Project Specific

Preliminary Water Quality Management Plan

Project Title: **First Hathaway Logistics Center**

600 North Hathaway Street, Banning, CA 92220

DEVELOPMENT NO. **TENTATIVE PM 38256 (TPM NO. 21-4002)**
DESIGN REVIEW NO. **DESIGN REVIEW NO. 21-7015**

Prepared for:

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Original Date Prepared: November 18, 2021

Revision Date(s): July 2023; March 2023; September 2022;

July 2023

REGISTERED PROFESSIONAL ENGINEER
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78576
CIVIL
STATE OF CALIFORNIA

07/10/2023

OWNER'S CERTIFICATION

This project-specific Preliminary Water Quality Management Plan (PWQMP) has been prepared for:

FR Hathaway, LLC
by **Stephen Crevoiserat**, PE

Stantec Consulting Inc.
for the project known as **First Hathaway Logistics Center** at **600 North Hathaway Street, Banning, CA 92220**.

This PWQMP is intended to comply with the requirements of **City of Banning** for the entitlement of **TENTATIVE PM 38256 (TPM NO. 21-4002)**, which includes the requirement for the preparation and implementation of a project-specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity.

The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under **City of Banning** Water Quality Ordinance 1415 (Municipal Code Section 13.24.010).

If the undersigned transfers its interest in the subject property/project, the undersigned shall notify the successor in interest of its responsibility to implement this WQMP.

"I, the undersigned, certify under penalty of law that I am the owner of the property that is the subject of this WQMP, and that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Owner's Signature

Micheal Goodwin
Owner's Printed Name

Director of Development
Owner's Title/Position

7/13/23
Date

898 N. Pacific Coast Hwy., Suite 175
El Segundo, CA 90245
(310) 606-1634

ATTEST

Notary Signature

Printed Name

Title/Position

Date

THIS FORM SHALL BE NOTARIZED BEFORE ACCEPTANCE OF THE
FINAL PROJECT SPECIFIC WQMP

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TABLES

APPENDICES

I. Project Description

Project Owner: FR Hathaway, LLC
898 N. Pacific Coast Hwy., Suite 175
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WQMP Preparer: Stephen Crevoiserat, PE
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735 E. Carnegie Drive, Ste. 280
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Project Site Address:	**600 North Hathaway Street** **Banning, CA 92220**
Planning Area/ Community Name/ Development Name:	**First Hathaway Logistics Center / TPM 38256**
APN Number(s):	**APN: 532-110-001, 002, 003, 008, 009 and 010**
Latitude & Longitude:	**33.9305, -116.8547**
Receiving Water:	**Smith Creek to the San Gorgonio Creek to the Whitewater Creek to the Coachella Valley Storm Channel to the Salton Sea**
Project Site Size:	**Total Site - 94.9 acres (gross) 84.8 acres (net); Parcel 1 (75.5 ac), Parcel 2 (7.6 ac), & Parcel 3 (1.7 ac)**

Standard Industrial Classification (SIC) Code: **SIC Code 4225 - General warehousing and Storage**

Formation of Home Owners' Association (HOA) or Property Owners Association (POA): Y ☐ N ☒

Additional Permits/Approvals required for the Project:

AGENCY	Permit required
State Department of Fish and Wildlife, Fish and Game Code §1602 Streambed Alteration Agreement	Y ☐ N☒
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Certification	Y ☐ N☒
US Army Corps of Engineers, CWA Section 404 permit	Y ☐ N☒
US Fish and Wildlife, Endangered Species Act Section 7 biological opinion	Y ☐ N☒
Statewide Construction General Permit Coverage	Y ☒ N☐
Statewide Industrial General Permit Coverage	Y ☐ N☒
Other *(please list in the space below as required)* City of Banning Grading Permit, City of Banning Building Permit, City of Banning Encroachment Permit	

Per City of Banning Stormwater Code (Ordinance No. 1415) this project (in the post-development condition) is required to store stormwater runoff from rainfall events up to and including the 100-year 3-hour duration; therefore, additional LID/Site Design and Treatment Control BMPs are not required and Sections V.1.A and B of the WQMP template are not completed.

This project is known as the First Hathaway Logistics Center and it encompasses approximately 95 gross acres in the City of Banning, California. The property is in the eastern portion of the city and located north of the I-10 Freeway. Currently, the property is comprised of six Assessor's Parcels. One of the existing parcels contains an unoccupied building, while the remaining five parcels are vacant. Two of the parcels (including the one with the building) were once home to the Orco Block Company. The remaining four parcels were part of previously entitled Tentative Parcel Map No. 36056 – in which the entitlements to subdivide have expired. Prior to expiration, a portion of Infrastructure improvements (sewer, water and storm drain) were constructed and are in place. Improvements made as a part of First Hathaway Logistics will build upon and complete the existing infrastructure.

Tentative Parcel Map No. 38256 creates three (3) new parcels by consolidating ownership of the two former Orco Block parcels with the four underlaying parent parcels of expired TPM No. 36056. These existing parcels are outlined in Exhibit "A". The First Hathaway Logistics Project proposes to construct a 1.4 MSF Industrial Building upon Parcel 1 (a 75.5-acre lot). Parcel 2 will not contain buildings nor aboveground structures but will include an infiltration basin, additional tractor-trailer parking and an underground infiltration perforated CMP system.

Parcel 3 will be a common landscape area and will remain vacant from buildings and aboveground structures. Although not required per the Regional Criteria of the White Water River Region Water Quality Management Plan, all three parcels will implement Low Impact Development features which are intended to mimic the natural process of storm water run-off. The LID features will include disconnected roof drains, landscaped drainage swales and Infiltration Basins. A copy of proposed TPM 38256 is included as Exhibit "B". The DMA's correlate to the Parcels as such: DMA A is in the northern portion of Parcel 1, DMA C is the southeastern portion of Parcel 1 together with Parcel 2, DMA D is the southwestern of Parcel 1 together with Parcel 3. Where each parcel is shown on the proposed Tentative Map.

Physically, the Site is bound by Hathaway Street on the West, the Morongo Indian Reservation to the North, and First Industrial Way on the East. The south project boundary is the southerly parcel lines of proposed Parcels 2 and 3. An existing Caltrans Yard separates Parcel 2 and Parcel 3.

Nicolet Street, which currently terminates at Hathaway Street, will be extended east through the Site and terminate at First Industrial Way (the project's easterly boundary). First Industrial Way is a planned collector street and will be constructed partial-width from Nicolet Street north to Wilson Street. Along the northern perimeter: Wilson Street (from Hathaway Street to First Industrial Way) will be transformed from the current, natural, unimproved state to a half-width paved roadway. North of the paved roadway, a storm water channel will be constructed

parallel to the Wilson Street alignment. This channel will capture off-site flows and route them to the historical discharge location east of First Industrial Way.

The activity for the Light Industrial Building is warehouse/distribution with some general office space.

Improvements constructed to support the operations of the business will include loading/unloading docks, tractor-trailer parking, and employee/customer parking areas. The site will be enhanced with LID features and open spaces which exceed 20 percent of the total project area.

The parking areas will be surfaced with AC Pavement. Landscaped areas will border buildings and parking areas.

The percentage of the proposed site to be covered by impervious surfaces is approximately 70%. The coverage area does not include imperviousness from the proposed public roads. Where practical, LID Landscaped areas will be incorporated around the structure and parking lots. Along with the LID facilities, all perimeter slopes will be landscaped.

Due to daily operations, and frequent tractor-trailers traffic trips, permeable pavements are infeasible for of this project.

In addition to landscaped swales and bioretention swales - there are two Infiltration facilities planned for the Site. These facilities double as Detention/ LID BMP basins.

The Infiltration perforated CMP System located in DMA A collects storm flows from a large part of the north half of the structure and will replace the temporary basin located in the north-eastern portion of the site.

The Infiltration system located within DMA C is a combination of Infiltration perforated CMP and an at-grade Infiltration Basin. Together, they will replace three temporary basins currently located on APNs 532-110-003, -08, & -09. And, together, they will be designed to reduce peak storm run-off. The Retention Chambers will be designed with a minimum volume of 4 ac-ft and the Infiltration Basin "C" will be designed with a minimum volume of 3.4 ac-ft.

In DMA D, the temporary BMP Basin on the west side of the Caltrans Yard (APN 532-110-003) will be re-graded to provide runoff mitigation for the peak flows out letting on the southerly boundary of Parcel 3. This Infiltration Basin "D" will be complemented by Retention Chambers to effectively treat storm flows and reduce peak runoff. The Infiltration Basin is preliminary designed with a minimum volume of 1.3 ac-ft and the Retention Chambers are design with a volume of 1.0 ac-ft. Together they collect the target DCV of 2.3 ac-ft.

Off-site flows will be intercepted by public improvements and will not be routed into on-site LID facilities. The collector channel north of Wilson Street will be constructed with check dams. The net effect of check dams will lengthen the time of concentration and add to the LID practices of the project. The public street improvements will by-pass the onsite BMP facilities. There are no LID features proposed within the dedicated public right-of-way. Future communications with city staff shall address the preferred methods for water quality management associated with proposed public improvements. Within Public Right-of-Way, for each catch basin, Trash Treatment

Control will be accomplished with the installation of a debris screening device. The screening device will be selected from the Certified List of Trash devices and shall capture all particles greater than 5mm in size. The list is available from the website for the "Trash Implementation Program" of the State Water Resource Control Board. Screen specification and screen sizing is not a part of this preliminary report and will be addressed in the Final WQMP.

Within the project limits there are some remaining portions of a storm drain network that were constructed with the rough grading operations in 2012. Whenever practical, the in-situ infrastructure will be utilized. The WQMP Site Plan, Exhibit "D", outlines the infrastructure improvements that are currently in place. The exhibit is provided in Appendix B.

Appendix A of this Preliminary project specific WQMP includes a copy of the preliminary application conference comments. Final Conditions of Approval will be provided at a later date after they are made available by the City after entitlements are approved. Appendix B of this Preliminary project-specific WQMP includes:

a. A Vicinity Map identifying the project site and surrounding planning areas in sufficient detail; and

b. A Site Plan for the project. The Site Plan included as part of Appendix B depicts the following project features:

- Location and identification of all structural BMPs, including Source Control, LID/Site Design and Treatment Control BMPs.
- Landscaped areas.
- Paved areas and intended uses (i.e., parking, outdoor work area, outdoor material storage area, sidewalks, patios, tennis courts, etc.).
- Number and type of structures and intended uses (i.e., buildings, tenant spaces, dwelling units, community facilities such as pools, recreation facilities, tot lots, etc.).
- Infrastructure (i.e., streets, storm drains, etc.) that will revert to public agency ownership and operation.
- Location of existing and proposed public and private storm drainage facilities (i.e., storm drains, channels, basins, etc.), including catch basins and other inlets/outlet structures. Existing and proposed drainage facilities should be clearly differentiated.
- Location(s) of Receiving Waters to which the project directly or indirectly discharges.
- Location of points where onsite (or tributary offsite) flows exit the property/project site.
- Delineation of proposed drainage area boundaries, including tributary offsite areas, for each location where flows exit the project site and existing site (where existing site flows are required to be addressed). Each tributary area should be clearly denoted.

- Pre- and post-project topography.

Appendix I is a one page form that summarizes pertinent information relative to this project-specific PWQMP.

II. Site Characterization

Land Use Designation or Zoning:	**Land Use Existing: Vacant & Industrial** **Land Use Proposed: Light Industrial** **Zoning Existing and Proposed: Business Park**
Current Property Use:	**Parcel 1 is vacant land. Portions of the land consists of the demolished remains of the former Orco Block. The remaining land is rough graded as an Light Industial Site with no structures. There are also temporary storm water basins on the property.**
Proposed Property Use:	**Parcel 1: Warehouse/Distribution and Office Space, Parcel 2: Parking and Storm Water Management Parcel 3: Common Landscaping and Storm Water Management.**
Availability of Soils Report:	Y ☒ N ☐ *Note: A soils report is required if infiltration BMPs are utilized. Attach report in Appendix E.*
Phase 1 Site Assessment:	Y ☐ N ☒ *Note: If prepared, attached remediation summary and use restrictions in Appendix H.*

Receiving Waters for Urban Runoff from Site

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use Designated Receiving Waters
Smith Creek	None	MUN (P), AGR, GWR, REC 1 (P), REC 2, WARM, WILD	Not Designated as RARE
San Gorgonio River	None	MUN (P), AGR, GWR, REC 1 (P), REC 2, WARM, WILD	Not Designated as RARE
Whitewater River	None	MUN, AGR, GWR, REC 1, REC 2, WARM, COLD, WILD, POW	Not Designated as RARE
Coachella Valley Storm Drain	DDT Dieldrin Indicator Bacteria Nitrogen-ammonia PCBs Toxaphene Toxicity	FRSH, REC 1, REC 2, WARM, WILD, RARE	Designated as RARE
Salton Sea	Arsenic Chlorpyrifos DDT Enterococcus Nutrients Salinity	AQUA, IND, REC 1, REC 2, WARM, WILD, RARE	Designated as RARE

III. Pollutants of Concern

Table 1. Pollutant of Concern Summary

Pollutant Category	Potential for Project and/or Existing Site	Causing Receiving Water Impairment
Bacteria/Virus	Yes	Coachella Valley Storm Drain (Indicator Bacteria) Salton Sea (Enterococcus)
Heavy Metals	No	Salton Sea (Arsenic)
Nutrients (Nitrogen-ammonia)	Potential Landscaping	Salton Sea Coachella Valley Storm Channel
Toxic Organic Compounds	No	Coachella Valley Storm Drain
Sediment/Turbidity	Potential Erosion	No
Trash & Debris	Potential	No
Oil & Grease	Potential	No
Other (specify pollutant): Salinity	No	Salton Sea
Other (specify pollutant):		

IV. Hydrologic Conditions of Concern

Local Jurisdiction Requires On-Site Retention of Urban Runoff:

Yes ☒ The project will be required to retain urban runoff onsite in conformance with local ordinance (See Table 6 of the WQMP Guidance document, "Local Land use Authorities Requiring Onsite Retention of Stormwater"). This section does not need to be completed; however, retention facility design details and sizing calculations must be included in Appendix F.

No ☐ This section must be completed.

This Project meets the following condition:

☐ **Condition A**: 1) Runoff from the Project is discharged directly to a publicly-owned, operated and maintained MS4 or engineered and maintained channel, 2) the discharge is in full compliance with local land use authority requirements for connections and discharges to the MS4 (including both quality and quantity requirements), 3) the discharge would not significantly impact stream habitat in proximate Receiving Waters, **and** 4) the discharge is authorized by the local land use authority.

☐ **Condition B**: The project disturbs less than 1 acre and is not part of a larger common plan of development that exceeds 1 acre of disturbance. The disturbed area calculation must include all disturbances associated with larger plans of development.

☐ **Condition C**: The project's runoff flow rate, volume, velocity and duration for the post-development condition do not exceed the pre-development condition for the 2-year, 24-hour and 10-year 24-hour rainfall events. This condition can be achieved by, where applicable, complying with the local land use authority's on-site retention ordinance, or minimizing impervious area on a site and incorporating other Site-Design BMP concepts and LID/Site Design BMPs that assure non-exceedance of pre-development conditions. This condition must be substantiated by hydrologic modeling methods acceptable to the local land use authority.

☐ **None:** Refer to Section 3.4 of the Whitewater River Region WQMP Guidance document for additional requirements.

Supporting engineering studies, calculations, and reports are included in Appendix C.

	2 year – 24 hour		10 year – 24 hour	
	Precondition	**Post-condition**	**Precondition**	**Post-condition**
Discharge (cfs)				
Velocity (fps)				
Volume (cubic feet)				
Duration (minutes)				

V. Best Management Practices

This project implements Best Management Practices (BMPs) to address the Pollutants of Concern that may potentially be generated from the use of the Project Site. These BMPs have been selected and implemented to comply with Section 3.5 of the WQMP Guidance document, and consist of Site Design BMP concepts, Source Control, LID/Site Design and, if/where necessary, Treatment Control BMPs as described herein.

V.1 Site Design BMP Concepts, LID/Site Design and Treatment Control BMPs

Local Jurisdiction Requires On-Site Retention of Urban Runoff:

Yes ☒ The project will be required to retain Urban Runoff onsite in conformance with local ordinance (See Table 6 of the WQMP Guidance document, "Local Land use Authorities Requiring Onsite Retention of Stormwater). **The LID/Site Design measurable goal has thus been met (100%), and Sections V.1.A and V.1.B do not need to be completed**; however, retention facility design details and sizing calculations must be included in Appendix F, and '100%' should be entered into Column 3 of Table 6 below.

No ☐ Section V.1 must be completed.

This section of the Project-Specific WQMP documents the LID/Site Design BMPs and, if/where necessary, the Treatment Control BMPs that will be implemented on the project to meet the requirements detailed within Section 3.5.1 of the WQMP Guidance document. Section 3.5.1 includes requirements to implement Site Design Concepts and BMPs, and includes requirements to address Pollutants of Concern with BMPs. Further, sub-section 3.5.1.1 specifically requires that Pollutants of Concern be addressed with LID/Site Design BMPs to the extent feasible.

LID/Site Design BMPs are those BMPs listed within Table 2 below which promote retention and/or feature a natural treatment mechanism; off-site and regionally-based BMPs are also LID/Site Design BMPs, and therefore count towards the measurable goal, if they fit these criteria. This project incorporates LID/Site Design BMPs to fully address the Treatment Control BMP requirement where and to the extent feasible. If and where it has been acceptably demonstrated to the local land use authority that it is infeasible to fully meet this requirement with LID/Site Design BMPs, Section V.1.B (below) includes a description of the conventional Treatment Control BMPs that will be substituted to meet the same requirements.

In addressing Pollutants of Concern, BMPs are selected using Table 2 below.

Table 2. BMP Selection Matrix Based Upon Pollutant of Concern Removal Efficiency (1)

(Sources: Riverside County Flood Control & Water Conservation District Design Handbook for Low Impact Development Best Management Practices, dated September 2011, the Orange County Technical Guidance Document for Water Quality Management Plans, dated May 19, 2011, and the Caltrans Treatment BMP Technology Report, dated April 2010 and April 2008)

Pollutant of Concern	Landscape Swale[2, 3]	Landscape Strip[2, 3]	Biofiltration (with underdrain)[2, 3]	Extended Detention Basin[2]	Sand Filter Basin[2]	Infiltration Basin[2]	Infiltration Trench[2]	Permeable Pavement[2]	Bioretention (w/o underdrain)[2, 3]	Other BMPs Including Proprietary BMPs[4, 6]
Sediment & Turbidity	M	M	H	M	H	H	H	H	H	Varies by Product[5]
Nutrients	L/M	L/M	M	L/M	L/M	H	H	H	H	
Toxic Organic Compounds	M/H	M/H	M/H	L	L/M	H	H	H	H	
Trash & Debris	L	L	H	H	H	H	H	L	H	
Bacteria & Viruses (also: Pathogens)	L	M	H	L	M	H	H	H	H	
Oil & Grease	M	M	H	M	H	H	H	H	H	
Heavy Metals	M	M/H	M/H	L/M	M	H	H	H	H	

Abbreviations:

L: Low removal efficiency M: Medium removal efficiency H: High removal efficiency

Notes:

(1) Periodic performance assessment and updating of the guidance provided by this table may be necessary.

(2) Expected performance when designed in accordance with the most current edition of the document, "Riverside County, Whitewater River Region Stormwater Quality Best Management Practice Design Handbook".

(3) Performance dependent upon design which includes implementation of thick vegetative cover. Local water conservation and/or landscaping requirements should be considered; approval is based on the discretion of the local land use authority.

(4) Includes proprietary stormwater treatment devices as listed in the CASQA Stormwater Best Management Practices Handbooks, other stormwater treatment BMPs not specifically listed in this WQMP (including proprietary filters, hydrodynamic separators, inserts, etc.), or newly developed/emerging stormwater treatment technologies.

(5) Expected performance should be based on evaluation of unit processes provided by BMP and available testing data. Approval is based on the discretion of the local land use authority.

(6) When used for primary treatment as opposed to pre-treatment, requires site-specific approval by the local land use authority.

V.1.A SITE DESIGN BMP CONCEPTS AND LID/SITE DESIGN BMPS

This section documents the Site Design BMP concepts and LID/Site Design BMPs that will be implemented on this project to comply with the requirements detailed in Section 3.5.1 of the WQMP Guidance document.

- Table 3 herein documents the implementation of the Site Design BMP Concepts described in sub-sections 3.5.1.3 and 3.5.1.4.
- Table 4 herein documents the extent to which this project has implemented the LID/Site Design goals described in sub-section 3.5.1.1.

Table 3. Implementation of Site Design BMP Concepts

Design Concept	Technique	Specific BMP	Included			Brief Reason for BMPs Indicated as No or N/A
			Yes	No	N/A	
Site Design BMP Concept 1	**Minimize Urban Runoff, Minimize Impervious Footprint, and Conserve Natural Areas (See WQMP Section 3.5.1.3)**	Conserve natural areas by concentrating or clustering development on the least environmentally sensitive portions of a site while leaving the remaining land in a natural, undisturbed condition.	☐	☐	☐	
		Conserve natural areas by incorporating the goals of the Multi-Species Habitat Conservation Plan or other natural resource plans.	☐	☐	☐	
		Preserve natural drainage features and natural depressional storage areas on the site.	☐	☐	☐	
		Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.	☐	☐	☐	
		Use natural drainage systems.	☐	☐	☐	
		Where applicable, incorporate Self-Treating Areas	☐	☐	☐	
		Where applicable, incorporate Self-Retaining Areas	☐	☐	☐	
		Increase the building floor to area ratio (i.e., number of stories above or below ground).	☐	☐	☐	
		Construct streets, sidewalks and parking lot aisles to minimum widths necessary, provided that public safety and a walkable environment for pedestrians are not compromised.	☐	☐	☐	
		Reduce widths of streets where off-street parking is available.	☐	☐	☐	
		Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.	☐	☐	☐	
		Other comparable and equally effective Site Design BMP concept(s) as approved by the local land use authority (Note: Additional narrative required to describe BMP and how it addresses site design concept).	☐	☐	☐	

Table 3. Site Design BMP Concepts (continued)

Design Concept	Technique	Specific BMP	Included			Brief Reason for Each BMP Indicated as No or N/A
			Yes	No	N/A	
Site Design BMP Concept 2	**Minimize Directly Connected Impervious Area (See WQMP Section 3.5.1.4)**	Design residential and commercial sites to contain and infiltrate roof runoff, or direct roof runoff to landscaped swales or buffer areas.	☐	☐	☐	
		Drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.	☐	☐	☐	
		Incorporate landscaped buffer areas between sidewalks and streets.	☐	☐	☐	
		Use natural or landscaped drainage swales in lieu of underground piping or imperviously lined swales.	☐	☐	☐	
		Where soil conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration.	☐	☐	☐	
		Maximize the permeable area by constructing walkways, trails, patios, overflow parking, alleys, driveways, low-traffic streets, and other low-traffic areas with open-jointed paving materials or permeable surfaces such as pervious concrete, porous asphalt, unit pavers, and granular materials.	☐	☐	☐	
		Use one or more of the following:				
		Rural swale system: street sheet flows to landscaped swale or gravel shoulder, curbs used at street corners, and culverts used under driveways and street crossings.	☐	☐	☐	
		Urban curb/swale system: street slopes to curb; periodic swale inlets drain to landscaped swale or biofilter.	☐	☐	☐	
		Dual drainage system: first flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder; high flows connect directly to MS4s.	☐	☐	☐	
		Other comparable and equally effective Site Design BMP concept(s) as approved by the local land use authority (Note: Additional narrative required to describe BMP and how it addresses site design concept).	☐	☐	☐	
		Use one or more of the following for design of driveways and private residential parking areas:				
		Design driveways with shared access, flared (single lane at street), or wheel strips (paving only under the tires).	☐	☐	☐	
		Uncovered temporary or guest parking on residential lots paved with a permeable surface, or designed to drain into landscaping.	☐	☐	☐	

Table 3. Site Design BMP Concepts (continued)

Design Concept	Technique	Specific BMP	Included			Brief Reason for Each BMP Indicated as No or N/A
			Yes	No	N/A	
Site Design BMP Concept 2 (cont'd)	**Minimize Directly Connected Impervious Area (See WQMP Section 3.5.1.4)**	Other comparable and equally effective Site Design BMP concept(s) as approved by the local land use authority (Note: Additional narrative required to describe BMP and how it addresses site design concept).	☐	☐	☐	
		Use one or more of the following for design of parking areas:				
		Where landscaping is proposed in parking areas, incorporate parking area landscaping into the drainage design.	☐	☐	☐	
		Overflow parking (parking stalls provided in excess of the Permittee's minimum parking requirements) may be constructed with permeable pavement.	☐	☐	☐	
		Other comparable and equally effective Site Design BMP (or BMPs) as approved by the local land use authority (Note: Additional narrative required describing BMP and how it addresses site design concept).	☐	☐	☐	

Project Site Design BMP Concepts:

Consistent with the Whitewater River Region WQMP Guidance Document this project is required (by local ordinance) to retain and infiltrate urban runoff. Consequently, additional LID and Treatment Control BMPs are not required. The LID features proposed with the First Hathaway Logistics Center are enhancement amenities proposed at the discretion of the Client.

Alternative Project Site Design BMP Concepts:

Not Applicable

Table 4. LID/Site Design BMPs Meeting the LID/Site Design Measurable Goal

(1) DRAINAGE SUB-AREA ID OR NO.	(2) LID/SITE DESIGN BMP TYPE* (See Table 2)	(3) POTENTIAL POLLUTANTS OF CONCERN WITHIN DRAINAGE SUB-AREA (Refer to Table 1)	(4) POTENTIAL POLLUTANTS WITHIN SUB-AREA CAUSING RECEIVING WATER IMPAIRMENTS (Refer to Table 1)	(5) EFFECTIVENESS OF LID/SITE DESIGN BMP AT ADDRESSING IDENTIFIED POTENTIAL POLLUTANTS (U, L, M, H/M, H; see Table 2)	(6) BMP MEETS WHICH DESIGN CRITERIA? (Identify as V_{BMP} OR Q_{BMP})	(7) TOTAL AREA WITHIN DRAINAGE SUB-AREA (Nearest 0.1 acre)
TOTAL PROJECT AREA TREATED WITH LID/SITE DESIGN BMPs (NEAREST 0.1 ACRE)						

*** LID/Site Design BMPs listed in this table are those that <u>completely</u> address the 'Treatment Control BMP requirement' for their drainage sub-area.**

Justification of infeasibility for sub-areas not addressed with LID/Site Design BMPs

This section is not applicable to the First Hathaway Logistics project. As the project is subject to the local ordinance for urban retention.

~~Insert text here listing each drainage sub-area wherein the design criteria of VBMP and/or QBMP are not treated using LID/Site Design BMPs as required in WQMP Guidance Section 3.5.1.1, and provide justification of infeasibility for each.~~

V.1.B TREATMENT CONTROL BMPS

Conventional Treatment Control BMPs shall be implemented to address the project's Pollutants of Concern as required in WQMP Section 3.5.1 where, and to the extent that, Section V.1.A has demonstrated that it is infeasible to meet these requirements through implementation of LID/Site Design BMPs.

☐ The LID/Site Design BMPs described in Section V.1.A of this project-specific WQMP completely address the 'Treatment Control BMP requirement' for the entire project site (and where applicable, entire existing site) as required in Section 3.5.1.1 of the WQMP Guidance document. Supporting documentation for the sizing of these LID/Site Design BMPs is included in Appendix F. ***Section V.1.B does not need to be completed**.

☐ The LID/Site Design BMPs described in Section V.1.A of this project-specific WQMP do **NOT** completely address the 'Treatment Control BMP requirement' for the entire project site (or where applicable, entire existing site) as required in Section 3.5.1.1 of the WQMP. ***Section V.1.B must be completed.**

The Treatment Control BMPs identified in this section are selected, sized and implemented to treat the design criteria of V_{BMP} and/or Q_{BMP} for all project (and if required, existing site) drainage sub-areas which were not fully addressed using LID/Site Design BMPs. Supporting documentation for the sizing of these Treatment Control BMPs is included in Appendix F.

Table 5: Treatment Control BMP Summary

(1) DRAINAGE SUB-AREA ID OR NO.	(2) TREATMENT CONTROL BMP TYPE* (See Table 2)	(3) POTENTIAL POLLUTANTS OF CONCERN WITHIN DRAINAGE SUB-AREA (Refer to Table 1)	(4) POTENTIAL POLLUTANTS WITHIN SUB-AREA CAUSING RECEIVING WATER IMPAIRMENTS (Refer to Table 1)	(5) EFFECTIVENESS OF TREATMENT CONTROL BMP AT ADDRESSING IDENTIFIED POTENTIAL POLLUTANTS (U, L, M, H/M, H; see Table 2)	(6) BMP MEETS WHICH DESIGN CRITERIA? (Identify as V_{BMP} OR Q_{BMP})	(7) TOTAL AREA WITHIN DRAINAGE SUB-AREA (Nearest 0.1 acre)
	TOTAL PROJECT AREA TREATED WITH TREATMENT CONTROL BMPs (NEAREST 0.1 ACRE)					

V.1.C MEASURABLE GOAL SUMMARY

This section documents the extent to which this project has met the measurable goal described in WQMP Section 3.5.1.1 of addressing 100% of the project's 'Treatment Control BMP requirement' with LID/Site Design BMPs. Projects required to retain Urban Runoff onsite in conformance with local ordinance are considered to have met the measurable goal; for these instances, '100%' is entered into Column 3 of the Table.

Table 6: Measurable Goal Summary

(1) Total Area Treated with LID/Site Design BMPs (Last row of Table 4)	(2) Total Area Treated with Treatment Control BMPs (Last row of Table 5)	(3) % of Treatment Control BMP Requirement addressed with LID/Site Design BMPs
		100

V.2 SOURCE CONTROL BMPS

This section identifies and describes the Source Control BMPs applicable and implemented on this project.

Table 7. Source Control BMPs

BMP Name	Check One		If not applicable, state brief reason
	Included	Not Applicable	
Non-Structural Source Control BMPs			
Education for Property Owners, Operators, Tenants, Occupants, or Employees	☒	☐	
Activity Restrictions	☒	☐	
Irrigation System and Landscape Maintenance	☒	☐	
Common Area Litter Control	☒	☐	
Street Sweeping Private Streets and Parking Lots	☒	☐	
Drainage Facility Inspection and Maintenance	☒	☐	
Structural Source Control BMPs			
Storm Drain Inlet Stenciling and Signage	☒	☐	
Landscape and Irrigation System Design	☒	☐	
Protect Slopes and Channels	☒	☐	
Provide Community Car Wash Racks	☐	☒	Not applicable
Properly Design*:			
Fueling Areas	☐	☒	Not Applicable
Air/Water Supply Area Drainage	☒	☐	Surface water will be routed to a drainage basin
Trash Storage Areas	☒	☐	Trash enclosures to be included on Site Plan
Loading Docks	☒	☐	Park trucks so that spills or leaks can be contained Add to training manual for proper spill containment and cleanup
Maintenance Bays	☐	☒	Maintenance will not be performed on-site
Vehicle and Equipment Wash Areas	☐	☒	No Planned wash areas are part of this project

Outdoor Material Storage Areas	☐	☒	No outdoor storage of materials
Outdoor Work Areas or Processing Areas	☐	☒	No outdoor processes will be performed.
Provide Wash Water Controls for Food Preparation Areas	☐	☒	Not a Restaurant or Food Distribution center

*Details demonstrating proper design must be included in Appendix F.

Source Control BMPs

All catch basins shall be appropriately marked with Storm Drain Stenciling per CASQA BMP #SD-13. The signage shall be placed on top of the curb. The stenciling shall be reapplied when signs of fading appear. NO DUMPING DRAINS TO SEA will be added to the final design plans.

Landscape maintenance and Irrigation systems will employ LID principles and will be regularly maintained per CASQA BMP Factsheet #SC-41.
BMP Maintenance shall also incorporate the following CASQA BMP standards:

- Storage areas and trash receptacle maintenance shall conform with #SC-32 and #SC-34.
- Litter control and parking lot maintenance shall include prevention practices per #SC-43.
- Drainage system maintenance shall conform to #SC-44

Additional Maintenance activity is listed in the Post Development BMP Table in Section VI.

Appendix D includes copies of the educational materials (described in Section 3.5.2.1 of the WQMP Guidance document) that will be used in implementing this project-specific PWQMP.

Tenant Restrictions:

On-site vehicle maintenance is prohibited.

On-site washing of vehicles is prohibited.

Outdoor storage of hazardous waste is prohibited.

V.3 EQUIVALENT TREATMENT CONTROL BMP ALTERNATIVES

Not Applicable, this project will meet 100 percent of the measurable goal for On-Site treatment.

V.4 REGIONALLY-BASED BMPS

Not Applicable, this project will include Site specific detention systems.

VI. Operation and Maintenance Responsibility for BMPs

The final edition of this document will include Appendix G. It will consist of project specific CC&Rs, Covenant and Agreements, BMP Maintenance Agreement and/or other mechanisms used to ensure the ongoing operation, maintenance, funding, transfer, and implementation of the project-specific WQMP requirements.

Treatment Control BMPs

Through correspondence with City of Banning Engineering staff, it is established that the maximum drawdown time is 72 hours for Basins A, B and C.
The City of Banning has a Stormwater Code (Ordinance No. 1415 § 6) requiring on-site retention of Urban Runoff. The code reads "*At a minimum, all development will make provisions to store runoff from rainfall events up to and including the one-hundred-year, three-hour duration event. Post-development urban runoff discharge rates shall not exceed pre-development peak urban runoff discharge rates."*

General maintenance of the Surface Basins should follow these recommendations, as extracted from fact sheet TC-11 (CASQA Stormwater Best Management Practice, January 2003).

- Inspection after rainfall events to ensure water infiltration
- Observe draw down time to confirm the design drain time is obtained
- Semiannual inspections
- Removal of trash and debris
- Trim vegetation at the beginning and end of wet season
- Remove accumulated sediment and regrade when the sediment exceeds 10% of volume
- Revegetate and stabilize when erosion is evident. Consider erosion control mulch

Maintenance of the underground retention basins shall follow the following recommendations, from the perforated CMP supplier:

- Annually Inspect for fine sediment accumulation in the inverts of the underground CMP pipes, via the access manholes.
- Annually Inspect for retained stormwater drawdown, within 48 hours of the conclusion of a >2" storm event, via the access manholes.
- When stormwater drawdown is not complete within 72 hours – following the conclusion of a 2" storm event, schedule a flushing/vacuum removal of resuspended fine sediment, via the access manholes, with a qualified contractor.

Maintenance of the Hydrodynamic Separators shall follow the vendor recommendations as listed in Exhibit MG-CDS provided in Appendix F.

Post Development BMP Inspection and Maintenance Responsibility			
BMP Designation	**Responsible Party**	**Description of Inspection and Maintenance Activity**	**Frequency of Maintenance**
Efficient Irrigation	Property Owner	Verify that runoff minimizing landscape design continues to function by checking that water sensors are functioning properly, that irrigation heads are adjusted properly to eliminate overspray to hardscape areas, and to verify that irrigation timing and cycle lengths are adjusted in accordance with water demands, given time of year, weather and day or night time temperatures.	Weekly maintenance
Trash Container Areas	Property Owner and/or tenants	Sweep area clean, spot clean using a mop and water (no detergents), and contact the City's Solid Waste pickup department to remove any large debris in the area that does not fit in the dumpster itself per CASQA BMP #SC-34.	Weekly maintenance
Catch Basin Messaging	Property Owner	Inspect stenciled or placarded message for legibility. Replace as necessary per CASQA BMP #SD-13.	Bi-annual maintenance
Tenant Education	Property Owner	Provide all tenants/occupants with stormwater BMP education materials in Appendix D.	Upon initial leasing or sale of property to occupants, and/or tenants, and annually thereafter
Common Area Landscape Management	Property Owner	Manage landscaping in accordance with applicable ordinances and with management guidelines for use of fertilizers and pesticides per CASQA BMP #SC-41.	Ongoing
Common Area Litter Control	Property Owner and/or tenants	Inspect for, remove, and properly dispose of litter per CASQA BMP #SC-34.	Weekly
Common Area Catch Basin Inspection	Property Owner	Inspect to verify inlets and gutters are clean; inspect for evidence of illegal/illicit dumping of materials into storm drains. Cleanup as necessary and investigate sources to prevent further incidents per CASQA BMP #SC-44.	Monthly
Street Sweeping Private Streets and Parking Lots	Property Owner	Vacuum sweep parking lots/paved areas per CASQA BMP #SC-43.	Monthly
Protect Slopes & Channels	Property Owner	Inspect slopes and channels for erosion.	Bi-annual and after a storm event
Water Quality Inlets	Property Owner	Remove floating petroleum product and floating debris.	Monthly maintenance
		Remove and properly dispose of sediment and sludge and floating debris accumulated in the gravity separators per CASQA BMP #MP-51.	Annual pumping/cleaning at the end of the Rainy Season (May-June)

Post Development BMP Inspection and Maintenance Responsibility			
BMP Designation	**Responsible Party**	**Description of Inspection and Maintenance Activity**	**Frequency of Maintenance**
Surface Retention / Infiltration Basins	Property Owner	Inspect system and remove any accumulated trash, debris and visible sediment from the recharge surface	Quarterly (1st year) Bi-Annual Inspection & Maintenance
Underground perforated CMP Systems	Property Owner	Inspect/Clean out system through manholes where vacuum/flushing pump system is inserted to remove solids once accumulated over 6". A record of each inspection is to be maintained for the life of the system.	Annually
CDS Unit	Property Owner	Inspect/Clean out system through manholes where vacuum/flushing pump system is inserted to remove solids once accumulated over 75% of capacity for offline units and 25% for online units. A record of each inspection is to be maintained for the life of the system.	Bi-Annual Inspection & Maintenance

VII. Funding

First Industrial Realty, will be solely responsible for operating, maintaining, and funding the proper care of the project pretreatment separators and retention/infiltration facilities. The maintenance responsibilities include, drainage systems, basin landscaping, trash enclosures and pavement sweeping.

First Industrial
898 N. Pacific Coast Hwy., Suite 175
El Segundo, CA 90245
Telephone: (310)606-1634

Appendix A

Conditions of Approval

This is a Preliminary Report:

No COA's are available for Preliminary WQMP

COA's will be included in Final WQMP

Pre-Application Conference (PAC) Comments are included.

Planning Commission Resolution _____

Dated _____

M E M O R A N D U M

C I T Y O F B A N N I N G

DATE: April 6, 2021

TO: Adam Rush, Community Development Director

FROM: Kevin Sin, Senior Civil Engineer

SUBJECT: Engineering Conditions of Approval for PAC No. 21-06; First Hathaway Logistics (APNs 532-110-001, 002, 003, 008, 009 & 010)

The Department of Public Works recommends the Conditions of Approval listed herein for the abovementioned project. Unless stated otherwise, all conditions shall be completed by the applicant at no cost to any government agency.

The Applicant may contact the Engineering Division at (951) 922-3130 for compliance with the following conditions:

A. General Requirements

1. A Public Works Permit shall be required prior to commencement of any work within the public right-of-way. The contractor working within the public right-of-way shall submit proof of a Class "A" State Contractor's License, City of Banning Business License, and Liability Insurance. Any existing public improvements, or public improvements not accepted by the City that are damaged during construction shall be removed and replaced as determined by the City Engineer or his/her representative.

2. Prior to the issuance of any grading, construction, or public works permit by the City, the applicant shall obtain any necessary clearances and/or permits from the following agencies:

   - Fire Marshal (access)
   - Public Works Department (grading permits, street improvement permits)
   - Riverside County Flood Control & Water Conservation District (storm drain)
   - California Regional Water Quality Control Board Colorado River Basin (RWQCB)
   - South Coast Air Quality Management District (SCAQMD)

   The applicant is responsible for meeting all requirements of permits and/or clearances from the above listed agencies. When the requirements include approval of improvement plans, the applicant shall furnish proof of such approvals when submitting improvements plans to the City.

3. The following improvement plans shall be prepared by a Civil Engineer licensed by the State of California and submitted to the Engineering Division for review and approval. A separate set of plans shall be prepared for each line item listed below. Unless otherwise authorized in writing by the City Engineer, the plans shall utilize the minimum scale specified and shall be drawn on 24" x 36" Mylar film. Plans may be prepared at a larger scale if additional detail or plan clarity is desired (Note: the applicant may be required to prepare other improvement

plans not listed here pursuant to improvements required by other agencies and utility purveyors):

a. Rough Grading Plans (All Conditions of Approval shall be reproduced on last sheet of set)	1" = 40' horizontal
b. Haul Route Plans	1" = 40' horizontal
c. Clearing Plans (Include construction fencing plan)	1" = 50' horizontal
d. Erosion Control & SWPPP, WQMP (Note: a, b, c & d shall be reviewed and approved concurrently)	1" = 40' Horizontal
e. Storm Drain Plans	1" = 40' Horizontal
f. Street Improvement Plans	1" = 40' Horizontal 1" = 4' Vertical
g. Precise Grading Plans	1" = 40' Horizontal
h. Landscaping Plans	1" = 20 Horizontal
i. Water Improvement Plans	1" = 40' Horizontal 1" = 4' Vertical
j. Sewer Improvement Plans	1" = 40' Horizontal 1" = 4' Vertical

Other engineered improvement plans prepared for City approval that are not listed herein shall be prepared in formats approved by the City Engineer prior to commencing plan preparation.

All off-site plan and profile, street improvement plans and signing & striping plans shall show all existing improvements for a distance of at least 200-feet beyond the project limits, or at a distance sufficient to show any required design transitions.

A small index map shall be included on the title sheet of each set of plans, showing the overall view of the entire work area.

4. Upon completion of construction, the Developer shall furnish the City with reproducible record drawings on Mylar film of all improvement plans that were approved by the City Engineer. Each sheet shall be clearly marked "As-Built" or "As-Constructed" and shall be stamped and signed by the engineer or surveyor certifying the accuracy and completeness of the drawings. The applicant shall have all AutoCAD files submitted to the City, revised to reflect the "As-Built" conditions.

B. Street Improvements/Right-of-Way

5. Applicant shall offer to dedicate to the City of Banning the additional right-of-way for Hathaway Street (55 feet one-half width) fronting the site as an Arterial Highway for public street and utilities purposes.

6. Applicant shall offer to dedicate to the City of Banning the right-of-way for Wilson Street (55 feet one-half width) fronting the site as an Arterial Highway for public street and utilities purposes.

7. Applicant shall offer to dedicate to the City of Banning the right-of-way for Nicolet Street (66 feet full width) through the site for public street and utilities purposes. The proposed Nicolet Street shall align with the prolongation of the existing Nicolet Street.

8. Applicant shall offer to dedicate to the City of Banning the right-of-way for the North-South Collector Street (33 feet one-half width) fronting the east end of the site for public street and utilities purposes. The North-South Collector Street shall intersect at right angles with the proposed Nicolet Street and Wilson Street.

9. All offers of dedication shall include the corner cut-off at intersections. Legal descriptions and plats of street dedication shall be provided to the Engineering Division for review and approval before acceptance by City Council and recorded by the County Recorder Office.

10. The City and Developer are to enter into a Public Improvement Agreement to guarantee the construction of the public improvements as listed in the Conditions of Approval and as shown on the approved plans. The applicant shall work with the City Attorney's Office to execute the agreement and pay all related legal processing fees.

11. All street improvement designs shall provide pavement and lane transitions per City of Banning and Caltrans standards for transition to existing street sections.

12. Construct half-width (55 feet from centerline) street improvements fronting Hathaway Street and Wilson Street including street lighting, curb and gutter, driveway approaches, sidewalk, parkway, asphalt concrete paving, traffic signs and striping, and any transitions. Street lights shall be installed offset of the existing street lights.

13. Construct full-width (66 feet) street improvements of Nicolet Street including street lighting, curb and gutter, driveway approaches, sidewalk, parkway, asphalt concrete paving, traffic signs and striping, and any transitions.

14. Construct half-width (33 feet) street improvements of the North-South Collector Street including street lighting, curb and gutter, driveway approaches, sidewalk, parkway, asphalt concrete paving, traffic signs and striping, and any transitions.

15. Applicant's geotechnical engineer shall provide the design of the pavement section based upon the Caltrans method.

16. Any public improvements damaged during the course of construction shall be replaced to the satisfaction of the City Engineer, or his/her designee.

17. The applicant shall plant and perpetually maintain trees, shrubs, and ground cover placed in the parkway, slopes adjacent to public right-of-ways constructed in connection with the project. This includes providing irrigation and the clearing of debris and weed removal.

18. All required public improvements for the project shall be completed, tested, and approved by the Engineering Division prior to issuance of any Certificate of Occupancy.

C. Grading and Drainage

19. Submit a Drainage Study with hydrologic and hydraulic analysis for developed and undeveloped (existing) conditions to the Engineering Division for review and approval. The

study and analysis shall be prepared by a civil engineer licensed by the State of California. Drainage design shall be in accordance with Banning Master Drainage Plan adopted by Riverside County Flood Control and Water Conservation District (RCFCD), RCFCD Hydrology Manual, and standard plans and specifications. The 10-year storm flow shall be contained within the street curbs, and the 100-year storm shall be contained within the street right-of-way; when this criteria is exceeded, additional drainage facilities shall be designed and constructed.

20. At a minimum, all development will make provisions to store runoff from rainfall events up to and including the one-hundred three-hour during event. Post-development peak urban runoff discharge rates shall not exceed pre-development peak urban runoff discharge rates.

21. Prior to issuance of any building permit, the applicant shall install trash filters in all catch basins adjacent to the site and/or will be constructed as part of the storm drain improvements for this development. The trash filters shall comply with the requirements of the Trash Amendment as amended and approved in accordance with California Regional Water Quality Control Board Colorado River Basin Region Order No. R7-2013-0011.

22. If the site is located in a Flood Area as identified in Flood Insurance Rate Map dated August 28, 2008 the applicant is responsible for providing a certification by a registered professional engineer or architect demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

23. The project grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage areas, outlet points and outlet conditions. Otherwise, a drainage easement shall be obtained for the release of concentrated or diverted storm flows. The project shall accept and convey storm flows from the adjacent property to the north.

24. The applicant shall comply with Chapter 13.24 "Stormwater Management Systems" of the Banning Municipal Code (BMC) and Title 18 "Grading, Erosion and Sediment Control" of the California Building Code related to excavation and grading; and, the State Water Resources Control Board's orders, rules and regulations.

    For construction activities including clearing, grading or excavation of land that disturbs one (1) acre or more of land, or that disturbs less than one (1) acre of land, but which is a part of a construction project that encompasses more than one (1) acre of land, the applicant shall be required to submit a Storm Water Pollution Protection Plan (SWPPP) and file a Notice of Intent (NOI) with the Regional Water Quality Control Board.

    The applicant shall ensure that the required SWPPP is available for inspection at the project site at all times through and including acceptance of all improvements by the City.

    The applicant's SWPPP shall include provisions for all of the following Best Management Practices ("BMPs"):

    - Temporary Soil Stabilization (erosion control).
    - Temporary Sediment Control.
    - Wind Erosion Control.
    - Tracking Control.
    - Non-Storm Water Management.

- Waste Management and Materials Pollution Control.

All erosion and sediment control BMPs proposed by the applicant shall be designed using the CASQA BMP handbook and approved by the City Engineer prior to any onsite or offsite grading, pursuant to this project.

The approved SWPPP and BMPs shall remain in effect for the entire duration of project construction until all improvements are completed and accepted by the City.

25. Prior to issuance of any grading or building permit, a Project-Specific Water Quality Management Plan (WQMP) shall be reviewed and approved in accordance with California Regional Water Quality Control Board Colorado River Basin Region Order No. R7-2013-0011.

26. Prior to the issuance of any building permit(s), a precise grading plan shall be submitted to the City Engineer for review and approval. A grading permit shall be obtained prior to commencement of any grading activity.

27. Grading and excavations in the public right-of-way shall be supplemented with a soils and geology report prepared by a professional engineer or geologist licensed by the State of California.

28. Prior to the issuance of a building permit, the applicant shall provide a lot pad certification stamped and signed by a qualified civil engineer or land surveyor. Pad certification shall list the pad elevation as shown on the approved grading plan, the actual pad elevation and the difference between the two, if any. Such pad certification shall also list the relative compaction of the pad soil.

D. Traffic/Airport Safety Zone

29. Prior to the issuance of a grading permit or building permit, the applicant shall submit and obtain approval in writing from the Fire Marshall for the plans for all public or private access drives or streets. The plans shall include plan and sectional views and indicate the grade and width of the access road measured flow-line to flow-line. When a dead-end access exceeds 150 feet or when otherwise required, a clearly marked fire apparatus access turnaround must be provided and approved by the Fire Marshall. Applicable covenant, conditions or restrictions or other approved documents shall contain provisions which prohibit obstructions such as speed bumps/humps, control gates or other modifications within said easement or access road unless prior approval of the Fire Marshall is granted.

30. Driveway grades shall not exceed eight percent unless approved by the City Engineer.

31. Access drives to the public right-of-way shall be restricted to those approved by the City Engineer as shown on the approved plans.

32. Prior to the issuance of any certificate of occupancy, all fire hydrants shall have a blue reflective pavement marker indicating the hydrant location on the street/access driveway as approved by the Fire Marshall and must be maintained in good condition by the property owner until the street is accepted for maintenance.

33. The applicant shall apply the current version of the “Riverside County Transportation Department Traffic Impact Analysis Preparation Guide”, all exemptions identified in the TIA Preparation Guide shall apply. If it is determined, according to the TIA Preparation Guide, that a TIA is determined, then a Scoping Agreement shall be required.

34. The site is located within an airport safety zone as designated in the Riverside County Airport Land Use Compatibility Plan. Prior to approval of any building permit, the project shall be submitted to the Riverside Airport Land Use Commission for a consistency determination and the Applicant shall provide written evidence that the project meets all conditions set forth by said Commission.

E. Trash/Recycling

35. Construction debris shall be disposed of at a certified recycling site. It is the responsibility of the developer to contact the City's franchised solid waste hauler, Waste Management of the Inland Valley, at 1-800-423-9986 for disposal of construction debris.

36. The developer shall participate in the City's recycling and diversion programs by providing a solid waste enclosure to accommodate necessary solid waste containers.

37. All new development projects including, but not limited to, industrial and business buildings and facilities, as well as multi-family complexes shall provide a solid waste enclosure to accommodate trash, recycle and organics waste bins and/or containers. Solid waste enclosures for multiple tenant properties, such as a shopping center, must design the enclosure to accommodate all waste containers of the property.

38. Solid waste enclosures shall be located on the site to be serviced.

39. The enclosure shall be designed for the exclusive use of housing solid waste containers including trash, recyclable and organics materials.

40. Enclosures Design Criteria:

    a. The size and dimensions of the trash enclosure shall be based on the required number and size of containers at a minimum accommodating one (1) container each for trash, recyclables and organics materials.

    b. Enclosure shall be architecturally compatible with the primary building on site to provide a coordinated design.

    c. Exterior materials and colors of the enclosure shall match the building walls.

    d. Chain link fencing with or without/plastic slats is prohibited.

    e. Enclosure shall have solid metal or wood gates with latches that can be secured in an open or closed position.

    f. Enclosures shall be constructed in a permanent manner.

    g. Exterior must be fully enclosed with solid roofing to prevent rainfall from entering the enclosure and to prevent wind dispersal, as well as, offsite transport of trash and recycling.

    h. Provide the minimum clearance for collector and user accessibility.

    i. City Engineer approval shall be obtained in writing prior to the construction of any solid waste enclosure.

F. Fees

41. Prior to the issuance of a building permit, all applicable development impact fees shall be paid.

42. Plan check fees for professional report review (geotechnical, drainage, WQMP, etc.), and all improvement plans review, shall be paid at the time of submittal of said documents for review and approval in accordance with the fee schedule in effect at the time of submittal.

43. Public Works Inspection fees shall be paid prior to issuance of any permits in accordance with the fee schedule in effect at time of time of scheduling.

44. A plan storage fee shall be paid for any engineering plans that may be required prior to issuance of certificate of occupancy in accordance with the fee schedule in effect at the time the fee is paid.

City of Banning

COMMUNITY DEVELOPMENT DEPARTMENT

99 E. Ramsey Street · P.O. Box 998 · Banning, CA 92220-0998 · (951) 922-3125 · Fax (951) 922-3128

Pre-Application Conference (PAC)
PAC # 21-06
Preliminary Comments
April 22, 2021

The Preliminary Application Conference or PAC is intended to provide a broad overview of the anticipated land use permits, environmental clearance documents, and development review process under which an individual application is subject to pursuant to the Banning Municipal Code (BMC) and state law. The PAC is not intended to provide final conditions of approval and does not constitute a valid entitlement or permit to conduct any work, commence construction, or pursue construction permits for the use specified under the PAC application.

PLEASE BE ADVISED OF THE FOLLOWING: *The comments provided at the PAC meeting are* ***preliminary and*** *based upon a review of the amount of information supplied the applicant, which may not be complete at this time. Please note that development regulations and environmental conditions continue to change over time and that some conditions cannot be anticipated until more detailed plans and studies are prepared for the proposal.*

PROPOSAL: Proposed development of 95-acres of vacant land for the construction of a 1.4 million square foot warehouse and distribution facility.

LOCATION: Southeast corner of Wilson Street and Hathaway Street, Banning, CA 92220, APN's 532-110-001, 002, 003, 008, 009, 010.

APPLICANT: Michael Goodwin – First Industrial, 898 N. Pacific Cast HWY, Suite 175, El Segundo, CA 90245.

LAND USE: Vacant Business Park zoning.

Comments specific to your proposal regarding Zoning/Land Use:

I. Environmental Related Issues of Concern/Comments (CEQA): An Initial Study with supporting documents and reports shall be required in accordance with the California Environmental Quality Act (CEQA). Contact a qualified environmental consultant to provide a legally defensible environmental assessment and/or Environmental Impact Report (EIR). If the Initial Study determines there are impacts that cannot be avoided, an EIR will be required.

II. Entitlement Applications: Design Review, Tentative Parcel Map, Environmental Assessment (see the attached, "Uniform Development Application").

III. Parking: All parking shall be in accordance with Chapter 17.28 (see attached "Chapter 17.28" of Division III the Banning Municipal Code (BMC)).

IV. Zoning: The current zoning is, "Business Park," which allows for warehouse and distribution facilities with approval of a Design Review application.

V. Development Standards/Landscaping: See the attached, Chapter 17.32 of Division III, Development Standards of the BMC.

VI. Fees: See the attached fee schedule for Entitlement Application fees. Additionally, the payment of Development Impact fees, plan check fees, utility connection fees, TUMP fees, MSHCP fees, School fees, and building permit fees, will be required.

VII. ALUC: The site is located within an airport safety zone (D) as designated in the Riverside County Airport Land Use Compatibility Plan. The project shall be submitted, by the applicant, to the Riverside Airport Land Use Commission (ALUC) for a consistency determination.

VIII. Tribal Notification: Tribal notification letters will be sent by the City of Banning in accordance with AB 52 and SB 18. Consultation with neighboring tribes is highly probable.

DESIGN GUIDELINES:

The City of Banning encourages a high-quality level of architecture, design, and landscaping. The following elements are a list of recommended design elements that shall be considered, and applicable elements integrated into the project design criteria:

General Design Principles

A. Desirable Elements of Project Design, commercial and industrial buildings should include:
    1. Significant texture, reveals, and variable color for all building surfaces and incorporating 360-degree architecture.
    2. Wall articulation (insets, canopies, wing walls, trellises)
    3. Multi-planed, pitched roofs
    4. Roof overhangs, arcades, and covered walkways
    5. Regular window distribution
    6. Articulated mass and bulk
    7. Significant landscape and hardscape elements
    8. Clearly identifiable access driveways
    9. Convenient and accessible parking
    10. Landscaped and screened parking
    11. Unified and complementary signage.

B. The following elements are highly discouraged and **prohibited** by the City's Development Code and Policies:
    1. Large blank, unarticulated wall surfaces

2. Unpainted concrete or precision block walls without stucco, texture, plaster, or other similarly related items
3. Reflective surfaces
4. Metal or plastic siding
5. Square "boxlike" structures
6. Unrelated architectural elements (e.g. Mission tower on a modern building)
7. **Visible outdoor storage, loading, and equipment areas**
8. Large parking areas without sufficient landscaping and parking lot shading

USEFUL LINKS AND CONTACT LIST:

1. City of Banning General Plan adopted January 31, 2006 (http://www.ci.banning.ca.us/index.aspx?NID=54).
2. City of Banning Zoning Code Title 17 (http://www.ci.banning.ca.us/index.aspx?NID=54).
3. City of Banning Zoning Map (http://www.ci.banning.ca.us/index.aspx?NID=54).
4. Building & Safety Information (http://www.ci.banning.ca.us/index.aspx?nid=72).
5. Multi-Species Habitat Conservation Plan (MSHCP) (http://www.rcip.org/conservation.htm).
6. California Environmental Quality Act (CEQA) (http://ceres.ca.gov/ceqa/).
7. Riverside County Airport Land Use Commission (ALUC) (http://www.rcaluc.org/).
8. Riverside County Department of Environmental Health (http://www.rivcoeh.org/opencms/rivcoeh/).
9. CALFIRE - Riverside County Fire Department (http://www.rvcfire.org/opencms/functions/).
10. Design Review application requirements (https://banningca.gov/DocumentCenter/View/5444/Design-Review_2017?bidId=)

City of Banning telephone contacts:

Planning	(951) 922-3125
Public Works	(951) 922-3130
Fire Services	(951) 922-3210
Electric Utility	(951) 922-3260
Building & Safety	(951) 922-3120

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HOW TO PROCEED:

1. Applicants, developers, and property owners are encouraged to contact a qualified, licensed, and/or registered professional civil engineer, structural engineer, and/or architect and landscape architect to incorporate the above comments and all applicable provisions of the Banning Ordinance Code, Building Code, or other applicable regulations into a revised set of plans.

2. Prepare the Uniform Development Application (UDA) supplied by the Planning Department.

3. Using the UDA handouts specific to your application, review the checklist and make sure the required items are included with the application. Pay special attention to the detailed submittal requirements in each handout. An incomplete application may cause additional delays and all processing will cease until correct information is submitted.

4. Submit the UDA, the required technical reports and/or special studies prepared in support of the project, along with the required application materials in one complete submittal to the Community Development Department. In addition, application fees are required at time of application submittal and can be found on-line by downloading the Planning Division's Fee Schedule (http://www.ci.banning.ca.us/DocumentCenter/View/5464/Fee-Schedule-2011?bidId=).

5. The Planning Division will distribute plans to the appropriate City departments (e.g., Planning, Public Works, Engineering, Fire, Banning Electric Utility, Police, Parks and Recreation). Staff will review the applications, special studies, and other required information and work with the applicant to make corrections if needed.

6. After your assigned Project Manager reviews the application materials and all corrections have been made to the City's satisfaction, a recommendation for approval or conditional approval, will be made by staff to the Planning Commission or City Council as appropriate. If the applicant, and the City, are at an impasse regarding the recommended corrections and conditions of approval, then a staff recommendation for **denial** pursuant to the process referenced above. A report will be prepared, and the applicant's proposal will be scheduled for a hearing.

7. If a Planning Commission or City Council action is required at a noticed public hearing, the Planning Commission or City Council will evaluate the proposal, approve, conditionally approve, or deny the application.

8. After a proposal is approved by the appropriate decision-making authority (e.g. Community Development Director, Planning Commission and/or City Council), the applicant may submit construction drawings and documents to the Building and Safety Division and Public Works Department as appropriate. Construction documents may be processed concurrently with an entitlement application; however, this will be at the risk of the applicant, and the appropriate application forms are required.

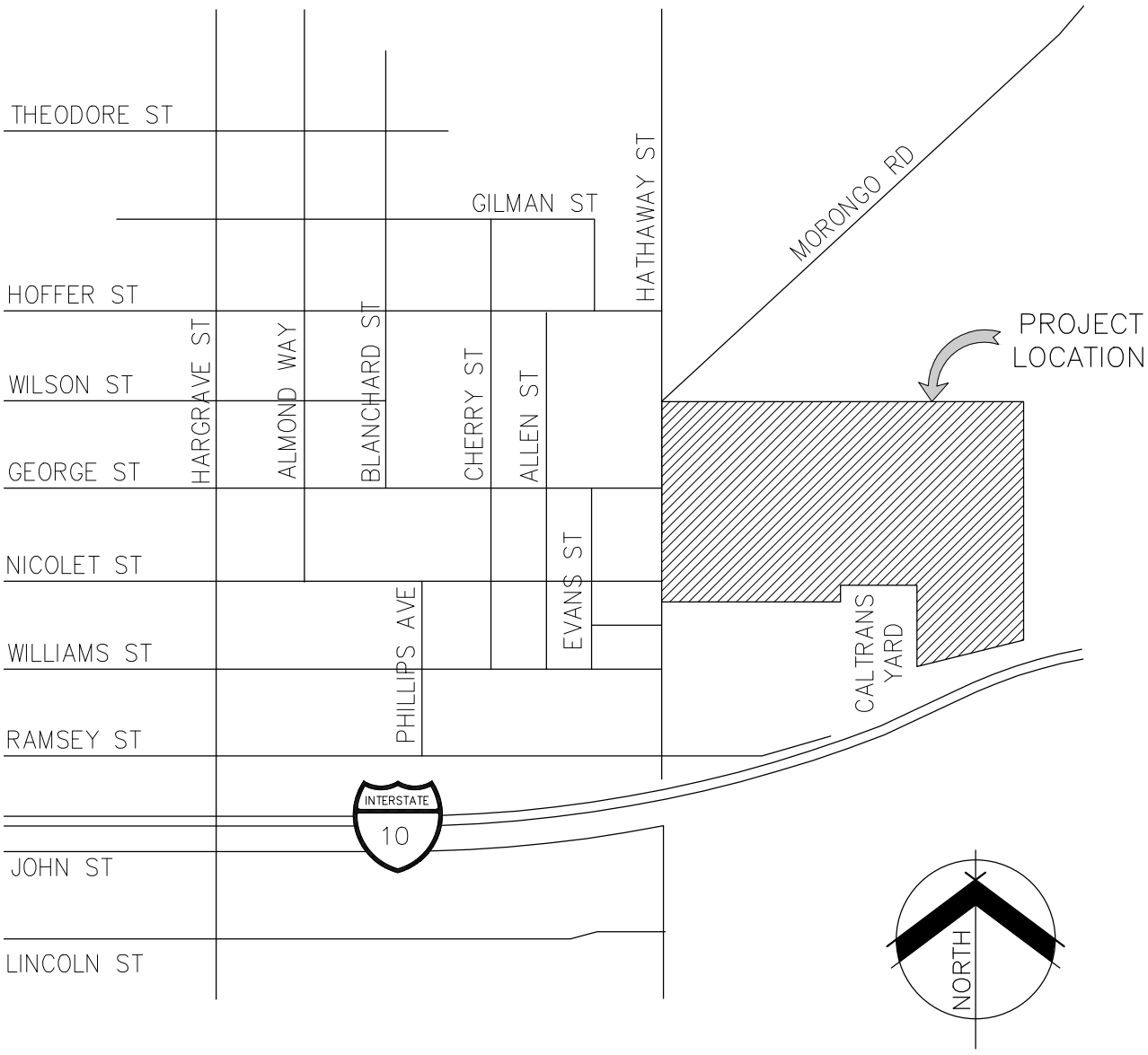
9. The applicant, and his or her consultant team, are encouraged to coordinate with the Department of Public Works –Engineering Division as to the schedule of submittal requirements for grading, street improvement, signing and striping, storm drain improvement, street lighting, water improvement, sewer improvement, and electrical improvement plans. **Please note these plans must be approved prior to the issuance of any building permit.**

10. After construction documents have been approved by the Building Division, permits issued, work completed and inspected, and permits finalized by all departments, the Community Development Department will issue a Certificate of Occupancy will be issued.

The above steps may vary depending upon the types of applications filed and completeness of said applications.

Appendix B

Vicinity Map
APN Ownership Map
Tentative Parcel Map
Preliminary WQMP Site Plan
Receiving Waters Map
WQMP DMA Map
Preliminary Grading Plan Exhibit



THOMAS BROS. MAP GUIDE BOOK QUADRANTS
PAGES 722, SEC D-2, D-3 AND E-2, E-3, SEC A-3
2008 EDITION

VICINITY MAP

NOT TO SCALE

WQMP Exhibit "A"

PREPARED BY:

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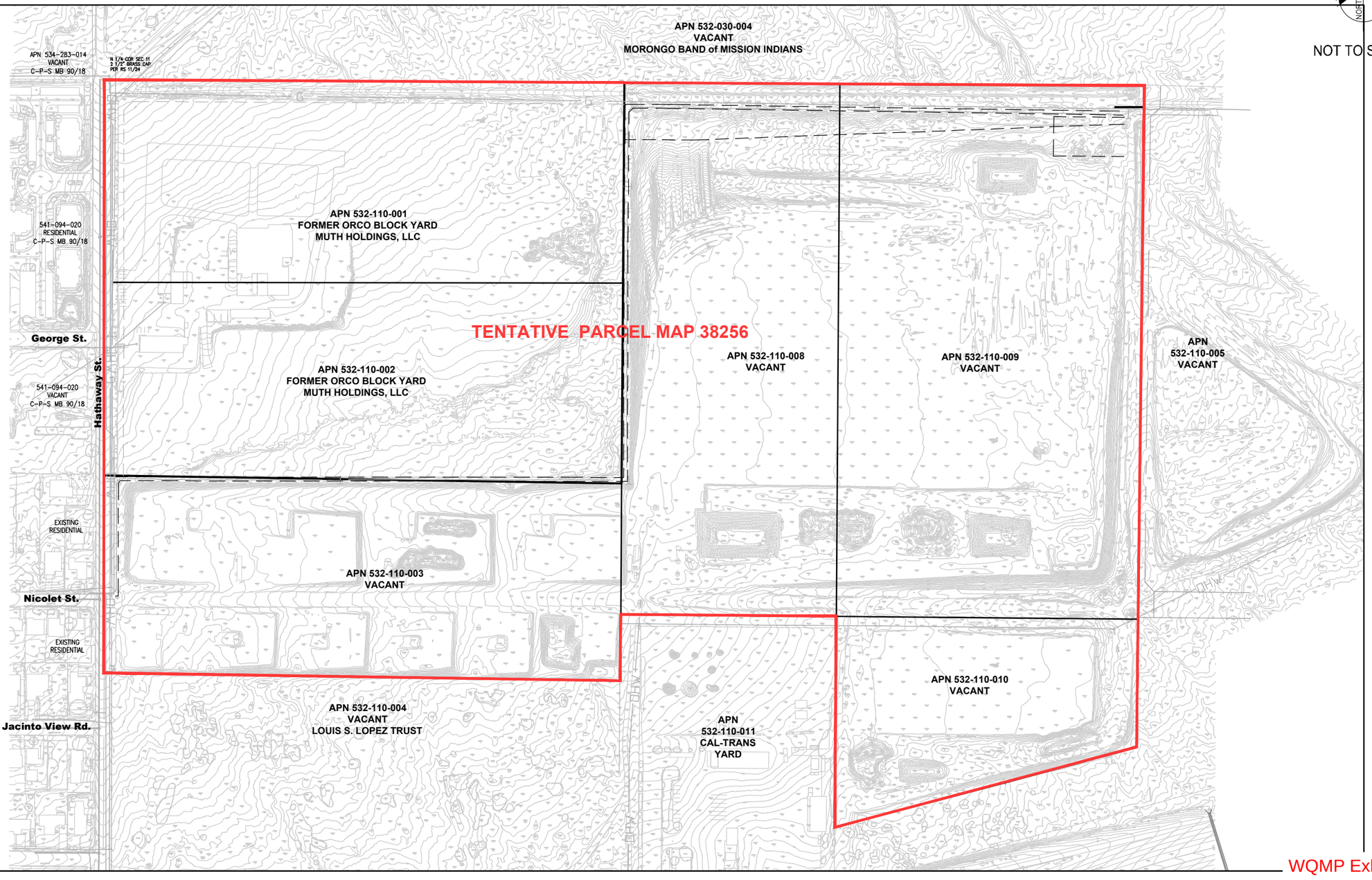
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
909.335.6116 stantec.com

PREPARED FOR:

First Industrial Realty
898 N. Pacific Coast Hwy., Suite 175
El Segundo, CA 90245
PH: (310) 606-1634

First Industrial Logistics
BANNING, CALIFORNIA
Tentative Parcel Map 38256
Parcels 1 thru 3

NOT TO SCALE



WQMP Exhibit "B"

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735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
909.335.6116 stantec.com

PREPARED FOR:
First Industrial Realty
898 N. Pacific Coast Hwy., Suite 175
El Segundo, CA 90245
PH: (310) 606-1634

FIRST HATHAWAY LOGISTICS
ASSESSOR PARCEL LISTINGS
TENTATIVE PARCEL MAP 38256
BANNING, CALIFORNIA

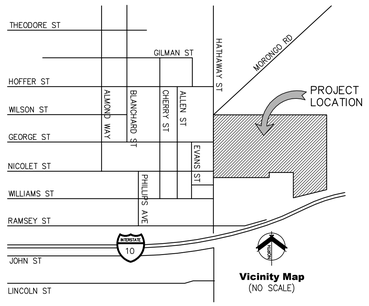
WQMP# _____

SHEET 1 OF 1

NOVEMBER 2021

IN THE CITY OF BANNING, STATE OF CALIFORNIA

TENTATIVE PARCEL MAP NO. 38256



OWNER:
FR HATHAWAY, LLC.
898 N. SEPULVEDA BLVD., SUITE 175
EL SEGUNDO, CA 90245

DEVELOPER:
FIRST INDUSTRIAL REALTY TRUST, INC.
898 N. SEPULVEDA BLVD., SUITE 175
EL SEGUNDO, CA 90245
(310) 606-1634

ENGINEER / REP.
STANTEC CONSULTING, INC.
735 E. CARNEGIE DRIVE, SUITE 280
SAN BERNARDINO, CA 92408
ATT: STEPHEN CREVOISERAT, PE.
R.C.E. # 78576
(909) 255-8235

ASSESSOR'S PARCEL NO:
ASSESSOR'S PARCEL NO: 532-110-001, 002, 003, 008, 009 & 010

ACREAGE:
TOTALS:
GROSS: 94.86 AC.
NET: 84.12 AC.

ZONING DATA:
EXISTING GENERAL PLAN: BUSINESS PARK
EXISTING ZONE: BP
PROPOSED GENERAL PLAN: BUSINESS PARK
PROPOSED ZONE: BP

LAND USE:
EXISTING: VACANT
PROPOSED: INDUSTRIAL
EXISTING SURROUNDING LAND USE: INDUSTRIAL, RESIDENTIAL

LEGAL DESCRIPTION:
A PORTION OF THE NORTHWEST 1/4 OF SECTION 11, TOWNSHIP 3 SOUTH, RANGE 1 EAST, SAN BERNARDINO BASE AND MERIDIAN.

BENCH MARK:
BM-DX3470 ELEVATION= 2118.09' NAVD88
PER NATIONAL GEODETIC SURVEY (NGS) DATA SHEET.

TOPOGRAPHY SOURCE:
ROBERT J. LUNG & ASSOCIATES, 3/19/21

FLOOD ZONE DESIGNATION:
THE AREA OF LAND SHOWN DOES NOT LIE WITHIN A FLOOD ZONE.

GENERAL NOTES:
1. TOTAL NUMBER OF LOTS: 7 (3 PARCELS AND 4 LETTERED LOTS)
2. THERE ARE NO KNOWN EXISTING WELLS ON THE PROPERTY OR WITHIN 200' OF THE PROJECT.
3. THERE IS ONE EXISTING BUILDING ON THE PROPERTY.

SCHOOL:
BANNING UNIFIED SCHOOL DISTRICT
161 W. WILLIAMS ST.
BANNING, CA 92220
PH. (909) 922-0200

UTILITIES:
WATER/SEWER:
CITY OF BANNING, PUBLIC WORKS
99 EAST RAMSEY ST.
BANNING, CA 92220
(951) 922-3130

ELECTRIC:
CITY OF BANNING, ELECTRIC UTILITY
99 EAST RAMSEY ST.
BANNING, CA 92220
(951) 922-3260

GAS:
SO. CAL GAS
155 SOUTH G. STREET
SAN BERNARDINO, CA 92410
(877) 238-0092

STORM DRAIN:
R.C.F.C.D. (AND CITY PUBLIC WORKS)
1995 MARKET STREET
RIVERSIDE, CA 92501
(909) 955-1200

TELEPHONE:
VERIZON
(800) 483-4000

TV:
TIME WARNER CABLE
300 S. HIGHLAND SPRINGS AVE., SUITE 10 B
BANNING, CA 92220
(760) 340-2225

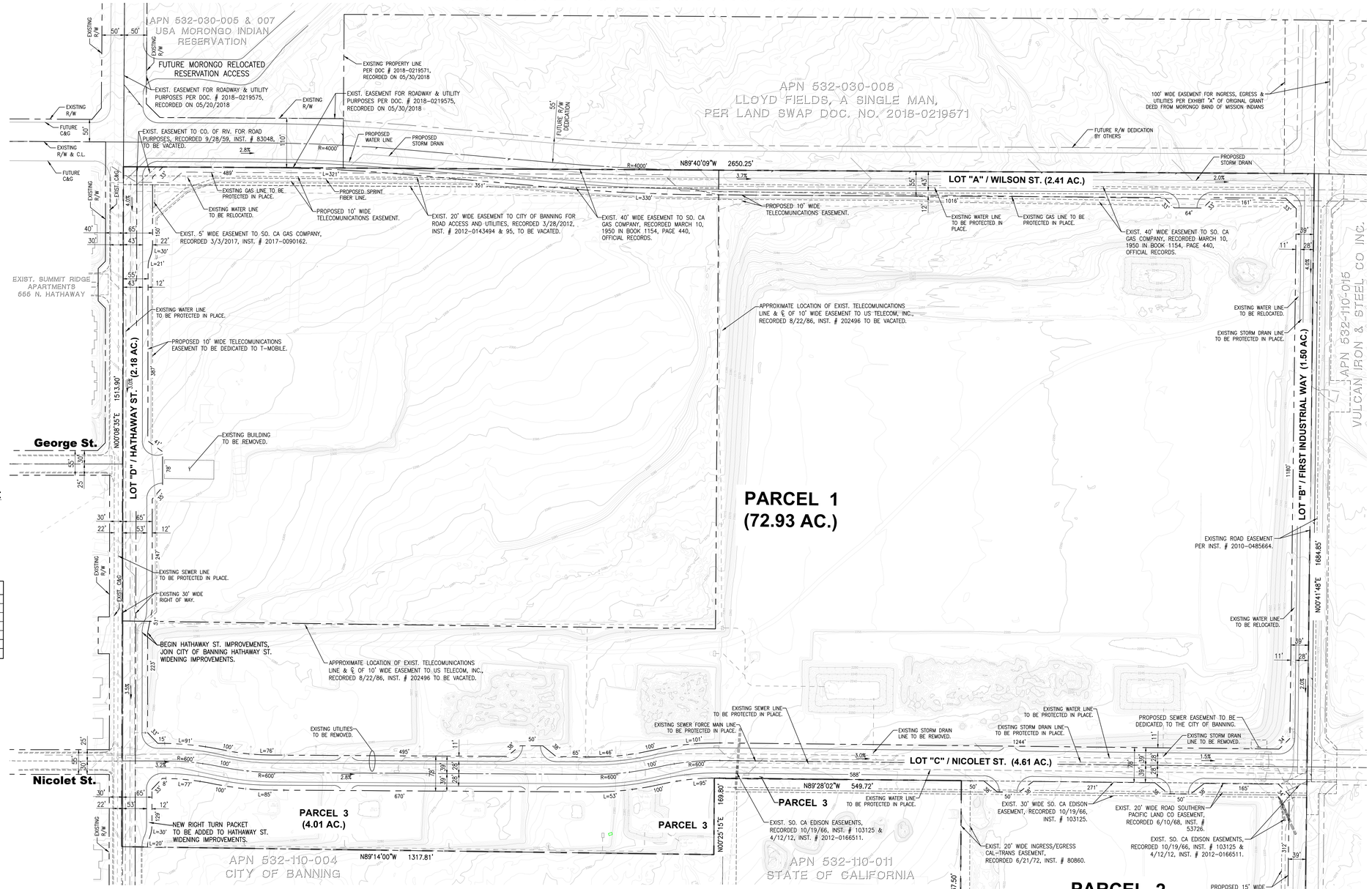
TRASH:
WASTE MANAGEMENT OF INLAND EMPIRE
800 SOUTH TEMESCAL ST.
CORONA, CA 92879
(951) 280-5440

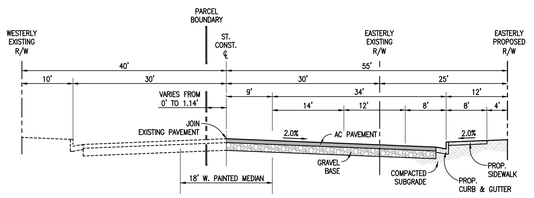
EARTHWORK QUANTITIES:

CUT = 950,000 C.Y.
FILL = 950,000 C.Y.

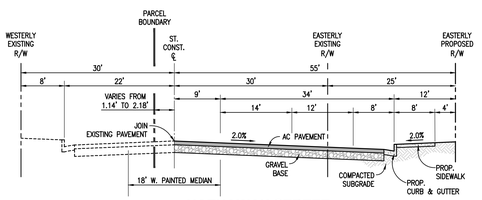
SEE GRADING ON SHEET 2.

PARCEL	AREA	LOT	AREA
1	72.89 AC	LOT "A"-WILSON ST.	2.40 AC
2	7.22 AC	LOT "B"-FIRST I. WAY	1.50 AC
3	4.01 AC	LOT "C"-NICOLET ST.	4.60 AC
		LOT "D"-HATHAWAY ST.	2.24 AC
TOTAL: 84.12 AC		TOTAL: 10.74 AC	
GRAND TOTAL: 94.86 AC			

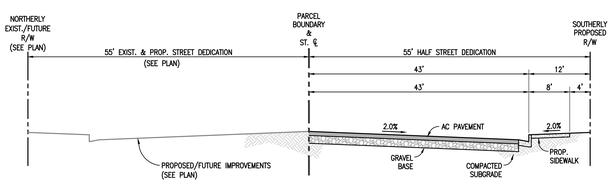




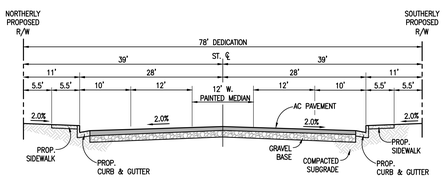
HATHAWAY STREET
ARTERIAL HIGHWAY
NORTH OF GEORGE ST.



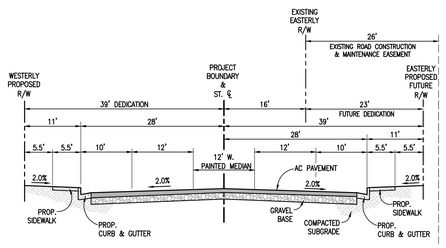
HATHAWAY STREET
ARTERIAL HIGHWAY
SOUTH OF GEORGE ST.



WILSON STREET
ARTERIAL HIGHWAY



NICOLET STREET
COLLECTOR STREET



FIRST INDUSTRIAL WAY
COLLECTOR STREET

LEGEND
- MAP BOUNDARY
- PARCEL LINE
- FUTURE R/W
- EXISTING R/W
- PROP. CURB
- PROP. STREET ℄

INTERSTATE 10

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

JUNE, 2023

PREPARED FOR:
FIRST INDUSTRIAL REALTY TRUST
FIRST INDUSTRIAL ACQUISITION II, LLC
898 N. PACIFIC COAST HWY., SUITE 175
EL SEGUNDO, CA 90245 PH: (310) 606-1634

PREPARED BY:
Stantec
735 E. CARNEGIE DRIVE, SUITE 280
SAN BERNARDINO, CA 92408
909.335.6116 stantec.com

REGISTERED PROFESSIONAL ENGINEER STANLEY C. CREVOISERAT 78576 CIVIL STATE OF CALIFORNIA

CITY OF BANNING
RECOMMENDED FOR APPROVAL BY:
KEVIN D. SIN, RCE # 71299 EXP. DATE
SENIOR CIVIL ENGINEER
RECOMMENDED FOR APPROVAL BY:
NATHAN SMITH, RCE # EXP. DATE
ASST. PWD/CITY ENGINEER

TENTATIVE PARCEL MAP NO. 38256

2042611700

HORIZONTAL SCALE: 1" = 100' VERTICAL SCALE: N/A

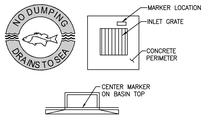
SHEET 1 OF 1

DRAWING: c:\2042\active\2042611700\drawing\exhibit files\611700c-px7004.dwg PLOTTED: 6/22/2023 7:48 AM BY: Sainz, Victor

WQMP Exhibit "C"

SOURCE CONTROL BMPs

(A) ATTACH ALMETEK STORM WATER PLACARDS TO ALL PUBLIC CATCH BASINS AND PRIVATE DRAINAGE INLETS AT THE LOCATION INDICATED BELOW.



(B) TRASH ENCLOSURE TO BE PAVED AND PLACED ON A RAISED PAD. THE ENCLOSURE SHALL BE ROOFED WITH A CANOPY STYLED COVER.

(C) ALL PAVED AREAS AND LOADING DOCKS ON SITE SHALL BE KEPT CLEAN AND REGULARLY MAINTAINED. VACUUM SWEEPING AND CLEARING OF DEBRIS SHALL OCCUR ON A WEEKLY BASIS.

(D) INLETS SHALL BE INSPECTED FOR DEBRIS ON A MONTHLY BASIS. SEDIMENT AND SLUDGE SHALL BE REMOVED ON A BI-ANNUAL BASIS.

(E) FACILITY TO BE MAINTAINED PER MANUFACTURER RECOMMENDATIONS LISTED IN EXHIBIT "MO-CDS" PROVIDED IN APPENDIX F OF THIS PWQMP.

(F) ALL LANDSCAPED AREAS OF THE SITE SHALL BE MAINTAINED TO PREVENT EROSION DAMAGE, MAINTENANCE WASTE AND PESTICIDE/HERBICIDE RESIDUES FROM FLOWING INTO STORM DRAIN INLETS.

(G) IRRIGATION SYSTEM SHALL BE MAINTAINED TO MINIMIZE RUNOFF INTO STORM DRAINS THROUGH REGULAR INSPECTION, ADJUSTMENT OF IRRIGATION FREQUENCY/DURATION AND REPAIR/REPLACEMENT OF EQUIPMENT.

(H) FACILITY TO BE MAINTAINED PER MANUFACTURER RECOMMENDATIONS LISTED IN EXHIBIT "MO-CDS" PROVIDED IN APPENDIX F AND PAGE 1-28 OF THIS PWQMP.

(I) FACILITY TO BE MAINTAINED PER MANUFACTURER RECOMMENDATIONS LISTED ON PAGE 1-28 OF THIS PWQMP.

INDICATES INLET/CATCH BASIN LOCATION WHERE:
A) METAL PLACARDS WITH "NO DUMPING MESSAGE" TO BE INSTALLED PER SOURCE CONTROL ITEM A ABOVE.
B) INSPECTION /MAINTENANCE PER SOURCE CONTROL ITEM D ABOVE.

INDICATES LOCATION OF PUBLIC FACILITY CATCH BASIN WHERE:
A) METAL PLACARDS WITH "NO DUMPING MESSAGE" TO BE INSTALLED PER SOURCE CONTROL ITEM A ABOVE.

INDICATES LOCATION OF PUBLIC FACILITY TRASH SCREENING DEVICE.
1. THE TRASH TREATMENT CONTROL DEVICE SHALL INTERCEPT ALL PARTICLES 5MM OR GREATER.
2. MANUFACTURER OF TRASH CONTROL DEVICES TO BE SPECIFIED IN FINAL WQMP DOCUMENT. THE TREATMENT CONTROL DEVICE SHALL BE SELECTED FROM THE CERTIFIED LIST FOR FULL CAPTURE, AS APPROVED BY STATE WATER RESOURCES CONTROL BOARD.

INDICATES PRETREATMENT LOCATION WHERE:
A) PRETREATMENT BMP FACILITIES TO BE MAINTAINED PER SOURCE CONTROL ITEM E ABOVE.

INDICATES LOCATION OF TRASH CAPTURE INLET FILTER
1. MANUFACTURER OF TRASH CONTROL DEVICES TO BE SPECIFIED IN FINAL WQMP DOCUMENT. THE TREATMENT CONTROL DEVICE SHALL BE SELECTED FROM THE CERTIFIED LIST FOR FULL CAPTURE, AS APPROVED BY STATE WATER RESOURCES CONTROL BOARD.

USA MORONGO INDIAN RESERVATION

PER LAND SWAP DOC. NO. 2015-0219071

WILSON STREET (PUBLIC)

PROPOSED COLLECTOR SD FOR BYPASS FLOW (TYP)

PROPOSED LID FEATURE

SITE DESIGN BMP

OFFLINE TREATMENT BMP HYDRO SEPARATOR UNIT AND BYPASS SD MANHOLE

RETENTION CHAMBERS (H)

EXISTING BASIN (TBR)

OFFICE

BUILDING AREA
1,407,230 S.F.

HATHAWAY STREET (PUBLIC)

FIRST INDUSTRIAL WAY (PUBLIC)

SITE DESIGN BMP

NICOLET STREET (PUBLIC)

OPEN SPACE -NATIVE (F)

INFILTRATION BASIN D (I)

DEBRIS SEDIMENT FOREBAY

PARKING LOT

PROPOSED INFILTRATION BASIN C (I)

LEGEND

(TBR)	TO BE REMOVED
	EXISTING STORM DRAIN (TO REMAIN)
	EXISTING STORM DRAIN (TO BE REMOVED OR ABANDONED)
	PROPOSED STORM DRAIN (PUBLIC)
	EXISTING BASIN
	PROPOSED LID FEATURE
	AC PAVING (PUBLIC STREETS)

SCALE: 1"=60'

PREPARED BY: Stantec
735 E. CARNEGIE DRIVE, SUITE 280
SAN BERNARDINO, CA 92408
909.335.6716 stantec.com

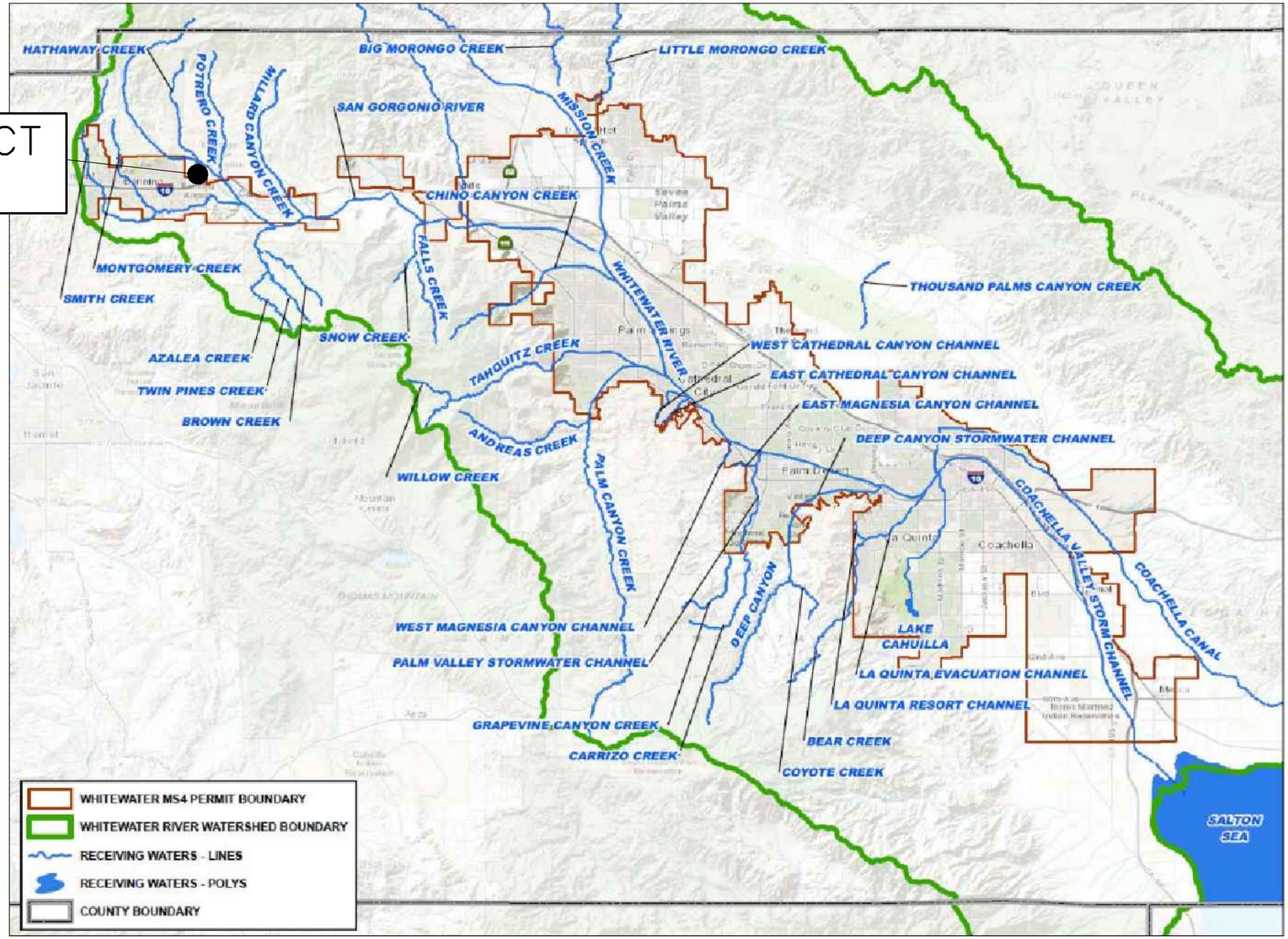
PREPARED FOR: FIRST INDUSTRIAL REALTY TRUST
FIRST INDUSTRIAL ACQUISITION II, LLC
898 N. PACIFIC COAST HWY., SUITE 175
EL SEGUNDO, CA 90245 PH: (310) 606-1634

FIRST HATHAWAY LOGISTICS CENTER
PWQMP SITE PLAN
BANNING, CALIFORNIA

DATE: 06/30/2023
SHEET 1 OF 1
JOB NO. 2042611700

WQMP Exhibit "D"

PROJECT SITE



NORTH

NOT TO SCALE

IMAGE SOURCE: 2015 WHITE WATER RIVER REGION WQMP GUIDANCE DOCUMENT

WQMP Exhibit "E"

Stantec
735 E. Carnegie Drive, Suite 280
San Bernardino, CA 92408
909.335.6116 stantec.com

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First Industrial Realty
898 N. Pacific Coast Hwy., Suite 175
El Segundo, CA 90245
PH: (310) 606-1634

FIRST HATHAWAY LOGISTICS
RECEIVING WATERS
TENTATIVE PARCEL MAP 38256
BANNING, CALIFORNIA

WQMP# _____

SHEET 1 OF 1

NOVEMBER 2021

WILSON STREET (PUBLIC)

COLLECTOR SD FOR BYPASS FLOW (TYP)

SITE DESIGN BMP

SITE DESIGN BMP

SITE DESIGN BMP

SITE DESIGN BMP

SITE DESIGN BMP

RETENTION CHAMBERS
Minimum Vol=6.4 AC-FT

420'

65'

OFFICE

OFFICE

SITE DESIGN BMP

SITE DESIGN BMP

DMA A

BUILDING AREA
1,407,230 S.F.

HATHAWAY STREET (PUBLIC)

DMA C

DMA D

OFFICE

OFFICE

SITE DESIGN BMP

LID LANDSCAPED SWALE

FIRST INDUSTRIAL WAY (PUBLIC)

SITE DESIGN BMP

NICOLET STREET (PUBLIC)

COLLECTOR SD FOR BYPASS FLOW (TYP)

OPEN SPACE NATIVE

RETENTION CHAMBERS
Minimum Vol=1.0 AC-FT

240'

30'

INFILTRATION BASIN "D"
Minimum Vol=1.3 AC-FT
D=3'

PROVIDE 1' WIDE CURB OPENINGS EVERY 10' (O.C.)

SITE DESIGN BMP

PARKING LOT

340'

RETENTION CHAMBERS
Minimum Vol=4.0 AC-FT

65'

PROVIDE 1' WIDE CURB OPENINGS EVERY 10' (O.C.)

INFILTRATION BASIN "C"
Minimum Vol=3.4 AC-FT
D=4'

DMA A	
LANDSCAPE:	6.9 AC
IMPERVIOUS (PAVING):	7.0 AC
IMPERVIOUS (BLDG.):	16.0 AC
TOTAL:	33.3 AC

DMA C	
LANDSCAPE:	5.1 AC
IMPERVIOUS (PAVING):	15.9 AC
IMPERVIOUS (BLDG.):	15.0 AC
LID BASIN:	2.3 AC
TOTAL:	38.3 AC

DMA D	
LANDSCAPE:	3.6 AC
PERVIOUS OPEN SPACE:	0.7 AC
IMPERVIOUS (PAVING):	6.7 AC
IMPERVIOUS (BLDG.):	0.1 AC
LID BASIN:	0.9 AC
TOTAL:	12.0 AC

PUBLIC	
ROADWAYS/ SIDEWALKS	11.0 AC
TOTAL:	11.0 AC

LEGEND

- LANDSCAPE AREAS
- DMA A
- DMA C
- DMA D
- DETENTION / INFILTRATION BASIN
- UNDERGROUND DETENTION / INFILTRATION BASIN
- OPEN SPACE - NATIVE COVER
- STORM DRAIN INLET
- STORM DRAIN CATCH BASIN
- STORM DRAIN STRUCTURE
- DIRECTION OF SURFACE FLOW
- DIRECTION OF STORM DRAIN PIPE FLOW
- ON-SITE STORM DRAIN (PRIVATE)
- PUBLIC STORM DRAIN (PROPOSED)
- PUBLIC STORM DRAIN (TO REMAIN)

60 30 0 60 120
SCALE: 1"=60'

PREPARED BY:
Stantec
735 E. CARNEGIE DRIVE, SUITE 280
SAN BERNARDINO, CA 92408
909.335.6116 stantec.com

PREPARED FOR:
FIRST INDUSTRIAL REALTY TRUST
FIRST INDUSTRIAL ACQUISITION II, LLC
898 N. PACIFIC COAST HWY., SUITE 175
EL SEGUNDO, CA 90245 PH: (310) 606-1634

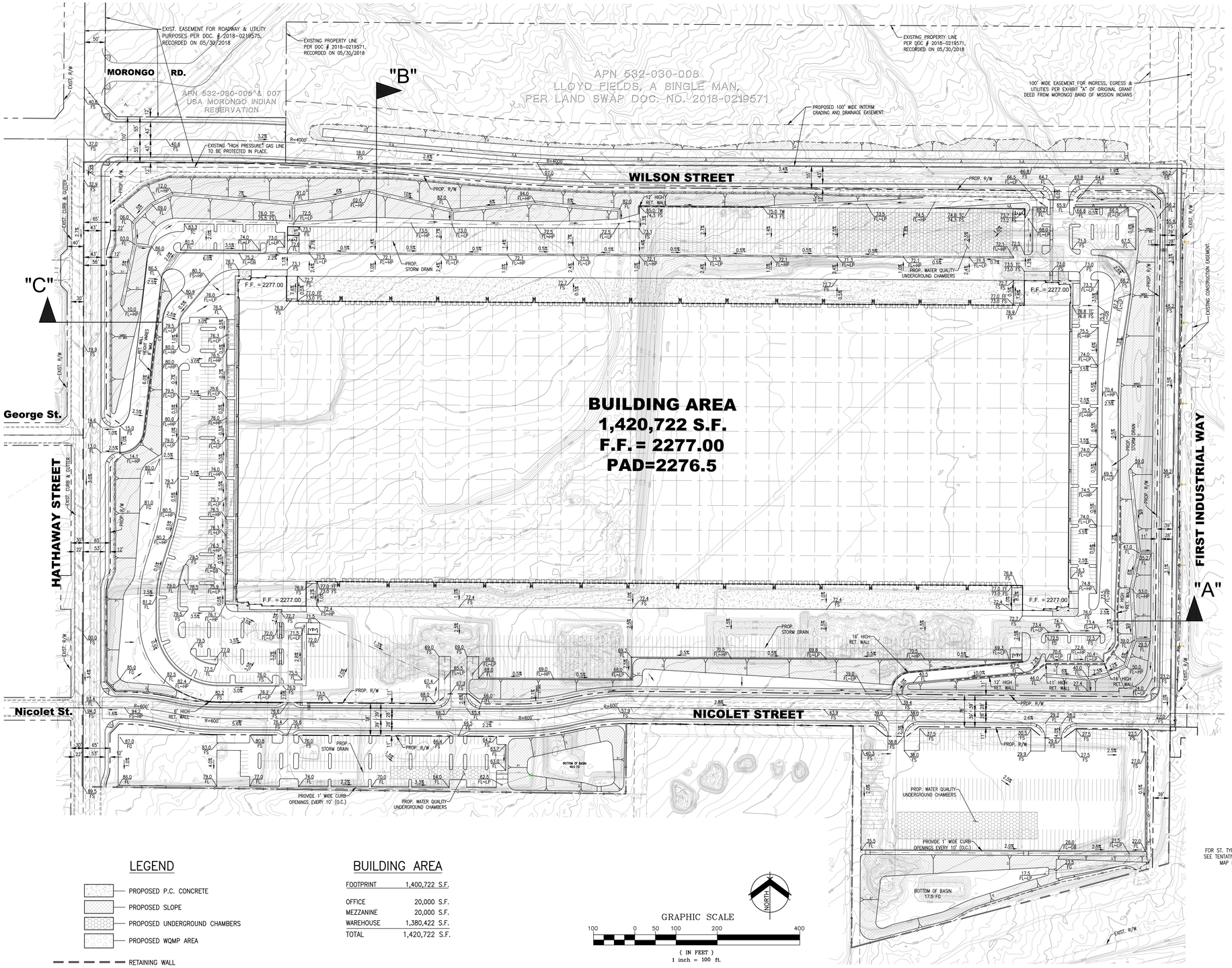
FIRST HATHAWAY LOGISTICS CENTER
PWQMP DMA EXHIBIT
BANNING, CALIFORNIA

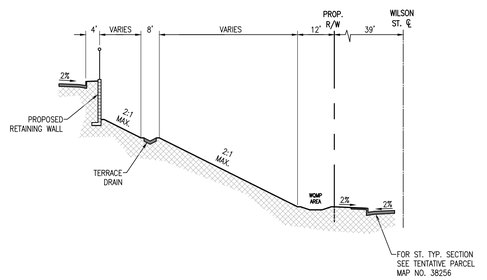
DATE: 6/6/2023
SHEET 1 OF 1
JOB NO. 204211700

WQMP Exhibit "F"

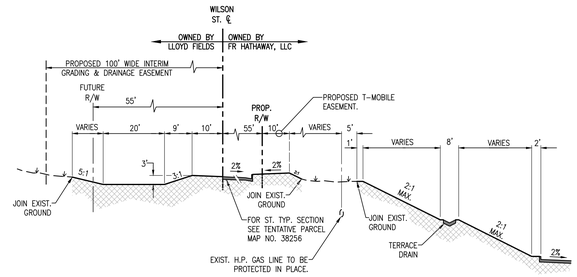
DRAWING: x:\204211700\engineering\wqmp_files\211700c-wqmp04.dwg, 7/12/2023 12:48 PM, Brian Ellis, Stantec

PRELIMINARY GRADING EXHIBIT
FOR
TENTATIVE PARCEL MAP NO. 38256

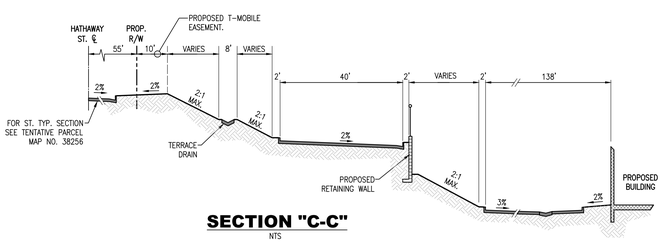




SECTION "A-A"
NTS



SECTION "B-B"
NTS



SECTION "C-C"
NTS

LEGEND

- PROPOSED P.C. CONCRETE
- PROPOSED SLOPE
- PROPOSED UNDERGROUND CHAMBERS
- PROPOSED WQMP AREA
- RETAINING WALL
- MAP BOUNDARY
- PROPOSED R/W
- PROP/EXIST. ST. ℄

BUILDING AREA

FOOTPRINT	1,400,722 S.F.
OFFICE	20,000 S.F.
MEZZANINE	20,000 S.F.
WAREHOUSE	1,380,422 S.F.
TOTAL	1,420,722 S.F.

NORTH

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

WQMP Exhibit "G"

JUNE, 2023

PREPARED FOR:
FIRST INDUSTRIAL REALTY TRUST
FIRST INDUSTRIAL ACQUISITION II, LLC
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SENIOR CIVIL ENGINEER

RECOMMENDED FOR APPROVAL BY:
NATHAN SMITH, RCE # EXP. DATE
ASST. PWD/CITY ENGINEER

PRELIMINARY GRADING EXHIBIT
FOR
TENTATIVE PARCEL MAP NO. 38256

2042611700

HORIZONTAL SCALE: 1" = 100' VERTICAL SCALE: N/A

SHEET 1 OF 1

Appendix C

Supporting Detail Related to Hydrologic Conditions of Concern

NOT REQUIRED:

This Project meets the City's local Stormwater Ordinance requirement for retention of the post-construction, 100-year 3-hour design storm event runoff, and therefore this section is not required.

Appendix D

Educational Materials

Appendix D

Table of Contents

1.0 GENERAL INFORMATION

After the Storm
The Ocean Begins at Your Front Door
When It Rains, It Drains
The Ocean is Close Than You Think
Common Pollutants and Non-Industrial Pollutant Sources Associated with Urban Runoff
Storm Drains are for Rain – they're not recycling centers
Quick Reference Table for Disposal Alternatives

Why is stormwater runoff a problem?

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

What is stormwater runoff?

Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground. Impervious surfaces like driveways, sidewalks, and streets prevent stormwater from naturally soaking into the ground.

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

After the Storm

For more information contact:

or visit
www.epa.gov/npdes/stormwater
www.epa.gov/nps

EPA 833-B-03-002

January 2003

Internet Address (URL) • HTTP://www.epa.gov
Recycled/Recyclable • Printed With Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper

A Citizen's Guide to Understanding Stormwater

Stormwater Pollution Solutions

Residential

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

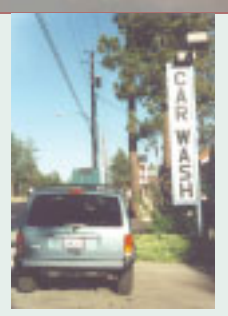
- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Auto care



Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from rooftop areas or paved areas can be diverted into these areas rather than into storm drains.

Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

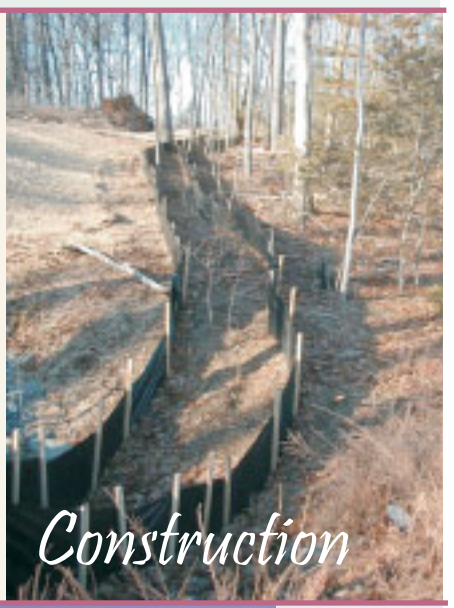
Commercial

Dirt, oil, and debris that collect in parking lots and paved areas can be washed into the storm sewer system and eventually enter local waterbodies.

- Sweep up litter and debris from sidewalks, driveways and parking lots, especially around storm drains.
- Cover grease storage and dumpsters and keep them clean to avoid leaks.
- Report any chemical spill to the local hazardous waste cleanup team. They'll know the best way to keep spills from harming the environment.

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies.

- Divert stormwater away from disturbed or exposed areas of the construction site.
- Install silt fences, vehicle mud removal areas, vegetative cover, and other sediment and erosion controls and properly maintain them, especially after rainstorms.
- Prevent soil erosion by minimizing disturbed areas during construction projects, and seed and mulch bare areas as soon as possible.



Construction

Agriculture

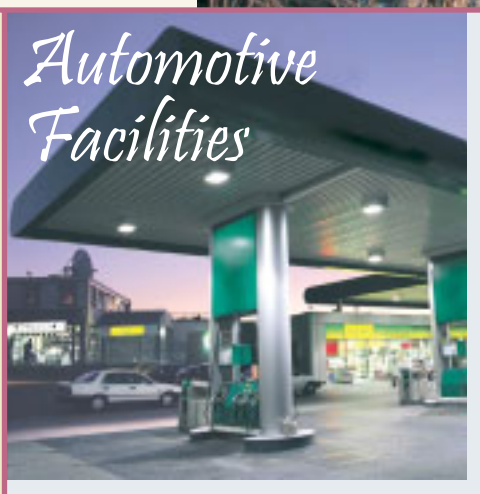
Lack of vegetation on streambanks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. Excess fertilizers and pesticides can poison aquatic animals and lead to destructive algae blooms. Livestock in streams can contaminate waterways with bacteria, making them unsafe for human contact.

- Keep livestock away from streambanks and provide them a water source away from waterbodies.
- Store and apply manure away from waterbodies and in accordance with a nutrient management plan.
- Vegetate riparian areas along waterways.
- Rotate animal grazing to prevent soil erosion in fields.
- Apply fertilizers and pesticides according to label instructions to save money and minimize pollution.

Forestry

Improperly managed logging operations can result in erosion and sedimentation.

- Conduct preharvest planning to prevent erosion and lower costs.
- Use logging methods and equipment that minimize soil disturbance.
- Plan and design skid trails, yard areas, and truck access roads to minimize stream crossings and avoid disturbing the forest floor.
- Construct stream crossings so that they minimize erosion and physical changes to streams.
- Expedite revegetation of cleared areas.



Automotive Facilities

Uncovered fueling stations allow spills to be washed into storm drains. Cars waiting to be repaired can leak fuel, oil, and other harmful fluids that can be picked up by stormwater.

- Clean up spills immediately and properly dispose of cleanup materials.
- Provide cover over fueling stations and design or retrofit facilities for spill containment.
- Properly maintain fleet vehicles to prevent oil, gas, and other discharges from being washed into local waterbodies.
- Install and maintain oil/water separators.

2.0 RECYCLING

Precyclin Rx for Living
The Solution is to Recycle

Precyclin®

℞ for living

- ✓ Reduce
- ✓ Reuse
- ✓ Recycle

California Integrated Waste Management Board

Precyclin®

℞ for living

Precyclin® isn't a product. It's not a thing.

You can't buy it. It's not for sale.

It's good medicine and we want you to use it.

But you can't take it.

So what is it exactly?

- Precycling means considering the waste implications of your purchases. In other words: Reduce waste before you buy.
- Every product we consume in our daily routine creates waste. That's bad.
- We can recycle some of the waste. That's good.
- But what if we made a conscious effort to create less waste? That would be good medicine for living and even better medicine for the environment.

Read on for some helpful tips about preserving resources and minimizing waste.

You can probably think of some tips of your own. If you practice these tips you will truly be a precycler, and make a difference!

For More Information

For details on source reduction, recycling and composting, contact the California Integrated Waste Management Board at 916-322-3330. Helpful fact sheets and other information are available.

Call our Recycling Hotline toll-free:
1-800-553-2962

Monday through Friday,
7:30 a.m. — 5:30 p.m.

We can also provide details on convenient recycling centers and local household hazardous waste activities.

California Integrated Waste Management Board
1020 Ninth Street, Suite 100
Sacramento, CA 95814

Here's How You Can Precycle

- Be a "Waste-Aware" consumer (see below).
- Use products which can be reused and repaired, rather than "disposable" products used for the sake of convenience.
- Practice source reduction in the work place. For example, use recycled paper products, make double-sided copies, and reuse scrap paper and manila envelopes.
- Be an example for others. Good ideas catch on!
- Continue to recycle paper, glass, plastic, aluminum and other recyclables.

The "Waste-Aware" Consumer

Here are some pointers for the "waste-aware" shopper to consider:

- Purchase products made from recycled and recyclable materials.
- Buy items such as flour, pasta, rice or cereal in bulk and store them in durable containers. Buying products in larger sizes is more economical and reduces packaging.
- Use durable products such as reusable cups and utensils, instead of paper, plastic or foam containers.
- Look for multiple-use products such as refillable pens, beverage containers and durable food storage containers.
- Repair things instead of discarding them.
- Landscape with shrubs and plants that require less water and less pruning.

By minimizing waste you:

- Reduce costs for waste collection, transportation, and disposal.
- Enjoy lower product costs.
- Save natural resources.
- Extend the life of our landfills.

Smart Shopper's List

This list provides shopping ideas for the environmentally smart consumer. Remember these important shopping tips:

- bring your cloth shopping bags
- reuse old plastic bags for produce
- don't go to the store hungry
- purchase only what you need

Purchase	Instead of
bulk products	pre-packaged items
concentrated juice	bottled or small packages
sponges, kitchen towels, cloth napkins	paper towels and convenience wipes
"giant economy size"	small packages
recycled paper products	paper made from virgin stock
concentrated cleaners	cleaners pre-mixed and ready to use
brewers yeast, flea comb	flea powder or sprays
reusable or "cartridge" razors	disposable razors
rechargeable batteries	disposable batteries
coffee mugs	polystyrene or paper cups
cloth diapers	disposable diapers
beeswax and linseed oil	furniture polish
baking soda, lemon, vinegar, club soda	caustic cleaners
cedar chips	moth balls
products in recyclable containers	non-recyclable packaging

Printed on Recycled Paper

The Solution Is To Recycle

Marine Debris — A Preventable Sickness

The next time you are out on your boat or casually stroll down a dock, take a look around. Is the water clean, is the shoreline free of debris, is animal life abundant? The answer is probably no. The ocean is threatened. Threatened by a sickness that you can prevent—the dumping of your debris into the water.

The U.S. Coast Guard estimates that over 800 tons of garbage are dumped annually into U.S. waters. California marinas alone, generate 5 to 3,000 tons of garbage per marina each year.

Every time you toss your trash into the ocean you become part of the problem. Your trash could be responsible for the death of an animal, a boating accident, or a polluted beach.

There is a solution — something you can do — stow your trash and recycle it.

Four Easy Steps to Recycling

Successful marine debris recycling requires that you...

1. Stop dumping trash into the ocean. Whether you are on a boat or enjoying the ocean from shore, don't carelessly toss your debris. Every can, cigarette butt, and plastic bag hurts!

2. On shore or at sea, stow your trash and separate recyclable items. You can recycle newspaper, glass jars and bottles, some plastics, paper, aluminum and steel cans, cardboard, scrap metal, wood, oil, batteries, and more. Recent studies indicate that over 60% of a marina's garbage can be recycled. Dispose of your non-recyclable trash in an appropriate receptacle.

3. Take your recyclable items to a recycling center. Centers are available in most communities and many marinas have their own recycling program.

4. Purchase wisely. When you buy new products look for items packaged in recyclable materials, or better yet, purchase reusable items. The less you need to throw away or recycle, the better for the ocean, the environment, and your pocket book.

There are obvious reasons to recycle:

- *saves natural resources*
- *eliminates trash in the ocean*
- *provides an alternative to the use of landfills*

There are also some not so obvious reasons to recycle:

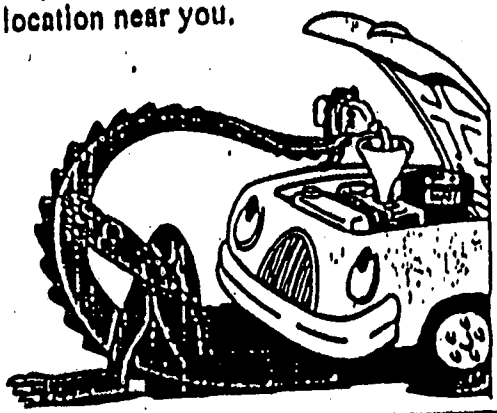
- *provides a cost-effective way to eliminate trash*
- *helps maintain a marina's waste management costs (which eventually come back to you, the consumer)*
- *provides positive PR for you, your vessel, and your marina*

Drain your used oil into a reusable plastic container that has a screw top. Unless the container was previously used to hold motor oil, make sure it is CLEAN before placing your used oil in it.

Do not mix your oil with anything (paint, gasoline, solvents, etc.). In order to be recycled, your used oil must be free of contaminants.

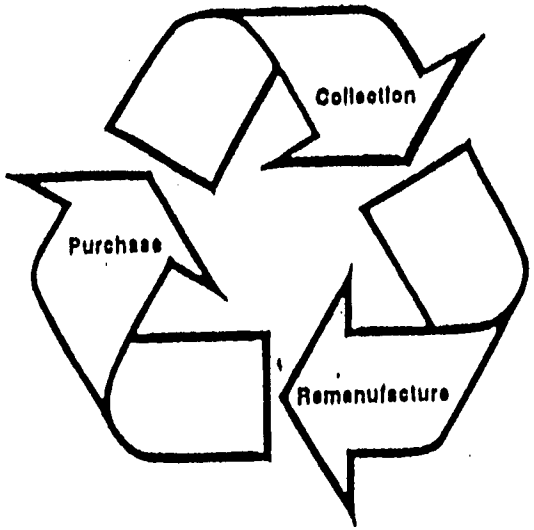
If you're changing your oil filter, drain it completely, seal it in a plastic zip-lock bag, and bring it to a collection center that accepts oil filters for recycling. Not all centers do. Check first!

Bring your used oil to a collection center that recycles it. Call 1-800-RECY OIL for a location near you.



Recycling used oil could reduce petroleum imports by [illegible] million barrels of oil per year, saving 1.3 [illegible] barrels of oil per day.

...AND KEEP A GOOD
THING GOING



The three arrows in the recycling logo represent three steps necessary in closing the recycling loop: collecting the material; re-manufacturing it into a "new" product; and purchasing the product. With used oil, this loop is closed as the oil goes from the collection program, to the manufacturer, to the consumer, and back to the collection program where the process begins again. This is possible because

OIL NEVER WEARS OUT;
IT JUST GETS DIRTY!

Dirty oil can be recycled many times. Re-refined oil can be used for hydraulic and crankcase oil. Ask for re-refined or recycled oil where you shop. Help close the recycling loop and save our natural resources.

It takes only 1 gallon of used oil to produce the same amount of motor oil as 42 gallons of crude oil - while requiring [illegible] bout 1/3 of the energy!

- Used oil is considered a hazardous waste Californin.
- It's against the law to use used motor oil weed abatement activities or dust control Used oil can carry heavy metals and toxi into nearby waterways.
- It's illegal to bury used oil in the ground, b it, or dump it in the trash or down a storm drain or sewer.

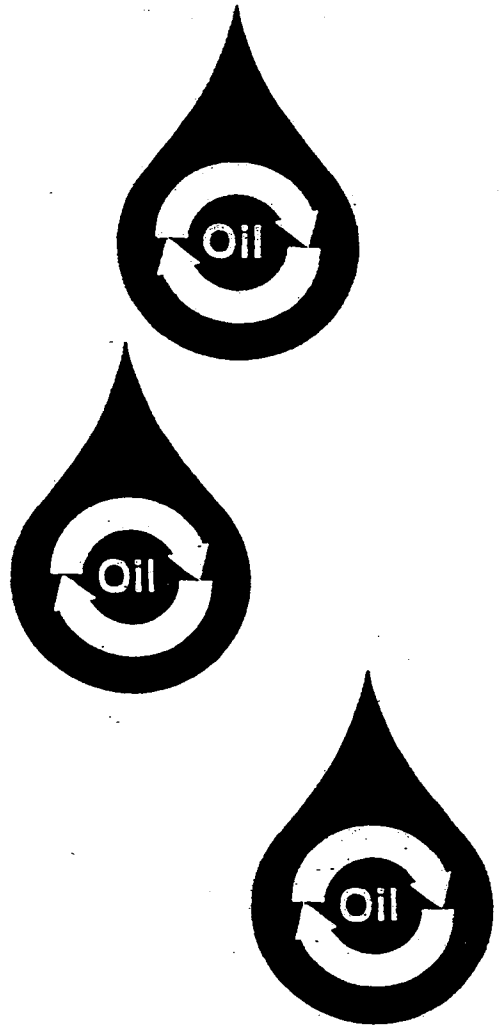
Illegal disposal should be reported to the St at 1-800-69 TOXIC

42% of all used oil available for recycling in California never reaches a recycling facility. Do you know where YOUR used

United States Environmental Protection Agency
EPA/530-SW-89-039B
June 1989
Solid Waste And Emergency Response (OS-305)

EPA Recycling Used Oil

What Can You Do?



The more waste we generate, the more we have to treat, store, and dispose of. So recycling makes more sense today than ever.

Improper waste management costs money—your money! You pay in higher consumer prices, taxes for environmental cleanups, and increased health care costs, when wastes are improperly managed.

Recycling saves money *and* protects the environment. So help be part of the solution, not part of the problem. Recycle used oil and other household materials, such as newspaper, glass, metals, and plastic.

If your community has an oil recycling program, join it. If it doesn't, start one. Write for EPA's manual entitled "How to Set Up A Local Program To Recycle Used Oil" at the address below or call EPA's RCRA/Superfund Hotline at 1-800-424-9346 (in Washington, DC, 382-3000).

Remember:

Environmental quality is everybody's business, and everybody can do a lot to help.

U.S. Environmental Protection Agency
Office of Solid Waste
401 M Street, SW
Washington, DC 20460

Printed on Recycled Paper

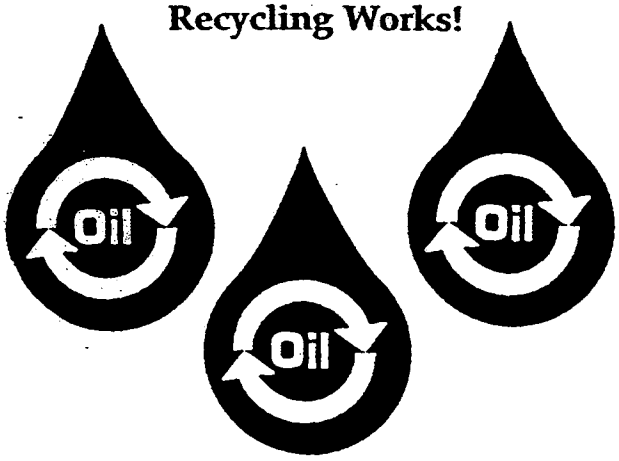
Why Recycling Your Oil Helps The Environment And Saves Energy

o Used oil from a single oil change can ruin a million gallons of fresh water--a year's supply for 50 people. Used oil is insoluble, persistent, and can contain toxic chemicals and heavy metals. It's slow to degrade. It sticks to everything from beach sand to bird feathers. Used oil is a major source of oil pollution in our nation's waterways.

o "Do-it-yourselfers"--consumers who change their own oil--generate at least 200 million gallons of used oil every year. Americans who change their own oil throw away 120 million gallons of recoverable motor oil by dumping it on the ground, by pouring it down stormdrains, or by putting it in trash cans.

o Recycling this oil would save the United States 1.3 million barrels of oil per day. One gallon of used oil provides the same 2.5 quarts of lubricating oil as 42 gallons of crude oil.

Recycling Works!



What Can You Do?

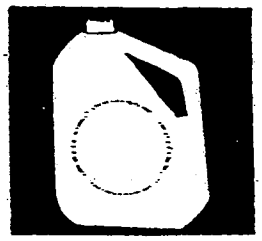
RECYCLE !

Today, almost 60 percent of the nation's automotive oil is changed by consumers themselves.

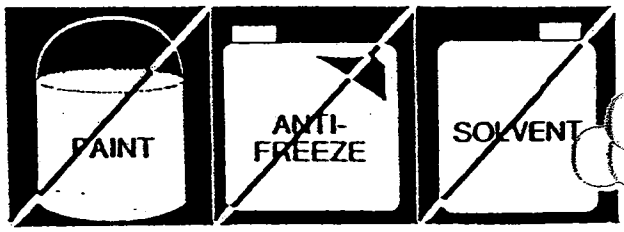
Recycle used oil from cars, trucks, boats, motorcycles, recreational vehicles, and lawnmowers.

It's easy to recycle used oil . . .

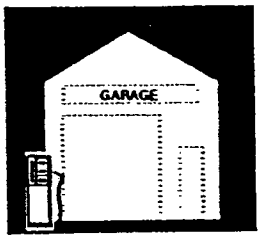
Put your used oil in a clean plastic container with a tight lid.



Don't mix it with anything else (paint, gasoline, solvents, antifreeze, etc.).



Take it to a service station or other location that collects used oil for recycling.



Call your local or state government to find out where.

3.0 PROCEDURES & MAINTENANCE

Copart's Spill Cleanup Policy
Drain System Maintenance (SC-74, CASQA BMP Handbook)
Inlet Cleaning
Spot Cleaning
Catch Basin Cleaning
Housekeeping Practices (SC10, CASQA BMP Handbook)
Building and Grounds Maintenance (SC11, CASQA BMP Handbook)
Spill Prevention (SC-11, CASQA BMP Handbook)
Maintenance Bays & Docks (SD-31, CASQA BMP Handbook)

CASQA: California Stormwater Quality Association

SMALL SPILL CLEAN UP PROTOCOL

A small spill is a spill that is easily contained and does not require use of sock booms. Always follow your company's procedures carefully.

1.0 ALWAYS UTILIZE PERSONAL PROTECTIVE EQUIPMENT (PPE)

1.1 Safety Vest Goggles Gloves
FM 186-2 Sprayer Pads Broom

A - Assess the spill and cone off the area.
B - Be safe – personal and public safety.
C - Clean up properly – follow your company guidelines carefully.
D - Determine waste and dispose of it correctly.

2.0 SPILL CLEAN UP

2.1 Spray the FM 186-2 completely around the spill

2.2 Cover the entire the spill area with the FM 186-2. Use a 1 to 1 ratio (one part FM 186-2 to one part spilled fuel).

2.3 Working from the outside edges first, mix the chemistries by pushing and pulling the solution within the impacted area towards the center of the spill.

2.4 As you mix the FM 186-2 with the spill, you will notice there is a bubbling action that starts to take place. In warmer weather this action may happen relatively quickly and in cooler weather it may be somewhat delayed.

2.5 As you start to mix the chemistries, the first reaction will turn the solution a milky white. Shortly thereafter the "bubbling" becomes quite pronounced.

2.6 Continue mixing until bubbling stops. If there is still bubbling going on, your mixture is incomplete. Remember, the larger the spill, the longer it will take to properly mix in the FM 186-2 chemistry.

2.7 When the bubbling action has stopped, you have successfully completed the reaction. Wait a couple of minutes to assure that the reaction is complete. It is now ready to be sorbed up.

2.8 Lay the sorbent pads in such a manner as to cover the ENTIRE SURFACE of the spilled fuel and allow the pads to sorb up the mixture.

2.9 After a couple of seconds use the brush to move the pads around to assist in this process.

2.10 Leave cones in place until all moisture has evaporated.

2.11 Remember to replace any products used from your spill kit immediately.

Petroleum waste is a presumptive hazardous waste and the users/generators are responsible for proper waste characterization and disposal. Federal and state regulations require generators to determine their waste classification(s). Regulations also allow for prior knowledge of the waste and treatment procedures in determining the waste's classification. The FM 186 program is a treatment procedure that can be applied as part of the prior knowledge package. Nothing herein is to be taken as approvals that <u>all</u> spill materials would be rendered non-hazardous. Ultimately it is up to the generator to determine the resulting clean up material and to dispose of it correctly.

CLEANING UP SMALL SPILLS
ALWAYS WEAR PPE

A small spill is one that is easy to contain. Remember to always wear your personal protective equipment (PPE). **Place one of your vests in the red bag containing your PPE so it will be there when you need to respond to a large spill**.
(See Protocol 1.0 and 1.1)

Circle the spill with FM 186-2 solution. Then spray over the entire spill area. Use a 1:1 ratio or, as much FM 186-2 solution as spilled fuel.
(See Protocol 2.1 and 2.2)

Begin brushing the spill and FM 186-2 solution into the center of the spill area
(See Protocol 2.3)

Hot Tip: Improve your curb appeal by frequently responding to the small drips that occur on a daily basis. Use the methods described.

SMALL SPILLS – Continued

As you mix the FM 186-2 into a spill, you will notice a bubbling action taking place. Continue mixing until the bubbling stops. In warmer weather, this action happens rapidly. In cooler weather, it will happen more slowly. If bubbling action is still happening, the mixing is incomplete - so continue to mix vigorously. REMEMBER: The larger the spill, the longer it will take to properly combine the spilled fuel and the FM 186-2. (See Protocol 2.4 - 2.7)

Lay sorbent pads over the entire spill area and let the pads soak up the mixture. Move the pads around with the broom to assist in this process. (See Protocol 2.8 and 2.9)

Use enough sorbent pads so that none of them are soaked through and dripping. Dispose of the used pads properly. (See Protocol 2.10 – 2.11)

Petroleum waste is a presumptive hazardous waste and the users/generators are responsible for proper waste characterization and disposal. Federal and state regulations require generators to determine their waste classification(s). Regulations also allow for prior knowledge of the waste and treatment procedures in determining the waste's classification. The FM 186 program is a treatment procedure that can be applied as part of the prior knowledge package. Nothing herein is to be taken as approvals that all spill materials would be rendered non-hazardous. Ultimately it is up to the generator to determine the resulting clean up material and to dispose of it correctly.

Emergency Spill Response – Rock and Dirt

The addition of FM 186-2 enhances remediation of the contamination. As with spill procedures, the mixing of the FM 186-2 with the hydrocarbon is important. In addition, turning of the surface by mechanical action increases the oxygen level within the substrate. This enhances natural bacterial growth which is the key to the biodegradation of the contamination. The following procedure should be followed for maximum results.

Assess the extent of the contamination.

This involves assessing both the amount of hydrocarbon and the total area that the hydrocarbon reached.

1. Scar up the area to increase effectiveness.

2. Apply FM 186-2 solution to cover the entire stain in the soil. Apply this evenly over the contaminated area.

3. Mix well with steel rake and reapply FM 186-2 if necessary.

4. Apply a small amount of fertilizer with a number that has a higher nitrogen count than the phosphorous and potassium (NPK). The number should be a 10-5-5 or 20-10-10. Sprinkle over the treated area. Do not add too much fertilizer. You do not want to grow weeds. (**Note:** Be sure that the fertilizer does not contain any additional component that inhibits bacterial growth or contains a weed killer).

5. Keep the soil moist but do not over water. Too much water will slow the remediation process. Add water once a week if it does not rain.

MARK and MONITOR

6. After 30 days, sample the area and evaluate progress. This can be accomplished by noting the absence or presence of hydrocarbon odor. Some discoloration is natural.

Petroleum waste is a presumptive hazardous waste and the users/generators are responsible for proper waste characterization and disposal. Federal and state regulations require generators to determine their waste classification(s). Regulations also allow for prior knowledge of the waste and treatment procedures in determining the waste's classification. The FM 186 program is a treatment procedure that can be applied as part of the prior knowledge package. Nothing herein is to be taken as approvals that all spill materials would be rendered non-hazardous. Ultimately it is up to the generator to determine the resulting clean up material and to dispose of it correctly.

FM 186-2 SHOULD ONLY BE USED IN COMPLIANCE
WITH ALL STATE AND LOCAL RULES AND REGULATIONS

Emergency Spill Response - Asphalt and Concrete
Large Spills Over One Gallon

A large spill requires a phone call to your Area Equipment and Safety Manager

1. Locate the source and stop the spill. The contaminated area should be cordoned off and customers and others kept out. If volatile fuel is spilled, to reduce the danger of fire, suppress the vapors by spraying FM 186-2 solution over entire spill area. **Containment of spills is a critical first step, for safety and in order to protect the environment.**

2. Health and safety are primary concerns as a large spill is handled. The use of FM 186-2 to reduce the level of volatile hydrocarbon is also an important step. Even though a complete reaction may not take place, the volatile levels will be significantly reduced during an event.

3. Sock booms have been provided to protect storm drains and stop the forward migration of the spill. It is imperative that the storm water system be protected from any spilled hydrocarbon. If the spill looks like it may enter the storm drain, surround storm drains with the white oleophilic sock booms.

4. After protection has been provided for the storm drain system, assess the extent of the spill. If necessary, absorb raw hydrocarbon in white oleophilic pads. These will be placed in orange plastic waste bags.

5. After the spilled material has been removed, spray the FM 186-2 solution on the residual oils left on the ground and brush it in thoroughly.

6. Pick up solution with provided pads (gray or white)

7. Place all material into the orange bag, seal and label it as: **Hydrocarbon Hazardous Waste**. Pick up and disposal should proceed according to company guidelines.

Petroleum waste is a presumptive hazardous waste and the users/generators are responsible for proper waste characterization and disposal. Federal and state regulations require generators to determine their waste classification(s). Regulations also allow for prior knowledge of the waste and treatment procedures in determining the waste's classification. The FM 186 program is a treatment procedure that can be applied as part of the prior knowledge package. Nothing herein is to be taken as approvals that all spill materials would be rendered non-hazardous. Ultimately it is up to the generator to determine the resulting clean up material and to dispose of it correctly.

Emergency Spill Response - Continued
Equipment and Safety Managers

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HOW TO HANDLE LARGE SPILLS SAFELY
ALWAYS WEAR PPE

When a large spill occurs – Press the **system shutoff switch** (if necessary) to shut down the station and begin to contain the spill.

Collect the ECS spill kit, proceed to the spill area and begin to contain the spill.

Place sock booms to protect the storm drain or edge of the property.

Large Spills – Continued

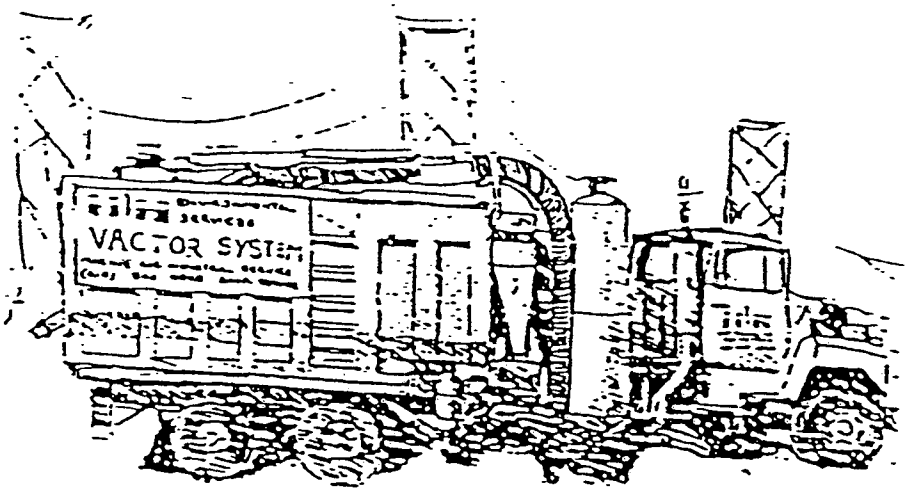
After the spill has been contained, overspray the spill area with the FM 186-2 solution. This overspray greatly reduces the danger of fire and explosion.

Clean up the used sorbent pads and sock booms by collecting them in the orange disposal bags provided in the ECS spill kit. Seal the bags and label them: HYDROCARBON – HAZARDOUS WASTE. **Pick up and disposal should proceed according to your company guidelines.** Following the cleanup of a large spill, remember to replenish your supply of FM 186-2 and sorbents.

Hot Tip: **Hold training spill drills** on a regular basis using <u>water</u>. This is a good way to prepare for a large spill.

Petroleum waste is a presumptive hazardous waste and the users/generators are responsible for proper waste characterization and disposal. Federal and state regulations require generators to determine their waste classification(s). Regulations also allow for prior knowledge of the waste and treatment procedures in determining the waste's classification. The FM 186 program is a treatment procedure that can be applied as part of the prior knowledge package. Nothing herein is to be taken as approvals that <u>all</u> spill materials would be rendered non-hazardous. Ultimately it is up to the generator to determine the resulting clean up material and to dispose of it correctly.

BMP: Inlet Cleaning



Description

Inlet cleaning is the removal of sediment and debris from storm drain inlets. Storm water inlets can only operate efficiently if they are maintained on a regular basis. Parking lot maintenance should include regular cleaning to remove pollutants and to prevent clogging of inlets. Clogged inlets are not only useless, but may act as a source of increased sediment and pollutant levels in storm water runoff.

Inlet cleaning is usually conducted using one of two methods, manual cleaning or by vacuum truck. Manual cleaning is the removal of debris and sediment using shovels, trowels, buckets, etc. Manual cleaning is recommeded for a few (5 or less) small sized inlets (approximately 3' x 3' x 3').

For greater than 5 small inlets or large sized inlets, the vaccum truck method should be used. The vacuum truck method includes manual removal of debris (trash, branches, etc.) followed by removal of sediment and/or water with a vacuum truck. A vacuum truck company in your area can be found in the Yellow Pages under Sewer Contractors or Pumping Contractors. Wastes need to be wet or moist for vacuum truck to work.

It should be noted that sediment (less the debris) removed from the catch basin should be analyzed for disposal. At a minimum, sediment should be analyzed for lead, oil & grease, and hydrocarbons.

Conditions Where BMP Applies

Inlet cleaning should be implemented in any parking lot that has a storm water inlet.

Costs

Costs are dependent upon the level of cleaning required for the inlet and the number of inlets requiring cleaning. Manual cleaning of a small inlet requires approximately 1 hour of labor. The vaccum truck method requires approximately 1/2 hour per inlet at a cost of $70 per hour. Additional costs are expected for analyses of the sediment, approximately $50 per constiuent (lead, oil & grease, etc.) and for disposal of the sediment.

Applicability

Small Parking Lots

Existing	New	
●	●	Small, high turnover rate, no landscaping
●	●	Small, low turnover rate, no landscaping

Large Parking Lots

Existing	New	
●	●	Large, high turnover rate, no landscaping
●	●	Large, high turnover rate, landscaping available
●	●	Large, low turnover rate, no landscaping
●	●	Large, low turnover rate, landscaping available

Availability

- O Commercially
- O Requires fabrication (off-site)
- O On-site fabrication
- O Excavation

Costs/Yr

- ● < $1000
- O 1K-5K
- O 5K-20K
- O > 20K

Inspection Frequency

- O Storm Event
- O Monthly during wet season
- ● Before wet season
- O 2-3 years

Equipment

Small storm water inlets can be cleaned manually by using shovels, trowels, etc. Larger inlets, however, usually require mechanical cleaning equipment such as vacuum trucks or bucket loaders.

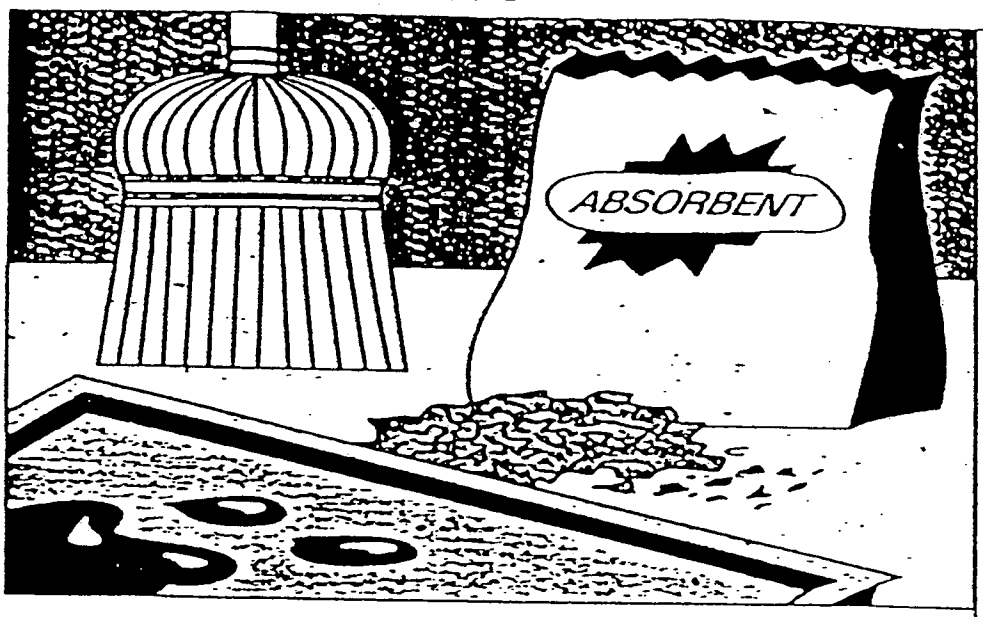
Inspection and Maintenance

Activity	Frequency	Level of Effort
Remove debris and sediment from inlet	Before wet season	Manual cleaning method: one person, 1 hour/inlet or Vacuum Truck Method: One vacuum truck crew (Operator & Truck) 1/2 hour /inlet at $70/hr.

Other

Periodic cleaning of inlets maintains the inlet's capabilities for treating storm water. Lack of cleaning has been established as one of the major causes for storm water inlet failures (e.g. flooding).

BMP: Spot Cleaning



Description

Spot cleaning is the application of absorbent materials to spilled or leaked automotive or similar fluids (i.e. gasoline, oil, antifreeze). Spot cleaning is conducted by placing an absorbent material over a spill, allowing the spilled material to be soaked up then sweeping up the absorbent and placing it into a container for reuse or disposal. Examples of absorbent materials include rice hull ash, kitty litter or sawdust.

Conditions Where BMP Applies

Absorbents can be used in any parking lot where leaks are observed, on wet areas or in frequently used stalls. Absorbents are capable of absorbing any spilled liquid material, but are mainly used to absorb automotive type fluids (i.e. gasoline, oil, antifreeze).

Costs

Absorbents are inexpensive. A 20-lb. bag of absorbent costs approximately $8. Spot cleaning involves low labor cost.. Application requires one person approximately 15 min. per spot (assuming a spill or spot size of 2 - 3 feet in diameter or less). Additional costs are associated with disposal of the spent absorbent.

Other

Absorbent materials can be reused until the material becomes saturated with the spilled product. Saturation is evident when the material becomes dark w/product (i.e. black from motoroil). If some of the original color of the absorbent can be seen, the material still has absorbing capabilities.

Saturated absorbent material should be collected in approved disposal containers, and disposed of properly. In some jurisdictions, oil-soaked absorbent is considered a hazardous waste. Check with your local administering agency (usually Department of Health).

Applicability

Small Parking Lots

Existing	New	
●	●	Small, high turnover rate, no landscaping
●	●	Small, low turnover rate, no landscaping

Large Parking Lots

Existing	New	
●	●	Large, high turnover rate, no landscaping
●	●	Large, high turnover rate, landscaping available
●	●	Large, low turnover rate, no landscaping
●	●	Large, low turnover rate, landscaping available

Availability

- ● Commercially
- O Requires fabrication (off-site)
- O On-site fabrication
- O Excavation

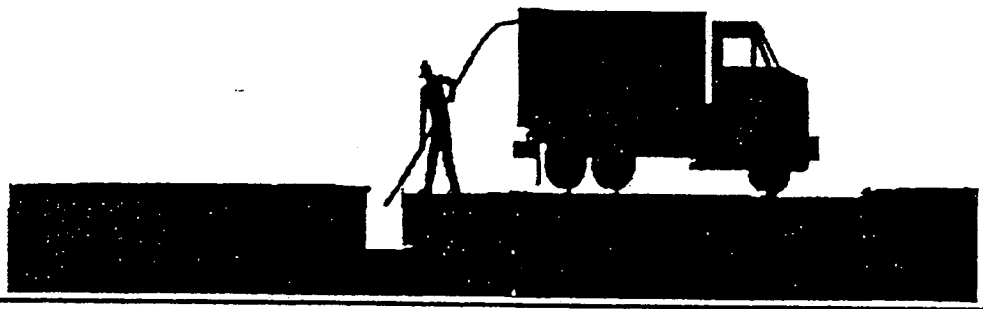
Costs/Yr

- ● < $1000
- O 1K-5K
- O 5K-20K
- O > 20K

Inspection Frequency

- O Storm Event
- ● Monthly during wet season
- O Before wet season
- O 2-3 years

BMP: CATCH BASIN CLEANING



Program Elements

- *New Development*
- *Residential*
- *Commercial Activities*
- *Industrial Activities*
- *Municipal Facilities* (●)
- *Illegal Discharges* (●)

DESCRIPTION

Maintain catch basins and storm water inlets on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, and restore the catch basins' sediment trapping capacity. A catch basin is distinguished from a storm water inlet by having at its base a sediment sump designed to catch and retain sediments below the overflow point. This fact sheet focuses on the cleaning of accumulated sediments from catch basins.

APPROACH

- Aggressively enforce anti-littering and illegal dumping ordinances.
- Catch basins should be cleaned regularly to reduce the possibility of sediment and pollutant loading from the flushing effect of storm water inflow.
- Prioritize maintenance to clean catch basins and inlets in areas with the highest pollutant loading.
- Keep accurate operation logs to track program.

REQUIREMENTS

- Cost Considerations
  - An aggressive catch basin cleaning program could require a significant capital and O&M budget. A careful study of cleaning effectiveness should be undertaken before increased cleaning is implemented.
- Regulations
  - There are no regulatory requirements for this BMP. Municipal codes should include sections prohibiting the disposal of soil, debris, refuse, hazardous waste, and other pollutants into the storm drain system, and prohibiting littering.
- Administrative / Staffing
  - Two-person teams may be required to clean catch basins with vactor trucks.
  - Arrangements must be made for proper disposal of collected wastes.
- Equipment
  - Except for small communities with relatively few catch basins that may be cleaned manually, most municipalities will require mechanical cleaners such as eductors, vacuums, or bucket loaders.
- Training
  - Crews must be trained in proper maintenance, including record keeping and disposal.

PUBLIC EDUCATION / PARTICIPATION

- Educate contractors (cement, masonry, painting) and utility employees (telephone, cable, gas and electric) about proper waste (solid and liquid) disposal.

LIMITATIONS

- There are no major limitations to this best management practice.

Targeted Constituents

- ● *Sediment*
- ○ *Nutrients*
- ● *Heavy Metals*
- ○ *Toxic Materials*
- ● *Floatable Materials*
- ● *Oxygen Demanding Substances*
- ● *Oil & Grease*
- ○ *Bacteria & Viruses*

- ● *Likely to Have Significant Impact*
- ○ *Probable Low or Unknown Impact*

Implementation Requirements

- ● *Capital Costs*
- ● *O&M Costs*
- ○ *Regulatory*
- ● *Staffing*
- ◒ *Training*
- ◒ *Administrative*

● *High* ○ *Low*

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Best Management Practices

Additional Information — Catch Basin Cleaning

Regular maintenance of public and private catch basins and inlets is necessary to ensure their proper functioning. Clogged catch basins are not only useless but may act as a source of sediments and pollutants. In general, the keys to effective catch basins are:

- At least annual inspections. Municipal staff should inspect public and private facilities to ensure compliance with the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
  - Stenciling of catch basins and inlets (see SC30, Storm Drain System Signs).
- Clean catch basins in high pollutant load areas just before the wet season to remove sediments and debris accumulated during the summer.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Consider implementing employee deputization and spill tracking measures in SC50, Illegal Dumping Control, in conjunction with this BMP to facilitate control of illegal dumping.

Public education should be implemented in conjunction with the public education effort in SC50, Illegal Dumping Control, to raise awareness of the problem. Information in the Construction Handbook regarding waste management (BMPs CA20-CA24) may be used to develop a program for contractors.

REFERENCES

Best Management Practices for Storm Drainage Facilities (Draft), Maintenance Subcommittee, Alameda County Urban Runoff Clean Water Program, 1992.

Protecting Water Quality in Urban Areas: Best Management Practices for Minnesota, Minnesota Pollution Control Agency, 1989.

Stormwater Management Manual for the Puget Sound Basin (The Technical Manual): Volume IV - Urban Land Use BMPs, Washington State Department of Ecology, 1992.

Street Cleaning Practice, American Public Works Association, 1978.

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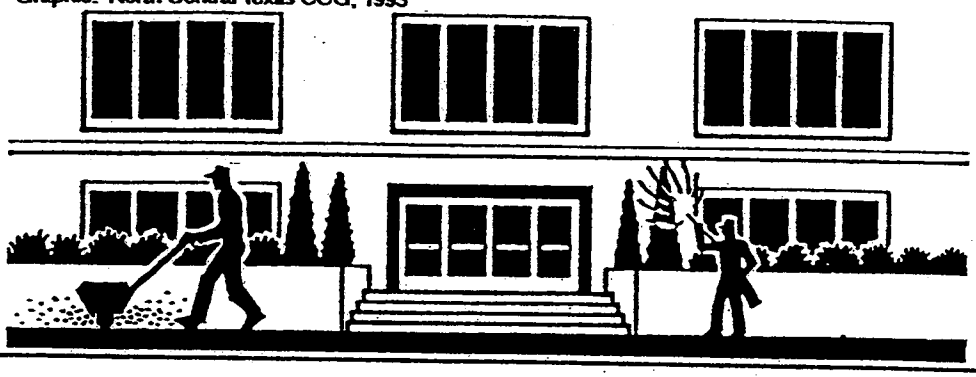
ACTIVITY: BUILDING AND GROUNDS MAINTENANCE

Graphic: North Central Texas COG, 1993



DESCRIPTION

Prevent or reduce the discharge of pollutants to storm water from buildings and grounds maintenance by washing and cleaning up with as little water as possible, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the storm water collection system.

APPROACH

- Leaving or planting native vegetation to reduce water, fertilizer, and pesticide needs.
- Careful use of pesticides and fertilizers in landscaping.
- Integrated pest management where appropriate.
- Sweeping of paved surfaces.
- Cleaning of the storm drainage system at appropriate intervals.
- Proper disposal of wash water, sweepings, and sediments.
- For a quick reference on disposal alternatives for specific wastes see Table 4.1, SC1.

REQUIRMENTS

- Costs (Capital, O&M)
  - Cost will vary depending on the type and size of facility.
  - Overall costs should be low in comparison to other BMPs.
- Maintenance
  - The BMPs themselves relate to maintenance and do not require maintenance as they do not involve structures.

LIMITATIONS

- Alternative pest/weed controls may not be available, suitable, or effective in every case.

Applications

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- **Commercial Activities**
- **Roadways**
- Waste Containment
- **Housekeeping Practices**

Targeted Constituents

- ● Sediment
- ● Nutrients
- ● Heavy Metals
- ● Toxic Materials
- ● Floatable Materials
- ● Oxygen Demanding Substances
- ● Oil & Grease
- ○ Bacteria & Viruses

● Likely to Have Significant Impact
○ Probable Low or Unknown Impact

Implementation Requirements

- ○ Capital Costs
- ◒ O&M Costs
- ◒ Maintenance
- ◒ Training

● High ○ Low

SC11

Best Management Practices

Additional Information — Building and Grounds Maintenance

Buildings and grounds maintenance includes taking care of landscaped areas around the facility, cleaning of parking lots and pavement other than in the area of industrial activity, and the cleaning of the storm drainage system. Painting and other minor or major repairs of buildings is covered in SC12 (Building Repair, Remodeling, and Construction). Certain normal maintenance activities can generate materials that must be properly disposed. Other maintenance activities can enhance water quality if they are carried out more frequently and/or in a more deliberate fashion.

Pesticide/Fertilizer Management

Landscape maintenance involves the use of pesticides and fertilizers. Proper use of these materials will reduce the risk of loss to storm water. In particular, do not apply these materials during the wet season as they may be carried from the site by the next storm. When irrigating the landscaped areas, avoid over-watering not only to conserve water but to avoid the discharge of water which may have become contaminated with nutrients and pesticides.

It is important to properly store pesticides and application equipment, and to dispose the used containers in a responsible manner, consistent with state regulations. Personnel who use pesticides should be trained in their use. The California Department of Pesticide Regulation and county agricultural commissioners license pesticide dealers, certify pesticide applicators, and conduct on-site inspections.

Written procedures for the use of pesticides and fertilizers relevant to your facility would help maintenance staff understand the "do's" and "don'ts". If you have large vegetated areas, consider the use of integrated pest management (IPM) techniques to reduce the use of pesticides.

Parking/Storm Sewer Maintenance

A parking area that drains to the same storm drainage system as the industrial activity that is to be permitted must also be evaluated for suitable BMPs. Storm water from parking lots may contain undesirable concentrations of oil, grease, suspended particulates, and metals such as copper, lead, cadmium, and zinc, as well as the petroleum byproducts of engine combustion. Deposition of air particulates, generated by the facility or by adjacent industries, may contribute significant amounts of pollutants.

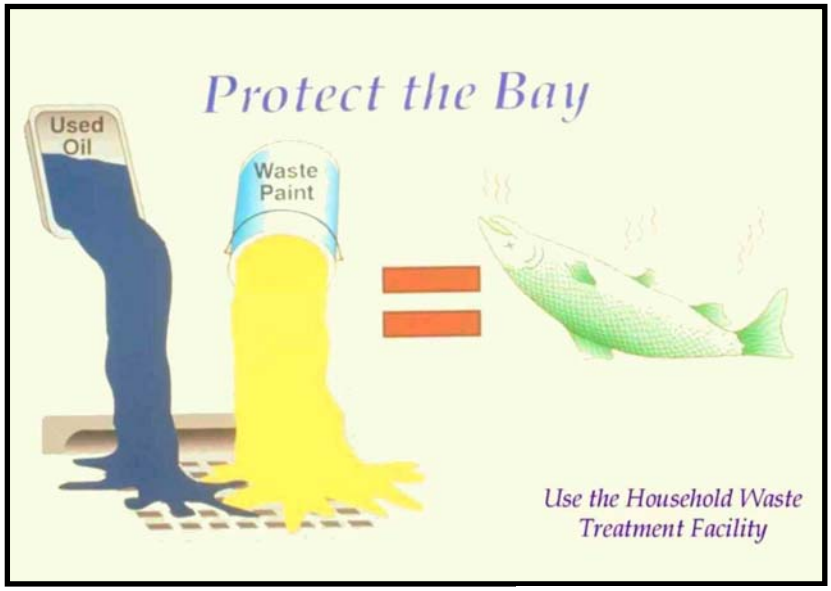
The two most appropriate maintenance BMPs are periodic sweeping and cleaning catch basins if they are part of the drainage system. A vacuum sweeper is the best method of sweeping, rather than mechanical brush sweeping which is not as effective at removing the fine particulates.

Catch basins in parking lots generally need to be cleaned every 6 to 12 months, or whenever the sump is half full. A sump that is more than half full is not effective at removing additional particulate pollutants from the storm water. If the storm drain lines have a low gradient, less than about 0.5 feet in elevation drop per 100 feet of line, it is likely that material is settling in the lines during the small, frequent storms. If you have not cleaned the storm drain system for some time, check the lines as well. If they are not cleaned, the catch basins will likely be filled during the next significant storm by material that is washed from the lines. Also, install "turn-down" elbows or similar devices on the outlets of the catch basins; they serve to retain floatables, oil and grease.

Clearly mark the storm drain inlets, either with a color code (to distinguish from process water inlets if you have them) or with the painted stencil of "DO NOT DUMP WASTE". This will minimize inadvertent dumping of liquid wastes.

Sweepings and sediments from these maintenance activities are generally low in metals and other pollutants and therefore can be disposed on-site or to a construction debris landfill. Test the material if there is a reasonable doubt whether metals or other pollutants are present. If concentrations of contaminants are high, it indicates that other BMPs may be needed to eliminate or reduce emissions from the source. If a vactor truck is used to clean the storm drainage system,

Non-Stormwater Discharges SC-10



Graphic by: Margie Winter

Objectives

- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Description

Non-stormwater discharges are those flows that do not consist entirely of stormwater. For municipalities non-stormwater discharges present themselves in two situations. One is from fixed facilities owned and/or operated by the municipality. The other situation is non-stormwater discharges that are discovered during the normal operation of a field program. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some non-stormwater discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include car washing, and surface cleaning. However, there are certain non-stormwater discharges that pose environmental concern. These discharges may originate from illegal dumping or from internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges (which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances (such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants) into storm drains. The ultimate goal is to effectively eliminate non-stormwater discharges to the stormwater drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges.

Approach

The municipality must address non-stormwater discharges from its fixed facilities by assessing the types of non-stormwater discharges and implementing BMPs for the discharges determined to pose environmental concern. For field programs

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

the field staff must be trained to now what to look for regarding non-stormwater discharges and the procedures to follow in investigating the detected discharges.

Suggested Protocols

Fixed Facility

General

- Post "No Dumping" signs with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Landscaping and beautification efforts of hot spots might also discourage future dumping, as well as provide open space and increase property values.
- Lighting or barriers may also be needed to discourage future dumping.

Illicit Connections

- Locate discharges from the fixed facility drainage system to the municipal storm drain system through review of "as-built" piping schematics.
- Use techniques such as smoke testing, dye testing and television camera inspection (as noted below) to verify physical connections.
- Isolate problem areas and plug illicit discharge points.

Visual Inspection and Inventory

- Inventory and inspect each discharge point during dry weather.
- Keep in mind that drainage from a storm event can continue for several days following the end of a storm and groundwater may infiltrate the underground stormwater collection system. Also, non-stormwater discharges are often intermittent and may require periodic inspections.

Review Infield Piping

- Review the "as-built" piping schematic as a way to determine if there are any connections to the stormwater collection system.
- Inspect the path of floor drains in older buildings.

Smoke Testing

- Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two systems.

- During dry weather the stormwater collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet indicates that there may be a connection between the sanitary and the stormwater system.

Dye Testing

- A dye test can be performed by simply releasing a dye into either your sanitary or process wastewater system and examining the discharge points from the stormwater collection system for discoloration.

TV Inspection of Storm Sewer

- TV Cameras can be employed to visually identify illicit connections to the fixed facility storm drain system.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Clean up spills on paved surfaces with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.
- See fact sheet SC-11 Spill Prevention, Control, and Clean Up.

Field Program

General

- Develop clear protocols and lines of communication for effectively prohibiting non-stormwater discharges, especially ones that involve more than one jurisdiction and those that are not classified as hazardous, which are often not responded to as effectively as they need to be.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as “Dump No Waste Drains to Stream” stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- See SC-74 Stormwater Drainage System Maintenance for additional information.

Field Inspection

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- During routine field program maintenance field staff should look for evidence of illegal discharges or illicit connection:
  - Is there evidence of spills such as paints, discoloring, etc.
  - Are there any odors associated with the drainage system
  - Record locations of apparent illegal discharges/illicit connections and notify appropriate investigating agency.
- If trained, conduct field investigation of non-stormwater discharges to determine whether they pose a threat to water quality.

Recommended Complaint Investigation Equipment

- Field Screening Analysis
  - pH paper or meter
  - Commercial stormwater pollutant screening kit that can detect for reactive phosphorus, nitrate nitrogen, ammonium nitrogen, specific conductance, and turbidity
  - Sample jars
  - Sample collection pole
  - A tool to remove access hole covers
- Laboratory Analysis
  - Sample cooler
  - Ice
  - Sample jars and labels
  - Chain of custody forms.
- Documentation
  - Camera
  - Notebook
  - Pens
  - Notice of Violation forms

- Educational materials

Reporting

- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during the course of normal daily activities so they can be investigated, contained and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any onsite drainage points observed.
- Maintain documentation of illicit connection and illegal dumping incidents, including significant conditionally exempt discharges that are not properly managed.

Enforcement

- Educate the responsible party if identified on the impacts of their actions, explain the stormwater requirements, and provide information regarding Best Management Practices (BMP), as appropriate. Initiate follow-up and/or enforcement procedures.
- If an illegal discharge is traced to a commercial, residential or industrial source, conduct the following activities or coordinate the following activities with the appropriate agency:
  - Contact the responsible party to discuss methods of eliminating the non-stormwater discharge, including disposal options, recycling, and possible discharge to the sanitary sewer (if within POTW limits).
  - Provide information regarding BMPs to the responsible party, where appropriate.
  - Begin enforcement procedures, if appropriate.
  - Continue inspection and follow-up activities until the illicit discharge activity has ceased.
- If an illegal discharge is traced to a commercial or industrial activity, coordinate information on the discharge with the jurisdiction's commercial and industrial facility inspection program.

Training

- Train technical staff to identify and document illegal dumping incidents.
- Well-trained employees can reduce human errors that lead to accidental releases or spills. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur. Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Train employees to identify non-stormwater discharges and report them to the appropriate departments.
- Train staff who have the authority to conduct surveillance and inspections, and write citations for those caught illegally dumping.

- Train municipal staff responsible for surveillance and inspection in the following:
  - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).
  - OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and federal OSHA 29 CFR 1910.146).
  - Procedural training (field screening, sampling, smoke/dye testing, TV inspection).
- Educate the identified responsible party on the impacts of his or her actions.

Spill Response and Prevention

- See SC-11 Spill Prevention Control and Clean Up

Other Considerations

- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The cost of fees for dumping at a proper waste disposal facility are often more than the fine for an illegal dumping offense, thereby discouraging people from complying with the law. The absence of routine or affordable pickup service for trash and recyclables in some communities also encourages illegal dumping. A lack of understanding regarding applicable laws or the inadequacy of existing laws may also contribute to the problem.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Many facilities do not have accurate, up-to-date schematic drawings.
- Can be difficult to locate illicit connections especially if there is groundwater infiltration.

Requirements

Costs

- Eliminating illicit connections can be expensive especially if structural modifications are required such re-plumbing cross connections under an existing slab.
- Minor cost to train field crews regarding the identification of non-stormwater discharges. The primary cost is for a fully integrated program to identify and eliminate illicit connections and illegal dumping. However, by combining with other municipal programs (i.e. pretreatment program) cost may be lowered.
- Municipal cost for containment and disposal may be borne by the discharger.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

What constitutes a "non-stormwater" discharge?

- Non-stormwater discharges are discharges not made up entirely of stormwater and include water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment condensate, outdoor secondary containment water, vehicle and equipment wash water, landscape irrigation, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters.

Permit Requirements

- Current municipal NPDES permits require municipalities to effectively prohibit non-stormwater discharges unless authorized by a separate NPDES permit or allowed in accordance with the current NPDES permit conditions. Typically the current permits allow certain non-stormwater discharges in the storm drain system as long as the discharges are not significant sources of pollutants. In this context the following non-stormwater discharges are typically allowed:
  - Diverted stream flows;
  - Rising found waters;
  - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
  - Uncontaminated pumped ground water;
  - Foundation drains;
  - Springs;
  - Water from crawl space pumps;
  - Footing drains;
  - Air conditioning condensation;
  - Flows from riparian habitats and wetlands;
  - Water line and hydrant flushing ;
  - Landscape irrigation;
  - Planned and unplanned discharges from potable water sources;
  - Irrigation water;
  - Individual residential car washing; and
  - Lawn watering.

Municipal facilities subject to industrial general permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence of non-stormwater discharges. The state's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Illegal Dumping

- Establish a system for tracking incidents. The system should be designed to identify the following:
  - Illegal dumping hot spots
  - Types and quantities (in some cases) of wastes
  - Patterns in time of occurrence (time of day/night, month, or year)
  - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
  - Responsible parties

Outreach

One of the keys to success of reducing or eliminating illegal dumping is increasing the number of people on the street who are aware of the problem and who have the tools to at least identify the incident, if not correct it. There we a number of ways of accomplishing this:

- Train municipal staff from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report the incidents.
- Deputize municipal staff who may come into contact with illegal dumping with the authority to write illegal dumping tickets for offenders caught in the act (see below).
- Educate the public. As many as 3 out of 4 people do not understand that in most communities the storm drain does not go to the wastewater treatment plant. Unfortunately, with the heavy emphasis in recent years on public education about solid waste management, including recycling and household hazardous waste, the sewer system (both storm and sanitary) has been the likely recipient of cross-media transfers of waste.
- Provide the public with a mechanism for reporting incidents such as a hot line and/or door hanger (see below).
- Help areas where incidents occur more frequently set up environmental watch programs (like crime watch programs).
- Train volunteers to notice and report the presence and suspected source of an observed pollutant to the appropriate public agency.

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  - Footing drains;
  - Air conditioning condensation;
  - Flows from riparian habitats and wetlands;
  - Water line and hydrant flushing ;
  - Landscape irrigation;
  - Planned and unplanned discharges from potable water sources;
  - Irrigation water;
  - Individual residential car washing; and
  - Lawn watering.

Municipal facilities subject to industrial general permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence

of non-stormwater discharges. The state's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Storm Drain Stenciling

- Stencil storm drain inlets with a message to prohibit illegal dumpings, especially in areas with waste handling facilities.
- Encourage public reporting of improper waste disposal by a HOTLINE number stenciled onto the storm drain inlet.
- See Supplemental Information section of this fact sheet for further detail on stenciling program approach.

Oil Recycling

- Contract collection and hauling of used oil to a private licensed used oil hauler/recycler.
- Comply with all applicable state and federal regulations regarding storage, handling, and transport of petroleum products.
- Create procedures for collection such as; collection locations and schedule, acceptable containers, and maximum amounts accepted.
- The California Integrated Waste Management Board has a Recycling Hotline, (800) 553-2962, that provides information and recycling locations for used oil.

Household Hazardous Waste

- Provide household hazardous waste (HHW) collection facilities. Several types of collection approaches are available including permanent, periodic, or mobile centers, curbside collection, or a combination of these systems.

Training

- Train municipal employees and contractors in proper and consistent methods for waste disposal.
- Train municipal employees to recognize and report illegal dumping.
- Train employees and subcontractors in proper hazardous waste management.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Federal Regulations (RCRA, SARA, CERCLA) and state regulations exist regarding the disposal of hazardous waste.
- Municipalities are required to have a used oil recycling element and a HHW element within their integrated waste management plan.
- Significant liability issues are involved with the collection, handling, and disposal of HHW.

Examples

The City of Palo Alto has developed a public participation program for reporting dumping violations. When a concerned citizen or public employee encounters evidence of illegal dumping, a door hanger (similar in format to hotel "Do Not Disturb" signs) is placed on the front doors in the neighborhood. The door hanger notes that a violation has occurred in the neighborhood, informs the reader why illegal dumping is a problem, and notes that illegal dumping carries a significant financial penalty. Information is also provided on what citizens can do as well as contact numbers for more information or to report a violation.

The Port of Long Beach has a state of the art database incorporating storm drain infrastructure, potential pollutant sources, facility management practices, and a pollutant tracking system.

The State Department of Fish and Game has a hotline for reporting violations called CalTIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).

The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

References and Resources

http://www.stormwatercenter.net/

California's Nonpoint Source Program Plan http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program,
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program
(http://www.projectcleanwater.org)

Santa Clara Valley Urban Runoff Pollution Prevention Program
http://www.scvurppp-w2k.com/pdf%20documents/PS_ICID.PDF

Spill Prevention, Control & Cleanup SC-11

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

Targeted Constituents

Sediment	
Nutrients	☑
Trash	
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

- An effective spill response and control plan should include:
  - Spill/leak prevention measures;
  - Spill response procedures;
  - Spill cleanup procedures;
  - Reporting; and
  - Training
- A well thought out and implemented plan can prevent pollutants from entering the storm drainage system and can be used as a tool for training personnel to prevent and control future spills as well.

Pollution Prevention

- Develop and implement a Spill Prevention Control and Response Plan. The plan should include:

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- A description of the facility, the address, activities and materials involved
- Identification of key spill response personnel
- Identification of the potential spill areas or operations prone to spills/leaks
- Identification of which areas should be or are bermed to contain spills/leaks
- Facility map identifying the key locations of areas, activities, materials, structural BMPs, etc.
- Material handling procedures
- Spill response procedures including:
  - Assessment of the site and potential impacts
  - Containment of the material
  - Notification of the proper personnel and evacuation procedures
  - Clean up of the site
  - Disposal of the waste material and
  - Proper record keeping

- Product substitution – use less toxic materials (i.e. use water based paints instead of oil based paints)
- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of materials that are brought into the facility or into the field.

Suggested Protocols

Spill/Leak Prevention Measures

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so that the contents are easily identifiable.
- Berm storage areas so that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one such as a tarp so that rain can not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose of them.

- Store, contain and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed of.
- For field programs, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a municipal yard where leaks and spill are easier to control.
- If paved, sweep and clean storage areas monthly, do not use water to hose down the area unless all of the water will be collected and disposed of properly.
- Install a spill control device (such as a tee section) in any catch basins that collect runoff from any storage areas if the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup if a spill occurs.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs, the material will be contained.

Training

- Educate employees about spill prevention, spill response and cleanup on a routine basis.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
  - The employees should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
  - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan if one is available.
- Training of staff from all municipal departments should focus on recognizing and reporting potential or current spills/leaks and who they should contact.
- Employees responsible for aboveground storage tanks and liquid transfers for large bulk containers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

Spill Response and Prevention

- Identify key spill response personnel and train employees on who they are.
- Store and maintain appropriate spill cleanup materials in a clearly marked location near storage areas; and train employees to ensure familiarity with the site's spill control plan and/or proper spill cleanup procedures.
- Locate spill cleanup materials, such as absorbents, where they will be readily accessible (e.g. near storage and maintenance areas, on field trucks).

SC-11 Spill Prevention, Control & Cleanup

- Follow the Spill Prevention Control and Countermeasure Plan if one is available.
- If a spill occurs, notify the key spill response personnel immediately. If the material is unknown or hazardous, the local fire department may also need to be contacted.
- If safe to do so, attempt to contain the material and block the nearby storm drains so that the area impacted is minimized. If the material is unknown or hazardous wait for properly trained personnel to contain the materials.
- Perform an assessment of the area where the spill occurred and the downstream area that it could impact. Relay this information to the key spill response and clean up personnel.

Spill Cleanup Procedures

- Small non-hazardous spills
  - Use a rag, damp cloth or absorbent materials for general clean up of liquids
  - Use brooms or shovels for the general clean up of dry materials
  - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
  - Dispose of any waste materials properly
  - Clean or dispose of any equipment used to clean up the spill properly
- Large non-hazardous spills
  - Use absorbent materials for general clean up of liquids
  - Use brooms, shovels or street sweepers for the general clean up of dry materials
  - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
  - Dispose of any waste materials properly
  - Clean or dispose of any equipment used to clean up the spill properly
- For hazardous or very large spills, a private cleanup company or Hazmat team may need to be contacted to assess the situation and conduct the cleanup and disposal of the materials.
- Chemical cleanups of material can be achieved with the use of absorbents, gels, and foams. Remove the adsorbent materials promptly and dispose of according to regulations.
- If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

Reporting

- Report any spills immediately to the identified key municipal spill response personnel.

- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to the Office of Emergency Service (OES)
- Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour)
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file (see the section on Reporting below). The incident may also be used in briefing staff about proper procedures

Other Considerations

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure Plan (SPCC) Plan (Health & Safety Code Chapter 6.67).
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, if permitted to do so, prohibiting any hard connections to the storm drain.

Requirements

Costs

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of wastes, contaminated soil and water is very expensive

Maintenance

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the response and containment of a spill. A good record keeping system helps the municipality minimize incident recurrence, correctly respond with appropriate containment and cleanup activities, and comply with legal requirements.

A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm drain.

These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Examples

The City of Palo Alto includes spill prevention and control as a major element of its highly effective program for municipal vehicle maintenance shops.

References and Resources

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

Outdoor Loading/Unloading SC-30

Description

The loading/unloading of materials usually takes place outside on docks or terminals; therefore, materials spilled, leaked, or lost during loading/unloading may collect in the soil or on other surfaces and have the potential to be carried away by wind, stormwater runoff or when the area is cleaned. Additionally, rainfall may wash pollutants from machinery used to unload or move materials. Implementation of the following protocols will prevent or reduce the discharge of pollutants to stormwater from outdoor loading/unloading of materials.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- ☐ Park tank trucks or delivery vehicles in designated areas so that spills or leaks can be contained.
- ☐ Limit exposure of material to rainfall whenever possible.
- ☐ Prevent stormwater run-on.
- ☐ Check equipment regularly for leaks.

Good Housekeeping

- ☐ Develop an operations plan that describes procedures for loading and/or unloading.
- ☐ Conduct loading and unloading in dry weather if possible.

Objectives
■ *Cover*
■ *Contain*
■ *Educate*
■ *Reduce/Minimize*
■ *Product Substitution*

Targeted Constituents	
Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	✓
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓

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- Cover designated loading/unloading areas to reduce exposure of materials to rain.
- Consider placing a seal or door skirt between delivery vehicles and building to prevent exposure to rain.
- Design loading/unloading area to prevent stormwater run-on, which would include grading or berming the area, and position roof downspouts so they direct stormwater away from the loading/unloading areas.
- Have employees load and unload all materials and equipment in covered areas such as building overhangs at loading docks if feasible.
- Load/unload only at designated loading areas.
- Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations, and when making and breaking connections. Several drip pans should be stored in a covered location near the liquid transfer area so that they are always available, yet protected from precipitation when not in use. Drip pans can be made specifically for railroad tracks. Drip pans must be cleaned periodically, and drip collected materials must be disposed of properly.
- Pave loading areas with concrete instead of asphalt.
- Avoid placing storm drains inlets in the area.
- Grade and/or berm the loading/unloading area with drainage to sump; regularly remove materials accumulated in sump.

Spill Response and Prevention Procedures

- Keep your spill prevention and control plan up-to-date or have an emergency spill cleanup plan readily available, as applicable.
- Contain leaks during transfer.
- Store and maintain appropriate spill cleanup materials in a location that is readily accessible and known to all employees.
- Ensure that employees are familiar with the site's spill control plan and proper spill cleanup procedures.
- Use drip pans or comparable devices when transferring oils, solvents, and paints.

Material Handling and Waste Management

- Spot clean leaks and drips routinely to prevent runoff of spillage.
- Do not pour liquid wastes into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.

- Do not put used or leftover cleaning solutions, solvents, and automotive fluids in the storm drain or sanitary sewer.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are easier to recycle if kept separate.
- Promptly transfer used fluids to the proper waste or recycling drums. Do not leave drip pans or other open containers lying around.
- Minimize the possibility of stormwater pollution from outside waste receptacles by doing at least one of the following:
  - ✓ Use only watertight waste receptacle(s) and keep the lid(s) closed.
  - ✓ Grade and pave the waste receptacle area to prevent run-on of stormwater.
  - ✓ Install a roof over the waste receptacle area.
  - ✓ Install a low containment berm around the waste receptacle area.
  - ✓ Use and maintain drip pans under waste receptacles.
- Post "no littering" signs.
- Perform work area clean-up and dry sweep after daily operations.

Employee Training Program

- Train employees (e.g., fork lift operators) and contractors on proper spill containment and cleanup.
- Have employees trained in spill containment and cleanup present during loading/unloading.
- Train employees in proper handling techniques during liquid transfers to avoid spills.
- Make sure forklift operators are properly trained on loading and unloading procedures.

Quality Assurance and Record Keeping

- Keep accurate maintenance logs that document activities performed, quantities of materials removed, and improvement actions.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Establish procedures to complete logs and file them in the central office.
- Keep accurate logs of daily clean-up operations.

Potential Limitations and Work-Arounds

Some facilities may have space constraints, limited staffing and time limitations that may preclude implementation of BMPs. Provided below are typical limitations and recommended "work-arounds."

- Space and time limitations may preclude all transfers from being performed indoors or under cover.
  - ✓ Designate specific areas for outdoor loading and unloading.
  - ✓ Require employees to understand and follow spill and leak prevention BMPs.
- It may not be possible to conduct transfers only during dry weather.
  - ✓ Limit materials and equipment rainfall exposure to all extents practicable.
  - ✓ Require employees to understand and follow spill and leak prevention BMPs.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

Many facilities will already have indoor or covered areas where loading/unloading takes place and will require no additional capital expenditures.

If outdoor activities are required, construction of berms or other means to retain spills and leaks may require appropriate constructed systems for containment. These containment areas may require significant new capital investment.

Capital investments will likely be required at some sites if adequate cover and containment facilities do not exist and can vary significantly depending upon site conditions.

Maintenance

Most of the operations and maintenance activities associated with implementing this BMP are integrally linked to routine operations as previously described. Therefore additional O&M is not required.

- Conduct regular inspections and make repairs and improvements as necessary.
- Check loading and unloading equipment regularly for leaks.
- Conduct regular broom dry-sweeping of area. Do not wash with water.

Supplemental Information

Loading and Unloading of Liquids

- Loading or unloading of liquids should occur in the manufacturing building so that any spills that are not completely retained can be discharged to the sanitary sewer,

treatment plant, or treated in a manner consistent with local sewer authorities and permit requirements.

- For loading and unloading tank trucks to above and below ground storage tanks, the following procedures should be used:
  - ✓ The area where the transfer takes place should be paved. If the liquid is reactive with the asphalt, Portland cement should be used to pave the area.
  - ✓ The transfer area should be designed to prevent run-on of stormwater from adjacent areas. Sloping the pad and using a curb, like a speed bump, around the uphill side of the transfer area should reduce run-on.
  - ✓ The transfer area should be designed to prevent runoff of spilled liquids from the area. Sloping the area to a drain should prevent runoff. The drain should be connected to a dead-end sump or to the sanitary sewer. A positive control valve should be installed on the drain.
- For transfer from rail cars to storage tanks that must occur outside, use the following procedures:
  - ✓ Drip pans should be placed at locations where spillage may occur, such as hose connections, hose reels, and filler nozzles. Use drip pans when making and breaking connections.
  - ✓ Drip pan systems should be installed between the rails to collect spillage from tank cars.

References and Resources

Minnesota Pollution Control Agency, *Industrial Stormwater Best Management Practices Guidebook BMP 26 Fueling and Liquid Loading/Unloading Operations.* Available online at: http://www.pca.state.mn.us/index.php/view-document.html?gid=10557.

New Jersey Department of Environmental Protection, 2013. *Basic Industrial Stormwater General Permit Guidance Document NJPDES General Permit No NJ0088315.* Available online at: http://www.nj.gov/dep/dwq/pdf/5G2_guidance_color.pdf.

Orange County Stormwater Program, Best Management Practices for Industrial/Commercial Business Activities. Available online at: http://ocwatersheds.com/documents/bmp/industrialcommercialbusinessesactivities.

Oregon Department of Environmental Quality, 2013. *Industrial Stormwater Best Management Practices Manual- BMP 26 Fueling and Liquid Loading/Unloading Operations.* Available online at: http://www.deq.state.or.us/wq/wqpermit/docs/IndBMP021413.pdf.

Sacramento Stormwater Management Program, *Best Management Practices for Industrial Storm Water Pollution Control*. Available online at: http://www.msa.saccounty.net/sactostormwater/documents/guides/industrial-BMP-manual.pdf.

Sacramento County Environmental Management Stormwater Program: *Best Management Practices*. Available online at: http://www.emd.saccounty.net/EnvHealth/Stormwater/Stormwater-BMPs.html.

Santa Clara Valley Urban Runoff Pollution Prevention Program. http://www.scvurppp-w2k.com/.

US EPA. National Pollutant Discharge Elimination System – Industrial Fact Sheet Series for Activities Covered by EPA's Multi Sector General Permit. Available online at: http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm.

4.0 GENERAL BUSINESS PROCEDURES/BMPS

Proper Maintenance Practices for Your Business
Your Business and the County Partners in Protecting the Ocean
Good Cleaning Practices
Spill Prevention and Control
Best Management Practices for Industrial Storm Water Pollution Control
Employee Training (SC14, CASQA BMP Handbook)
Water Quality Guidelines for Carpet Cleaning Activities

Preventing water pollution at your commercial/industrial site

A clean ocean and healthy creeks, rivers, bays and beaches are important to Orange County. However, many landscape and building maintenance activities can lead to water pollution if you're not careful. Paint, chemicals, plant clippings and other materials can be blown or washed into storm drains that flow to the ocean. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains and streets is not treated before entering our waterways.

You would never pour soap or fertilizers into the ocean, so why would you let them enter the storm drains? Follow the easy tips in this brochure to help prevent water pollution.

Some types of industrial facilities are required to obtain coverage under the State General Industrial Permit. For more information visit www.swrcb.ca.gov/stormwater/industrial.html.

For more information, please call the Orange County Stormwater Program at (714) 567-6363 or visit www.ocwatersheds.com.

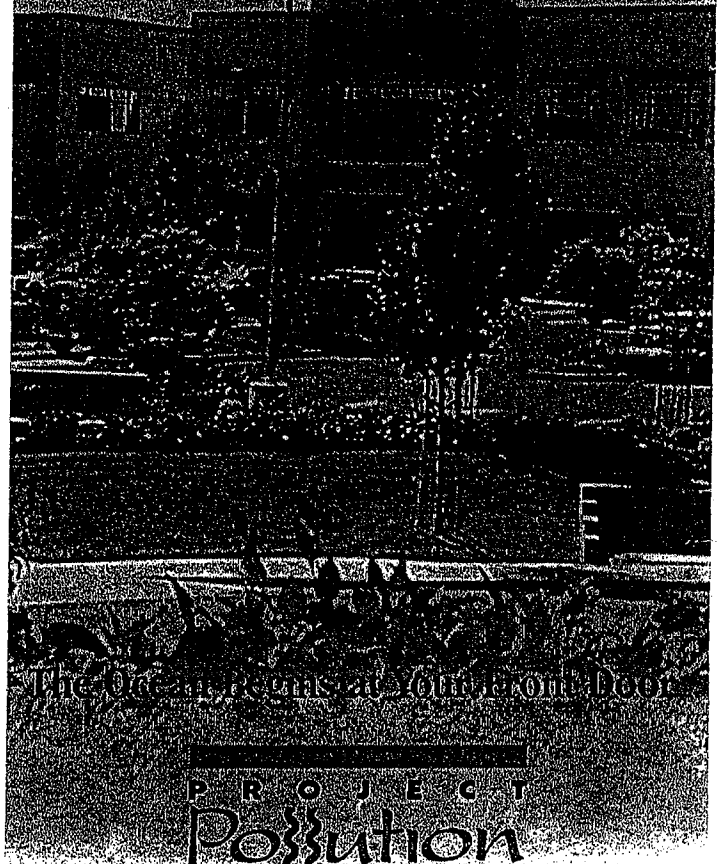
To report a spill, call the Orange County 24-Hour Water Pollution Reporting Hotline (714) 567-6363.

For emergencies dial 911.

RECYCLE USED OIL

Help Prevent Ocean Pollution

Proper Maintenance Practices for Your Business



The Ocean Begins at Your Doorstep

PROJECT Pollution PREVENTION

Storm Drain Awareness and Maintenance Practices

Landscape Maintenance

- Compost grass clippings, leaves, sticks and other vegetation, or dispose at a permitted landfill or in green waste containers. Do not dispose of these materials in streets, waterways or storm drains.
- Irrigate slowly and inspect the system for leaks, overspraying and runoff. Adjust automatic timers to avoid over-watering.
- Follow label directions for the use and disposal of fertilizers, herbicides and pesticides.
- Do not apply pesticides, herbicides or fertilizers if rain is expected within 48 hours or if wind speeds are above 5 mph.
- Do not spray pesticides within 100 feet of waterways.
- Fertilizers should be worked into the soil rather than dumped onto the surface.
- If fertilizer is spilled on the pavement or sidewalk, sweep it up immediately and place it back in the container.

Building Maintenance

- Never allow wash water, sweepings or sediment to enter the storm drain.
- Sweep up dry spills and use cat litter, towels or similar materials to absorb wet spills. Dispose in the trash.
- If you must wash your building, sidewalk or parking lot, you **must** contain the water. Collect the water with a shop vac, and contact your city or sanitation agency for proper disposal information. Do not let water enter the street or storm drains.
- Use drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of materials in the trash.
- Use a ground cloth or oversized tub for mixing paint and cleaning tools.
- Use a damp mop or broom to clean floors.
- Cover dumpsters to block insects, animals, rainwater and sand. Keep the area around the dumpster clear of trash and debris. Do not overfill the dumpster.
- Call your trash hauler to replace leaking dumpsters.
- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain. Even materials that seem harmless—like latex paint or biodegradable cleaners—can damage the environment.

NEVER DISPOSE OF ANYTHING IN THE STORM DRAIN.

- Recycle paints, solvents, lumber and other materials.
- Store materials indoors or under cover and away from storm drains.
- Use chemicals that can be recycled. For more information about recycling and collection centers, visit www.oclandfills.com.
- Properly label materials. Familiarize employees with Material Safety Data Sheets.

YOUR BUSINESS AND THE COUNTY
PARTNERS IN PROTECTING THE OCEAN

Steps You Can Take Now

COVER AREAS WHERE POTENTIAL POLLUTANTS ARE STORED.

Pollutants such as trash, grease, paints detergents and metals can come into contact with storm water or water from other sources and create polluted runoff. Keep these materials covered, labeled and stored in appropriate containers.

SEAL LEAKING STORAGE AND DUMPSTER CONTAINERS.

Prevent substances like grease, liquids and food products from coming into contact with rainfall and entering the storm drains.

PREVENT SPILLS AND LEAKS

Maintain a regular inspection and repair schedule for vehicles and equipment. Take appropriate precautions in loading and unloading materials. Look for and correct any potential leaks or spills.

DEVELOP PLANS TO MANAGE SPILLS SHOULD THEY OCCUR.

Propose a Spill Contingency Plan for hazardous spills, or an Accident Spill Plan for food or other spills. Clean any spills promptly, not allowing them to evaporate. Clean spills without water whenever possible. Rags, damp mops, and dry, absorbent materials are recommended for clean up. Dispose of any spill waste and clean-up materials promptly and legally.

KNOW YOUR WASTE HAULER'S PRACTICES.

Avoid waste haulers that accept your payment and dump your waste illegally. You are liable for illegal dumping of your waste. Your waste should be disposed of at a landfill if not hazardous or other appropriate facility.

SWEEP PARKING LOTS AND OUTDOOR STORAGE AREAS REGULARLY.

Sweep these areas at least once per week to maintain a debris-free facility. Dispose of debris, do not sweep it into the gutter. Never hose off paved surfaces.

LANDSCAPE MAINTENANCE.

Pick up and properly dispose of waste; don't allow waste to be blown into the street gutter. Avoid over-irrigation and over-application of herbicides and pesticides that could create run-off to the storm drains.

RECYCLE OR DISPOSE OF FLUIDS PROPERLY.

Many automotive fluids can be recycled, others must be disposed of as hazardous materials. For photo processors, treat spent chemicals on site, if possible, to remove silver.

WASH VEHICLES AND EQUIPMENT IN DESIGNATED AREAS ONLY.

Wash areas must be paved and fitted to drain only to sanitary sewers. A commercial car wash may be an alternative if your facility is not properly equipped.

LABEL STORM DRAIN INLETS.

Stenciling storm drains with "No Dumping! Drains to Ocean," alerts employees and customers that no dumping is allowed. Contact Marti, NPDES Coordinator, for information on stenciling of storm drains near your facility: (714) 834-3526.

INSPECT STORM DRAIN INLETS PERIODICALLY.

Prevent accumulated pollutants from washing down storm drains on your property and periodically inspect, remove and properly dispose of any debris.

CHECK FOR AND CORRECT ILLICIT CONNECTIONS TO STORM DRAINS.

Any discharged waste water must be carried by the sanitary sewer to a treatment plant, never by storm drains to the ocean.

EDUCATE CUSTOMERS AND TRAIN EMPLOYEES TO IMPLEMENT STORM WATER MANAGEMENT PRACTICES.

Post notices of appropriate practices, provide convenient labeled, covered, disposal containers and train employees to implement these management practices.

ADDITIONAL INFORMATION.

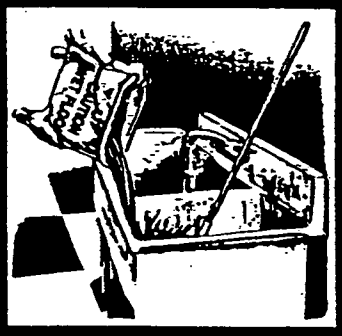
The California Integrated Waste Management Board Recycling Hotline offers information on local recycling services: (800) 553-2952.

If you would like more information about the County of Orange Clean Storm Water Program and Best Management Practices (BMPs), please call Marti Guerra Serizawa, NPDES Coordinator, Subdivision and Grading, NPDES Section, at (714) 834-3526.

Good Cleaning Practices

Clean floormats, filters and garbage cans in a mop sink, floor drain or proper outside area. Don't wash them in a parking lot, alley, sidewalk or street.

Limpie los tapetes de piso, los filtros y los botes de basura en un fregadero para trapeadores, desagüe de piso o en algún sitio apropiado afuera.
No los lave en los estacionamientos, callejones, veredas o en la calle.



Pour washwater into a janitorial or mop sink. Don't pour it out onto a parking lot, alley, sidewalk or street.

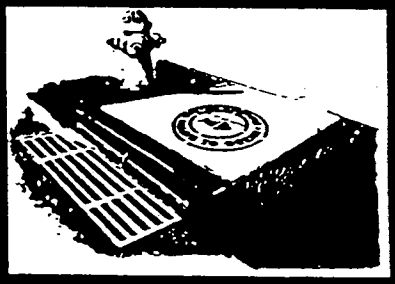
Arroje el agua empleada en la limpieza al fregadero para trapeadores. No la arroje en los estacionamientos, callejones, veredas o en la calle.

Recycle grease and oil. Don't pour it into sinks, floor drains, or onto a parking lot or street.

Recicle grasa y aceite. No los arroje en lavaderos o desagües de piso ni en estacionamientos o calles.

Keep dumpster area clean and lid closed. Don't fill it with liquid waste or hose it out.

Mantega el área alrededor del basurero limpia y la tapa cerrada. No lo llene con desperdicios líquidos ni utilice la manguera.

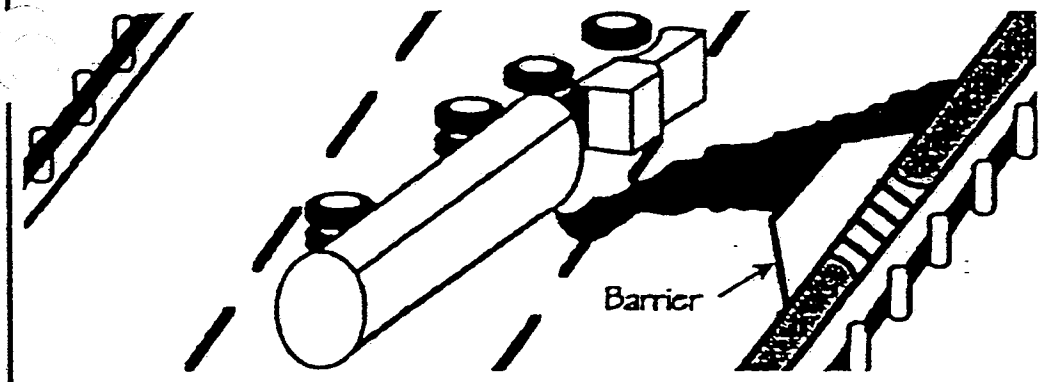


Use dry methods for spill cleanup (sweeping, cat litter, e Don't hose down spills.

Use métodos secos para limpiar los derrame (escobas, aserrin de los gatos, etc.). No utili mangueras para limpiar los derrames.

For A Cleaner Ocean

ACTIVITY: SPILL PREVENTION AND CONTROL



Objectives

- ~~Housekeeping Practices~~
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

DESCRIPTION

Prevent or reduce the discharge of pollutants to storm water from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

This best management practice covers only spill prevention and control. However, CA10 (Material Delivery and Storage) and CA11 (Material Use), also contain useful information, particularly on spill prevention. For information on wastes, see the waste management BMPs in this chapter.

APPROACH

The following steps will help reduce the storm water impacts of leaks and spills:

Define "Significant Spill"

Different materials pollute in different amounts. Make sure that each employee knows what a "significant spill" is for each material they use, and what is the appropriate response for "significant" and "insignificant" spills.

General Measures

Hazardous materials and wastes should be stored in covered containers or with plastic sheeting and protected from vandalism.
Place a stockpile of spill cleanup materials where it will be readily accessible.
Train employees in spill prevention and cleanup.
Designate responsible individuals.

Cleanup

Clean up leaks and spills immediately.
On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to either a certified laundry (rags) or disposed of as hazardous waste.
Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs for specific information.

Reporting

Report significant spills to local agencies, including the Fire Department.
Federal regulations require that any significant oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour).

Targeted Pollutants

- ○ Sediment
- ○ Nutrients
- ◒ Toxic Materials
- ◒ Oil & Grease
- ○ Floatable Materials
- ○ Other Construction Waste

- ● Likely to Have Significant Impact
- ○ Probable Low or Unknown Impact

Implementation Requirements

- ○ Capital Costs
- ◒ O&M Costs
- ○ Maintenance
- ◒ Training
- ○ Suitability for Slopes >5%

● High ○ Low

CA12

Best Management Practices

ACTIVITY: SPILL PREVENTION AND CONTROL (Continue)

Use the following measures related to specific activities:

Vehicle and Equipment Maintenance

If maintenance must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses, to prevent the runon of storm water and the runoff of spills.

Regularly inspect on-site vehicles and equipment for leaks, and repair immediately.

Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment on-site.

Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.

Place drip pans or absorbent materials under paving equipment when not in use.

Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the adsorbent materials promptly and dispose of properly.

Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

Oil filters disposed of in trash cans or dumpsters can leak oil and pollute storm water. Place the oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters.

Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

If fueling must occur on-site, use designated and secured (e.g., bermed or with sandbags) areas, located away from drainage courses, to prevent the runon of storm water and the runoff of spills.

Discourage "topping-off" of fuel tanks.

Always use secondary containment, such as a drain pan, when fueling to catch spills/leaks.

REQUIREMENTS

Costs (Capital, O&M)

- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of contaminated soil or water can be quite expensive.

Maintenance

- Keep ample supplies of spill control and cleanup materials on-site, near storage, unloading, and maintenance areas.
- Update your spill prevention and control plan and stock cleanup materials as chances occur in the types of chemicals on-site.

LIMITATIONS

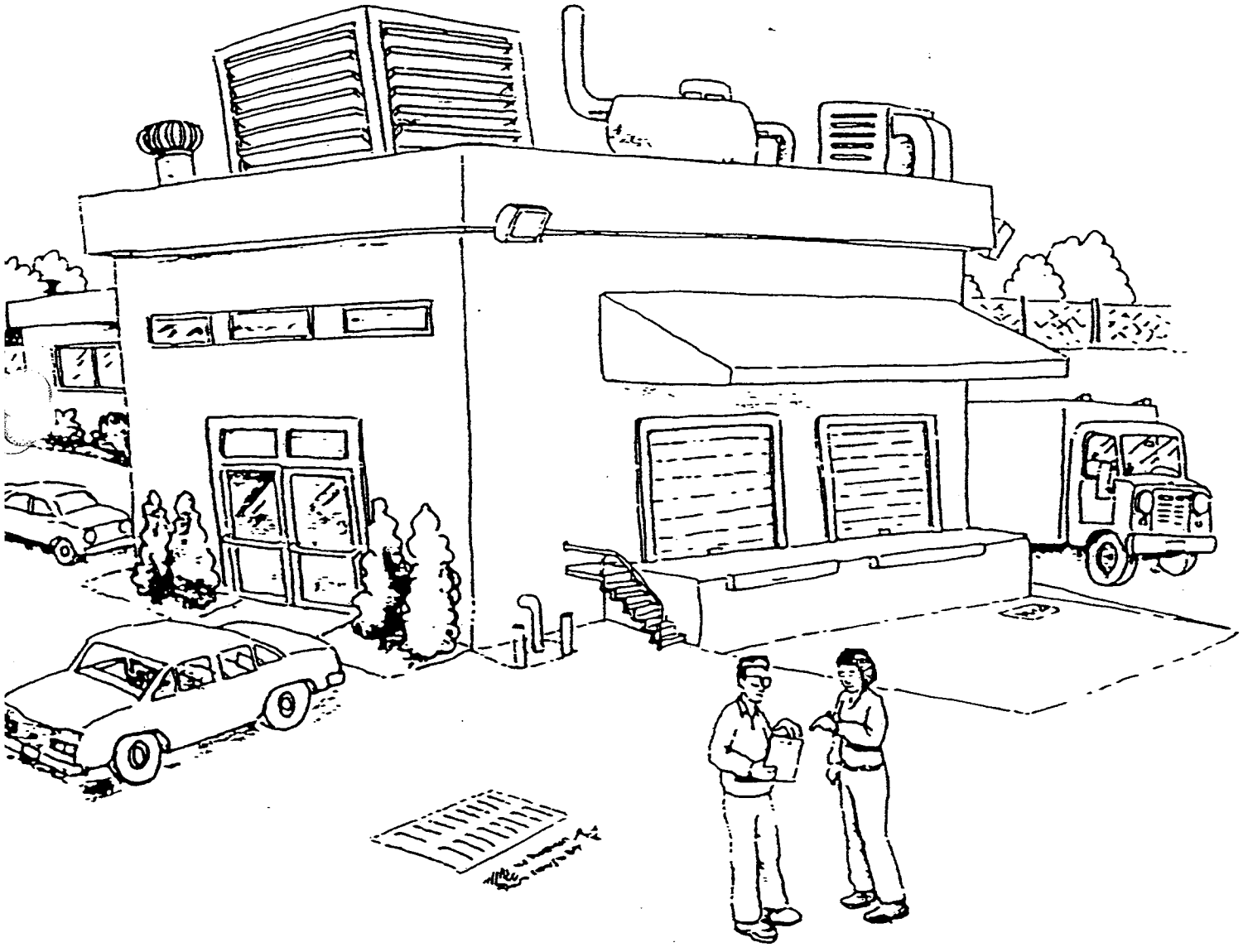
If necessary, use a private spill cleanup company.

REFERENCES

Blueprint for a Clean Bay-Construction-Related Industries: Best Management Practices for Storm Water Pollution Prevention; Santa Clara Valley Nonpoint Source Pollution Control Program, 1992; Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.

Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Best Management Practices for Industrial Storm Water Pollution Control



Nonpoint Source
Pollution Control Program

. Training and Education for Employees and Customers

uccessful storm water pollution control relies in large art on proper training and education of employees. lany of the recommended BMPs in this part of the anual identify specific training needs for employees ho conduct the activities. Train your employees in est management practices for storm water pollution ontrol.

rain employees in these BMPs because a single mployee's mistake or misunderstanding at the wrong ime, in the wrong place, can lead to a costly pollution ncident. When you have selected the BMPs that apply o your facility, add training in the BMPs to your egular employee training procedures.

Train employees to routinely inspect industrial ctivities and equipment that may be exposed to storm vater. A once-a-week walk-through can help identify otential difficulties before they become major roblems. Inspect structural BMPs to be sure that hey continue to function properly.

Continue your training procedures in the future. Assign experienced workers to train new employees. Review procedures as a group at least once a year. You can coordinate this with worker safety training programs or "worker right-to-know" training for hazardous materials.

Periodically check employees' work practices to be sure the BMPs are implemented properly. Post informational and reminder signs, such as: proper equipment wash procedures at designated washing areas; "Close the cover" signs at dumpsters and other storage areas; and others. Stencil "No dumping! — flows to Bay" messages at storm drains. (Stencils are available from the NPS Program.)

Provide general information as well because employees often respond best if they understand *why* they are being asked to conduct a new procedure. Employees' suggestions in return can help identify cost-effective storm water controls for your facility. Provide positive feedback so employees understand the difference they each make in protecting the Bay.

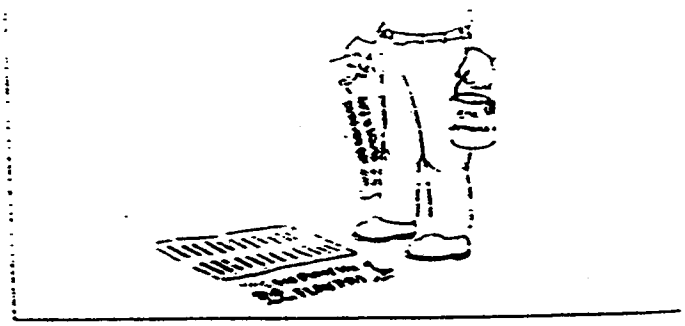
Emphasize the importance of keeping pollutants out of the storm drain, because the drains flow directly to streams and the Bay without benefit of the wastewater treatment that the sanitary sewers receive. Educate plant personnel about the harmful environmental effects of improper disposal of materials into the storm drain, so they understand the importance of preventing storm water pollution. Also, educate employees on what they can do at home to reduce storm water pollution in the Bay. Public information pamphlets are available from your municipality[redacted]

If you subcontract for small construction jobs or other work on your premises, write contracts with your BMPs as conditions. Provide contractors with proper disposal options for wastes. Monitor contractors to be sure they comply with your BMPs.

To keep abreast of new developments, participate in workshops, trade association meetings, and seminars. Trade association publications can be valuable sources of information. Modify your practices whenever you find a new idea that serves your shop better.

If you serve customers at your facility, be aware of customer activities onsite. If they dispose of materials improperly, *you* will be responsible for the violation. Ask your customers not to discard liquids into your trash cans or storm drains. If you have persistent problems, you may need to monitor your customers more carefully at trash cans, storm drains, and other potential disposal areas on your property.

Let your customers know how you are minimizing wastes and recycling fluids to show that you are a "good neighbor," and encourage your customers to be the same. Showing clients what you are doing to protect the Bay is good public relations. Some businesses make the customer aware of their environmental requirements by including a modest environmental compliance fee, itemized on customers' billing statements, to cover handling and disposal costs for hazardous materials.



Label storm drain inlets so employees do not dispose waste there.

2. Eliminating Improper Discharges to Storm Drains

The Industrial Storm Water General Permit generally prohibits discharges of *anything but storm water* to the storm drains. There are many ways in which non-storm water from industrial plants can enter the storm drainage system. In most cases, the discharges result from practices that are now illegal, even though they may be inadvertent or may have been permissible in the past. Industrial process water, building wastewater, and water from other sources are prohibited, with a few exceptions described in Table 1. Inspect your facility and yard to be sure no unauthorized discharges enter your storm drains.

Unauthorized discharges take two forms. **Illicit connections** are improper permanent connections that allow wastewaters to enter storm drains, including some that may have been allowed in the past. Connections that allow sanitary or process wastewater to enter the storm drain are prohibited, including all storm drain connections from indoor drains or sinks. More information on identifying and removing illicit connections is available in the Santa Clara Valley NPS Program's Guide to Compliance with the General Permit.

Illegal dumping is water that has been exposed to industrial activities, and then released to the properly-connected storm drainage system. Pollutants may be introduced to storm drains inadvertently, by routine practices that discharge water outdoors; or by routinely discharging wastes, wash water, and other materials to storm drains, catch basins, and other conveyance facilities either on your property or in the street. A large part of this improper discharge results from employees' lack of understanding, coupled with a lack of readily-available proper routes for the discharge.

You need to make a long-term ongoing effort to assure that no illegal discharges will occur. This requires continuing observation to identify potential sources of intentional or inadvertent improper discharges. Discontinue or re-route the water from those activities. Continuing employee training will be needed. Measures to help prevent illegal discharges include:

- Provide well-marked proper disposal or collection methods for waste water wherever you frequently use wash water, discharge cooling water, or produce a liquid waste that might otherwise reach the storm drain.
- Employee training should especially emphasize proper disposal of non-storm water (see Section 1). Educate employees to understand that storm drains connect directly to streams and the Bay without treatment.
- Label all storm drain inlets and catch basins "No dumping—flows to Bay" so employees will know which inlets are part of the storm drain system.
- Periodically inspect and maintain storm drain inlets. Clean out catch basins so that accumulated pollutants do not wash down the storm drains.

Table 1 is a summary of a 3-page table included in the Storm Water Industrial General Permit for the Santa Clara Valley. The table identifies some common sources of water in industrial plants that can enter storm drains. For each source, the table lists the preferred disposal option for facilities in the Santa Clara Valley. For water that is allowable for discharge to the storm drain, Table 1 lists conditions or restrictions on discharge.

A few discharge categories of special interest are:

- **Cooling tower condensate** for industrial process water must be discharged to the sanitary sewer, with the appropriate permits.
- **Internal coolant** for refrigeration or building air conditioning is prohibited from the storm drains.
- **Building air conditioner condensate** may be discharged to the storm drain *only* if it is not treated with algae inhibitors, corrosion control chemicals, or other additives. Do not allow it to run across parking lots or other paved surfaces that may be contact pollutants on its way to the storm drain; use a pipe or trough to direct the flow. In most Santa Clara Valley cities, the preferred course is to discharge to the sanitary sewer. (Some cities have made this a legal requirement.)

. Spill Prevention, Control, and Cleanup

nall spills can have cumulative effects that add up to ;ignificant source of potential pollutants in your ɔrm water discharge. The best approach by far is to event spills and leaks: maintain a regular inspection d repair schedule, and correct potential spill uations before a spill can occur. Some prevention chniques are described in Sections 4, 5, and 6.

hen a spill does occur, quick and effective response the best way to prevent pollutants from reaching ɔrm water. Prepare a set of well-defined procedures r responding to a spill of any liquids in an area that ight be exposed to storm water. The procedures n be specific for your facility, and should consider l circumstances from small, minor releases that can : easily handled to a large emergency spill — cluding who to call to respond to the situation :fore it gets out of hand. Train employees in the ·ocedures (Section 1).

ne basic procedures should emphasize that spills be eaned up promptly, not allowed to evaporate. therwise, pollutants remain on the pavement and ay be washed to the storm drains with the next in, or will remain in the soil to become a possible roundwater pollutant. If the spill is on an unpaved rface, determine whether you need to remove the ɔntaminated soil to prevent it from being a source of ture storm water pollutants.

lso, the standard procedures should specify leaning up leaks, drips, and other spills without ·ater whenever possible. Do not use a hose or wet ıop to clean up a spill area. Hosing may remove the pill from the immediate area, but does not keep the ollutant out of the environment. On the contrary, it dds to the volume of the spill and spreads the spilled naterial around a larger area.

f you handle hazardous materials, spill prevention ınd response procedures are described in your haz-ırdous materials management plan, filed with your ire department or other hazardous materials ("Haz-Mat") authority (see Section 6). If a spill occurs, ıotify the authorities as required in your emergency ·esponse plan. Contain and collect the spilled sub-stance, then dispose of the substances and any con-aminated soil in compliance with hazardous materials regulations.

Small spills are those which can be wiped up with a shop rag. Don't put wet rags in the dumpster with the shop trash: store them in a covered rag bin, of the kind used at auto service stations. Avoid paper towels. You can avoid making this a waste stream by sending used rags to a professional cleaning service. (You need to inform your cleaning service of what the shop rags have been used for.) Do not saturate rags with gasoline, solvents, or other volatile liquids.

Medium-sized spills are too large to wipe up with a rag and require more attention. Contain and soak up the liquid using dry absorbent material such as vermiculite, specially-prepared sawdust, or "cat litter." Absorbent "snakes" may be used as temporary booms to contain and soak up the liquid. Sweep up the used absorbent and snakes and dispose of them appropriately: with the shop trash if non-hazardous, with the hazardous wastes if necessary. Another convenient option is to use a wet/dry shop vacuum cleaner to collect spills, and dispose of the liquid with your liquid or hazardous wastes. *Do not* use vacuums for gasoline, solvents or other volatile fluids, because the enclosed vacuum may become an explosion hazard.

Larger spills must be contained, then cleaned up. For spills of food waste or other non-hazardous liquid, take steps to contain and clean up the liquid, and minimize the wash water used in cleanup. Shut off or plug storm drain inlets or sewer inlets where the spill may enter. If necessary, keep temporary plugs on hand to fit your inlets and train employees in when and how to use them. For hazardous materials spills, implement your emergency procedures and alert your HazMat authority.

Wipe up small spills immediately with shop rags.

4. Outdoor Process Equipment Operations and Maintenance

Storm water from your site can accumulate pollutants by exposure to numerous small leaks, spills, and other discharges of outdoor equipment. Large equipment may require specially-designed structural or advanced BMPs to reduce the potential for storm water to contact pollutants. Ordinary precautions, such as those below, may suffice for smaller equipment.

As a first step, identify all equipment at your site that may be exposed to storm water, or may discharge potential pollutants that may be exposed to storm water. Identify the kinds of pollutants each piece of equipment may generate — lubricants, coolants, and other possible sources of leaks or discharges.

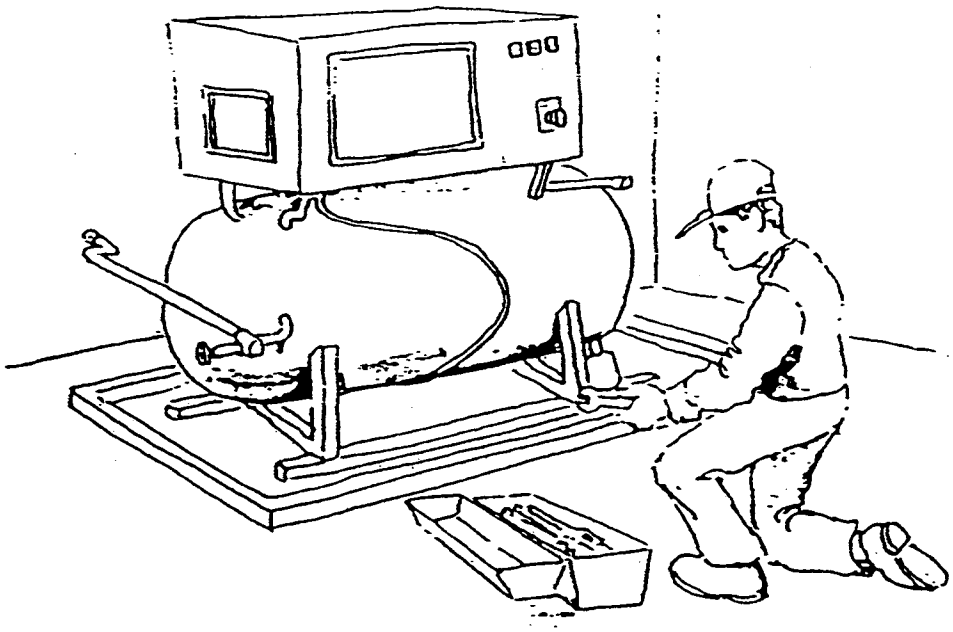
Be creative and thorough in developing your list. The inventory should include rooftop cooling towers or air conditioners; rooftop air vents for industrial equipment; outdoor air compressors and other service equipment; indoor wet processes where leaks or discharges may discharge to outdoor areas; and material transfer areas, such as loading areas where forklifts or trucks may carry pollutants outdoors on their tires.

Following the equipment inventory, assign an employee to inspect each piece of equipment on a regular basis to see that it is functioning properly. This could be the employee responsible for operating the equipment if it is used regularly, or may be a maintenance staff member for equipment on the roof or in seldom-seen places. Inspect for leaks, malfunctions, and staining on and around the equipment, and other evidence of leaks and discharges. Assign the inspecting person to be responsible for reporting a spill. Develop a routine for taking actions on the report: cleaning up the spill, and repairing the leak to prevent future spills.

Where possible, take the next step toward full pollution prevention and make modifications to prevent storm water from contacting the equipment or its discharges. Place equipment on an impermeable surface, or install a drip pan beneath potential leak points. To minimize the amount of rainwater that contacts the equipment, you may construct a simple roof and install a berm to prevent run-on and runoff. If the equipment requires a "wet" process — that is, operations inevitably releases wash water or process liquids — place it on a paved surface and install a connection to the sanitary sewer. Check with your municipality or wastewater authority to identify appropriate permits.

Air compressors and other equipment sometimes produce small quantities of automatic blowdown water, which commonly contains lubricating oil or other potential pollutants. This may not be discharged to the storm drain. Connect the blowdown to the sanitary sewer. Or, if the compressor has a frequent small bleed, place a drip pan or catchment to collect the water — do not let it soak into unpaved surfaces or run off paved surfaces.

Condensate on exterior surfaces of compressors, building cooling equipment, and other machinery need not be collected for discharge to the sanitary sewer, but may be directed to the storm drain. Prevent buildup of puddles or pools of condensate under the equipment; route it to a storm drain so it does not pick up pollutants while it flows across your site.



Keep drip pans under outdoor equipment to contain drips and leaks, especially during maintenance.

5. Outdoor Materials Storage and Handling

If you handle **bulk solid materials** outdoors, keep them covered, in appropriate containments, and protected from storm water. Apply this policy for raw materials, products, by-products, and construction materials or supplies. Materials of concern include gravel, sand, lumber, topsoil, compost, concrete, packing materials, metal products, and others.

Store the material in one of these ways:

- The preferred method is storage on a paved surface with a roof or covering so that no direct rainfall contacts them, and with appropriate berms or mounding to prevent run-on of storm water. Roofs are required by most municipalities for new facilities.
- Where a roof is not feasible, store on a specially constructed paved area with a drainage system. Pave the area with a slope of about 1.5% to minimize water pooling. Prevent runoff and run-on with berms or curbing along the perimeter. For many materials, the preferred alternative will be the installation of *no drain* and the testing and pumping of ponded water to the sanitary sewer, a treatment sytem, or offsite disposal as appropriate. Discharge to the storm drain is not allowed for many materials.
- Where a drain is allowed, install longitudinal drains that lead to treatment facilities or water quality catch basins along the lower edge of the pad. You may need a permit from your wastewater authority to discharge to the sanitary sewer, or may need the Regional Board to allow special provisions in your storm water NPDES permit (the General Permit).
- As a temporary arrangement, place the material on a paved surface and cover it with plastic sheeting, secured with weighted tires or sand bags. If possible, choose a mounded or bermed area that will prevent run-on of storm water through the material. Move the materials to a permanent storage place as soon as possible.

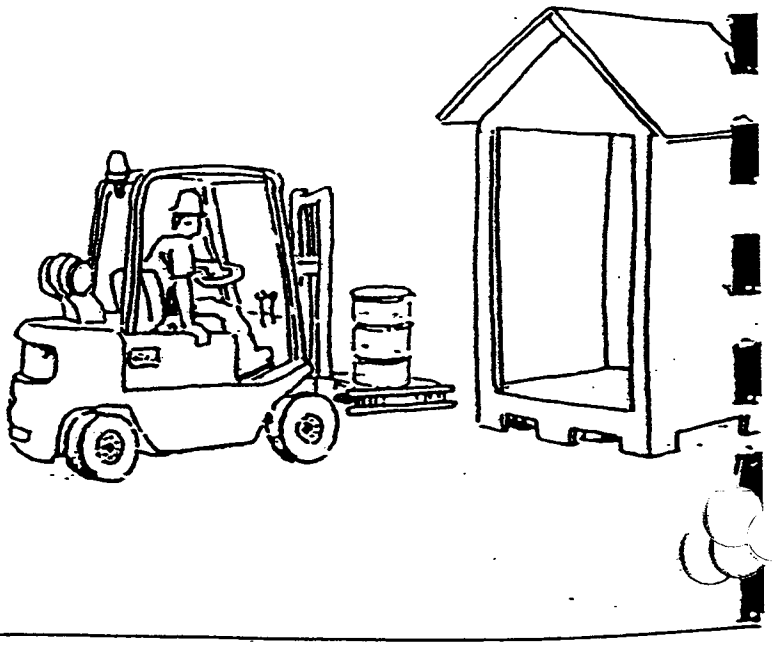
Parking lots or other surfaces near bulk materials storage facilities should be swept periodically to remove fines that may wash out of the materials, which will otherwise wash away with storm water. Larger bulk material storage facilities will need more extensive structural controls designed for the specific facility and material.

Hazardous materials need to be stored in accordance with federal, state, and local HazMat requirements. The requirements are generally more than adequate to prevent storm water pollution — for instance, HazMat secondary containment may have *no drain*.

If you store **liquid containers**, implement a plan and a design to control unexpected leaks and spills so the liquid does not reach storm drains or surfaces that will be exposed to storm water. If you store hazardous materials, the spill prevention plans required by your HazMat authority are adequate to ensure storm water protection. Non-hazardous materials storage should also incorporate spill control designs and procedures.

Select a storage method appropriate for the type of material. Keep liquid tanks in a designated area on a paved impermeable surface and within a berm or other secondary containment. Keep outdoor storage containers especially in good condition. Inspect containers regularly for damage or leaks, as described

"Doghouse" sheds are one way to keep storm water away from barrels and materials kept outdoors, and provide spill control at the same time.

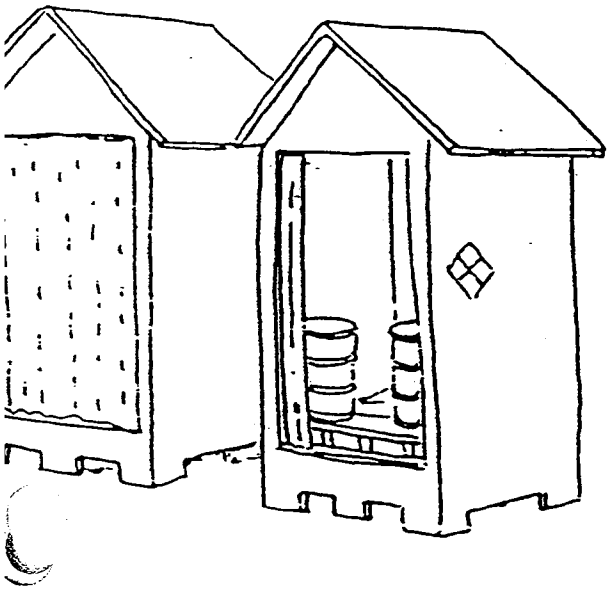


n Section 4. Clean up any leaks or spills immediately (using dry methods, described in Section 3), and the leaks promptly.

If the materials frequently leak during transfer, or the materials generally cause a wet environment when using or storing them, the area may need to be connected to the sanitary sewer (permitted by your wastewater authority), and should be covered and bermed to minimize contact with storm water.

Some localities *require* that secondary containments be connected to sanitary sewers, and prohibit any hard-plumbed storm drain connections within the secondary containment. On the other hand, large storage facilities and tank farms that have high-capacity bermed areas may receive rainfall over a wide area, and much of it may not contact the tanks or equipment: these might be better-served by a storm drain. As a rule, large facilities like this need site-specific storm water pollution prevention designs.

For smaller storage tanks, storage in roofed areas can prevent all contact with storm water (in combination with well-designed spill control procedures). Store liquids in a shed where one is available. New sheds, if temporary, can be costly because of building permits and fire-code requirements. A possible solution is the "doghouse" design used by some firms (illustrated). The roof and flooring prevent contact with direct rain or run-on storm water. Since it has only two walls, most fire departments do not require sprinklers. The flooring is wire mesh above secondary containment, so most HazMat authorities accept the structure for storing hazardous materials. (A permit may be required by local building or planning departments.)



Storm water in secondary containments often accumulates from direct rainfall into open containments. Water that has contacted storage vessels, or the pumping and transfer equipment associated with storage and handling, is considered to have contacted industrial activities and may not be discharged to the storm drains.

You may wish to roof the containment to avoid this problem. If that is not possible, or you wish to avoid the cost, you need to identify an acceptable disposal for water from the containment. One common solution is a portable pumping system that can be moved to accommodate separate containment structures on your site. The equipment can pump water into a truck or portable temporary holding tank. The water then can be tested and disposed according to whether any pollutants are present. Some disposal options are:

- If it meets criteria to be defined as hazardous waste, employ a certified hazardous waste hauler for disposal at a permitted hazardous waste facility.
- If it contains constituents similar to process wastewater for which your onsite wastewater pretreatment facilities are designed, pretreat the water and discharge to the sanitary sewer.
- If it meets standards for your industrial discharge permit, discharge it to the sanitary sewer without pretreatment (if your wastewater authority permits).
- Reuse it on your site in an appropriate manner: industrial process water, equipment wash water, steam cleaning makeup, or another use where the water will eventually be discharged as industrial or sanitary wastewater. You may need to invest in a truck or plumbing to convey the water to its reuse location.
- If it is free of hazardous constituents, use it on your facility grounds for landscape watering. Don't apply the water to landscaping if hazardous pollutants are present — even if not concentrated enough to be hazardous waste — because the pollutants may accumulate in the soil or vegetation, and create a health hazard over the long term.

6. Waste Handling and Disposal

Table 2 summarizes the preferred storage and disposal practices for some common industrial facility wastes. For many wastes, reusing or recycling is the most cost-effective means to prevent potential pollution. Fluids that you hold for recycling are special categories of hazardous waste. You may store them on your site only for short periods, in accordance with hazardous waste requirements, but they can be transported under somewhat less stringent requirements than other hazardous wastes. Many recycling services have special variances or permits that reduce your paperwork requirements and allow shipping at reduced cost.

Keep general shop trash in a dumpster with the lid closed. Put the dumpster in a paved area, not on unpaved soil or your lawn. Keep the area clean by picking up dropped trash and sweeping the area regularly (perhaps once a week), but don't use a hose to clean up — keep water off the area. Nearly all dumpsters and trash compactors leak: keep liquid wastes out of them, and keep them closed to keep storm water out.

If you can't prevent leakage from trash containers, install a roof or lean-to that keeps direct rainfall off, and place asphalt curbing or berms around the dumpster to contain the leaks. (Check with your local agencies and comply with fire codes and building permits.)

If you store scrap metal or other materials outdoors, keep them under a roof, cover, or tarpaulin. Keep scrap parts or other used metals indoors. Oils and other potential pollutants can wash off long after you think the parts have been washed clean. Collect waste metal such as used parts and metal lathe filings, for delivery to a scrap metal dealer.

If you store **empty drums** outdoors, do not hold them longer than necessary. Ship them to a drum reconditioner or another facility.

- Drain them completely to avoid spills.
- Seal them properly watertight, to keep storm water from entering; otherwise, the water would become a process wastewater, and can't be dumped to the storm drain.

Store and handle **hazardous wastes** properly. Hazardous materials or wastes are not a storm water problem if they are handled in accord with state and federal regulations, and the requirements of your local HazMat control authority.

Keep hazardous waste and materials indoors or under cover in a locked area, to keep nighttime trespassers away. Store them before disposal in special hazardous waste containers, or closed drums within a secondary containment that is approved by your HazMat authority.

Table 2. Preferred waste handling & disposal methods

		Recommended storage	Preferred disposal	Hazardous waste?
General plant wastes	Used parts: clean metal scrap	Bin (covered or indoors)	Scrap collector	No
	Used oily parts, contaminated	Drum	Hazardous waste hauler	Yes
	Metal shavings	Bin (covered or indoors)	Scrap collector	No
	Used rags	Rag bin with lid	Rag laundry	Possibly
	Soiled cleanup absorbent	Drum	Hazardous waste hauler	Yes
	Coolant from air conditioner or refrigeration equipment	Recycling machine	Reuse in-house (HVAC service company)	No
Liquid wastes	Paints*	Original container, with lid	Hazardous waste hauler	Yes
	Waste lubricating oil	Drum (segregate)	Oil recycler	Special**
	Solvents, thinners, and miscellaneous fluids*	Tank ("hot" waste) (Segregate different fluids to make recycling possible)	Solvent recycler (where possible) or waste hauler	Possibly
Liquid containers	Empty drums	Indoors or under cover	Drum reconditioner	
	Empty cans, bottles, aerosol cans, etc.	Drum	Municipal trash or hazardous waste hauler	Possibly
Vehicle wastes	Waste motor oil	Drum (segregate)	Oil recycler	Special**
	Brake fluid, gear oil, hydraulic fluids, etc.*	Bottle or tank ("hot" waste)	Hazardous waste hauler	Yes
	Antifreeze	Tank (segregate)	Recycler	Special**
	Batteries	Open rack	Battery supplier	Special**
	Tires	Covered or indoors	Tire hauler	No
	Oil filters	Drum (drain first)	Oil recycler	Special*

* *Unused pure product may sometimes be returned to the vendor rather than disposed as waste.* ** *Recyclable under special hazardous materials restrictions.*

most cities of Santa Clara County, the municipal fire partment is the HazMat authority that controls zardous materials storage, handling, and response. cales contract with the Central Fire District or ity Health Department. For information about ning solid wastes that might be controlled under zardous waste regulations, contact the County's vironmental Health Department or Cal-EPA's Toxic bstances Control Division. (See the rear cover for a of regulatory agencies.)

npty containers such as storage barrels, oil cans, int buckets, aerosol cans, and similar containers hazardous wastes if they once held hazardous terials. You may not discard these with the regular sh. They must be stored properly so they do not k outdoors. Some drum suppliers accept empty ums for reuse, under less-stringent hazardous terial recycling regulations.

hicle maintenance waste materials often deserve ecial attention. Waste oil, antifreeze, spent solvents, d some other liquids can be recycled. Spent batter- s may not be discarded with trash, but must either be sposed as hazardous waste, or returned to the dealer om whom you purchased them, for reclamation and use. Guidance on handling vehicle wastes may be n the Automotive Industries BMP manual, avail- m the NPS rogram and listed on the rear

7. Equipment Washing and Steam Cleaning

Wash water for industrial equipment in most cases must be discharged as process wastewater to the sanitary sewer, and is not allowed in storm drains. To clean dirty, greasy field equipment or trucks you must install equipment to capture, pretreat, and discharge the wash water to the sanitary sewer as industrial process waste. It may be less costly in the long run to locate a commercial car wash which has all the appropriate equipment and municipal permits, and to contract with them for washing services offsite.

If you wash vehicles or equipment on your site, you may do so only in a designated area, designed and equipped as follows:

- Pave the area.
- Mark the area clearly as a wash area, and be sure all employees know they must wash in this area only. Post instructional signs that prohibit changing vehicle oil, washing with solvents, and other activities.
- Install sumps or drain lines to collect wash water for treatment and discharge to the sanitary sewer; reuse (for repeated washings); or recycle (used elsewhere onsite).
- If the equipment is a continuing source of grease or heavy dirt, cover the area to prevent contact with rain water when not in use.
- Grade or berm the area to prevent storm water from running on.
- If possible, wash inside a building designed for maintenance or equipment storage. Ensure that all drains connect to the sanitary sewers.

Steam cleaning should be done on your site *only* if you are equipped to capture all the water and other wastes. All the washing requirements above apply to steam cleaning as well. Steam cleaning wash water is prohibited from storm drains; requires a permit from your wastewater authority — including pretreatment requirements, such as an oil/water separator; and may require you to determine whether it is a hazardous waste treatment unit. If you steam clean, do it indoors or in a specially-prepared outdoor working area where you collect the wash water and treat it for discharge.

3. Trucking and Shipping/Receiving

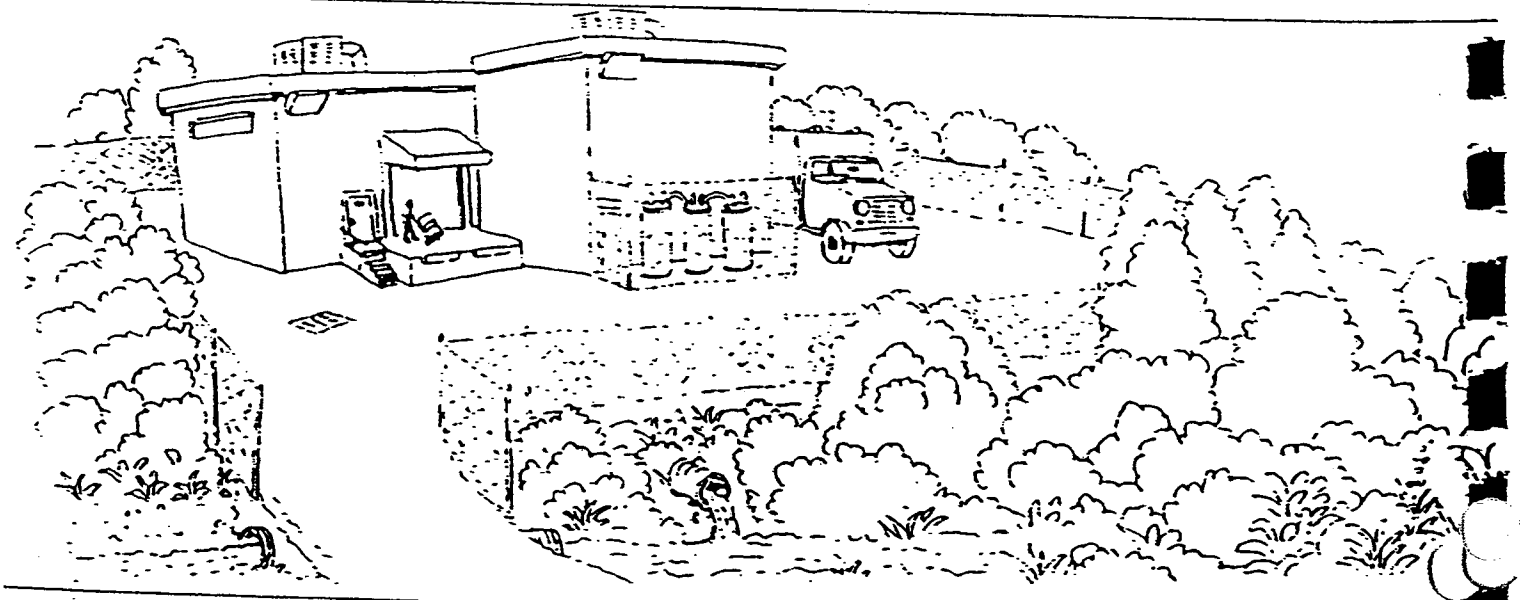
Truck loading and unloading are potential sources of pollutants when rainfall and run-on contact spilled raw materials, dust, and motor fluids that accumulate in this heavy-traffic area.

Load and unload raw materials, products, and other materials only at designated loading areas. In that way, you can isolate the potential source to areas that you can control, rather than unspecified areas throughout your site. The best areas from a storm water point of view are indoor bays. For facilities that must use an outdoor loading dock, some operational BMPs and simple design features can control storm water pollution.

- Cover the loading dock area with a roof overhang, or use a door skirt that fits snugly to both the building door and the truck door.
- Install curbs or berms around the loading area to prevent storm water from running on and any spilled material from running off. Accumulated liquids should be pumped out with a portable pump to the sanitary sewer unless concentrations exceed allowable limits. In those cases the material must be treated or shipped offsite.
- Designate the person who accepts the shipment, the truck driver, or someone else to check under the truck for leaked motor fluids, spilled materials, debris, and other foreign materials.
- If you own and operate the truck, make the driver responsible for identifying and reporting the spill — large or small.
- If you receive shipments from trucks operated by others (a trucking company or suppliers' trucks), i.e., the drivers are not your employees, have the person who signs for delivery responsible for inspecting for spills, leaks, and debris before the trucks leave.
- Detail a procedure so that a maintenance crew cleans up spilled materials promptly.
- If you have a small company that cannot spare a crew, make the driver responsible for cleaning up after unloading or before departing with a full load.
- If you identify the loading dock as a significant source of potential pollutants in your SWPP Plan, implement further control measures such as those described in Section 13.

If you load or unload liquids, you need further operational precautions and the loading dock needs further design features. If you handle hazardous materials, all the features you need are probably in place as part of a spill control and response plan. If they are not, you should select structural BMPs such as those described in Section 13.

Parking lots and access roads are sources of potential pollutants from the trucks themselves and from possible spills or leaks of the materials being transported. If you are re-grading roads and parking lots, or if you transport materials that you expect to be signifi-



Storm water runoff from industrial roofs, trucks, parking lots, and yards flows into storm drains and directly into streams and the Bay. It never receives treatment that would remove pollutants.

int sources of potential storm water pollutants, follow ıctural BMPs recommended in Section 16. For g facilities, especially smaller parking lots and ıort driveways where no hazardous materials are ansported, you can effectively prevent storm water ollution by implementing routine maintenance ctivities, such as:

- Visually inspect your access roads and parking lots regularly to identify and clean up spills.
- Remove solid debris as soon as operations permit.
- Clean up liquid spills promptly, as if they were on your shop floor.

Conduct street sweeping-style cleanups periodically to emove loose debris, small amounts of spilled raw naterials, road dust, and other potential pollutants.

- Smaller spaces can easily be swept by hand.
- Do not hose off paved surfaces.
- For larger spaces, use a vacuum truck or mechanical sweeper (that collects solids, not just brushes them aside). Whenever possible, do not use a wet-washing street sweeper unless you can collect the polluted wash water.
- Private corporations or your municipality might perform the work on a contract basis so you need not purchase the truck.

During the dry weather season, the appropriate frequency of sweeping for your facility depends on how heavily the road is used and the kinds of materials you transport. Some signs that you need to sweep more frequently:

- If your trucks commonly spill or drip bulk materials.
- If you notice debris or other materials accumulating on the access roads. The correct frequency is the one that prevents unwanted materials from accumulating.

During the wet weather season, emphasize sweeping at times that will best prevent storm water from contacting potential pollutants:

- Clean the area once thoroughly in the fall, before the wet weather season begins.
- After that, you may stay close to your dry-season needs for debris removal, but add an additional thorough cleaning before a major rainfall (half an inch or more of rainfall forecast).

Dispose of the cleaned-up material with your regular facility trash if there are no hazardous materials. If you suspect it may be hazardous — if you handle hazardous materials, or if you know of a significant motor oil leak, for example — you should test the material or dispose of it with your facility's hazardous waste. You could face substantial penalties if you improperly dispose of hazardous waste.

If you park trucks or heavy equipment onsite, inspect the parking area for leaks of oil and motor fluids and design a procedure to report them, clean them up, and repair the leaking vehicle. Some practical techniques include:

- Designate consistent parking spots for each vehicle so that if a leak is indicated on the ground, the truck can be identified and repaired.
- Designate a responsible person to check under a vehicle for leaks or spills. If you employ drivers, the driver could be responsible as part of a vehicle check before driving.
- Clean up spills promptly, using dry cleanup procedures described in Section 3. Conduct the preferred cleanup procedures for unpaved as well as paved areas.
- Develop a reasonable procedure for identifying, reporting, repairing, and cleaning up leaking motor fluids and spilled materials. Make sure employees are fully trained in the procedures: who is responsible for checking each truck, who should be notified, and who should respond.

. Fleet Vehicle Maintenance

ıe Automotive BMP manual prepared by the Santa ara Valley NPS Program addresses automotive and hicle repair facilities. You should implement the MPs in that manual if vehicle maintenance is a ıtentially significant source of pollutants on your site. ctions 9 and 10 of this manual merely summarize me of the appropriate BMPs for fleet maintenance at ı industrial facility.

henever possible, perform vehicle maintenance in an door garage, not in outdoor parking areas. If you ıange oil and do other routine engine work outdoors. ou need to create a designated area for vehicle aintenance. Keep the area clean as if it were part of ur shop floor and use dry cleanup practices. The ea should incorporate some specific design features. ; described in Sections 14 and 15. Some operational ethods also can be successful at preventing storm ater pollution at vehicle maintenance areas. A few ggestions:

- Keep equipment clean: don't allow buildup of grease and oil, which will wash away when the equipment is exposed to rain.
- If you work on vehicles outdoors, keep drip pans or containers under the vehicles at all times while you work on them — leaks and spills occur unexpectedly. Place drip pans under vehicles as soon as you detect a leak.
- Drain fluids from any retired vehicles kept onsite for scrap or parts. Out-of-service vehicles you intend to restore and vehicles being held for resale should be checked periodically for leakage.
- Don't change motor oil or perform vehicle or equipment maintenance in the parking lot or storage yard; use the vehicle maintenance area. Don't allow customers or employees to change their personal vehicles' oil in your vehicle service areas.

ehicle parking or storage yards need to be perated with some similar precautions:

- Inspect equipment in the yard for fluid leaks regularly — perhaps with a walk-by inspection for ground staining every day, and a closer visual inspection once a week.
- Keep the equipment yard clean and clear of debris, using dry sweeping methods as in Section 8. Do not hose off the area or wash with water, because any runoff becomes an illegal discharge to the storm drain.
- Maintain the yard's storm drain inlet(s) with special care. Clean them on a regular schedule and also after large storms. Pay attention to the kinds of potential pollutants that accumulate, so you can identify the sources and take measures to control the sources.

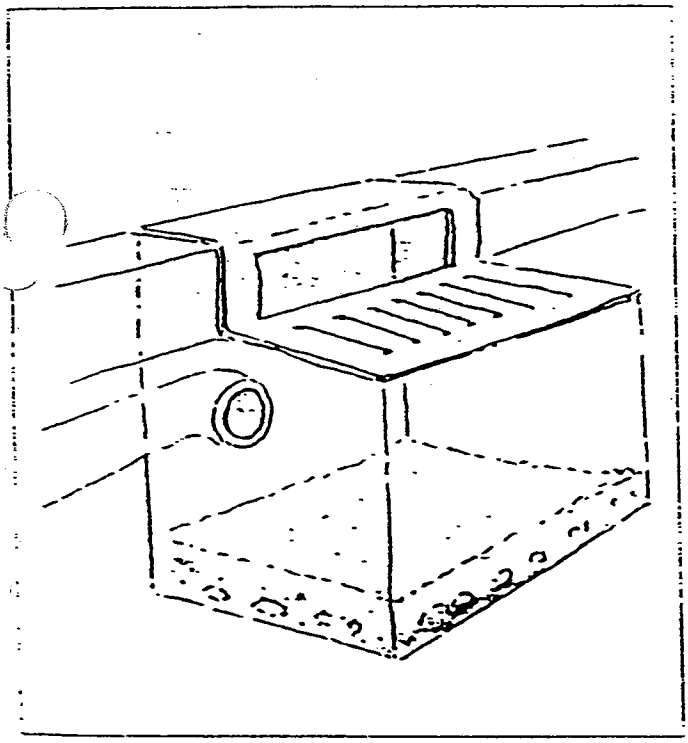
10. Fleet Vehicle and Equipment Fueling

If you have a vehicle fueling area it should be designed and operated to minimize spilled fuel and leaked fluids coming into contact with rain water. This section describes general principles, but simple operational controls may not be adequate for an industrial fueling facility. You may need to re-design your fueling area or install structural controls. Section 14 describes some general design approaches that may be useful in your eventual complete Storm Water Pollution Prevention Plan. In the near term, steps you can take for proper operation of a fueling area include:

- Use a paved area or provide a concrete slab for the fueling area — never place it on open ground. Concrete is preferred because fuel and oils cause asphalt to deteriorate.
- Clean up gasoline overflows and spills using dry methods as in Section 3. Do not allow spills to run off or evaporate, and do not flush the spill away with a hose. Spread absorbent material, sweep it up with a broom, and dispose of it as a hazardous waste.
- Post signs that instruct pump operators not to "top off" or overfill gas tanks. Keep dry cleanup materials in the fueling area, and instruct employees in the dry clean up methods described in Section 3. Assign someone responsibility to check the area every day for gasoline, motor oil, or other fluids that may have leaked.
- When you do routine cleaning, use a damp cloth on the pumps and a damp mop on the pavement rather than spraying with a hose to minimize clean water to the sump.

The main concept is to respond properly to fluid leaks is spill-prone area. Even very small spills, when happen every day, add up to a lot of fuel in the drainage system. This is an improper discharge that is illegal under the General Permit. Small spills do not present a problem if the fueling area is designed to handle spills — that is, if no storm water contacts it, and if it drains to a sump. But if the area drains to a valved-off storm drain or sewer connection, it must be pumped out before the valve may be opened during a rainfall.

Fuel tanks, including temporary tanks, need to be permitted by your HazMat authority. They will specify design features such as size of containments. Keep temporary fuel tanks in a bermed area that has an impervious lining, such as concrete or a heavy-gauge plastic liner.



A catch basin helps keep debris and sediments out of the storm drain, but needs to be cleaned out periodically.

11. Building Maintenance and Grounds Upkeep

Building maintenance and general outdoor cleanup should use the same principles as parking lot cleanup and spill prevention: clean up without water whenever possible, by sweeping or wiping; wash with as little water as possible; prevent and clean up spills; and clean up debris and solids so they do not reach the storm drains.

Arrange **rooftop** drains or downspouts so they don't drain directly onto paved surfaces. Connect them directly to a storm drain instead. Alternately, allow water to flow onto a grassy surface, if the grassy area is large enough that it can accept the roof's entire runoff from a medium-sized storm — that is, no water runs across the grassy area into a paved area except in the largest of storms.

Maintain the **storm water conveyance system** on your property. The "conveyance system" may be as simple as roof downspouts and a gutter in your driveway, or may be an extensive system of inlets, ditches, drainage channels, and underground lines. Keep all parts of the system clear of debris to avoid blockage that may cause storm water to back up. Remove from the system any spilled or leaked materials that can be transported by storm water.

Clean the storm drain inlets to remove sediment and debris at least twice a year — late in the dry weather season before the first storm, and after the first major storm of the wet weather season. After each large storm, inspect the inlet; remove debris; and determine whether you need to remove sediments or do other maintenance.

The storm drain inlet may have a **catch basin:** a below-grade chamber where the storm drain pipe connects. Catch basins are intended to collect debris and sediments to prevent clogging the lines. Therefore, the catch basins themselves must be cleaned out periodically to prevent flooding. If you clean catch basins annually, shortly before the wet weather season, you can keep them flowing freely and remove leaves, sediments, and other materials that would otherwise be washed down the storm drain. Don't flush the catch basin with water; use a shovel or vacuum device to remove the materials.

Other useful design features, such as vegetated ditches and water quality improvement inlets, are described in Sections 19, 20, and 21 as advanced BMPs.

12. Building Repair, Remodeling, and Construction

This section describes some relatively simple BMPs that apply to minor building repairs, remodelling, and minor construction projects at an industrial facility that involve "industrial activity exposed to storm water."

Larger-scale projects, such as construction of new facilities, are covered under a separate General Permit for construction. These require more extensive storm water pollution prevention measures than described here. A separate BMP manual for construction activities is available from the Santa Clara Valley NPS Program. (See rear cover.)

The same practices are *recommended* for construction activities on industrial sites. Before you begin a construction or repair project, review the Construction BMP Manual to identify and implement the appropriate practices. If those BMPs do not apply, or are unduly elaborate for a simple construction activity that will be completed in a short time, consider the BMPs described in this section.

Store building materials under cover or in contained areas, using BMPs discussed above, in Section 5. For outdoor storage at a construction site, select a pollution prevention method such as:

- Put an impermeable tarp over piles of wood, gravel, or other materials. Don't wait for forecasts of rain — do this every day, to avoid being caught unaware. Also, it will keep materials from blowing off the pile and contributing pollutants to runoff later.
- Keep the working area clean every day for the same reason. Sweep up wood splinters, paint chips, and other residues every day, as well as a thorough cleanup at the end of the project.

Painting requires some basic procedures.

- Before painting, while you scrape to remove old paint, spread a ground cloth or tarpaulin to collect dust and paint chips. If the paint contains lead or tributyl tin, dispose of the paint chips as hazardous waste.
- Mix paints indoors before starting work.
- Use impermeable ground cloths, such as plastic sheeting, while you paint. Place in-use paint buckets in a pan or on plastic sheeting.
- At the end of the work day, store paint buckets and barrels of materials away from contact with storm water.
- Use a tarp or portable, inflatable berm to prevent spills.
- Treat a paint spill as a chemical spill: capture it before it flows to the storm drain, and clean it up promptly using dry methods.

During **painting cleanup**, proper procedures are:

- If you use water-based paint, clean brushes and equipment in a sink connected to the sanitary sewer.
- Clean up oil-based paint where you can collect the waste paint and solvents to be handled as small quantity hazardous waste — do not pour it to the sink or to a storm drain.
- Keep leftover paint, solvents, and other supplies for a later use, or deliver them to a solvent recycler with other plant wastes when you ship a batch.
- Handle empty paint cans and other containers as described in Section 6. Containers may be small-quantity hazardous waste. Latex paint cans are not hazardous waste if the paint is dry.

Do not fall back on old cleanup practices from days when storm water pollution was not known as a problem. Do not pour leftover paint down the storm drain or onto the ground. Do not clean brushes into the storm drain or pour buckets of cleaning water to the drain, or wash spilled paint down the storm drain with a hose. These practices are now categorized as "illegal dumping." Do not wipe brushes onto old newspapers, or pour leftover paint supplies into newspapers and discard the paper in the trash.

Spray painting requires a few extra precautions.

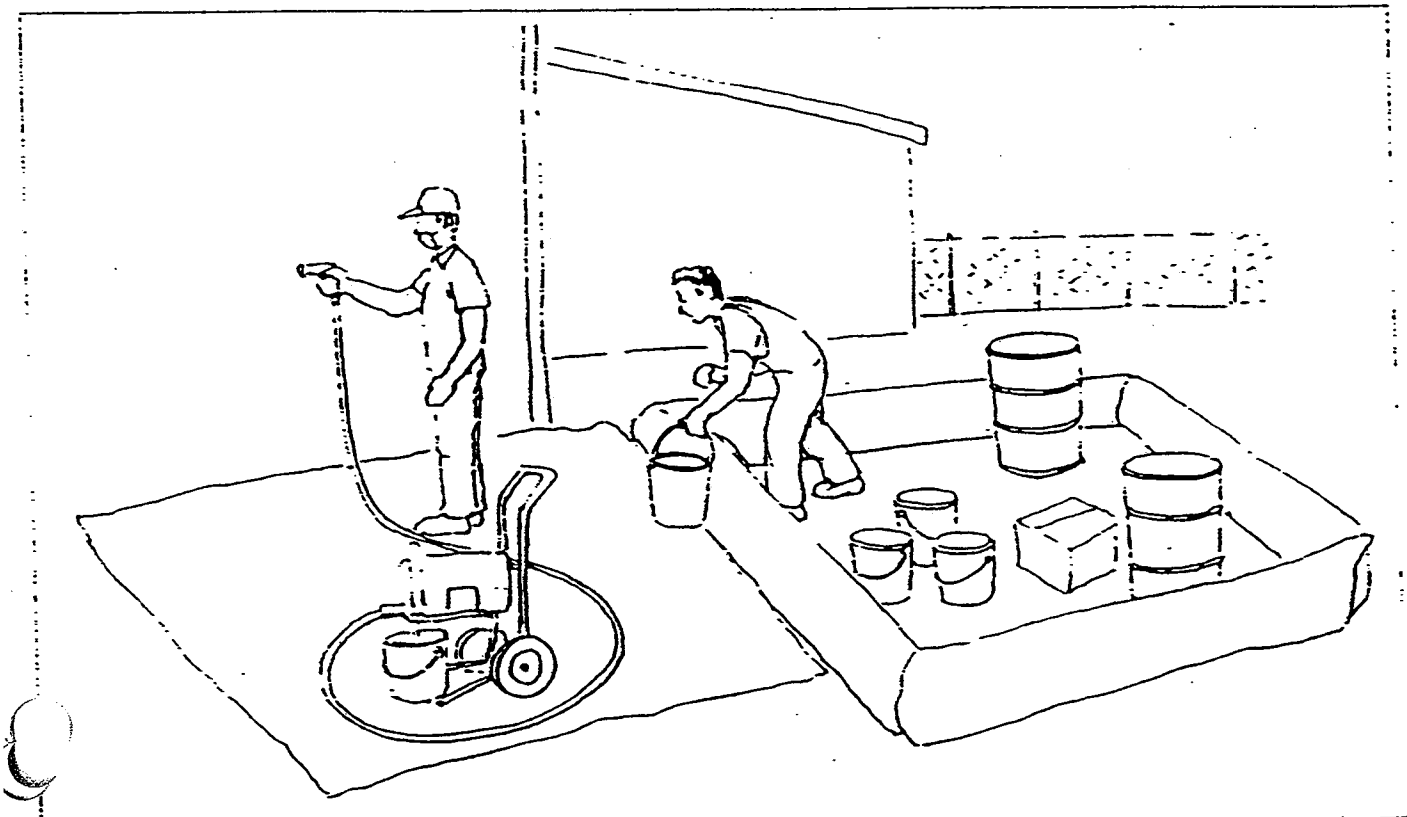
- Use temporary scaffolding to hang drop cloths or draperies to shield you from the wind and to collect overspray.
- Arrange the draperies to minimize the spreading of windblown materials.
- Be aware of air quality restrictions on spray paints that use volatile chemicals. Consider a water-based spray paint for better air quality compliance.

Sand blasting can be controlled to keep particles off ved surfaces and out of storm drains. Ask your cipality whether building and construction codes ce requirements on the size and type of blasting medium that is allowed. More complete instructions are available in the Construction BMP manual for full-sized jobs, but some basics should be applied for smaller projects, as well:

- Place a tarpaulin or ground cloth beneath your work to capture the blasting medium and particles from the surface being cleaned.
- Hang tarps or drop cloths to enclose the area, using temporary scaffolding if necessary. Arrange the drop cloths to protect the work area from wind, and to capture airborne particles.
- Curtail operations on a windy day.
- Clean up frequently: collect dust and particles from the drop cloths before you produce too large a pile to handle easily.

Wood preservatives, pavement seal coating, and other outdoor surface treatments commonly contain als, pesticides, solvents, or polymers that are ardous materials. Handle and dispose of them perly, as follows:

- Apply only as much of the chemical as the wood can absorb or as needed to cover the paved area.
- Soak up excess chemicals with absorbent material or rags rather than allowing them to flow to the storm drains or soak into the soil.
- If the chemicals spill, clean up promptly using dry techniques; see Section 3.
- When sealing a sidewalk, prevent the sealant from reaching the gutters or drains. Use absorbent booms, or stuff rags into storm drain openings.
- When treating a roof with wood preservative or sealant, line the gutters with rags. Dispose of the rags properly: with your hazardous waste if the substances you are using are hazardous.
- If you clean a roof or sidewalk before applying preservative, sweep thoroughly to remove loose particles first, then wash with water if necessary.
- Collect wash water from downspouts or drains where possible and remove particles.
- Avoid applying surface treatment chemicals during the wet weather season.



Outdoor painting requires practices to prevent paint and dust from becoming storm water pollutants.

Advanced BMPs and Structural Controls

Some industrial operations and plant situations require more extensive measures to control storm water pollution. All but the smallest and least complex industrial facilities are likely to require some structural modifications. Depending on your facility, and your success at eliminating potential sources of storm water pollution, your long-term implementation plan may need to include more or fewer of these advanced BMPs.

The BMPs in this section are more extensive and, in general, more costly than the recommended BMPs in Part 1. These BMPs include structural controls — storm water management measures that require constructing new facilities or installing new equipment. Not all of the advanced practices are necessary for every facility, and some will not be of use in some facilities.

You will need to evaluate your own plant to determine which BMPs are applicable to your operations, and which combination will best succeed at controlling the storm water pollutants that may run off from your site. You may find you have a choice in selecting structural BMPs, unlike in implementing basic recommended practices. Evaluate and select controls that are adequate and most cost-effective for your site.

The BMP descriptions in Part 2 are not complete design standards, but describe the central principles you need to consider in identifying and controlling storm water pollution from various sources in your plant. Design standards, performance specifications, and detailed discussion of the design and application of structural and treatment BMPs are available in a BMP manual from the state of California, scheduled for publication in late 1992.

Advanced pollution control practices take a number of forms, and may include a wide range of solutions that are not listed here. You may develop other approaches that are more effective for your facility.

Or, you may need to develop and implement further BMPs than the ones described in this manual. If you conduct more complex activities, especially activities that are unavoidably exposed to storm water, you will need to develop more intensive source control and storm water management BMPs.

If you are renovating your shop or building a new facility, you should evaluate installing some of these structural controls even if the shop does not currently have a pollution problem with that specific area. Some of the structural measures in this section are much less costly to install during new construction than to retrofit afterwards.

For example, if you re-grade an equipment parking area, you should consider storm water design criteria even if the yard has not been in violation of standards in the past. If you put off implementing the measures, future more-stringent requirements may require these same measures to be retrofitted, which can be much more costly than if you do it while constructing a new facility or renovating for other reasons.

If your principal sources of pollutants do not originate with industrial activities, you may need to control sources that are not specifically named in the General Permit, such as: pesticides and fertilizers from landscape maintenance; oil and antifreeze from autos in large employee parking lots; and cooling water or equipment lubricants from large building ventilation and cooling equipment. Your municipality and the NPS Program hold their own permit that requires they reduce pollutants in storm water from *all* sources, and they may request your cooperation in developing controls for your pollutant sources that go beyond the BMPs in this manual.

13. Loading Dock Design Features

Loading docks may require more intensive pollution controls than the operational BMPs described in Section 8. This is especially true of areas where you load or unload liquids in containers. Bulk liquid transfers are a more intensive industrial operation that requires specific control designs, and are not addressed in this manual.

Additional features of a properly-designed loading dock include:

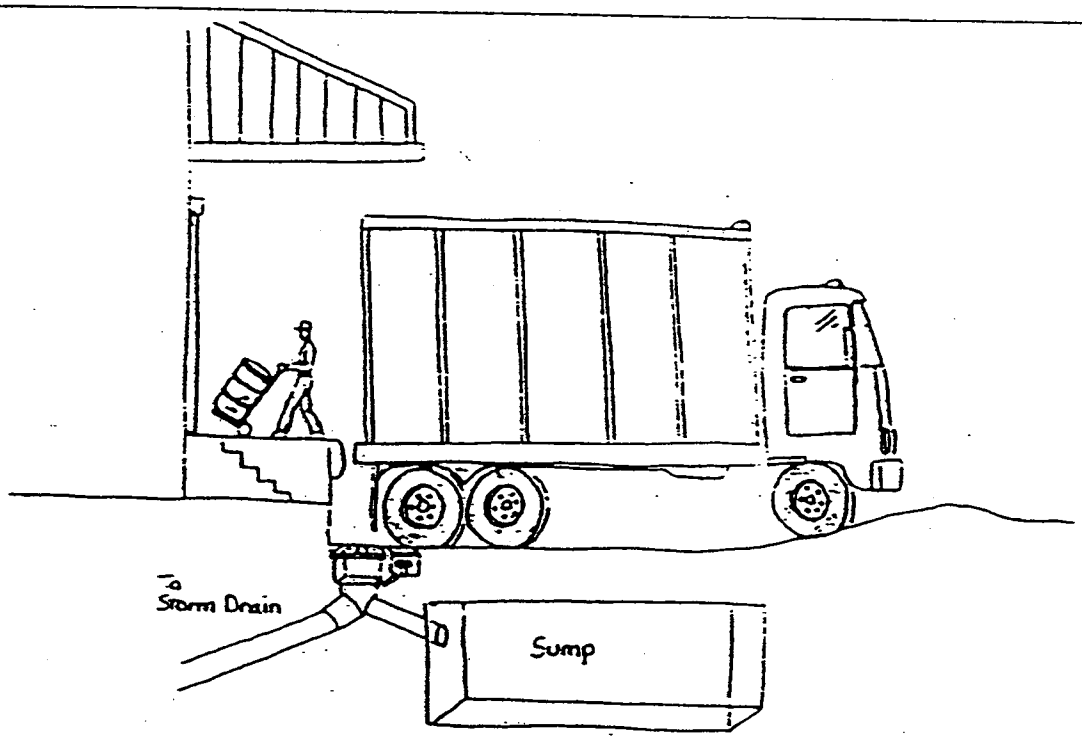
- Grade the loading area to be sloped or recessed to direct flow toward an inlet with a shutoff valve, or toward a dead-end sump.
- Make sure the inlet includes a sump with enough capacity to hold a spill while the valve is closed.
- Keep the valve closed at all times except when you need to release storm water or other liquids that are acceptable for discharge.
- Preferably, this inlet should connect to a sanitary sewer rather than a storm drain. Check with your wastewater treatment authority for permitting requirements.
- Consider completely preventing contact with storm water using a roof and berms, as described in Section 8. This will both avoid washing potential pollutants into the drain and avoid discharging clean storm water to the sanitary sewer.

If the inlet connects to a *storm drain*:

- Accumulated liquid must be tested and found to contain *no pollutants* before opening the valve for discharge.
- If the liquid does contain pollutants, you need to pump it from the sump and discharge to your sanitary sewer if the wastewater treatment authority agrees to accept it. (See the recommendation below.)

If the inlet connects to a *sanitary sewer*:

- Accumulated liquid must be tested and found to be within the parameters specified in your wastewater discharge permit before opening the valve for discharge.
- If you cannot discharge to the sanitary sewer, you need to convey the liquid to a hazardous waste disposal facility.



A dead-end sump provides secure spill control, but any accumulated liquids need to be pumped out, tested, and properly disposed. Use berms or slopes to prevent run-on so storm water is not added to waste in the sump.

14. Equipment Yard Design Features

'arking and storage yards for large vehicles and heavy quipment generally require site-specific structural nd operational controls. Follow the operational BMPs or vehicles recommended in Sections 7, 8, 9, and 10. lso assess your equipment yard to determine ossible sources of pollutants, and install appropriate ontrols to keep potential pollutants out of the storm ater. Design approaches may include:

- Grade the area to slope to a longitudinal drain, or install curbs to direct all storm water to a storm drain in the yard. If your yard is not too large and is properly designed, it should drain to a single storm drain. Even a small yard should include a storm drain on your property, and not rely on a city-operated drain in the street.
- If you determine that the equipment yard is a large source of oily materials in your storm water, consider fitting the inlet(s) with a sand filter (see Section 20) or removing oily pollutants (see Section 21).

egregate the area where you service vehicles, and nstall special structural controls.

- If possible, perform all work indoors, or construct a roof over the specified area. This will require a building permit and compliance with appropriate fire codes.
- Pave the surface with concrete, not asphalt. Vehicle fluids may dissolve asphalt, or may be absorbed into the blacktop and released later.
- Drain the surface to a single drain, preferably connected to a sanitary sewer. The drain may require an oil/water separator or oil/grease trap, and must be approved by your wastewater treatment authority.
- Grade the working area to be higher than the parking lot, or surround it with a berm, to prevent storm water run-on.
- Construct a special area in which to segregate your "dirtiest" equipment (roof tar equipment, asphalt paving equipment, etc.) Handle its discharges, leaks, and runoff separately. This approach could save you from the need to treat *all* the runoff from the equipment yard.

15. Fleet or Equipment Fueling Area Design Features

If your facility's vehicle fueling area is one of the significant sources you identify in your SWPP Plan, you may need more intensive BMPs than the operational efforts described in Section 10. Some design features to consider are:

- Cover the fueling area to prevent rain from falling directly on the area. Install a roof over the fueling island, the area where vehicles park while fueling, and as much of the approach area as practical. Leaked engine fluids and spilled fuel inevitably accumulate on the pavement in these heavily-trafficked areas.
- Storm drain and sewer inlets that drain the fueling area must be equipped with a shutoff valve to keep fuel out of the drain in the event of a spill from the pumps. The valve should be kept closed at all times except during a rainfall.
- Curtail fueling activities when the valve must be open, or use extra precautions to capture any spilled fuel, such as a large drip pan under the vehicle.

A number of different approaches may serve as effective drainage design. The fueling area needs to be separated from the rest of the yard, both to contain any fuel spill and to prevent storm water from running on. Select or adapt a scheme such as one of these:

- Grade the fueling area to be "mounded" or elevated. The Automotive Industries BMP manual includes a suggested mounded grading scheme.
- Install berms around the area that are high enough to redirect water from a large storm.
- Grade the entire fueling area to drain to a single inlet. You can accomplish this with longitudinal drains at the perimeter along the "downhill" side of the fueling area, or with a depression in the middle of the fueling area. Either way, be sure to design the grading to avoid run-on.
- At the inlet, either install a sump, from which you will pump any accumulated liquids; or connect to a sanitary sewer, after checking to get all the permits the wastewater authority may require. The sump or connection should be operated as suggested for a loading dock area in Section 13.

16. Access Roads and Rail Corridors

Access roads and rail corridors can be significant sources of pollutants for some industrial facilities. In the General Permit, access roads and rail corridors are defined as "industrial activities exposed to storm water" that you must include in identifying potential sources and selecting BMPs for your SWPP Plan.

Maintenance and operational BMPs for access roads are the same as those described for vehicle access and parking areas under Section 9. Some structural BMPs are described below.

Proper drainage design is a good place to start. Generally, this means the roads should be crowned and sloped outward; and that storm water should not be allowed to drain across the road, but be carried in ditches or culverts alongside the road. Grass-lining the roadside ditches can be an effective way to remove storm water pollutants — see Section 20. Maintain the ditch to be sure it does not clog or fill with sediments, allowing storm water to overflow. Plant vegetation by roadside to control erosion and to promote water infiltration.

If your site includes railroad access, an important source of pollutants is the preservatives on wooden railroad ties. Use a less-toxic preservative; avoid organic toxics such as creosote and pentachlorophenol. Or use concrete ties or other non-wooden ties.

Control spills and dust from railroad unloading. If your rail line delivers or picks up liquids, in bulk or in containers, you may need to add spill-control loading docks with shutoff valves. (See Section 3 for spill controls, and Section 13 for loading dock design features). If parked railroad cars drip, install a drip pan at the loading dock between the rails.

17. Onsite Storm Water Management

Some industrial facilities may still find potential pollutants exposed to storm water even after implementing source control measures like the operational BMPs in the first part of the manual and the structural source controls above. Further structural controls can be used to manage the storm water itself, either to control the flow of the runoff (described in Section 19), to remove some of the pollutants in passive devices (Section 20), or to remove pollutants using specially-designed equipment (Section 21).

The best way to avoid the need for storm water management or treatment is to use source controls, most likely in combination. The right combination for your facility will probably include conscientious implementation of BMPs such as those recommended in Sections 1 through 12 of this manual, attention to the sources of waste at your facility, and careful reduction of process wastes.

If you need to manage storm water onsite, the most important consideration is to minimize the quantity of storm water that contacts potential pollutants. For example, keep the area of industrial activities as small as possible; separate the area from parking lots, to prevent run-on; and roof or enclose the area if possible.

Design your storm water conveyance system to *isolate* the areas where storm water contacts potential pollutants, and convey water from those areas separately from water that runs off of "clean" and non-industrial parts of the site. This will allow you to control storm water with smaller and less-costly hydraulic or water quality controls. Or, if you plan to discharge to your wastewater treatment authority (Section 18), reducing the volume will reduce the discharge cost and increase the willingness of your wastewater authority to accept the discharge.

18. Redirect Storm Water Discharge from Storm Drain to Sanitary Sewer

If source control BMPs are not adequate to prevent discharging pollutants in storm water from your facility, you may need to cease discharging storm water that contacts those pollutants. One way to avoid discharging potential pollutants with storm water is to isolate runoff from that part of your facility where the pollutants are contacted and discharge the storm water to the sanitary sewer rather than a storm drain.

Installing new connections and new piping can be quite costly, and the required permits may be a barrier, so this could be a costly BMP. Also, it will require a permit from your local wastewater authority. The permit will specify the volume of water you may discharge, the kind of pretreatment equipment you may need to install and operate, and requirements for monitoring your discharge.

Redirecting discharge to the sanitary sewer may not be allowable in all localities — some wastewater authorities have sections in their local ordinances that prohibit the discharge of storm water to the sanitary sewer. Requirements might differ from one municipality to another, so contact the authority that serves your area for information. (See the list on the rear cover.)

Your wastewater treatment authority, as a rule, would prefer to minimize the volume of storm water that passes through the treatment system. You should reduce the quantity of storm water you redirect, using techniques like those described in Section 17.

The wastewater authority may require temporary storage of your storm water onsite, to avoid overloading their facilities during a storm. Your authority is more likely to accept discharge of storm water that has contacted pollutants if you can store it temporarily and deliver it *after* the high flows from a storm event.

19. Storm Water Management: Hydraulic Controls

Hydraulic controls are intended to control *quantity* of storm water discharge, but can be useful for water *quality* as well by removing potential pollutants from storm water. BMPs of this type are widely used to control erosion of hillsides and to remove sediments from storm water runoff. Also, hydraulic-control BMPs can help to remove oils and heavy metals that adsorb to sediment particles in storm water.

Design standards and operating information for hydraulic controls are available in a number of references. The NPS Program is preparing a manual of "new development" BMPs recommended for newly-constructed buildings, which includes discussion of hydraulic BMPs for storm water pollution control and conditions under which hydrauiic BMPs should be implemented. Design specifications for hydraulic controls will also be addressed in detail in a BMP manual being prepared by the state of California for storm water pollution control. Many local and regional regulations that target erosion control give specifications for hydraulic BMPs.

Hydraulic controls are designed for one of two purposes. One category serves to control the rate of peak flow , slowing the flow of water at the height of the storm to reduce its potential to carry away soils and other contaminants. The other type reduces volume of runoff, generally by causing some storm water to *infiltrate* (or soak into the soil) rather than running off into storm drains, streets, or streams. Some approaches control both peak rate and volume.

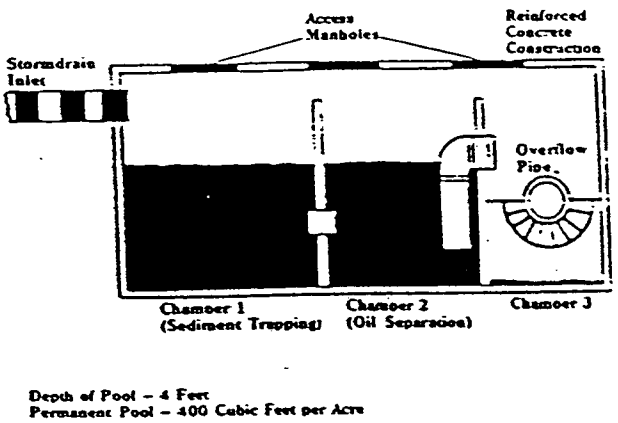
Hydraulic controls for a site are most effective if the overall site design is considered. The first step generally is to modify the site layout to increase the water-permeable surface, to increase infiltration and reduce runoff volume. If greater flow control is needed, the second step may be to strategically place *infiltration trenches* to intercept runoff and promote infiltration. (Infiltration may not be permitted in some areas — see Section 20.) For large quantities of flow, onsite ponds can be designed either to slow the peak flow of storm water or to hold water onsite until it infiltrates or evaporates. These are known as *detention ponds* or *retention ponds*. A variation is the *storm water wetland*, which similarly controls flow while wetland vegetation helps remove pollutants.

20. Storm Water Management: Water Quality Controls

A number of specific storm water management controls are better suited to water quality control than hydraulic control. These features may be added to various parts of the storm water conveyance system on an industrial site to help control potential pollutants in the storm water before it leaves the site. They are for the most part passive design features rather than treatment devices in the usual sense. Information in existing references gives design parameters for these water quality controls, so this section merely summarizes a few types of controls.

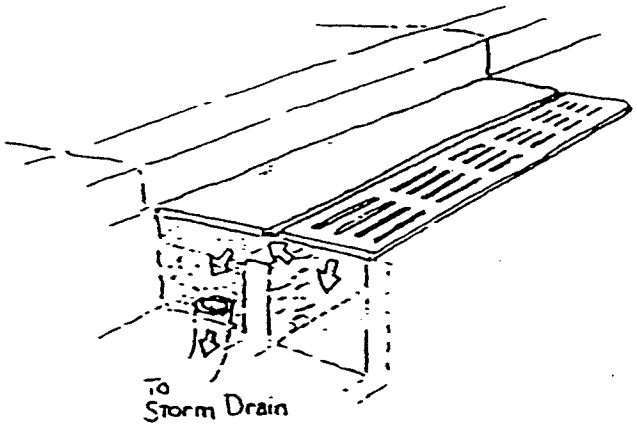
A simple technique is a **vegetated swale or channel**, a ditch that carries storm water in which plants are permitted to grow. The plants provide some peak flow control by slowing the water. They also remove some pollutants by encouraging the deposition of sediments and minor oily wastes. This control can be retrofitted to some existing storm water conveyance ditches simply by allowing grasses to grow, if it does not interfere with storm water drainage and cause water to back up on the site.

WATER QUALITY INLET



An API separator is only partly effective at removing oily wastes, but is more effective at removing sediments than an ordinary catch basin.

A **water quality inlet** is a simple multi-purpose device, shown in the diagram above. A storm drain inlet is lined with an enlarged catch basin or grit chamber where solids and sediments settle out of the water. A baffle restricts the flow of surface-floating oil, which can be removed by hand later. Floatable debris also collects at the baffle. This type of inlet has in the past been used to help remove oily wastes, but is of limited effectiveness. Section 21 describes the inlet further, including its maintenance requirements.



A sand filter inlet can remove some pollutants before they enter the storm drain.

A **sand filter inlet** is a storm drain inlet that contains sand or another filter medium. The sand removes particulates and oily wastes from storm water as it enters the storm drain. An extension of the same concept is a **sand filter**, where storm water quality can be improved before discharge. Sand filters appear to be particularly effective if used in combination with detention or retention ponds, by diverting the first-flush of runoff (often carrying the most pollutants) to the filter and routing the remainder of the water to the pond.

Many of these water quality controls can be designed either of two ways: to control potential pollutants before discharging water to a storm drain; or to remove unwanted constituents and then direct the storm water into the ground as an *infiltration* device. Any of these controls that use infiltration techniques, or others designed specifically to promote infiltration, (porous pavement, infiltration trenches, and others), may be restricted or prohibited in some municipalities [redacted] as potential sources of ground water contamination. Dry wells for disposal of storm water are illegal under State and Federal Law. The Regional Board's newly-amended Basin Plan for the San Francisco Bay Region adopts some new policies that address infiltration devices. The NPS Program does not recommend them in areas where shallow ground water may be impacted. Check with your municipality before installing an infiltration device.

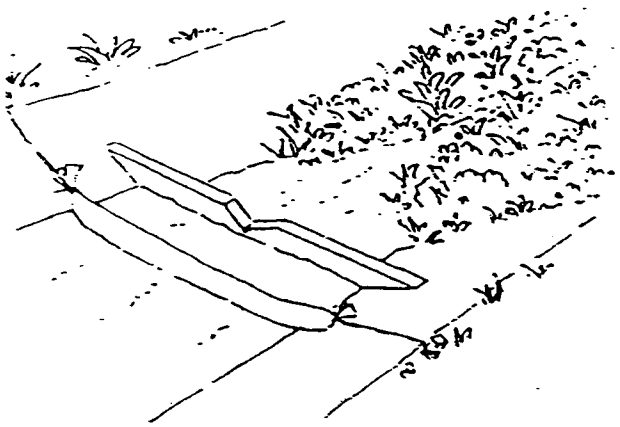
Storm Water Management: Removing Oily Pollutants

ıple technique to remove oils and grease from
ı water uses **oil-absorbent materials** (or
hilic materials), such as the booms used to
in oil spills. The absorbent material preferentially
ibs oil, and does not fill with water, so it can be
on storm water with small concentrations of oily
rials.

: facilities that have a storm water conveyance
where water flows season-long have found it
enient to install a permanent floating boom to
ol an occasional light surface sheen. When the
ı is spent, it is full of oil and is visibly heavier,
ng lower in the water. The booms are inexpensive
gh that they may easily be replaced whenever the
rbent is saturated. Disposal is more costly, since
may be hazardous waste unless an oil recycler
ıccept the material.

water separators are a broad category of devices
are intended to remove oily constituents. There
nany varieties of oil/water separators, and the
ı is not used in the same way by all equipment
lors or design specifications.

most applications, oil/water separators are *not
mmended* as a storm water management strategy.
rce control BMPs are strongly preferred.
water separators are fairly costly, and most



l-absorbent berms can remove oily sheen from storm
ıter. Vegetation in an open ditch can slow the flow,
lping sediments settle.

designs do not operate best at the low concentrations commonly present in storm water. A sand filter inlet is typically more effective, and less costly, for the small quantities and low concentrations of oils in routine storm water runoff — that is, runoff that has not directly contacted oily industrial activities.

Separators may be useful in limited applications. They are sometimes useful as a retrofit measure, to temporarily help a facility comply while it installs more effective source control BMPs. Another use is in spill control sumps, upstream of a treatment process. The advanced designs are sometimes used as a treatment device (that will discharge to a sanitary sewer) for storm water that contacts industrial activities in isolated areas where contact cannot be avoided.

The **API oil/water separator** is a simple design, named for the American Petroleum Institute. The API separator is sometimes called an "oil and grease trap," to distinguish it from a true oil/water separator used for industrial wastewater. An API separator usually is a long basin with multiple chambers or vaults, typically installed below grade. It can be fitted to storm drains or storm water inlets in a variety of configurations — the water quality inlet described in Section 20 is one form. The intent is to slow water and stratify the flow so that oil rises. The floating oil is then retained by one or more baffles in the chambers.

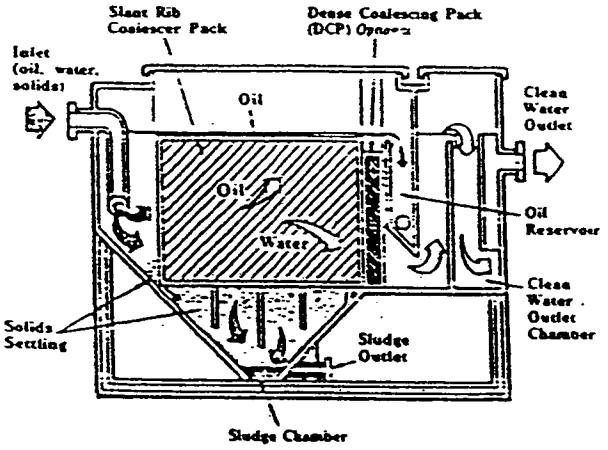
An API separator removes the bulk of floating oily wastes, especially if the oil is not well-mixed but floats on top of the water. However, it is not highly efficient, so storm water can still be polluted unacceptably even after it flows through the inlet. The separator works by concentrating oily wastes within the chamber, so inevitably some of the collected wastes are carried away during heavier storms. It can be made somewhat more effective at oil removal if it includes pads or pillows of oleophilic material at the water surface level.

If you install an API separator, it *must be maintained* regularly. It requires a standing pool of water, which should be pumped out periodically and replaced with clean water. To clean, remove oil floating on the standing pool and greasy matter collected at the baffle. Some commercial oil recyclers accept this material for recycling; otherwise, it must be handled as hazardous waste. If you install oil-absorbent pillows, the pillows must be closely monitored and replaced when they are saturated, also disposed either as hazardous waste or to a recycler. If the inlet includes a sediment trap, as in the water quality inlet shown in Section 20, remove solids with a shovel between storms.

elop a regular cleaning schedule appropriate for facility. For inlets that don't carry much flow, ce cleanings per year are sufficient: once before the rainy season (mid-September) to remove materials that have accumulated; once after the first major storm; and once at the end of the rainy season to prevent slow loss or evaporation of the collected oily wastes. If storm water flow is greater, the API separator may need to be cleaned monthly, or periodically between storms. As another guideline, clean the separator before three inches of oil accumulate in the entry chamber.

The CPI, or coalescing plate interceptor oil/water separator, is a more advanced design. These are common for treatment of oil-bearing industrial wastewater, but are less often cost-effective for storm water. The CPI separator generally achieves greater removal efficiency than an API type, but is more costly to purchase and operate. A CPI separator can attain a high removal efficiency, and accommodate a fairly high flow rate, but at ever-increasing capital costs for the equipment (by adding more separator plates). The best economics generally apply for relatively high entrations of oil at low and constant flow rates.

SLANT RIB COALESCING SEPARATOR



A CPI separator can be very effective at removing oil but requires upstream sediment control and can be costly to maintain.

w design features can improve the effectiveness of il-water separator. Pollution removal effectiveness highest if the concentration is high when the storm water enters the unit. Avoid diluting the water to be treated with water from other parts of the site, where it does not contact the potential pollutants, both to save on the capital investment and to increase treatment effectiveness. For industrial process applications, an evaporator can be used reduce the volume of water treated.

An oil-water separator works best if sediment is not present in the water — limit your water to be treated to isolated areas, free of mud and soils if possible. Efficiency is highest with a fairly steady flow, so you may require upstream detention. Also, don't site the separator downstream of a pump, because the pump mixes the oil and water and partially emulsifies the oil, so separators are less effective.

Storm water treatment generally is *not recommended* as a BMP. Some of the devices described in Section 21 may be considered to be treatment by the state or by your local wastewater treatment authority, which can open the door to some burdensome regulatory restrictions and permitting requirements.

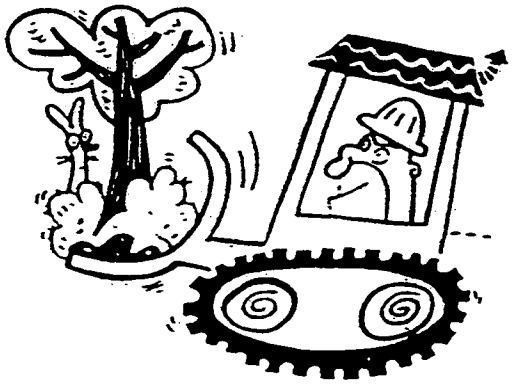
For most industrial facilities, the best advice about onsite storm water treatment is to avoid it, for a number of reasons. Most of the available treatment equipment is costly to purchase and to receive permitting approval for. Operational costs can also be significant — you must monitor the equipment to assure continued effectiveness, and may need to prepare and submit chemical analyses to demonstrate continued compliance.

Further, in most places in the Santa Clara Valley, treatment of storm water means you must discharge it to the sanitary sewer rather than the storm drain (as described in Section 17). In effect, water on which you perform treatment is no longer considered to be storm water, but industrial wastewater instead. You will need to obtain or modify a discharge permit from your local wastewater authority or your municipality.

The most troublesome permitting procedures are for hazardous materials. Before installing any treatment equipment, determine whether your waste water is a hazardous waste. Cal-EPA/Toxics or the County Environmental Health Department can describe the necessary testing and approval procedures. If the wastewater that would enter the pretreatment equipment is considered to be hazardous you must obtain a permit from Cal-EPA/Toxics to operate a hazardous waste treatment facility. At present this may be true even for a simple water quality inlet. If you determine that the waste stream is not hazardous, and do not apply for a hazardous waste treatment permit, keep your testing documentation on hand to show regulators.

At Your Construction Site

Whether you're building a home, office or large scale development, construction creates special problems for Estuary water quality. Once the bulldozer's cleared your property of rocks and vegetation, not to mention reshaped the landscape, there may be little left to protect the soil from severe erosion and few barriers to stop site runoff. While the primary pollutant is sediment, construction can also contribute pollution from the miscellaneous chemicals and fuels lying around the work site. And poor construction quality, both in buildings and sanitary systems, can mean more pollution in the years to come.



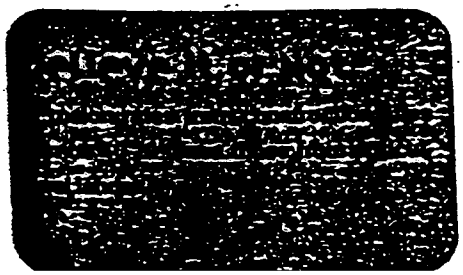
Construction the clean way . . .

☛ Avoid bulldozing
and outdoor construction in the rainy season.

☛ Schedule construction
to minimize soil exposure.

☛ Limit soil disturbance,
keeping as much of the original vegetation as possible, and planting temporary cover as necessary.

☛ Check your soil type
and build accordingly. Get a soil survey, and share it with your engineer, architect and builder. Make sure to survey all pertinent factors, including permeability, the level of the water table, the soil's texture, and the steepness of slopes.



☛ Pick your building site
carefully. Avoid level areas at the base of hills (which tend to be wet); streambanks, soggy spots, and depressions.

☛ Locate septic systems
at a sufficient distance from streams, lakes, drainage ditches, flood plains, wetlands and the Estuary shore in accordance with government regulations.

☛ Divert runoff around
excavations using check dams and ditches, and filter structures made out of stone, gravel or sandbags.

☛ Install gravel trenches
along driveways or patios to collect water and allow it to filter into the soil.

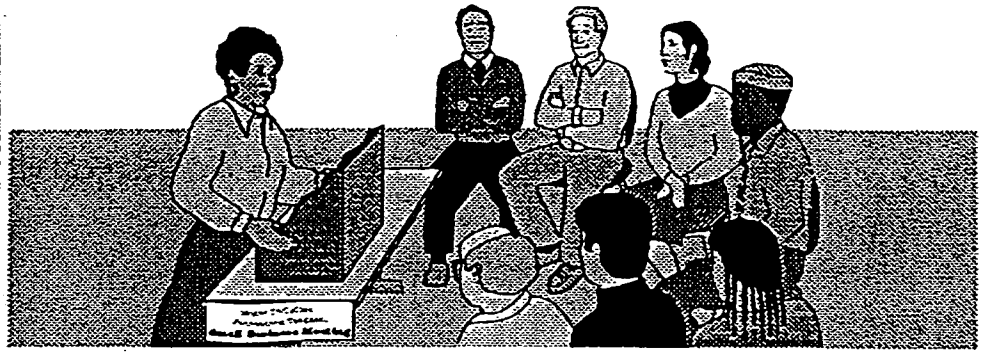
☛ Keep sites clean
of loose dirt, litter, toxic chemicals and other debris.

☛ Conduct all vehicle
and equipment maintenance and refueling at one location with pollution prevention controls. Perform major repairs off-site at appropriate facilities.

☛ Cover stockpiles
and landscaping materials with tarps.

☛ Look up the law.
Federal law now requires construction sites over five acres in size to apply for a stormwater discharge permit and develop a stormwater management plan.

CTIVITY: EMPLOYEE TRAINING



Applications

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- Waste Containment
- Housekeeping Practices

DESCRIPTION

Employee training, like equipment maintenance, is not so much a best management practice as it is a method by which to implement BMPs. This fact sheet highlights the importance of training and of integrating the elements of employee training from the individual source controls into a comprehensive training program as part of a facility's Storm Water Pollution Prevention Plan (SWPPP).

The specific employee training aspects of each of the source controls are highlighted in the individual fact sheets. The focus of this fact sheet is more general, and includes the overall objectives and approach for assuring employee training in storm water pollution prevention. Accordingly, the organization of this fact sheet differs somewhat from the other fact sheets in this chapter.

OBJECTIVES

loyee training should be based on four objectives:

Promote a clear identification and understanding of the problem, including activities with the potential to pollute storm water;

- Identify solutions (BMPs);
- Promote employee ownership of the problems and the solutions; and
- Integrate employee feedback into training and BMP implementation.

APPROACH

- Integrate training regarding storm water quality management with existing training programs that may be required for your business by other regulations such as: the Illness and Injury Prevention Program (IIPP) (SB 198) (California Code of Regulations Title 8, Section 3203), the Hazardous Waste Operations and Emergency Response (HAZWOPER) standard (29 CFR 1910.120), the Spill Prevention Control and Countermeasure (SPCC) Plan (40 CFR 112), and the Hazardous Materials Management Plan (Business Plan) (California Health and Safety Code, Section 6.95).
- Businesses, particularly smaller ones that are not regulated by Federal, State, or local regulations, may use the information in this Handbook to develop a training program to reduce their potential to pollute storm water.

LISTING OF INDUSTRIAL ACTIVITIES

Employee training is a vital component of many of the individual source control BMPs included in this chapter. Following is a compilation of the training aspects of the source control fact sheets.

SC14

Best Management Practices

ACTIVITY — EMPLOYEE TRAINING (Continue)

SC1 Non-Storm Water Discharges to Drains

- Use the quick reference on disposal alternatives (Table 4.1) to train employees in proper and consistent methods for disposal.
- Consider posting the quick reference table near storm drains to reinforce training.

SC2 Vehicle and Equipment Fueling

- Train employees in proper fueling and cleanup procedures.
- The SPCC Plan may be an effective program to reduce the number of accidental spills from fueling.

SC3 Vehicle and Equipment Washing and Steam Cleaning

- Train employees in standard operating procedures and spill cleanup techniques described in the fact sheet.

SC4 Vehicle and Equipment Maintenance and Repair

- Train employees in standard operating procedures and spill cleanup techniques described in the fact sheet.
- Paint stencils to remind employees not to pour waste down storm drains.

SC5 Outdoor Loading/Unloading of Materials

- Use a written operations plan that describes procedures for loading and/or unloading.
- Have an emergency spill cleanup plan readily available.
- Employees trained in spill containment and cleanup should be present during loading/unloading.
- Make sure fork lift operators are also properly trained.

SC6 Outdoor Container Storage of Liquids

- Registered and specifically trained professional engineers can identify and correct potential problems such as loose fittings, poor welding, and improper or poorly fitted gaskets for newly installed tank systems.
- Employees trained in emergency spill cleanup procedures should be present when dangerous waste, liquid chemicals, or other wastes are handled.

SC7 Outdoor Process Equipment Operations and Maintenance

- The preferred and possibly most economical action to reduce storm water pollution is to alter the activity. This may mean training employees to perform the activity during dry periods only or substituting benign materials for more toxic ones.

SC8 Outdoor Storage of Raw Materials, Products, and By-Products

- Train employees in standard operating procedures and spill cleanup techniques described in the fact sheet.

SC9 Waste Handling and Disposal

- Train employees in standard operating procedures and spill cleanup techniques described in the fact sheet.
- Paint stencils to remind employees not to pour waste down storm drains.

SC10 Contaminated or Erodible Surface Areas

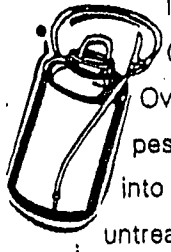
- Training is not a significant element of this best management practice.

5.0 LANDSCAPE RELATED BMPS

Tips for Landscape & Gardening
Storm Drain are for Rain – Not Pesticides
Storm Drains are for Rain – Not Fertilizer
Preventing Pollution through Efficient Water Use
Management Guidelines for use of Fertilizers and Pesticide
Twenty Ways to Protect Your Water
Healthy Lawn, Healthy Environment
Citizen's Guide to Pest Control and Pesticide Safety
Model Water Efficient Landscape Ordinance

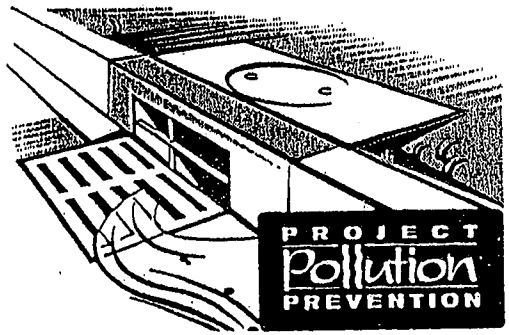
Storm Drains are for Rain...

More than 150,000 times each month, lawns and gardens throughout LA County are sprayed with pesticides. Overwatering or rain causes pesticides on leaves and grass to flow into the storm drain and to the ocean — untreated.



Please use pesticides wisely, not before a rain, and water carefully.

...not pesticides.



LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

Pesticide Tips:

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

You can keep your lawn and garden green and at the same time solve the pollution problem by taking these easy steps...

- Never dispose of lawn or garden chemicals in storm drains. This is called illegal dumping. Take them to a household hazardous waste roundup. Call 1-888-CLEAN-LA to locate a roundup or collection facility near you.
- More is not better. Use pesticides sparingly. "Spot" apply, rather than "blanket" apply.
- Read labels! Use only as directed.
- Use non-toxic products for your garden and lawn whenever possible.
- If you must store pesticides, make sure they are in a sealed, water-proof container that cannot leak.
- When watering your lawn, use the least amount of water possible so it doesn't run into the street and carry pesticide chemicals with it. Don't use pesticides before a rain storm. You will not only lose the pesticide, but also will be harming the environment.

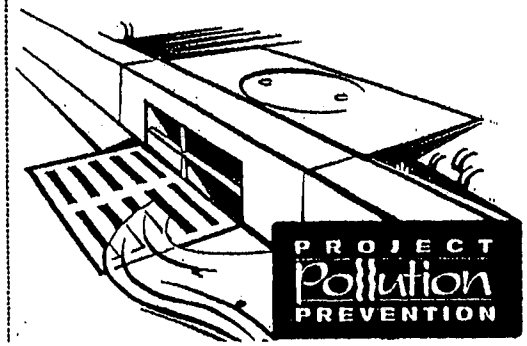
PROJECT Pollution PREVENTION

Storm Drains are for Rain...

More than 150,000 times each month, lawns and gardens throughout LA County are overwatered. This can cause fertilizers and pesticides on grass and plants to flow into storm drains and to the ocean, untreated — harming the environment.

Please use fertilizers and pesticides wisely, not before a rain, and water carefully.

...not fertilizer.



Fertilizing Tips:

Fertilizers contain toxic chemicals that are harmful to people and the environment. You can keep your lawn and garden green and, at the same time, solve the pollution problem by taking these easy steps.

- Do not over-fertilize and do not fertilize near ditches, gutters or storm drains.
- Follow the directions on the label carefully.
- Do not overwater after fertilizing. Overflow water and your fertilizer will run into the street, down the storm drain and into the ocean. Do not fertilize before a rain.
- Store fertilizers and chemicals in a covered area and in sealed containers to prevent runoff.
- Do not blow, sweep, hose or rake leaves or other yard trimmings into the street, gutter or storm drain.

PROJECT Pollution PREVENTION

Printed on recycled paper

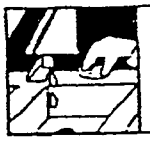
United States Environmental Protection Agency
20W-0002
July 1990

OW (WH-556)
OPPE (PM-222)

EPA

Preventing Pollution Through Efficient Water Use

How Efficient Water Use Helps Prevent Pollution



Other Reasons to Use Water Wisely

What Individuals Can Do

What Communities Can Do

How Efficient Water Use Helps Prevent Pollution

Using water more efficiently can help prevent pollution as well as protect and conserve our finite water resources. More efficient water use by you and your community has many other benefits.

Fewer Pollutants

- Using less water reduces the amount of wastewater discharged into our lakes, streams, rivers, and marine waters.
- The amount of pollutants wastewater carries can also be reduced, as treatment efficiency improves.
- Recycled process water can reduce pollutants from industry.
- More efficient irrigation can minimize runoff of agricultural pollutants and reduce the use of fertilizers and pesticides.

Protection of Aquatic Habitats

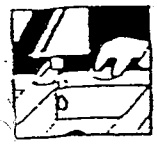
- Building fewer and smaller new water projects can help preserve wetlands, which naturally treat pollutants.
- Diverting less water preserves more streamflow to maintain a healthy aquatic environment.

Protection of Drinking Water Sources

- Less pumping of groundwater lowers the chance that pollutants will be drawn into a water supply well.
- With less water use, septic system performance can improve, reducing the risk of groundwater contamination.
- Highest quality water sources are preserved for drinking water by using treated wastewater for other uses.

Energy Conservation

- Efficient water use means less power needed to pump and treat water and wastewater.
- Less water use reduces the amount of energy required for heating hot water.
- Less energy demand results in fewer harmful by products from power plants.



Other Reasons to Use Water Wisely

Preventing pollution is only one reason why using water efficiently makes sense. Here are a few more:

Money Saved

- Less water use results in fewer pumping and treatment costs.
- Saving money on water and wastewater operations frees money for meeting water quality, public health and water treatment goals.
- Water saved is also energy, and money, saved for you and your community.

Improved Reliability

- Water conservation provides a hedge against drought impacts.

  Improving water efficiency may be quicker and cheaper than developing a new supply.
- Reduced water use may extend the life of your water or wastewater facility.
- Reduced water use may increase the efficiency of wastewater treatment, and reduce overflows during storms.
- Communities which use water efficiently are better prepared to cope with effects of possible future climate change.

What Individuals Can Do

More efficient water use begins with individuals, in the home and place of work. Taking these and othe steps, and encouraging others to do so, makes goo economic as well as environmental sense.

In The Home

- Install a toilet dam or plastic bottle in your toilet tank.
- Install a water-efficient showerhead (2.5 gallons or less per minute).
- When you buy a new toilet, purchase a low flow model (1.6 gallons or less per flush).

Outdoors

- Water in the morning or evening, to minimize evaporation.
- Install a drip-irrigation watering system for valuable plants.
- Use drought-tolerant plants and grasses for land scaping, and reduce grass-covered areas.

At Work or School

- Adopt the same water-saving habits that are effective at home.
- Ask about installing water-efficient equipment and reducing outdoor water use.
- Encourage employers to explore the use of recycled "gray-water" or reclaimed wastewater.

What Communities Can Do

A water supplier or wastewater system operator (public or private) has cost-effective options to process & deliver water more efficiently. A community can do the same, and can foster ways to use water wisely.

Not all of these steps are expensive. The best choices vary by region and by community: start by asking if these are appropriate where you live and work.

A Water Supplier or Wastewater Processor Can:

- ☞ Identify who uses water, and reduce unaccounted-for water use.
- ☞ Find and repair leaking pipes.
- ☞ Consider a new pricing scheme which encourages conservation.
- ☞ Reduce excess pressure in water lines.
- ☞ Explore the reuse of treated wastewater for uses other than drinking water.
- ☞ Charge hookup fees which encourage more efficient water use in new buildings.
- ☞ Build water efficiency into future demand projections, facility planning, and drought planning.

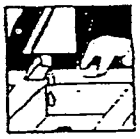
A Community Can:

- ☞ Adopt plumbing and building codes that require water-efficient equipment and practices.
- ☞ Adopt a water-efficient landscaping ordinance to reduce the water used for golf courses and commercial landscapes.
- ☞ Retrofit older buildings with water-efficient equipment, starting with public buildings.
- ☞ Reduce municipal water use for landscaping and other uses.
- ☞ Conduct a public education campaign.
- ☞ Require developers to build in water efficiency measures.

EPA

For more information on what you and your community can do to use water more efficiently, contact:

U.S. Environmental Protection Agency
Office of Water
401 M Street, S.W.
Washington, D.C. 20460



For more information on pollution prevention programs at U.S. EPA, contact:

U.S. Environmental Protection Agency
Office of Pollution Prevention
401 M Street, S.W.
Washington, D.C. 20460

COUNTY OF ORANGE

ENVIRONMENTAL MANAGEMENT AGENCY

SANTA ANA, CALIFORNIA

REGULATION FUNCTION
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Prepared by
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MANAGEMENT GUIDELINES FOR USE OF FERTILIZERS AND PESTICIDES

March 12, 1993

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Director

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Table of Contents

EXECUTIVE SUMMARY

This document was prepared to fulfill the commitment in the Orange County Drainage Area Management Plan (DAMP), Sections 5.2.9 and 5.2.10, which requires that co-permittees establish guidelines for the management of fertilizers and pesticides.

The main objective of these guidelines is to safeguard to "the maximum extent practicable" against unnecessary discharges of fertilizers and pesticides into surface and groundwater systems and to establish safe and reasonable standards for handling those materials. The guidelines are based on state and federal laws, environmental policies and "best management practices" established by various public and private agencies.

The County and many of the cities have already been following many of these guidelines. However, through this document, it is envisaged that these practices will be adopted by the County and all of the co-permittees to establish a set of uniform standards and procedures.

In addition to management guidelines, this document also includes a summary of the findings of the June 2 fertilizer and pesticide survey, specifically outlining and comparing different aspects of the policies and procedures of the co-permittees.

1.0 INTRODUCTION

1.1 Status of Fertilizer and Pesticide Use

Fertilizers and pesticides are primary tools of vegetation management. Used properly, fertilizers provide important nutrient supplies for vegetation and agriculture, and pesticides help to protect those resources from potential harm.

Used improperly, fertilizers and pesticides can become an impairment to surface and groundwater supplies. Careless application, mixing, transportation, storage and disposal allow chemicals to enter surface and groundwater through runoff and infiltration; the same handling problems endanger human health through exposure to toxic chemicals; soil degradation often results from overuse and misuse of pesticides and fertilizers. Even under ideal conditions, there is still a high level of risk, and consequently, there is a need for considerable professional planning and management.

1.2 Management Options

Because of the risk involved in using fertilizers and pesticides, the development of management guidelines for use of fertilizers and pesticides is an essential element of the Drainage Area Management Plan (DAMP). These guidelines are designed not only to comply with National Pollutant Discharge Elimination System (NPDES) permitting, but also to minimize any threat to human health and environmental resources from improper use of fertilizers and pesticides. It is envisaged that consideration of these guidelines by the co-permittees will cause public agencies to re-evaluate their approach to using fertilizers and pesticides and move toward reducing dependence on them.

The guidelines that follow are intended for the use of the co-permittees, although they may ultimately be used on a broaderscale. They are based on the laws, management guidelines and "best management practices" established by other federal, state and local agencies. They recognize that the safe management of fertilizers and pesticides is a shared responsibility between the field worker and management. These guidelines address the concern for fertilizer and pesticide use at a basic level, and if followed, they should reasonably prevent environmental damage to the highest degree possible.

1.3 Definitions

For the purpose of these guidelines, fertilizers may be referred to as "nutrients" or "soil nutrients," and the term "pesticides" will encompass all herbicides, insecticides, fungicides and rodenticides. The California Food and Agricultural Code and the California Code of Regulations Title 3 (3 CCR) constitute the laws and regulations referenced in this plan. They are referenced often and usually referred to as the "State Code." Also, co-permittees in the NPDES permits shared by the County and its incorporated cities will be referred to as "public agencies," and employees working for these public agencies who handle fertilizers and pesticides will be referred to as "workers" or "public employees."

2.0 FERTILIZER MANAGEMENT

2.1 Definition and Scope of Guidelines

Fertilizers are nutrients applied to soil to provide a better growing environment for plants. The fertilizers most commonly in use in Southern California today are nitrogen- and phosphorus-based. Both leach into soils easily in the presence of water and have become a water quality concern, causing algal blooms and eutrophication and, in some cases, causing levels to exceed federal drinking water standards.

However, fertilizers also play the important role of promoting vegetation growth that protects soil from erosion and enhances landscape aesthetics. Because there is a necessity for soil nutrients and because there is a potential for adverse effects on local waterways due to the loss of these nutrients through runoff and infiltration, management guidelines are necessary as a means of reducing the loss of fertilizers into water supplies.

2.2 General Considerations

2.2.1 State and Federal Law

Because most fertilizers are not as toxic as pesticides, state and federal lawmakers have not developed regulations for their use. Fertilizers are not usually considered an immediate danger to public health or safety. However, the California Fertilizer Association, a Sacramento-based organization, has developed complete management guidelines for fertilizer use and the State Department of Food and Agriculture has recommendations for use of nitrate-based fertilizers, both of which are available for consultation.

2.2.2 General Recommendations

1. Public agencies should periodically test soils before applying fertilizers to be certain that application is appropriate for and compatible with soil conditions. The samples should be analyzed by a qualified specialist, and workers should follow the recommendations for application.

2. Public agencies should choose to use organic fertilizers such as compost, peat and mulch wherever possible to increase soil porosity and water retention.

3. Workers should apply only the minimum amount of fertilizer needed and incorporate it directly into the soil around the plant where possible to minimize potential surface runoff.

4. Workers should not apply fertilizers in the rain or on the same day that rain is expected.

5. Workers should immediately cleanup any spill of fertilizers.

6. Storage facilities should be covered and have impermeable foundations so that potential spills don't have the opportunity to runoff into surface water or leach into groundwater systems.

7. Fertilizers that may be carried by the wind should be stored in areas away from open loading spaces and entrances of storage warehouses.

8. Fertilizers should be securely covered in the vehicle before being taken to application sites so that none can spill or fly out during transport.

9. Use slow release fertilizers – such as water soluble nitrogen fertilizers, coated fertilizers and fertilizers of limited solubility – wherever possible to reduce the chances of leaching.

2.3 Planning for Use of Fertilizers

2.3.1 Soil Testing

Most fertilizers travel quickly through water. Therefore, fertilizers will leach through soil and potentially contaminate groundwater more quickly after excess watering or irrigation, after heavy rains and where the water table is high. For this reason, soil testing is an important management technique to determine the safest fertilizer application rate.

The California Landscape Contractors Association (CLCA) has a complete list of organizations in Southern California that offer soil testing and analyzing for fertilizer use. To get a copy of that list, CLCA can be contacted at (916) 448-2522. If a reliable soil analyst is not already known, it is advisable for public agencies to consult CLCA and research a specialist who can make recommendations for fertilizer use.

2.3.2 Application Rates

The amount of fertilizer needed for different applications depends on a number of factors. For specific recommendations, a qualified specialist should be consulted. However, some factors to be considered include:

- the vegetation's ability to use fertilizer;

- the amount of nutrients already in the soil, including fertilizer that may still be present from a previous application;

- the amount of soil nutrients that will or can be obtained from natural processes;

- expected loss of nutrients from the soil, and

- temperature at the time of application.

2.3.3 Timing

For vegetation with different growth patterns, fertilizers should be applied at different times and in different quantities. The vegetation being managed should be researched and fertilizers applied only according to the recommended amounts and at the recommended time intervals so that waste of fertilizer and risk of water contamination are minimized. This research should be incorporated in a recommendation from a qualified specialist for fertilizer applications.

2.4 Application Methods of Fertilizers

This section details the most common methods for application of fertilizers. These are not the only acceptable methods of fertilizer application. Every application has its own unique circumstances and variables to consider. A qualified fertilizer specialist should be consulted to recommend the most appropriate application method.

2.4.1 Banding of Fertilizer

Probably the most common and safest application method, this involves physically working small amounts of fertilizer into the soil in a band beneath and around the sides of a seed. It allows new roots to efficiently use the nutrients and minimizes potential nutrient loss to surface runoff. However, given the labor involved, banding may not be practical for most public agency fertilizer applications.

2.4.2 Foliar Fertilization

This is fertilizer applied in solution form that is absorbed through leaves and stems. The method can reduce nutrient leaching into the soil when applied correctly and can be performed at the same time as pesticide applications to avoid spraying twice. In the latter case, the guidelines for pesticide use must also apply.

2.4.3 Broadcast Application

By this method, dry or liquid fertilizer is uniformly spread over the soil surface. This is often done mechanically, an example being the "drop spreader," which is usually an inverted triangle hopper. The simplest of mechanical applicators, the drop spreader is commonly mounted on wheels and pushed by hand or pulled by vehicle to drop fertilizer out the bottom of the triangle.

Other types of broadcast applicators include spray booms for liquid fertilizer or "spinning disks" mounted on a moving vehicle that throw dry fertilizer into the air. It should be noted that these latter methods do not offer much control over fertilizer drift in adverse weather conditions.

2.4.4 Fertigation

Although not likely to be used by public agencies for fertilizer applications, this method is common among Californian farmers who incorporate fertilizers into irrigation water. The potential for nutrient leaching using this method, though, appears to be high.

2.5 Storage and Handling of Ferilizers

2.5.1 General Description

When stored and handled properly, fertilizers present no hazard to the users' health. Public employees responsible for storage and handling of fertilizers should be aware that some fertilizers have properties that can result in dangerous chemical reactions if mixed with other substances or under unusual conditions. For example, ammonium nitrate may become explosive if it becomes mixed in diesel fuel; a dehumidifier may be necessary for storage areas where sensitive fertilizers are stored. Also, because most fertilizers tend to be corrosive, concrete structures are preferred for fertilizer storage facilities.

2.5.2 Dry Fertilizer

In most cases, dry fertilizers are safe to store, transport and handle. However, because some fertilizers have unique, potentially dangerous properties, it is advisable for public agencies to consult a qualified fertilizer specialist for the safest storage and handling procedures for specific fertilizers.

2.5.3 Liquid Fertilizer

Fertilizers in liquid form are potentially more hazardous than dry fertilizer. Public employees responsible for storage and handling need to be aware of the specific properties of each liquid fertilizer in use, including corrosivity and tolerable temperature and pressure ranges. Protective equipment may be necessary for workers handling fertilizers such as sulfuric or phosphoric acid. A qualified fertilizer specialist should be consulted for recommending the safest handling and storage procedures for specific liquid fertilizers.

3.0 PESTICIDE MANAGEMENT

3.1 Definition and Scope of Guidelines

Pesticides are designed to kill or restrict the growth of plants and organisms, and thus, are potentially dangerous chemicals. Increasing scientific concern for their safe use and heightened public awareness of health concerns has led to more and more regulations in the United States at both the state and federal level. Pesticide use by public agencies often involves applications to keep flood control channels and roadways clear or to minimize health and safety hazards of disease-bearing rodents and insects -- any of these applications can drain into stormwater basins if not controlled properly. Although safety concerns and the cost of complying with new regulations have encouraged some public agencies to cut back on the use of pesticides, use is still common, and their management is therefore essential.

3.2 General Considerations

3.2.1 State and Federal Law

The California Department of Food and Agriculture and the federal Toxic Substances Control Act (TSCA) have set forth extensive rules and regulations that must be met by all public agencies. At an absolute minimum, public agencies must comply with these laws or be subject to the penalties described in the statutes.

3.2.2 Chemical Labels and Materials Safety Data Sheets (MSDS)

1. Without exception, chemical labels provided by the manufacturer of each pesticide are the first source of recommendations and instructions for chemical use. Whenever a chemical is to be used by a worker or a contractor of a public agency, the user needs to be intimately familiar with the label instructions and requirements.

As described in the State Code (3 CCR, Ch. 2, Subch. 1, Art. 10), the label must appear on the immediate container of the chemical and include, in prominent, bold type, the appropriate warning or caution statement according to its toxicity classification. If a chemical is transferred to another container, a copy of the label should be transferred with it.

Workers should never handle a container that doesn't have a warning label attached, and the supervisor in charge should be immediately advised of the situation. If a label is badly damaged, it shall be replaced by the supervisor.

2. Workers using pesticides shall have readily available the Materials Safety Data Sheets (MSDS) for each chemical they are using. Although the MSDS is a form that may vary in appearance for different chemicals, the information is the same, as required by law. Similar to the chemical labels, these sheets contain information necessary to handle each chemical safely, and all workers shall be familiar with the information.

MSDS sheets include chemical identifications, hazardous ingredients, physical data, fire and explosion data, health hazards, reactivity data, spill or leak cleanup procedures, special protection and special precautions.

3.2.3 General Recommendations

1. Public agencies should maintain a complete list of all chemicals and their uses.

2. Public agencies should thoroughly investigate and consider all alternatives to pesticide use.

3. Workers shall use pesticides only according to label instructions.

4. Work crews should bring to the work site only the amount of chemical to be used during the application and use only the minimum amount of the chemical that is necessary.

5. Workers should consider weather conditions that could affect application (for example, they shouldn't spray when winds are exceeding 5 mph, when raining or when rain is likely).

6. Workers should consider area drainage patterns (for example, they shouldn't apply near wetlands, streams and lakes or ponds unless it is for an approved maintenance activity).

7. Workers should consider soil conditions before applying pesticides (for example, they shouldn't apply to bare or eroded ground).

8. Workers shall triple-rinse empty pesticide containers before disposal and use the leftover wash as spray.

9. Workers should never clean or rinse pesticide equipment and containers in the vicinity of storm drains.

10. Pesticides should only be stored in areas with cement floors and in areas insulated from temperature extremes.

11. Workers shall secure chemicals and equipment during transportation to prevent tipping or excess jarring in a part of the vehicle completely isolated from people, food and clothing.

12. Workers or their supervisors should inspect pesticide equipment, storage containers and transportation vehicles daily.

13. Public agencies should adopt a plan for dealing with potential accidents before they happen.

14. Workers should immediately clean up any chemical spill according to label instructions and notify the appropriate supervisors and agencies.

3.3 Planning for the Use of Pesticides

3.3.1 Selection of Appropriate Pesticides

1. Pesticides are to be used only after recommendation from a state-licensed pest control advisor.

2. Public agencies should seek advice for appropriate pesticide use from the Orange County Agricultural Commission, from other professional pesticide handlers and/or through professional publications. The County Agricultural Commission can be contacted at (714) 447-7100.

3. A special effort should be made to limit use of restricted pesticides and all other Category One pesticides.

3.3.2 Certification, Licensing and Permitting

1. Pesticides are only to be applied by or under the direct supervision of a state-licensed or certified pesticide applicator or by workers with equivalent training.

2. Chemicals listed as "restricted" in the State of California may be used only under a restricted materials permit (3 CCR Ch. 2, Subch. 4) to be issued by the Orange County Agricultural Commission. The permit must be renewed annually for continued use. For more information, contact the Commission at (714) 447-7100.

3. Other guidelines concerning permits, licensing and certification that need to be followed before pesticide application are detailed in the State Code (3 CCR, Ch. 3, Subch. 1).

3.3.3 Employee Training

1. Public agency employees must know the information on the chemical label and its MSDS before using pesticides in any capacity. In addition, they shall (a) know the immediate and long-term health hazards posed by chemicals to be used, the common symptoms of chemical poisoning and the ways poisoning could occur, and (b) know the safe work practices to be followed, including the appropriate protective clothing, equipment, mixing, transportation, storage, disposal and spill cleanup procedures that apply to the specific chemicals being used.

2. In addition to the training and annual continuing education required by State Law for licensing and certification (3 CCR, Ch. 3, Subch. 3, Art.2), public employees are

encouraged to participate in continuing pesticide education programs whenever programs are available.

3.3.4 Accident Mitigation

Public agencies using pesticides should have plans for dealing with potential accidents before they happen. These plans should consider:

1. Labels and MSDS Sheets -- All workers handling pesticides must be familiar with these instructions. The steps for accident mitigation are spelled out on chemical labels and MSDS sheets.

2. Spill Cleanup Kits -- Any time pesticides are being handled, there should be a cleanup kit on hand in case of an accident. This means there should **always** be a cleanup kit located in pesticide storage areas, on vehicles used to transport pesticides and on location where the chemicals are being applied. Although these kits may vary in what they contain depending on the chemical type and the situation, at a minimum they should include:

* spill-control procedures;
* a five gallon drum with sealable lid;
* a dust pan and broom;
* a squeegee;
* a shovel;
* protective goggles, gloves, boots, coveralls;
* a tarp (for covering dry spills);
* detergent and water (check label or MSDS for proper use);
* barricade tape, florescent traffic safety cones or string to cordon off an area, and
* large sponges, containment booms or some other absorbent material.

3. Cleanup Procedures -- Spilled pesticides must be prevented from entering the local surface and/or groundwater supplies. Specific recommendations for spill cleanup should be available on each chemical label or MSDS. Specific recommendations for the sequence of procedures may also vary depending on the situation. However, generally, in case of a spill, the responsible worker(s) should:

EVALUATE the accident and quickly determine the most immediate concerns (medical and/or environmental).

CONTAIN OR CONTROL the spill.

NOTIFY the supervisor in charge who should, in turn, notify the proper authorities. If contact cannot be made, dial 911.

ISOLATE the area with fluorescent traffic safety cones, ropes or some other cordoning device to be sure that no one walks, wanders or drives through the spill area.

CLEAN UP the spill as best as possible following label instructions and using the appropriate spill cleanup kit.

EVALUATE any damage that may have occurred resulting from the spill (property damage, health damage, equipment damage, etc.) and make notes on all relevant details and circumstances before leaving the scene.

PREPARE A COMPLETE REPORT detailing the incident immediately after leaving the scene upon returning to the work place and submit it to the immediate supervisor.

3.3.5 Emergency Medical Care

Accident situations requiring emergency medical care are likely to involve acute exposure to potentially toxic chemicals. Instructions for handling these exposures appear on the chemical label. Workers should:

1. Be aware of the symptoms of acute exposures for each chemical being used.

2. Have a predetermined strategy for dealing with exposure scenarios, including knowing (a) the label recommendations for dealing with acute exposures and (b) the nearest medical facility where emergency care is available.

3.3.6 Equipment and Equipment Maintenance

All equipment for the handling of pesticides should be inspected and cleaned by workers before each use to ensure that there are no problems that could lead to chemical leaks, spills or accidents during the day's work (3 CCR, Ch. 3, Subch. 3, Art. 2).

3.3.7 Groundwater and Surface Water Protection

Similar to the discussion of leaching in fertilizer management, the main factors determining the rate at which pesticides enter groundwater and surface water systems are chemical mobility, solubility and persistence and the soil type. For example, potentially dangerous chemicals are likely to have a high solubility and an extremely long half-life, and they are not likely to be easily absorbed into the soil. Therefore, chemicals that decompose rapidly may be preferred. However, note that to choose a chemical that may need to be applied two or three times as often may not make sense from a transportation and application risk standpoint.

Because of these factors, regardless of the category of chemicals being used, pesticide advisors should periodically test the soil for compatibility with specific chemicals before recommending pesticides for a specific area.

Furthermore, because the effect of these uses is not always immediately apparent, public agencies should periodically test areas that could be particularly vulnerable to contamination or deterioration. The results of these tests should be kept on public record.

3.4 Application of Pesticides

3.4.1 Supervision

1. In cases where supervision of pesticide applications is required by the State Code, supervision must be handled by a state-licensed or certified pesticide applicator. For all other pesticides applications, supervision may be handled by workers with equivalent training.

2. Public agencies that contract for pesticide applications should periodically inspect contracted work crews to be certain that contractors are following proper management guidelines. Public agencies handling their own applications should likewise inspect their own work crews on a regular basis to ensure that safety standards are being met.

3.4.2 Proper Techniques

1. Read the label carefully and follow application instructions. Be absolutely certain that the right chemical is being used for the right job before applying.

2. To prevent potentially harmful runoff, only the absolute minimum amount of pesticides should be used to ensure vegetation safety.

3. Recommendations for best weather conditions to prevent pesticide spray drift are outlined in the State Code, Chapter 2, Subchapter 4, Article 2.

3.4.3 User Safety and Protection

1. Public agencies shall have on hand equipment for application of pesticides including eye protection, gloves, respiratory gear and impervious full-body, chemical resistant clothing when called for by the chemical label.

2. Even when wearing respiratory gear or masks, when dealing with spray applications of pesticides, workers should avoid directly inhaling in the spray mist.

3. Workers should avoid working alone, especially at night.

4. Workers should clean equipment, clothing and self thoroughly after each application.

5. State laws regarding re-entry into fields that have recently been treated with pesticides shall be followed (3 CCR, Ch.3, Subch. 3, Art. 3).

6. Public agencies are responsible for knowing and informing workers about the specific pesticides being used including how they are properly handled, the dangers involved and the proper training and safety procedures.

7. Public agencies are responsible for keeping updated records and a complete list of the pesticides being used in their jurisdiction. This should include the chemicals, amount in storage, amount of applications, dates and location of applications and pests controlled with each application.

8. Public agencies shall keep all relevant label and MSDS information for each chemical updated and readily available at all times to workers handling the materials.

3.5 Storage, Disposal and Transportation

3.5.1 Proper Storage

1. Storage areas should be away from living areas and in a covered area that is well-insulated from temperature extremes; they should have a cement floor and good ventilation. Also, storage areas should be clearly marked according to state standards and be securely locked at all times when not in use.

2. Public agencies shall ensure that chemical labels on pesticides being stored or used are kept in good condition and attached to all containers holding pesticides (3 CCR, Ch. 3, Subch. 2, Art. 4).

3. Workers should ensure that storage equipment and containers are inspected daily for leaks or defects before being taken on the job. Containers should also be inspected and before storing at the end of the day.

3.5.2 Proper Disposal

1. Workers shall make certain that chemical containers are triple-rinsed before disposal (3 CCR, Ch. 3, Subch. 2, Art.

2. It is recommended that cleaned containers be sent back to the manufacturer for recycling whenever possible. However, once triple-rinsed, most haulers will take them to most landfills.

3. Workers should use left over rinse water as spray.

4. Public agencies should ensure that surplus or out-of-date chemicals are given to a licensed hazardous waste hauler for disposal.

3.5.3 Safe Transportation Methods

1. Before transporting pesticides, workers shall ensure that all pesticide containers are tightly sealed and secured from tipping or excess jarring (3 CCR, Ch. 3, Subch. 2, Art. 4).

2. Transportation compartments on vehicles shall be isolated from the compartment carrying people; food and clothing and should be securely locked (3 CCR, Ch. 3, Subch. 2, Art. 4).

3. Workers should transport only the amount of pesticide needed for the day to the site.

4. Workers should be certain that the appropriate chemical labels and MSDS sheets, a spill cleanup kit, the location of emergency medical care and a first aid kit are always brought along when transporting pesticides.

5. Public agencies should encourage all vehicles used for pesticide transportation to include radio communications for contacting help in case of a spill or some other emergency.

4.0 INTEGRATED PEST MANAGEMENT (IPM)

4.1 Background on Pesticide Use

For most of the last 50 years, the trend in vegetation management has been toward a greater reliance on pesticides. The result has been not only an enormous increase in the use of many dangerous chemicals, but also an enormous increase in the number of pests that are resistant to the pesticides being produced -- in essence, as more pesticides have been produced, more resistent strains of pests have evolved. Worse, recent studies have shown that the end result of this global trend has been no net gain in vegetation survival rates.

With these realizations becoming well-known, vegetation managers are now moving away from their reliance on pesticides and toward an integrated approach that combines limited pesticides use with more environmentally-friendly pest control techniches.

4.2 Scope of Guidelines

For public agencies in Orange County, IPM practices should be preferred to the sole use of pesticides as the primary means of vegetation management. These techniques are designed to prevent overuse and to reduce reliance on them. IPM should be considered by all public agencies or their contractors before intensive use of pesticides.

The goal of IPM is not to eliminate all pests, but to keep their populations at a manageable number. Pesticides are part of IPM techniques, but they are used in small quantities and only after all other alternatives have been reviewed.

4.3 Alternatives to Pesticides

Some of the alternatives to pesticides that may be considered as part of an IPM program include:

1. Introduction of natural predators such as ladybugs, lacewings, garter snakes and toads. Also, some bacteria, viruses and insect parasites may be preferable to pesticides.
2. Selected removal or rotation of vegetation habitat to eliminate the breeding places of specific pests.
3. Weeding, hoeing and trapping manually. Pruning and thinning of trees is also an effective means of preventing epidemic tree insects and diseases.

Also, at certain times of the year and under certain environmental conditions, certain pests can be expected. Therefore, timely planting or well-timed use of small quantities of pesticides may avoid the need for some chemical use.

GLOSSARY

TERMS, ABBREVIATIONS, ACRONYMS

RELATED TO THE MANAGEMENT GUIDELINES FOR USE OF FERTILIZERS AND PESTICIDES

Best Management Practices (BMPs)
Schedules of activity, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

California Code of Regulations Title 3, Division 6 (3 CCR)
The State of California code regulating pesticides and pest control operations.

California Fertilizer Association (CFA)
An organization promoting progress in the fertilizer industry in the interest of an efficient and profitable agricultural community. Activities of CFA include developing and disseminating new information to its members and others; supporting production-oriented research programs to identify maximum yield systems for farmers; promoting agronomic topics at our schools, colleges and universities; and maintaining open communications among the industry, universities and other state and federal agencies.

Chemical Labels
As required by federal law, manufacturers of pesticides must provide chemical labels on the containers of all pesticides distributed. These labels include all necessary information on the chemical constituents of the pesticide, including recommendations and instructions for use, toxicity classification and the appropriate warning statements and emergency procedures in case of acute exposures. As required by state law, labels must be kept in good, readable condition and be attached to all pesticide containers at all times.

Co-permittee
A permittee to an NPDES permit that is responsible for permit conditions relating to the discharge for which it is operator. As used in the Stormwater Permit Implementation Agreement, co-permittees are the County of Orange, its incorporated cities and the Orange County Flood Control District.

Drainage Area Management Plan (DAMP)
A document required under the municipal NPDES stormwater permits granted to the co-permittees by the Santa Ana and San Diego Regional Water Quality Control Boards.

Equivalent Training
A term referring to public agency employees dealing with the application of pesticides who have not received a qualified applicator's license (QAL) from the State of California but who has completed a training course in pesticide application offered by the County of Orange.

Eutrofication
A decrease of dissolved oxygen in a body of water to such an extreme extent that plant life is favored over animal life. For example, a lake that has been overgrown in algae on the surface is likely in a state of eutrofication.

Integrated Pest Management (IPM)
The trend in vegetation management which supports moving away from reliance on pesticides and toward an integrated approach of limited pesticide use with more environmentally-friendly pest control techniques.

Materials Safety Data Sheet (MSDS)
Similar to chemical labels and also required by federal law, these sheets contain all information necessary for the safe handling of pesticides. They include chemical identifications, hazardous ingredients, physical data, fire and explosion data, health hazards, reactivity data, spill or leak cleanup procedures, special protection and special precautions.

Maximum Extent Practicable (MEP)
MEP means taking into account equitable considerations of competing factors including, but not limited to, the gravity of the problem, fiscal feasibility, public health risks, societal concern and social benefits.

National Pollutant Discharge Elimination System (NPDES)
The national program under the Clean Water Act for controlling discharges from point source discharges directly into the waters of the U.S.

Pest Control Advisor (PCA)
Certification obtained from the State of California after demonstrating an adequate knowledge of pests, pesticides and the implications of pesticide use. A recommendation for pesticide use must be obtained from a PCA before public agencies may approve any pesticide applications.

Qualified Applicators License (QAL)
A license obtained from the State of California after demonstrating adequate knowledge of the proper techniques for handling, storing, transporting and applying pesticides. Workers must obtain a QAL before being permitted to apply or supervise application of Category One pesticides.

Qualified Fertilizer Specialist
A person designated by the governing public agency who is knowledgeable of the proper techniques for handling, storing, transporting and applying fertilizers as defined in the Management Guidelines for Use of Fertilizers and Pesticides. This person shall be able to sample, inspect, test and make analyses of fertilizers that are in use or being considered for use in the agency's jurisdiction to such an extent that may be necessary to comply with the management guidelines.

Restricted Materials Permit
A permit that must be acquired by any public agency before application of any one of the pesticides listed as restricted by the State of California in the State Code of Regulations Title 3, Division 6. In Orange County, this permit must be obtained from the County Agricultural Commissioner.

State Code
In this report, referring to the State of California Code of Regulations Title 3, Division 6 and referenced as "3 CCR."

Storm Drain
Pipe or channel structure designed to convey only stormwater runoff for purposes of flood protection. Federal regulations use the term "storm sewer." Use of the word "sewer" for a stormwater conveyance structure should be discouraged, since the word "sewer" also includes sanitary sewers and combined sewers which carry human waste.

Toxicity Classification
Pesticides are grouped into three categories by the California Department of Food and Agriculture according to their toxicity or potential for causing injury to people. Category One pesticides are the most hazardous and their use is normally restricted, while Category Three pesticides are least toxic to people and are generally less hazardous.

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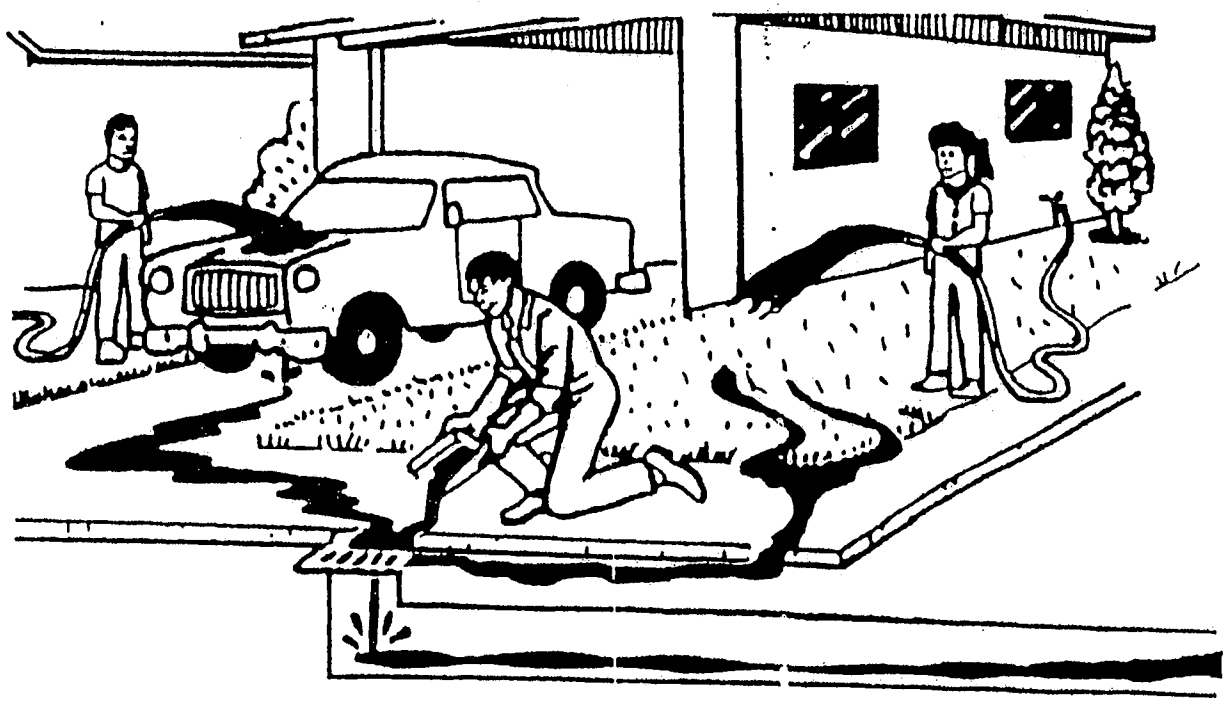
Twenty Ways to Protect Your Water

You Can Make A Difference!

Stormwater pollution . . . is fouling our water!

Every day, water from garden hoses, sprinklers and rainfall washes pollutants off roads and yards . . . right into neighborhood storm drains. Storm drains carry untreated water and pollutants **directly** *to our water resources.*

Some pollutants, such as grease and dirt from streets, reach the storm drains unintentionally. But, many pollutants like used motor oil, detergents, paints, and solvents, are carelessly dumped into the storm drains.

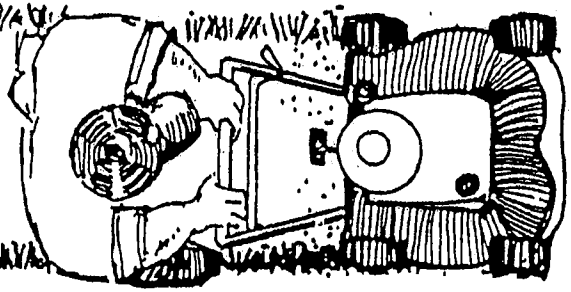


Polluted stormwater harms wildlife, jeopardizes the use of our rivers and lakes for recreation . . . and may eventually contaminate the water we drink!

Prevention, Pesticides And Toxic Substances (7506C)

700-K-92-006
June 1992

Healthy Lawn



Healthy Environment

Caring for Your Lawn in an Environmentally Friendly Way

Washington DC 20460

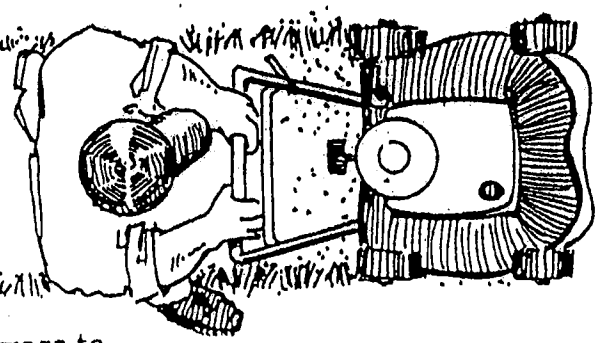
HEALTHY LAWN, HEALTHY

Caring for Your Lawn in an Environmentally Friendly Way

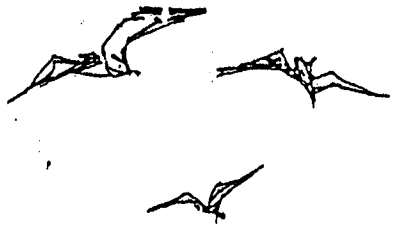
Printed on Recycled Paper

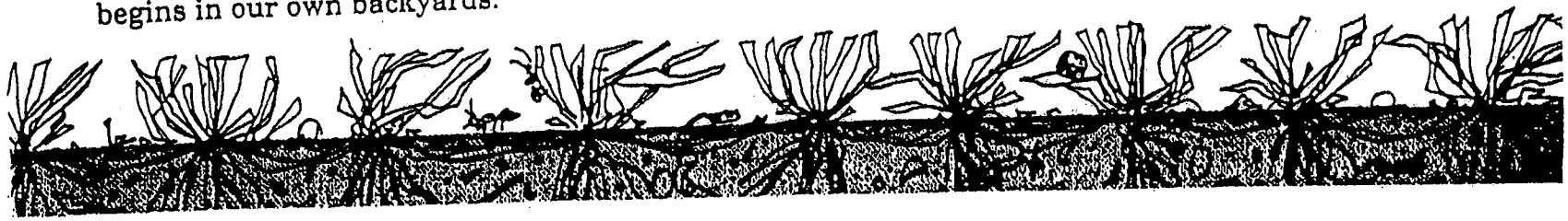
Picture a healthy green lawn: perfect for lounging, great for ball games and cookouts, a real asset to your home. But did you know that your lawn—and how you take care of it—can also help the environment? Healthy grass provides feeding ground for birds, who find it a rich source of insects, worms, and other food. Thick grass prevents soil erosion, filters contaminants from rainwater, and absorbs many types of airborne pollutants, like dust and soot. Grass is also highly efficient at converting carbon dioxide to oxygen, a process that helps clean the air. Caring for your lawn properly can both enhance its appearance and contribute to its environmental benefits. You don't have to be an expert to grow a healthy lawn. Just keep in mind that the secret

ENVIRONMENT



is to work with nature. This means creating conditions for grass to thrive and resist damage from weeds, disease, and insect pests. It means setting realistic goals for your lawn, whether you or a professional lawn care service will be doing the work. And if you choose to use pesticides, it means using them with care so as to get the most benefit and reduce any risks. Caring for your lawn in an environmentally sensible way can have a bigger impact than you might think. Your lawn is only a small piece of land, but all the lawns across the country cover a lot of ground. That means you and your lawn care activities, along with everyone else's, can make a difference to the environment. And that's why taking care of the environment begins in our own backyards.





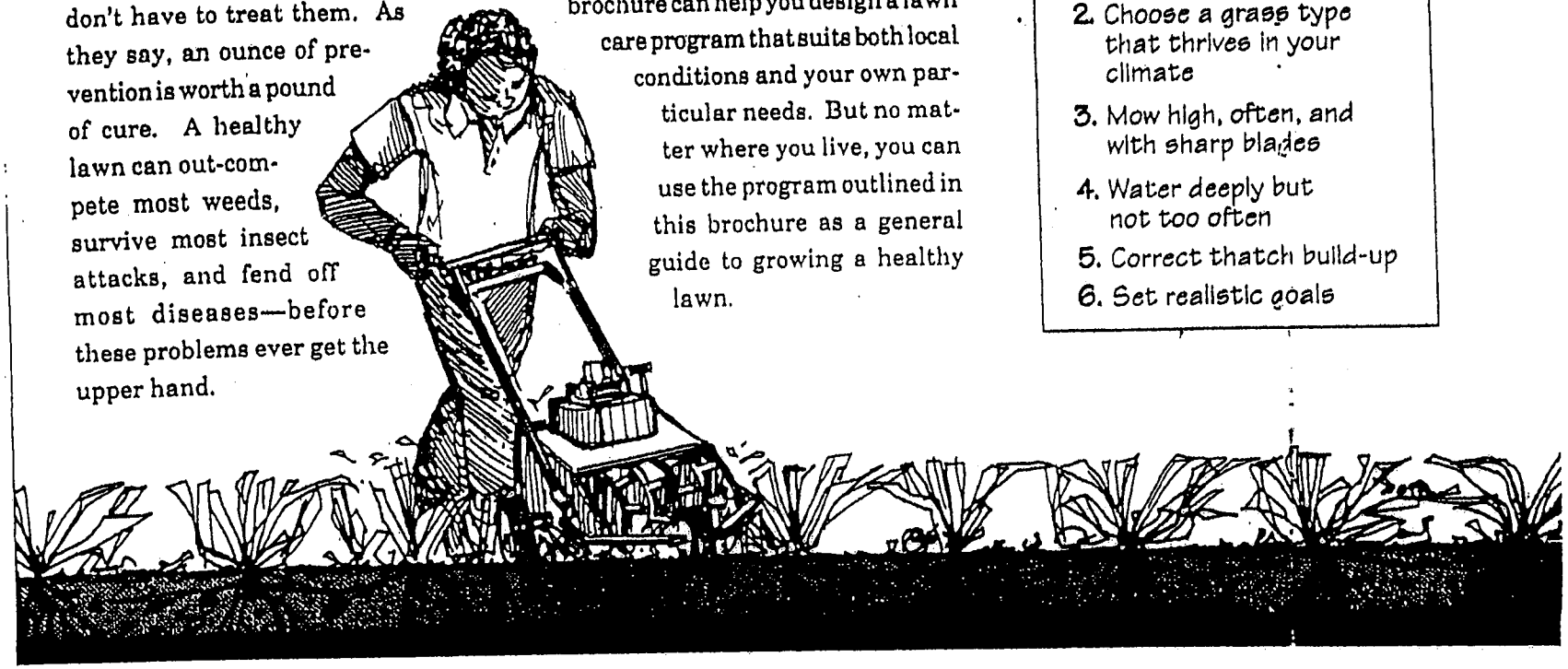
Working With Nature: A Preventive Health Care Program For Your Lawn

To start, think about lawn care as a ***preventive*** health care program, like one you would use to keep up your own health. The idea is to prevent problems from occurring so you don't have to treat them. As they say, an ounce of prevention is worth a pound of cure. A healthy lawn can out-compete most weeds, survive most insect attacks, and fend off most diseases—before these problems ever get the upper hand.

Your lawn care program should be tailored to local conditions—the amount of rainfall you get, for example, and the type of soil you have. The sources listed at the back of this brochure can help you design a lawn care program that suits both local conditions and your own particular needs. But no matter where you live, you can use the program outlined in this brochure as a general guide to growing a healthy lawn.

A preventive health care program for your lawn should have the following steps:

1. Develop healthy soil
2. Choose a grass type that thrives in your climate
3. Mow high, often, and with sharp blades
4. Water deeply but not too often
5. Correct thatch build-up
6. Set realistic goals



1. Develop Healthy Soil

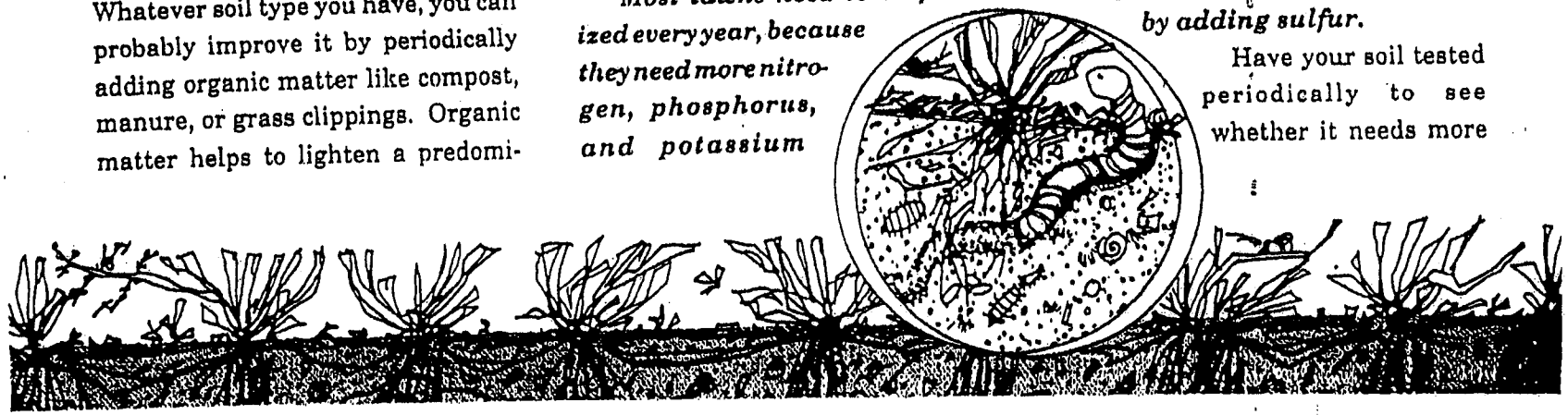
Good soil is the foundation of a healthy lawn. ***To grow well, your lawn needs soil with good texture, some key nutrients, and the right pH, or acidity/alkalinity balance.***

Start by checking the texture of your soil to see whether it's heavy with clay, light and sandy, or somewhere in between. Lawns grow best in soil with intermediate or "loamy" soils that have a mix of clay, silt, and sand. Whatever soil type you have, you can probably improve it by periodically adding organic matter like compost, manure, or grass clippings. Organic matter helps to lighten a predominantly clay soil and it helps sandy soil retain water and nutrients.

Also check to see if your soil is packed down from lots of use or heavy clay content. This makes it harder for air and water to penetrate, and for grass roots to grow. To loosen compacted soil, some lawns may need to be aerated several times a year. This process involves pulling out plugs of soil to create air spaces, so water and nutrients can again penetrate to the grass roots.

Most lawns need to be fertilized every year, because they need more nitrogen, phosphorus, and potassium than soils usually contain. These three elements are the primary ingredients found in most lawn fertilizers. It's important not to over-fertilize—you could do more harm to your lawn than good—and it's best to use a slow-release fertilizer that feeds the lawn slowly. It's also important to check the soil's pH. Grass is best able to absorb nutrients in a slightly acidic soil, with a pH of 6.5 to 7.0. ***Soil that is too acidic can be "sweetened" with lime; soil that's not acid enough can be made more "sour" by adding sulfur.***

Have your soil tested periodically to see whether it needs more



organic matter or the pH needs adjusting. Your county extension agent (listed in your phone book under county government) or local nursery should be able to tell you how to do this. These experts can also help you choose the right fertilizer, compost, and other "soil amendments," and they can advise you about aerating if your soil is compacted. If a professional service takes care of your lawn, make sure it takes these same steps to develop good soil. There's no getting around it: your lawn's health is only as good as the soil it grows in.

2. Choose A Grass Type That Thrives In Your Climate

The right type of grass—one that suits your needs and likes the local weather—will always give better results. Grasses vary in the type of climate they prefer, the amount of water and nutrients they need, their resistance to pests, their tolerance for shade, and the degree of wear they can withstand.

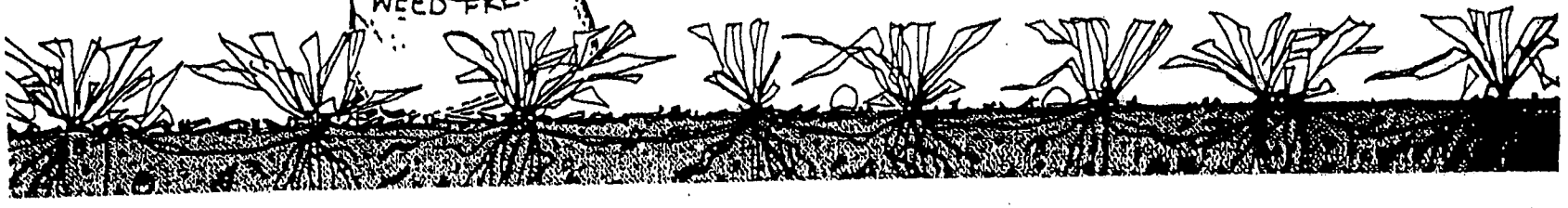
If you are putting in a new lawn, it will be worth your while to do some research to identify the best grass type for your needs.

If you're working with an established lawn that fails to thrive despite proper care, you might consider replanting with a different type of grass.

Why struggle to grow grass that's susceptible to fungal disease if you live in a humid climate? Or a water-loving species if you live in an area with water shortages? Grass that is well-adapted to your area will grow better and resist local pests and diseases better.

New grass varieties and mixtures come out on the market every year.

Ask your county extension agent or another one of the sources listed in this brochure for recommendations.



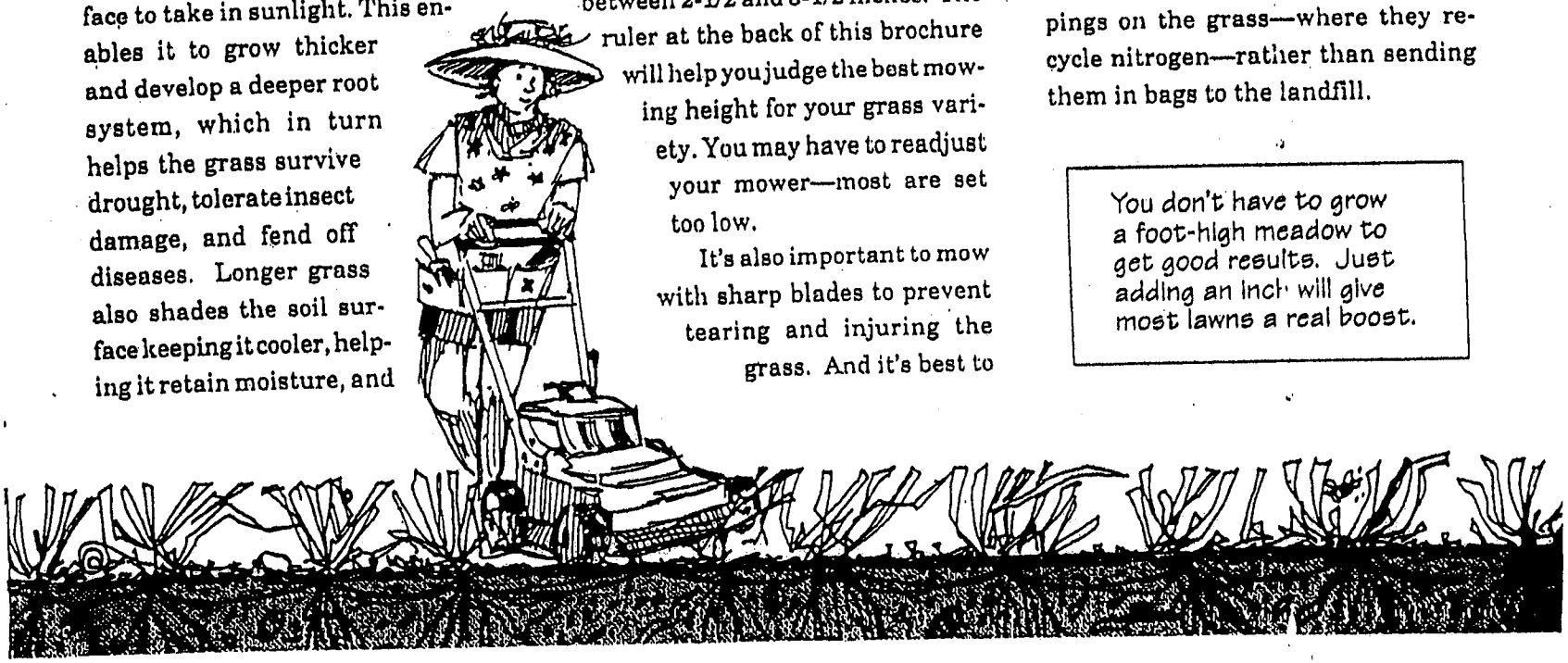
3. Mow High, Often and With Sharp Blades

Mowing high—that is, keeping your lawn a bit long—will produce stronger, healthier grass with fewer pest problems.

Longer grass has more leaf surface to take in sunlight. This enables it to grow thicker and develop a deeper root system, which in turn helps the grass survive drought, tolerate insect damage, and fend off diseases. Longer grass also shades the soil surface keeping it cooler, helping it retain moisture, and making it difficult for weeds to germinate and grow.

A lawn's ideal length will vary with the type of grass, but many turf grass species are healthiest when kept between 2-1/2 and 3-1/2 inches. The ruler at the back of this brochure will help you judge the best mowing height for your grass variety. You may have to readjust your mower—most are set too low.

It's also important to mow with sharp blades to prevent tearing and injuring the grass. And it's best to mow often, because grass adjusts better to frequent than infrequent mowing. ***The rule of thumb is to mow often enough that you never cut more than one-third of the height of the grass blades.*** Save some time *and* help your lawn and the environment by leaving short clippings on the grass—where they recycle nitrogen—rather than sending them in bags to the landfill.



You don't have to grow a foot-high meadow to get good results. Just adding an inch will give most lawns a real boost.

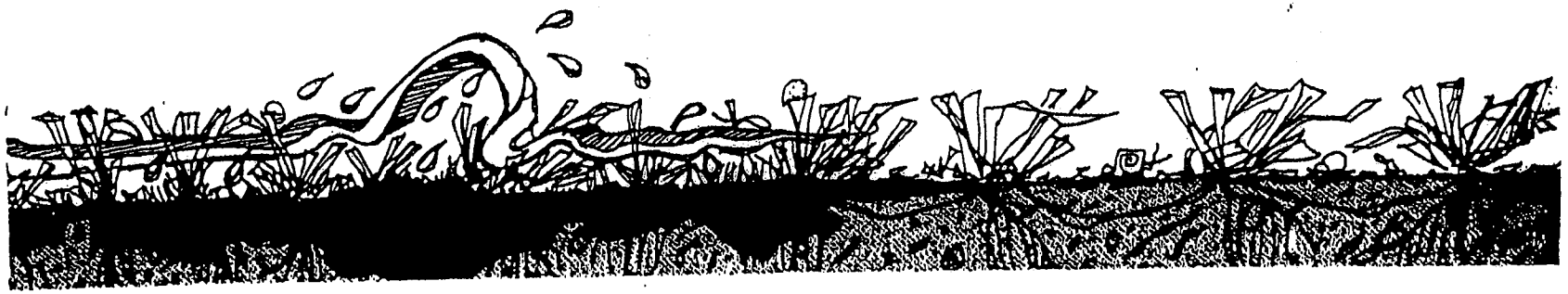
4. Water Deeply But Not Too Often

Watering properly will help your lawn grow deep roots that make it stronger and less vulnerable to drought. Most lawns are watered too often but with too little water. ***It's best to water only when the lawn really needs it, and then to water slowly and deeply.*** This trains the grass roots down. Frequent shallow watering trains the roots to stay near the surface, making the lawn less able to find moisture during dry periods.

Every lawn's watering needs are unique: they depend on local rainfall, the grass and soil type, and the general health of the lawn. But even in very dry areas, no established home lawn should require daily watering.

Try to water your lawn in a way that imitates a slow, soaking rain, by using trickle irrigation, soaker hoses, or other water-conserving methods. It's also best to water in the early morning, especially during hot summer months, to reduce evaporation. Apply about an inch of water—enough that it soaks 6–8 inches into the soil. Then let the lawn dry out thoroughly before watering it again.

> The best rule is to water only when the lawn begins to wilt from dryness--when the color dulls and footprints stay compressed for more than a few seconds.

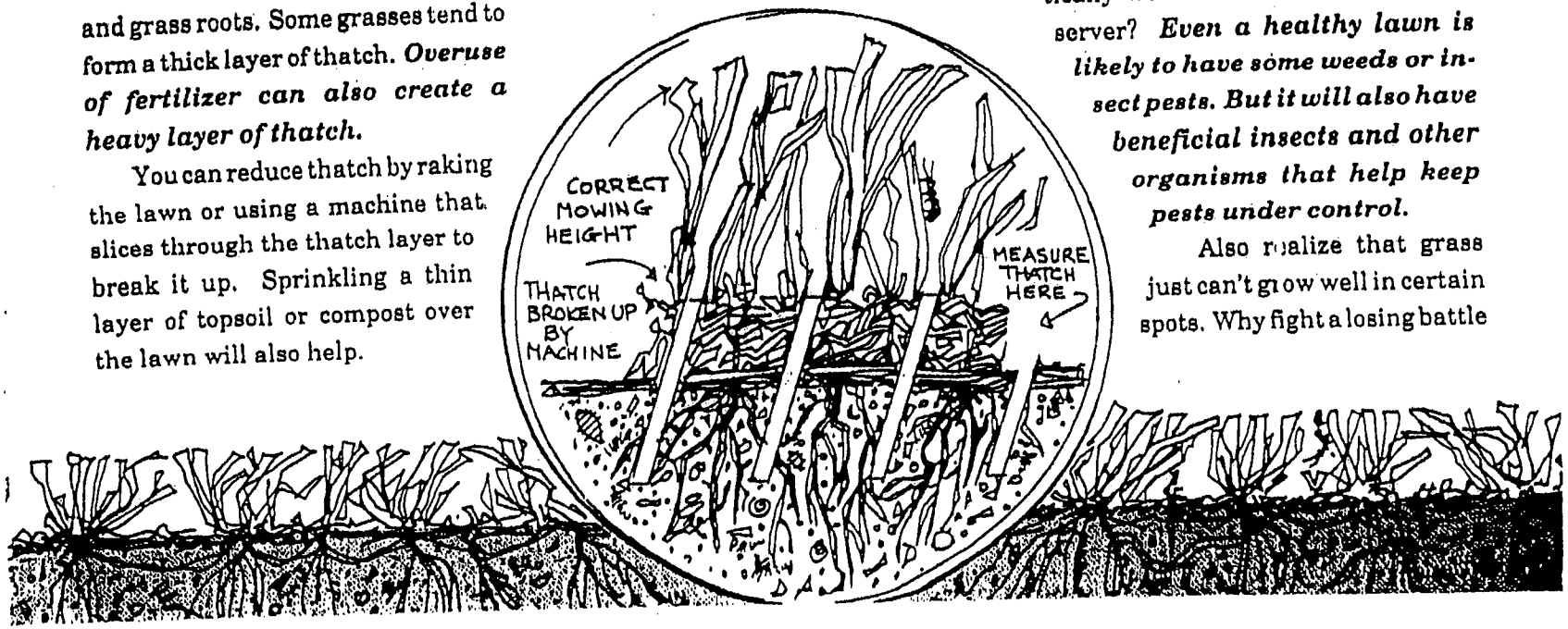


5. Correct Thatch Build-Up

All grass forms a layer of dead plant material, known as thatch, between the grass blades and the soil. When thatch gets too thick—deeper than one-half inch—it prevents water and nutrients from penetrating to the soil and grass roots. Some grasses tend to form a thick layer of thatch. ***Overuse of fertilizer can also create a heavy layer of thatch.***

You can reduce thatch by raking the lawn or using a machine that slices through the thatch layer to break it up. Sprinkling a thin layer of topsoil or compost over the lawn will also help.

In a healthy lawn, microorganisms and earthworms help keep the thatch layer in balance by decomposing it and releasing the nutrients into the soil.



6. Set Realistic Goals

Setting realistic goals will allow you to conduct an environmentally sensible lawn care program. It's probably not necessary to aim for putting-green perfection. Did you know that a lawn with 15 percent weeds can look practically weed-free to the average observer? ***Even a healthy lawn is likely to have some weeds or insect pests. But it will also have beneficial insects and other organisms that help keep pests under control.***

Also realize that grass just can't grow well in certain spots. Why fight a losing battle

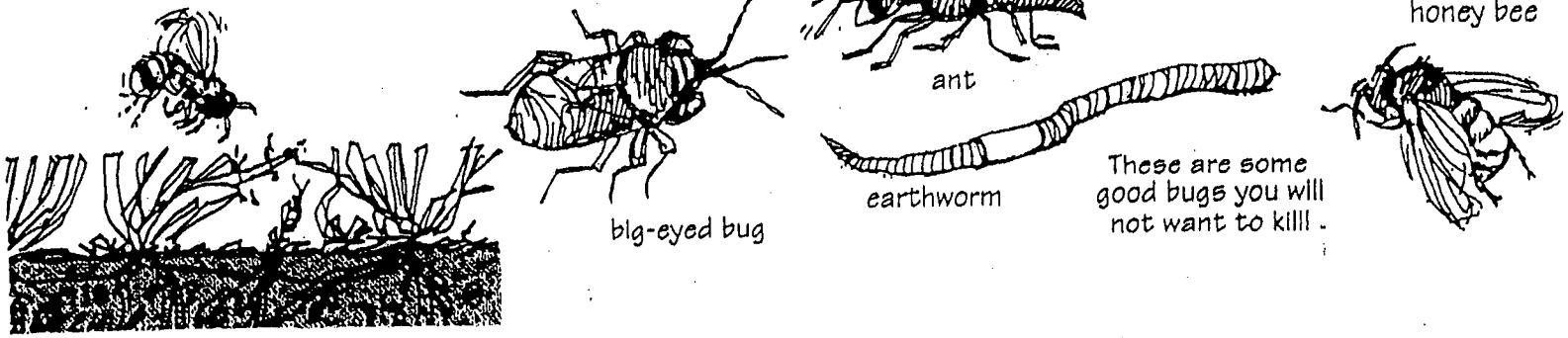
with your lawn, when you have other options? At the base of a tree, for example, you might have better luck with wood chips or shade-loving ornamental plants like ivy, periwinkle, or pachysandra. If your climate is very dry, consider converting some of your lawn to dry-garden landscaping. It could save time, money, and water resources.

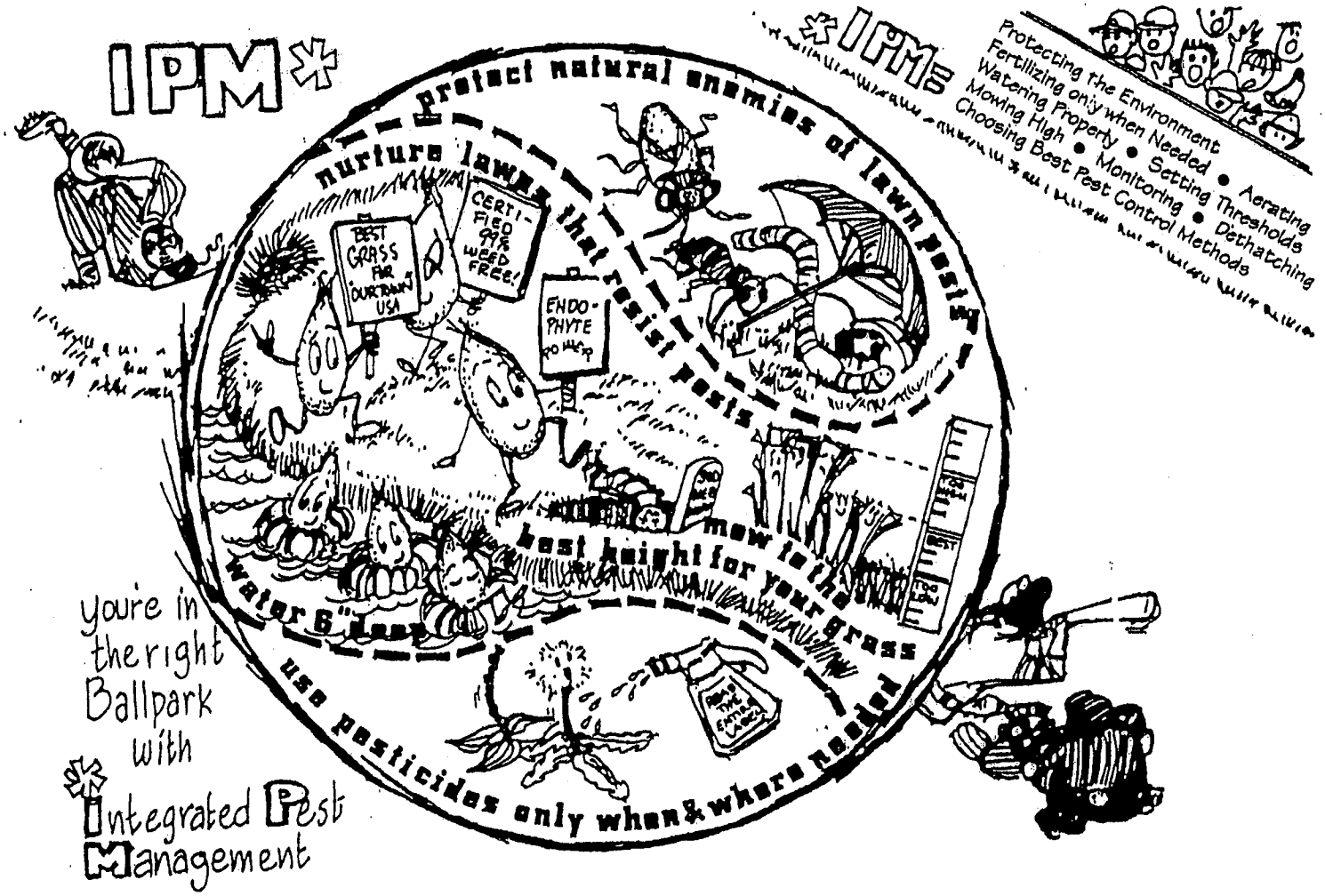
What Is IPM?

Integrated Pest Management is essentially common-sense pest control. IPM is not a new concept; some forms of it have been practiced for centuries.

IPM involves the carefully managed use of three different pest control tactics—biological, cultural, and chemical—to get the best long-term results with the least disruption of the environment. Biological control means using natural enemies of the pest, like lady bugs to control aphids. Cultural or horticultural control involves the use of gardening methods, like mowing high to shade out weeds. Chemical control involves the judicious use of pesticides.

IPM is a highly effective approach that minimizes the use of pesticides and maximizes the use of natural processes. Lawn care professionals who use IPM should have a sophisticated understanding of the ecosystem of your turf and the available pest control tactics. Home gardeners can also practice IPM by following the steps outlined in this brochure.



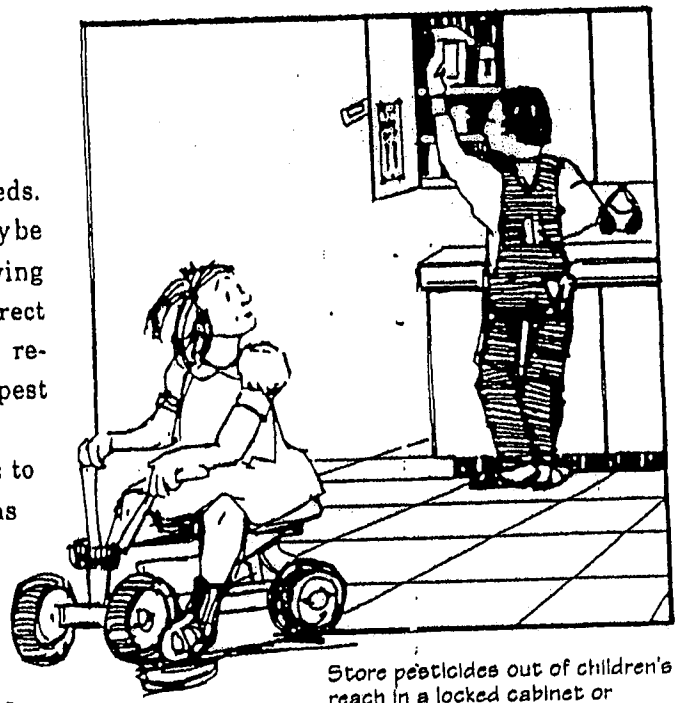

IPM*
Protect natural enemies of lawn pests
nurture lawns that resist pests
BEST GRASS FOR OUR RAINY USA
CERTIFIED 0% WEED FREE!
ENDOPHYTE POWER
mow to the best height for your grass
water 6" deep
use pesticides only when & where needed
DRINK TIME EATING TIME!
*IPM
Protecting the Environment
Fertilizing only when Needed • Aerating
Watering Properly • Setting Thresholds
Mowing High • Monitoring • Dethatching
Choosing Best Pest Control Methods
you're in the right Ballpark with
Integrated Pest Management

Tips For Using Pesticides

Sometimes, even with good lawn care practices, weather conditions or other factors can cause pest problems to develop. Pesticides can help control many lawn pests. But pesticides have risks as well as benefits, and it's important to use them properly.

The chemicals we call pesticides include insecticides, herbicides, and fungicides. These products are designed to kill or control pest insects, weeds, and fungal diseases. Pesticides can be very effective. But don't be tempted to rely solely on pesticides as a quick-fix solution to any lawn problem. Serious, ongoing pest problems are often a sign that your lawn is not getting everything it needs. In other words, the pests may be a symptom of an underlying problem. You need to correct the underlying problem to reduce the chance that the pest will reappear.

All pesticides are toxic to some degree. This means they can pose some risk to you, to your children and pets, and to any wildlife that venture onto your lawn—especially if these chemicals are overused or carelessly applied. Pesticides can also kill earthworms and other beneficial organisms, disrupting the ecological balance of your lawn.



Store pesticides out of children's reach in a locked cabinet or garden shed.

2. Use pesticides to minimize pests, not eradicate them. The latter is often impossible and unnecessary.

3. Be sure you have accurately identified the pest so you can choose the best pesticide for the job and use it most effectively. Obtain professional advice from your county extension agent or a local expert.

4. Spot treat whenever possible. In most cases, it isn't necessary to treat the whole lawn with pesticides if the problem is confined to certain areas. Spraying more than necessary is wasteful and can be environmentally damaging.

If you have questions about a pesticide, call EPA's toll-free National Pesticide Telecommunications Network (1-800-858-7378). For general information on minimizing pesticide risks, call or write EPA for a free copy of the *Citizen's Guide to Pesticides*. The number to call is 703-305-5017; the address is: *EPA, Office of Pesticide Programs, Field Operations Division, H7506C, 401 M Street, S.W., Washington, D.C. 20460.*

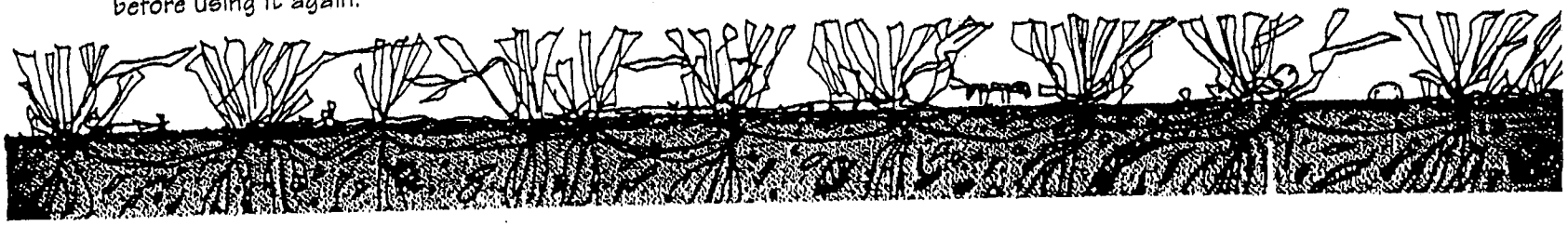
When Spraying, Protect

Wash this clothing separately before using it again.

Before Using Any Pesticide, Be Sure To Review These Basic Rules

1. ***Take safety precautions. Never assume a pesticide is harmless.***

- ❑ Read the entire label and follow its instructions. Use only the amount directed, at the time and under the conditions specified, and for the purpose listed.
- ❑ Be sure to wear any protective clothing—like gloves, long sleeves, and long pants—indicated on the label. Wash this clothing separately before using it again.
- ❑ Keep children and pets away from pesticides, and make sure no one goes on a treated lawn for at least the time prescribed by the pesticide label.
- ❑ Remember to follow any state or local requirements for posting your treated lawn or notifying your neighbors that a pesticide has been applied.
- ❑ Store and dispose of pesticides properly, according to the label directions and any state and local regulations.



often reduces pesticide use by combining it with other, non-chemical methods of pest control?

A. More and more lawn companies are offering integrated pest management (IPM) in response to public concern about pesticides. Be aware that IPM is a general term and that companies may use it to describe a wide range of activities. Find out exactly what a company means if it says it uses IPM.

Q. Is the company willing to help you understand your lawn's problems and the solutions?

A. Lawn services generally apply fertilizers and pesticides. But you may be the one who mows and waters—and poor watering and mowing practices can lead to disappointing results. The

Choosing A Lawn Care Service

Many people choose to hire a professional company to help maintain their lawn. Lawn care companies offer a range of services, from fertilizing and pest control to aerating, mowing, and renovation.

Lawn care companies should follow the same healthy lawn program outlined in this brochure. They should also follow the same precautions for minimizing pesticide risks.

How can you be sure that a service will do these things? Start by asking questions like these:

Q. Is the company licensed?

A. Nearly all states require lawn care companies to be licensed. The qualifications for obtaining a license vary from state to state, but having a license is one indication that the company is reputable and operating legally.

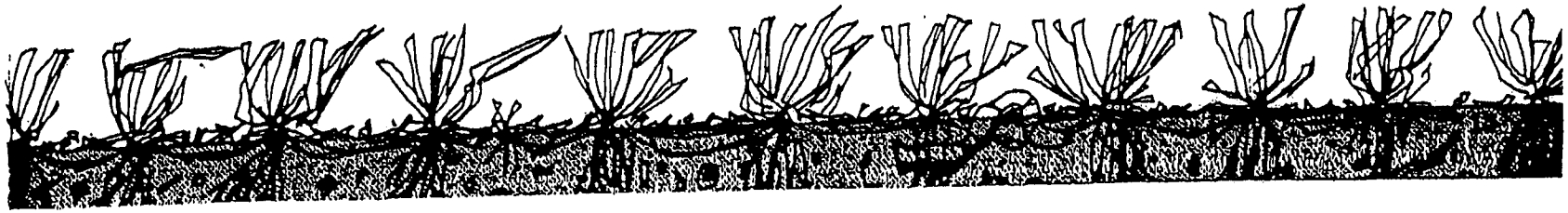
Q. Does the company have a good track record?

A. Ask neighbors and friends who have dealt with the company if they were satisfied with the service they received. Call the Better Business Bureau or the state or local consumer protection office listed in your phone book; have they received any complaints about the company? Determine from the state pesticide regulatory agency if the company has a history of violations.

Q. Is the company affiliated with a professional lawn care association?

A. Affiliation with a professional association helps members to stay informed of new developments in the lawn care field.

Q. Does the company offer a variety of pest management approaches? Does it apply pesticides on a set schedule or only when they are really needed? Does it use integrated pest management, or "IPM"—an approach that



For More Information

Affiliated with the Land Grant university in each state is a system of **County Cooperative Extension Offices.** Usually listed in the telephone directory under county or state government, these offices often have a range of resources on lawn care and landscape maintenance, including plant selection, pest control, and soil testing.

State agriculture and/or environmental agencies may publish information on pests and pest management strategies. The state pesticide regulatory agency can provide information on pesticide regulations, and may also have information on companies with a history of complaints or violations. NPTN (see below) can identify the agency responsible for pesticide regulation in each state.

The **National Pesticide Telecommunications Network** is a toll-free, 24-hour information service that can be reached by calling 1-800-858-7378 or by FAX at 806-743-3094. The operators can provide a wide range of information about the health effects of pesticides, and provide assistance in dealing with pesticide-related emergencies.

Libraries, bookstores, and garden centers usually have a wide selection of books that discuss lawn care and other aspects of landscape management. Garden centers may also have telephone hotlines or experts available on the premises to answer your gardening questions.

The **Environmental Protection Agency** can provide information on integrated pest management strategies for lawn care. Write EPA's Office of Pesticide Programs, Field Operations Division (H7506C), 401 M St., S.W., Washington, D.C. 20460.

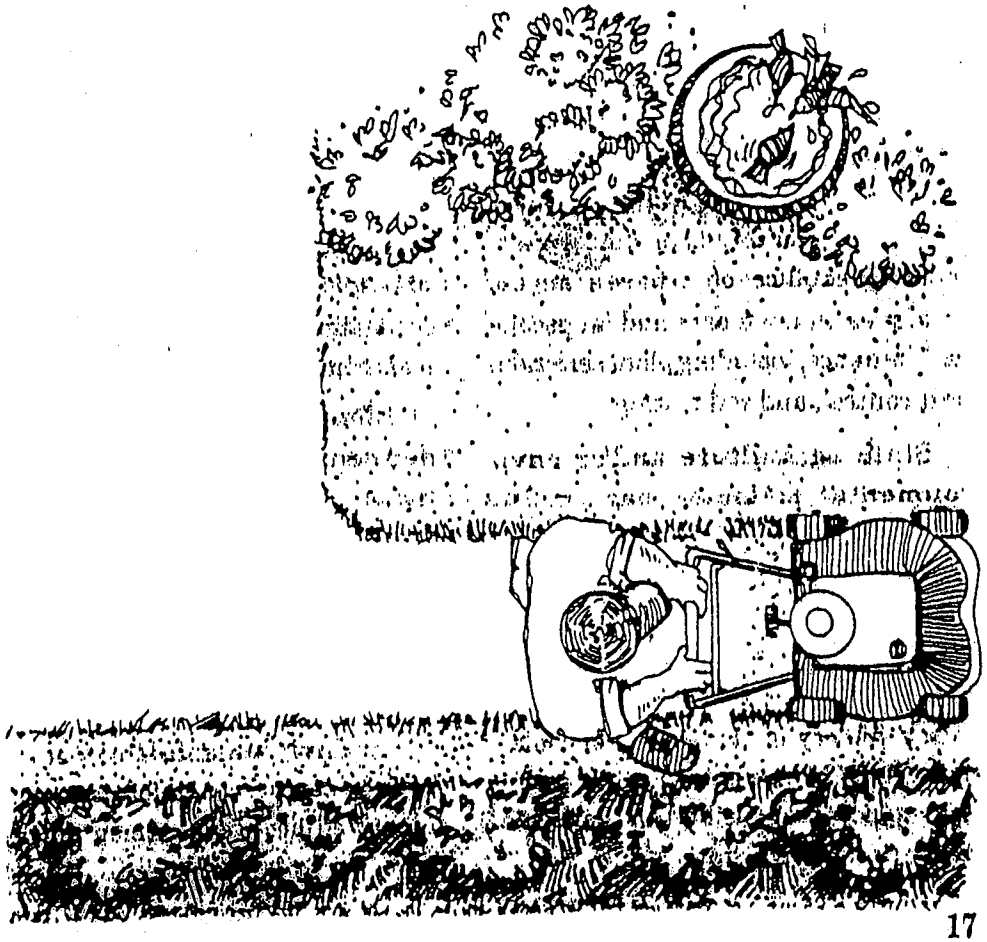
Some **suppliers of lawn care products** can provide helpful tips, answer questions, and help identify problems. Look for information/hotline numbers on product packaging.

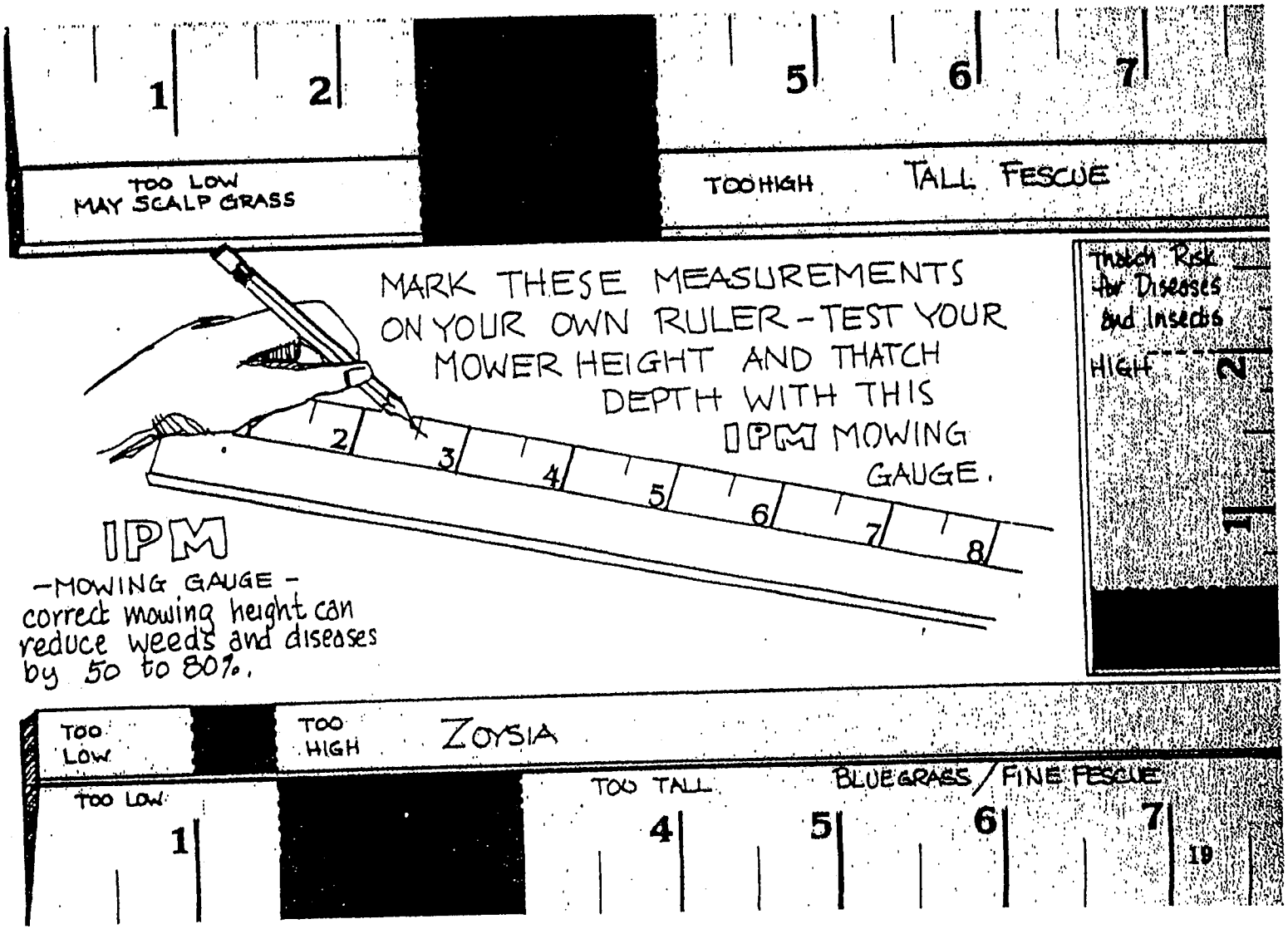
The **Bio-Integral Resource Center (BIRC)**, a non-profit organization formed in 1978 through an EPA grant, has information on least-toxic methods for lawn care. BIRC's address is: P.O. Box 7414, Berkeley, CA 94707.

company should tell you how it plans to take care of your lawn, and advise you about the work you need to do to keep your lawn in good shape.

Q. Will the company tell you what pesticides it applies to your lawn and why, and what health and environmental risks may be presented by their use?

A. You have a right to this information. If asked, the company should readily supply it. All pesticides sold legally in the United States are registered by EPA, but such registration is *not* a guarantee of safety. Ask to see a copy of pesticide labels to make sure they bear an EPA registration number, and to review the directions that should be followed. If the company can't answer your questions about the chemicals it uses, call NPTN (1-800-858-7378) for more information.

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MARK THESE MEASUREMENTS ON YOUR OWN RULER - TEST YOUR MOWER HEIGHT AND THATCH DEPTH WITH THIS IPM MOWING GAUGE.
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IPM
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correct mowing height can reduce weeds and diseases by 50 to 80%.
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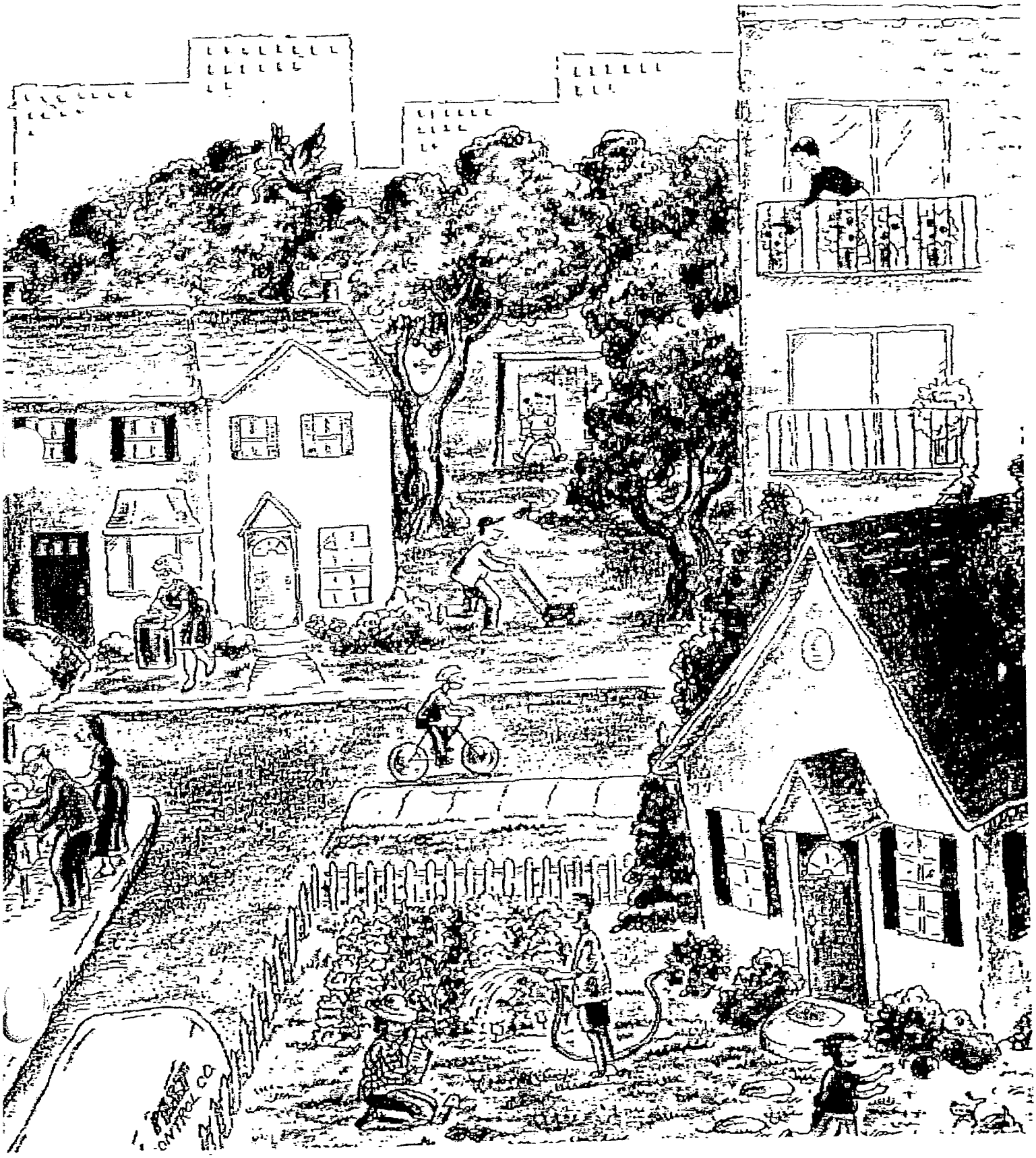
United States
Environmental Protection
Agency

Prevention, Pesticides,
and Toxic Substances
(7501C)

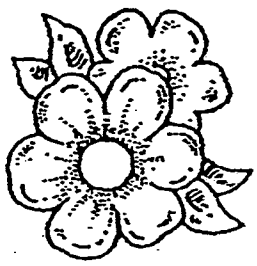
EPA 730-K-95-001
September 1995

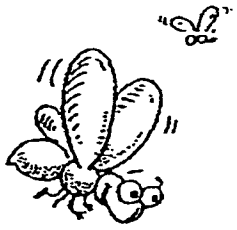
EPA

Citizen's Guide to Pest Control and Pesticide Safety



Contents





Foreword

The Environmental Protection Agency (EPA) is charged with ensuring that pesticides do not pose unreasonable risks to the public and to the environment. EPA regulates the use of pesticides under the authority of two laws—the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug and Cosmetic Act (FFDCA). Most all pesticides may legally be sold in the United States if they have been "registered" by EPA and if they bear an EPA registration number. Federal pesticide registration, however, is only the first step in preventing pesticide risks. Just as important are the steps that consumers take to control pests and use pesticides safely. EPA hopes that this booklet will help you control pests safely.

Introduction

SOONER OR LATER, we're all pestered by pests. Whether it's ants in the kitchen or weeds in the vegetable garden, pests can be annoying and bothersome. At the same time, many of us are concerned that the pesticides we use to control pests can cause problems too. How can pests be controlled safely? When and how should pesticides be used?

This booklet is intended to help answer these questions. The questions have no single right answer, but *Citizen's Guide to Pest Control and Pesticide Safety* gives the information you need to make informed decisions. You should be able to control pests without risking your family's health and without harming the environment.

The major goals of this booklet are to help you understand—

- What steps to take to control pests in and around your home.
- What alternatives to chemical pesticides are available, including pest prevention and non-chemical pest controls.
- How to choose pesticides and how to use, store, and dispose of them safely.
- How to reduce your exposure when others use pesticides.
- How to choose a pest control company.
- What to do if someone is poisoned by a pesticide.

Did you know that these common household products are pesticides?

- ✔ Cockroach sprays and baits.
- ✔ Insect sprays and wasp repellents for indoor use.
- ✔ Insect repellents for personal use.
- ✔ Termite control products.
- ✔ Rat and other rodent poisons.
- ✔ Flea and tick sprays, powders, and pet collars.
- ✔ Kitchen, laundry, and bath disinfectants and sanitizers, including bleach.
- ✔ Products to kill mold and mildew.
- ✔ Lawn and garden products such as weed killers.
- ✔ Swimming pool chemicals, including those that kill algae.
- ✔ Repellents that keep deer, raccoons, or rabbits away from your garden.

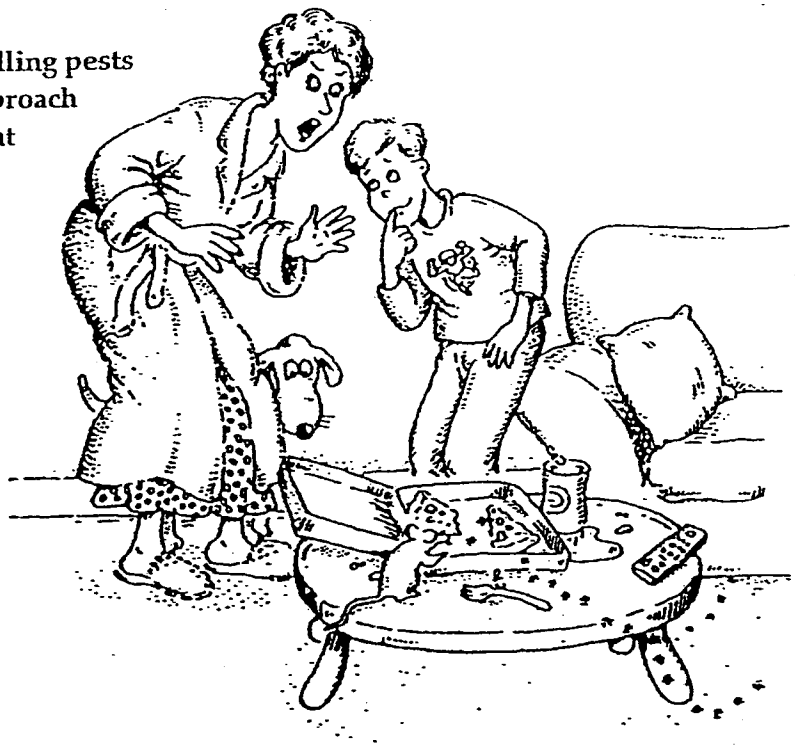
Pests, Pest Control, and Pesticides

PLANTS, insects, mold, mildew, rodents, bacteria, and other organisms are a natural part of the environment. They can benefit people in many ways. But they can also be pests. Apartments and houses are often hosts to common pests such as cockroaches, fleas, termites, ants, mice, rats, mold, or mildew. Weeds, hornworms, aphids, and grubs can be a nuisance outdoors when they get into your lawn, flowers, yard, vegetable garden, or fruit and shade trees. Pests can also be a health hazard to you, your family, and your pets. It's easy to understand why you may need and want to control them.

Nowadays, you can choose from many different methods as you plan your strategy for controlling pests. Sometimes a non-chemical method of control is as effective and convenient as a chemical alternative. For many pests, total elimination is almost impossible, but it is possible to control them. Knowing your options is the key to pest control. Methods available to you include pest prevention, non-chemical pest controls, and chemical pesticides. Each of these methods will be described in more detail in the next three sections of this booklet (starting on pages 6, 11, and 13).

Pest Management

The most effective strategy for controlling pests may be to combine methods in an approach known as integrated pest management (IPM) that emphasizes preventing pest damage. In IPM, information about pests and available pest control methods is used to manage pest damage by the most economical means and with the least possible hazard to people, property, and the environment. An example of using the IPM approach for lawn care is presented in the next section of this booklet titled "Preventing Pests."



Some signs of pest infestation are unmistakable.

Knowing a range of pest control methods gives you the ability to choose among them for an effective treatment. Knowing the options also gives you the choice of limiting your exposure to potentially harmful chemicals. No matter what option you choose, you should follow these steps to control your pest problem:

First Steps in Pest Management

1 **Identify the pest problem.** This is the first and most important step in pest control—figuring out exactly what you're up against. Some pests (or signs of them) are unmistakable—most people recognize a cockroach or a mouse. Other signs that make you think "pest" can be misleading. For example, what may look like a plant "disease" may be, in fact, a sign of poor soil or lack of water.

Use free sources to help identify your pest and to learn the most effective methods to control it. These sources include library reference books (such as insect field guides or gardening books) and pest specialists at your County Cooperative Extension Service or local plant nurseries. These resources are usually listed in the telephone book.

2 **Decide how much pest control is necessary.** Pest control is not the same as pest elimination. Insisting on getting rid of all pests inside and outside your home will lead you to make more extensive, repeated, and possibly hazardous chemical treatments than are necessary. Be reasonable. Ask yourself these questions:

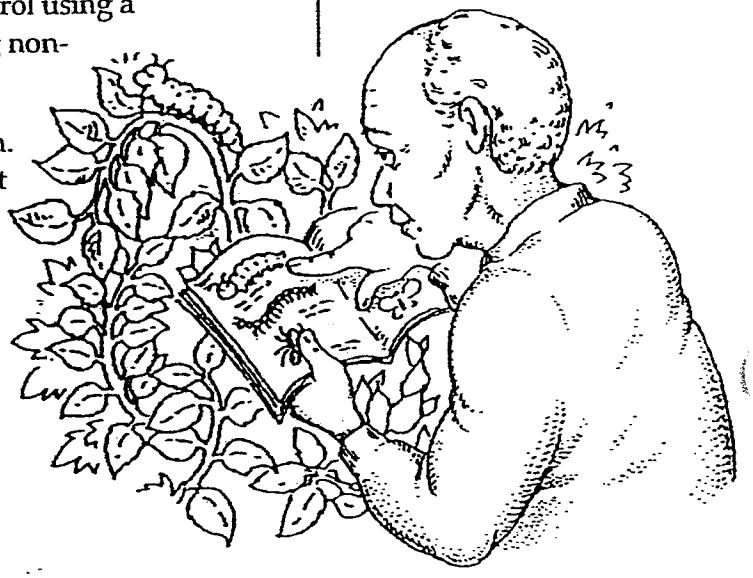
- Does your lawn really need to be totally weed free?
- Recognizing that some insects are beneficial to your lawn, do you need to get rid of all of them?
- Do you need every type of fruit, vegetable, or flower you grow, or could you replace ones that are sensitive to pests with hardier substitutes?
- Can you tolerate some blemished fruits and vegetables from your garden?
- Is anyone in your home known to be particularly sensitive to chemicals?

3 **Choose an effective option.** Use the information gathered in Step 1, your answers to the questions in Step 2, and guidance in the sections titled "Preventing Pests," "Using Non-Chemical Pest Controls," and "Using Chemical Pest Controls" to determine which option you want to choose. If you're still uncertain, get further advice from the free sources listed in Step 1.

4 **Evaluate the results.** Once a pest control method has been chosen and implemented, always allow time for it to work and then evaluate its effectiveness by taking the following steps:

- Compare pre-treatment and post-treatment conditions. Is there evidence of a clear reduction in the number of pests?
- Weigh the benefits of short-term chemical pesticide control against the benefits of long-term control using a variety of other treatments, including non-chemical methods.

It's easier to prevent pests than to control them. You may not need to worry about the four pest control steps just mentioned IF you make the effort to prevent pests in the first place.



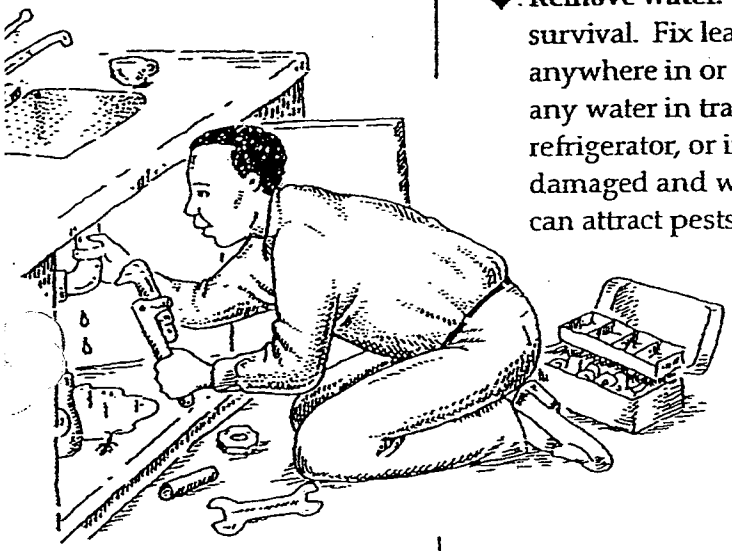
The first step in pest control is to identify the pest.

Preventing Pests

PESTS SEEK PLACES TO LIVE that satisfy basic needs for air, moisture, food, and shelter. The best way to control pests is to try to prevent them from entering your home or garden in the first place. You can do this by removing the elements that they need to survive. Take the following preventive actions:

Indoor Prevention

- **Remove water.** All living things, including pests, need water for survival. Fix leaky plumbing, and do not let water accumulate anywhere in or around your home. For example, do not leave any water in trays under your houseplants, under your refrigerator, or in buckets overnight. Remove or dry out water-damaged and wet materials. Even dampness or high humidity can attract pests.

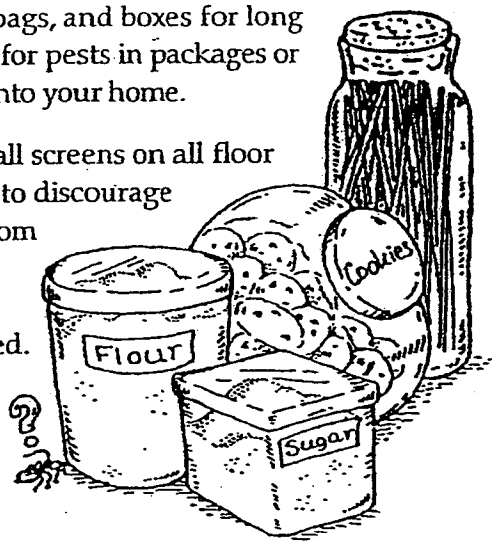


Pests need water to survive. Fix leaky pipes.

- **Remove food.** Store your food in sealed glass or plastic containers, and keep your kitchen clean and free from cooking grease and oil. Do not leave food in pet bowls on the counter or floor for long periods of time. Put food scraps or refuse in tightly covered, animal-proof garbage cans, and empty your garbage frequently.

- **Remove or block off indoor pest hiding places.** Caulk cracks and crevices to control pest access. Bathe pets regularly and wash any mats or surfaces they lie on to control fleas. Avoid storing newspapers, paper bags, and boxes for long periods of time. Also, check for pests in packages or boxes before carrying them into your home.

- **Block pest entryways.** Install screens on all floor drains, windows, and doors to discourage crawling and flying pests from entering your home. Make sure any passageways through the floor are blocked. Place weatherstripping on doors and windows. Caulk and seal openings in walls. Keep doors shut when not in use.



Store food in sealed containers.

Outdoor Prevention

- **Remove or destroy outdoor pest hiding places.** Remove piles of wood from under or around your home to avoid attracting termites and carpenter ants. Destroy diseased plants, tree prunings, and fallen fruit that may harbor pests. Rake fallen leaves. Keep vegetation, shrubs, and wood mulch at least 18 inches away from your house.

- **Remove breeding sites.** Clean up pet droppings from your yard; they attract flies that can spread bacteria. Do not accumulate litter or garbage; it draws mice, rats, and other rodents. Drain off or sweep away standing puddles of water; water is a breeding place for mosquitos and other pests. Make sure drain pipes and other water sources drain away from your house.

Remove breeding sites.
Clean up litter or garbage.

- **Take proper care of all outdoor plants.** These include flowers, fruit and shade trees, vegetable and other plants, and your lawn. Good plant health care reduces pest control needs—healthy plants resist pests better than do weak plants. Plant at the best time of year to promote healthy growth. Use mulch to reduce weeds and maintain even soil temperature and moisture. Water adequately. Native flowers, shrubs, and trees often are good choices because they adapt well to local conditions and require minimal care.

Gardening

- Select healthy seeds and seedlings that are known to resist diseases and are suited to the climate where you live. Strong seeds are likely to produce mature plants with little need for pesticides.

- If your garden is large, alternate rows of different kinds of plants. Pests that prefer one type of vegetable (carrots, for example) may not spread to every one of your carrot plants if other vegetables (not on the pests' diet) are planted in the neighboring rows.

- Don't plant the same crop in the same spot year after year. That way your plants are not as vulnerable to pests that survive the winter.

- Make sure your garden plot has good drainage. Raised beds will improve drainage, especially of clay soils. If a heavy clay soil becomes compacted, it does not allow air and water to get to the roots easily, and plants struggle to grow. To loosen

fore planting, add organic matter to rich the soil mixture in your garden plot.

compacted soil and create air spaces so that water and nutrients can reach the roots, buy or rent a tiller that breaks up the dirt and turns it over. Before planting, add sand and organic matter to enrich the soil mixture in your garden plot. Also, have the soil tested periodically to see whether you need to add more organic matter or adjust the pH (acidity/alkalinity) balance by adding lime or sulfur. Your County Cooperative Extension Service, listed in the telephone book, or local nursery should be able to tell you how to do this.

- Mulch your garden with leaves, hay, grass clippings, shredded/chipped bark, or seaweed. **Do not use newspapers** to keep down weeds or to fertilize plants. **Newsprint may contain toxic metals** such as lead and mercury.

Lawn Care

Tending a garden may not be your hobby; but if you rent or own a home, you might need to care for the lawn. You don't have to be an expert to grow a healthy lawn—the key is to work with nature. You need to create the right conditions for your grass to grow strong and stay healthy. A healthy lawn can resist damage from weeds, disease, and insect pests. Set realistic weed and pest control goals for your lawn.

Think of lawn care as a preventive health care program, like one you would follow to stay healthy yourself. The goal is to prevent problems from ever occurring.

Pesticides can be effective, but should not be relied on as the quick-fix solution to any lawn problem. Serious, ongoing pest problems are often a sign that your lawn is not getting what it needs to stay healthy. Pests may be a symptom of an underlying problem. You need to correct the underlying problem to reduce the chances of pests reappearing.

Make these six steps part of a preventive health care program for your lawn:

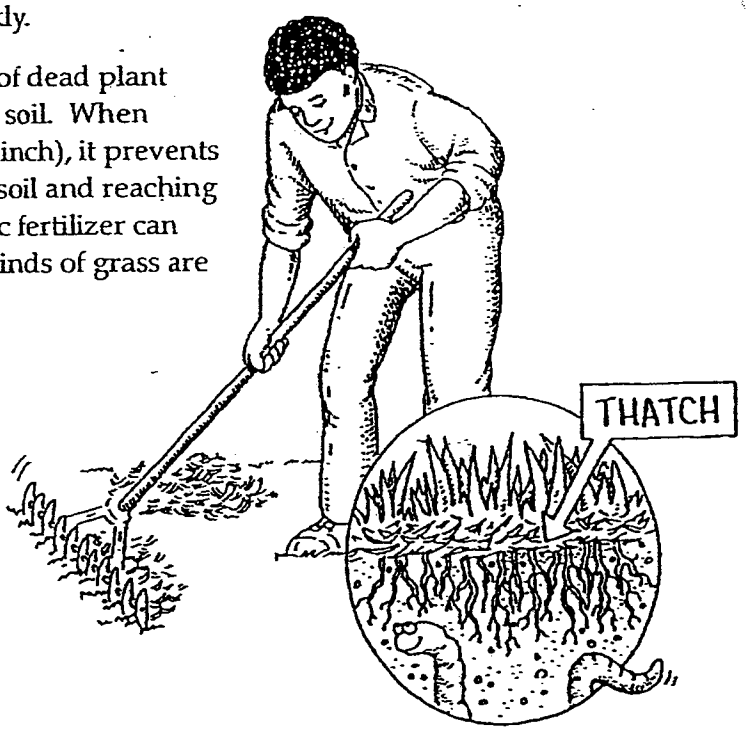
1 **Develop healthy soil that has the right pH balance, key nutrients, and good texture.** You can buy easy-to-use soil analysis kits at hardware stores or contact your local County Cooperative Extension Service for a soil analysis.

2 **Choose a type of grass that grows well in your climate.** For instance, if your area gets very little rain, don't plant a type of grass that needs a lot of water. Your local County Cooperative Extension Service can advise you on which grasses grow best in your area.

3 **Mow high, mow often, and make sure the lawn mower blades are sharp.** Grass that is slightly long makes a strong, healthy lawn with few pest problems. Weeds have a hard time taking root and growing when grass is fairly long (around 2½ to 3½ inches for most types of grass). A foot-high meadow isn't necessary; just adding an inch to the length of your grass will give most lawns a real boost.

4 **Water deeply but not too often.** The best rule is to water only when the lawn begins to wilt from dryness—when the color dulls and footprints stay in the grass for more than a few seconds. Avoid watering during the hottest part of the day because the water will evaporate too quickly.

5 **Correct thatch buildup.** Thatch is a layer of dead plant material between the grass blades and the soil. When thatch gets too thick (deeper than ¾ of an inch), it prevents water and nutrients from getting into the soil and reaching the roots of the grass. Overusing synthetic fertilizer can create a heavy layer of thatch, and some kinds of grass are prone to thatch buildup.



Get rid of excess thatch by raking the lawn or using a dethatching rake.

In a healthy lawn, earthworms, spiders, millipedes, and a variety of microorganisms help keep the thatch layer in balance by breaking it up and using it for food, which releases nutrients into the soil. You can get rid of excess thatch by raking the lawn using a dethatching rake or by using a machine that pulls plugs out of the grass and thatch layer to break it up. Sprinkle a thin layer of topsoil or compost over the lawn after dethatching or aerating it to speed up the process of decomposition.

6 **Set realistic weed and pest control goals.** It is almost impossible to get rid of all weeds and pests. However, even a lawn that is 15 percent weeds can look almost weed-free to the casual observer. A healthy lawn will probably always have some weeds and some insect pests. But a healthy lawn will also have beneficial insects and other organisms like earthworms that keep pests under control. Improper use of pesticides can kill these beneficial organisms.

By following this preventive health care program for your lawn, you should be able to rely very little, if at all, on chemical pesticides for weed and insect pest control. For additional information, refer to EPA's booklet *Healthy Lawn, Healthy Environment*. (See page 42 in the Reference Section.)

If you use the preventive techniques just described, you reduce the chance of pests ever getting into your home or garden in the first place.

Using Non-Chemical Pest Controls

YOU'VE GOT PESTS, and you want to control them with a dependable pest control method that does not contain chemical pesticides. Non-chemical pest control methods really work, and they have many advantages. Compared to chemical treatments, non-chemical methods are generally effective for longer periods of time. They are less likely to create hardy pest populations that develop the ability to resist pesticides. And many non-chemical pest controls can be used with fewer safeguards, because they are generally thought to pose virtually no hazards to human health or the environment. Two examples of non-chemical pest control methods are biological and manual treatments.

Biological Controls

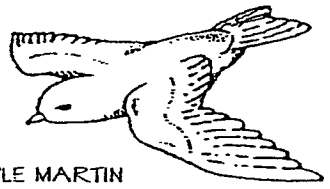
Did you know that pests themselves may be eaten or otherwise controlled by birds, insects, or other living organisms? You can use a pest's natural enemies (predators) to your advantage. These "biological controls," as they are called, take many forms:

- **Beneficial predators** such as purple martins and other birds eat insects; bats can eat thousands of insects in one night; lady beetles (ladybugs) and their larvae eat aphids, mealybugs, whiteflies, and mites. Other beneficial bugs include spiders, centipedes, ground beetles, lacewings, dragonflies, big-eyed bugs, and ants. You can install a purple martin house in your yard. You can also buy and release predatory insects. They are available from sources such as gardening catalogs and magazines.

  Contact your County Cooperative Extension Service, a nursery, or a garden association for information on how to attract and protect beneficial predators.

- **Parasitoids** such as miniature wasps lay their eggs inside the eggs or bodies of insect pests such as tomato hornworms. Once the eggs hatch, the offspring kill their insect hosts, making parasitoids highly effective pest controllers.

Beneficial Predators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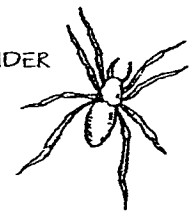
SPIDER


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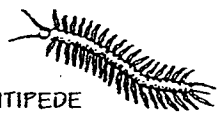
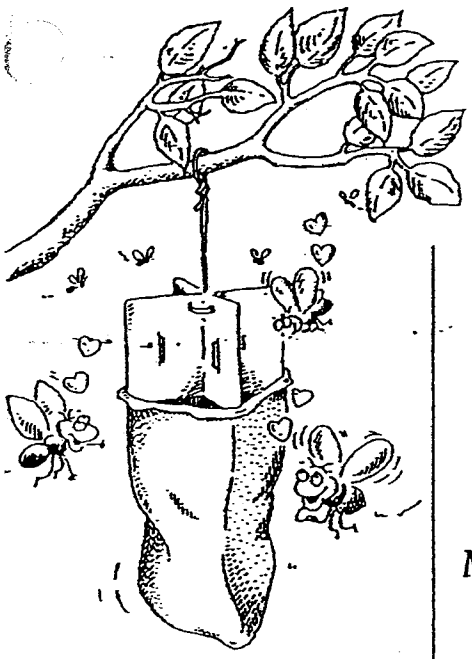

CENTIPEDE


MINI-WASP



Pheromone traps lure pests.

- **Microscopic pathogens** such as fungi, bacteria, and viruses control pests. An example is milky spore disease, which attacks Japanese beetles. A number of these biological pesticides are available commercially at hardware and garden stores. (See page 43 in the Reference Section for more information.)
- **Biochemical pesticides** include pheromones and juvenile insect hormones. Pheromones are chemical substances released by various organisms (including insects) as means of communicating with others of the same species, usually as an aid to mating. Pheromones lure pests inside a trap. Juvenile insect hormones interfere with an insect's normal growth and reproductive functions by mimicking the effects of compounds that occur naturally in the pest.

Manual Methods

- Spading and hoeing to cut up weeds.
- Hand-picking weeds from your lawn and pests from your plants, indoors or out.
- Using a flyswatter.
- Setting traps to control rats, mice, and some insects.
- Mulching to reduce weed growth.

One or a combination of several non-chemical treatments may be just what you need for your pest problem. You must be patient because results may not be immediate. And, you must work to prevent pests from entering your home or garden in the first place.

Using Chemical Pest Controls

IF YOU DECIDE that the best solution to your pest problem is chemical—by itself or, preferably, combined with non-chemical treatments—be aware that one of the greatest causes of pesticide exposure to humans is the use of pesticides in and around the home.

Anyone can buy a wide variety of "off the shelf" pesticide products to control weeds, unwanted insects, and other pests. No special training is required to use these pesticides. Yet many of the products can be hazardous to people, especially when stored, handled, applied, or disposed of improperly. **The results achieved by using chemical pesticides are generally temporary, and repeated treatments may be required.** Over time, some pests become pesticide-resistant, meaning they adapt to the chemical and are no longer harmed by it. This forces you to choose another product or method. If used incorrectly, home-use pesticide products can be poisonous to humans. As a result, it is extremely important for you to take responsibility for making sure that these products are used properly. The basic steps in reducing pesticide risks are—

- Choosing the right pesticide product.
- Reading the product label.
- Determining the right amount to purchase and use.
- Using the product safely and correctly.
- Storing and disposing of pesticides properly.

Each of these steps is described in more detail in the sections that follow.

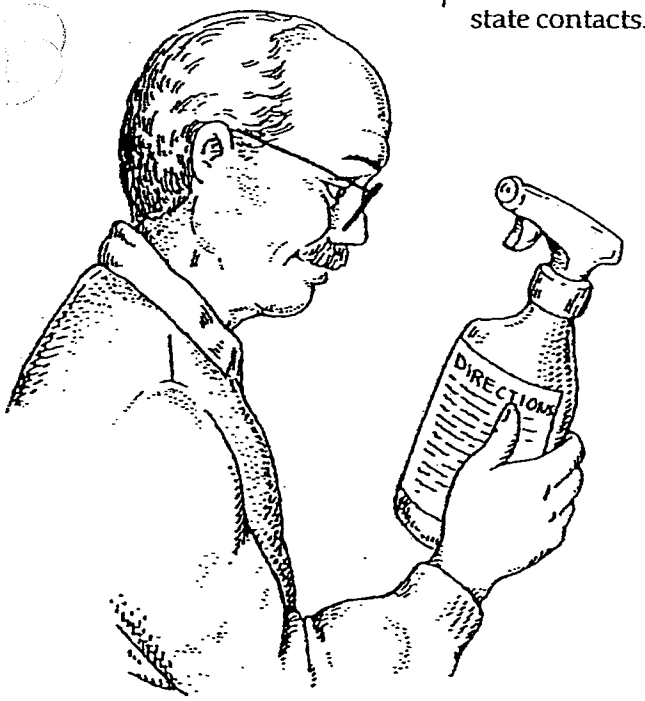
Choosing the right product is a basic step in reducing pesticide risks.

Choosing the Right Pesticide Product

Once you decide to use chemical pesticides, you must decide whether to do the job yourself or hire a professional pest control service. If you are interested in hiring professionals, see pages 36–38 for advice. If you choose to tackle the job yourself, the next question is the most important. Which pesticide product is the best one for your situation?

Home-use pesticides come in many forms—including solutions, aerosols, dusts, granules, baits, and wettable powders. As the name implies, wettable powders are usually mixed with water and/or other liquids and then applied. Pesticide solutions are often diluted with water. Certain formulations work better for some pests and/or some target areas than others. Many pesticides also come in ready-to-use forms, such as aerosols and spray bottles, which are often more practical and easy to use because they don't require measuring or mixing.

Before you buy a product, read the label! Compare product labels, and learn as much as you can about the pesticide. Contact your County Cooperative Extension Service (listed in the telephone book), local pesticide dealers, the National Pesticide Telecommunications Network (NPTN) at 1-800-858-7378, or your state pesticide agency for assistance. (See pages 45–48 in the Reference Section for state contacts.)



Read the label before you buy or use a pesticide product.

When you are ready to buy a pesticide product, follow these recommendations:

- First, be certain that you have identified the problem correctly. Then, choose the least toxic pesticide that will achieve the results you want and be the least toxic to you and the environment.
- When the words "broad-spectrum" appear on the label, this means the product is effective against a broad range of pests. If the label says "selective," the product is effective against one or a few pests.
- Find the signal word—either *Danger-Poison, Danger, Warning,* or *Caution* on the pesticide label. The signal word tells you how poisonous the product is to humans. (See page 16.)

  Pesticide products labeled *Danger-Poison* are "Restricted Use" and are mainly used under the supervision of a certified applicator. For the most part, these products should not be available for sale to the consumer.
- Choose the form of pesticide (aerosol, dust, bait, or other) best suited to your target site and the pest you want to control.

Choose the form of pesticide best suited to your target site and the pest you want to control.

DANGER-POISON means highly poisonous.

DANGER means poisonous or corrosive.

WARNING means moderately hazardous.

CAUTION means least hazardous.

Reading the Pesticide Label

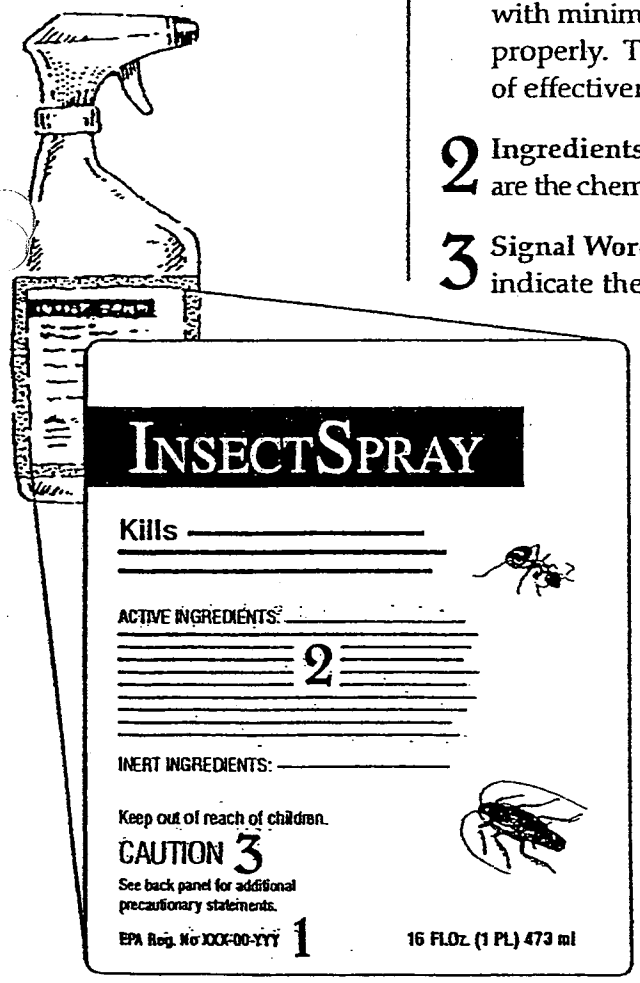
The pesticide label is your best guide to using pesticides safely and effectively. The directions on the label are there primarily to help you achieve "maximum" benefits—the pest control that you desire—with "minimum" risk. Both depend on following label directions and correctly using the pesticide. ***Read the label.*** Read the label ***before buying*** the pesticide. Read the label ***before mixing or using*** the pesticide ***each time,*** and read the label before storing or disposing of the pesticide. Do not trust your memory. You may have forgotten part of the label instructions or they may have changed. Use of any pesticide in any way that is not consistent with label directions and precautions is illegal. It may also be ineffective and, even worse, dangerous.

The main sections of a pesticide label are described below:

1 EPA Registration Number. This number tells you that EPA has reviewed the product and determined that it can be used with minimal or low risk if you follow the directions on the label properly. The number is not a stamp of approval or guarantee of effectiveness.

2 Ingredients Statement or Active Ingredients. Active ingredients are the chemicals in the pesticide that kill or control the target pest(s).

3 Signal Words. The signal words—*Caution, Warning, or Danger*—indicate the pesticide's potential for making you sick. The word *CAUTION* appears on pesticides that are the least harmful to you. A pesticide with the word *WARNING* is more poisonous than those with a *Caution* label. Pesticides with the word *DANGER* on the label are very poisonous or irritating. They should be used with extreme care because they can severely burn your skin and eyes.



Main sections on front label.

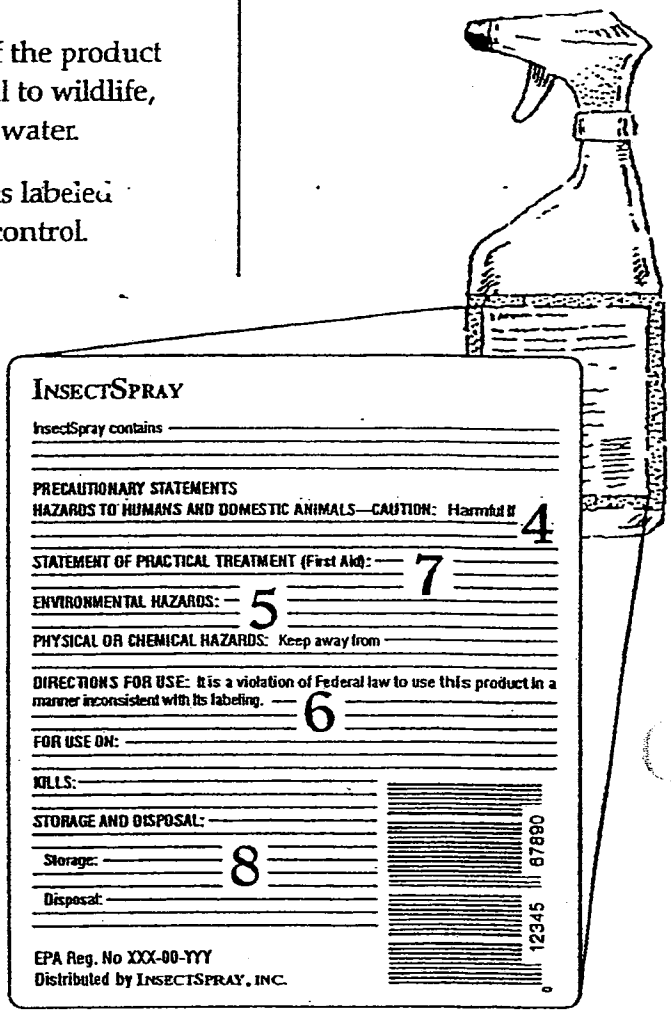
4 Precautionary Statements. This part describes the protective clothing, such as gloves or goggles, that you should wear when using the pesticide. The section also tells you how to protect children or pets by keeping them away from areas treated with pesticides.

5 Environmental Hazards. This section tells you if the product can cause environmental damage—if it's harmful to wildlife, fish, endangered plants or animals, wetlands, or water.

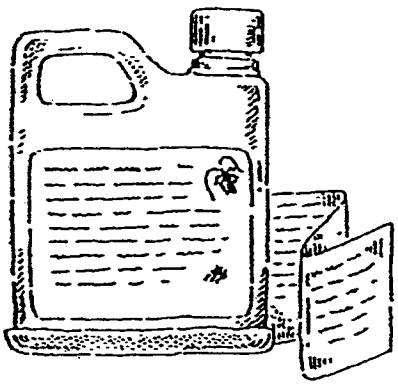
6 Directions for Use. Make sure that the product is labeled for use against the pest(s) that you are trying to control. (For example, products labeled only for termites should not be used to control fleas.) Use only the amounts recommended, and follow the directions exactly.

7 First Aid Instructions. The label tells you what to do if someone is accidentally poisoned by the pesticide. Look for this information in the *Statement of Practical Treatment* section. The instructions are only first aid. ALWAYS call a doctor or your local poison control center. You may have to take the person to a hospital right away after giving first aid. Remember to take the pesticide label or container with you.

8 Storage and Disposal. Read carefully and follow all directions for safe storage and disposal of pesticide products. Always keep products in the original container and out of reach of children, in a locked cabinet or locked garden shed.



Main sections on back label.



Some pesticides have small foldout booklets containing the label information.

Determining the Correct Amount To Use

Many products can be bought in a convenient ready-to-use form, such as in spray cans or spray bottles, that won't require any mixing. However, if you buy a product that has to be measured out or mixed with water, prepare only the amount of pesticide that you need for the area where you plan to use the pesticide (target area). The label on a pesticide product contains much useful information, but there isn't always room to include examples of different dilutions for every home use. Thus, it is important to know how to measure volume and figure out the exact size of the area where you want to apply the pesticide. Determining the correct amount for your immediate use requires some careful calculations. Use the following example as an illustration of how to prepare only the amount of pesticide needed for your immediate pest control problem.

An example: The product label says, "For the control of aphids on tomatoes, mix 8 fluid ounces of pesticide into 1 gallon of water and spray until foliage is wet." You have only 6 tomato plants. From experience, you know that 1 gallon is too much, and that you really need only 1 quart of water to wet the leaves on these 6 plants. A quart is only ¼ of a gallon. Because you want to use less water than the label says, you need less pesticide. You need only ¼ of the pesticide amount listed on the label—only 2 fluid ounces. This makes the same strength spray recommended by the label, and is the appropriate amount for the 6 tomato plants.

In short, all you need to do is figure the amount of pesticide you need for the size of your target area, using good measurements and careful arithmetic. For help in making these calculations, see pages 39–41 in the Reference Section.

When using pesticides that must be mixed, determine the correct amount for your immediate use.

Caution: When you use cups, teaspoons, or tablespoons to measure pesticides, use only level measures or level spoonfuls. NEVER use the same tools that you use for measuring pesticides—spoons, cups, bottles—to prepare food, even if you've washed them.

Using Pesticides Safely and Correctly

Once you have read the pesticide label and are familiar with all precautions, including first aid instructions, follow these recommendations to reduce your risks:

Before Using a Pesticide

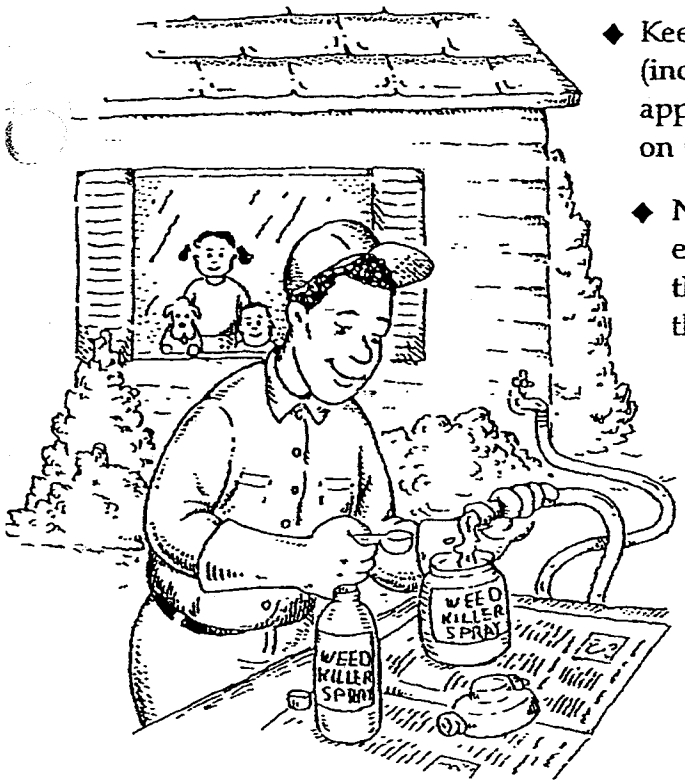
- Wear the items of protective clothing the label requires: for example, long-sleeved shirts, long pants, overalls, non-absorbent gloves (not leather or fabric), rubber footwear (not canvas or leather), a hat, goggles, or a dust-mist filter. If no specific clothing is listed, gloves, long-sleeved shirts and long pants, and closed shoes are recommended. You can buy protective clothing and equipment at hardware stores or building supply stores.

When Mixing or Applying a Pesticide

- Never smoke or eat while mixing or applying pesticides. You could easily carry traces of the pesticide from your hands to your mouth. Also, some pesticide products are flammable.
- Follow the use directions on the label carefully. Use only for the purpose listed. Use only the amount directed, at the time and under the conditions specified. **Don't change the recommended amount.** Don't think that twice the amount will do twice the job. It won't. You could harm yourself, others, or whatever you are trying to protect.
- If the directions on the label tell you to mix or dilute the pesticide, do so outdoors or in a well-ventilated area. Use the amount listed on the label and measure the pesticide carefully. (Never use the same measuring cups or spoons that you use in the kitchen.) Mix only the amount that you need for each application. Do not prepare larger amounts to store for possible future use. (See "Determining the Correct Amount To Use" on page 18.)

When using a pesticide—

- ✓ Read and follow the label directions.
- ✓ Wear protective clothing.
- ✓ Don't smoke or eat.
- ✓ Mix and apply only the amount you need.



Mix pesticides outdoors or in a well-ventilated area.

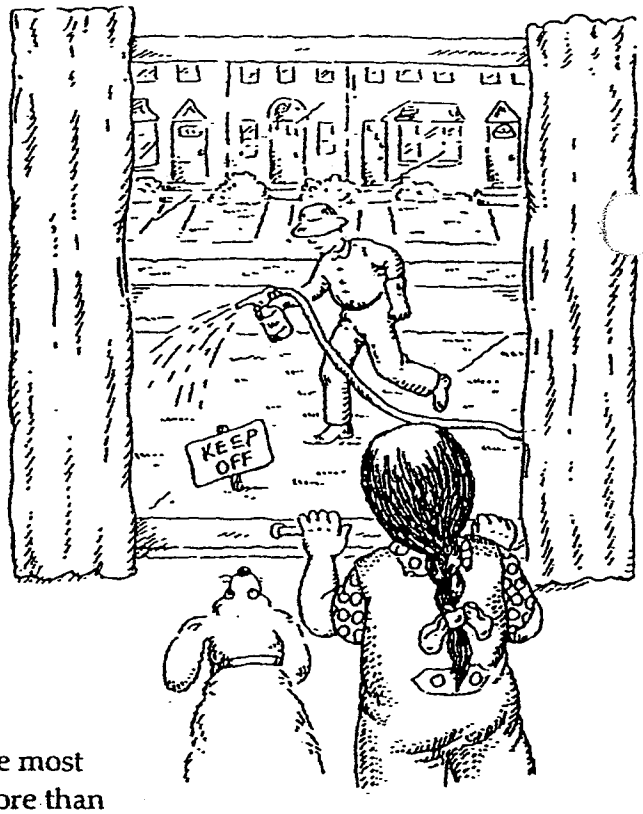
- Keep children, pets (including birds and fish), and toys (including pet toys) away from areas where you mix and apply pesticides for at least the length of time required on the label.
- Never transfer pesticides to other containers, such as empty soft drink or milk bottles. Keep pesticides in their original containers—ones that clearly identify the contents. Refasten all childproof caps tightly.
- If a spill occurs, clean it up promptly. Don't wash it away. Instead, sprinkle the spill with sawdust, vermiculite, or kitty litter. Sweep it into a plastic garbage bag, and dispose of it as directed on the pesticide product label.
- Indoors or outdoors, never put bait for insects or rats, mice, and other rodents where small children or pets can reach it. When using traps, make sure the animal inside is dead before you touch or open the trap.

Indoor Applications

- Use pesticides indoors only when absolutely necessary, and use only very limited amounts.
- Provide adequate ventilation. If the label directions permit, leave all windows open and fans operating after the application is completed. If the pesticide product is only effective in an unventilated (sealed) room or house, do not stay there. Put all pets outdoors, and take yourself and your family away from treated areas for at least the length of time prescribed on the label.
- Apply most surface sprays only to limited areas such as cracks; don't treat entire floors, walls, or ceilings.
- Remove food, pots and pans, and dishes before treating kitchen cabinets. Don't let pesticides get on any surfaces that are used for food preparation. Wait until shelves dry before refilling them. Wash any surfaces that may have pesticide residues before placing food on them.

Outdoor Applications

- Never apply pesticides outdoors on a windy day (winds higher than 10 mph). Position yourself so that a light breeze does not blow pesticide spray or dust into your face.
- Before spraying, close the doors and windows of your home.
- Use coarse droplet nozzles on your sprayer to reduce misting, and spray as close to the target as possible.
- Keep pesticides away from plants and wildlife you do not want to treat. Do not apply any pesticide to blooming plants, especially if you see honeybees or other pollinating insects around them. Do not spray bird nests when treating trees.
- Follow label directions carefully to ensure that you don't apply too much pesticide to your lawn, shrubs, or garden. Never water your lawn after applying pesticides. Before using a pesticide outdoors, check the label or contact your EPA Regional Office or County Cooperative Extension Service to find out whether the pesticide is known or suspected to run off or seep into ground water. Ground water is the underground reservoir that supplies water to wells, springs, creeks, and the like. Excessive application of pesticides could cause the pesticide to run off or seep into water supplies and contaminate them. Excess spray may also leave harmful residues on your home-grown fruit and vegetables, and could affect other plants, wildlife, and fish.
- Never mix or apply a pesticide near a wellhead.
- If you have a well, be sure it extends downward to water sources that are below, and isolated from, surface water sources. Be sure the well shaft is tightly sealed. For further information, see EPA's brochure *Pesticides in Drinking Water Wells*. (See page 42 for information on how to order a copy from EPA's Public Information Center.)
- When using total release foggers to control pests, the most important precautions you can take are to use no more than the amount needed and to keep foggers away from ignition sources (ovens, stoves, air conditioners, space heaters, and water heaters, for example). Foggers should not be used in small, enclosed places such as closets and cabinets or under tables and counters.



Keep children and pets away from areas where you apply pesticides.

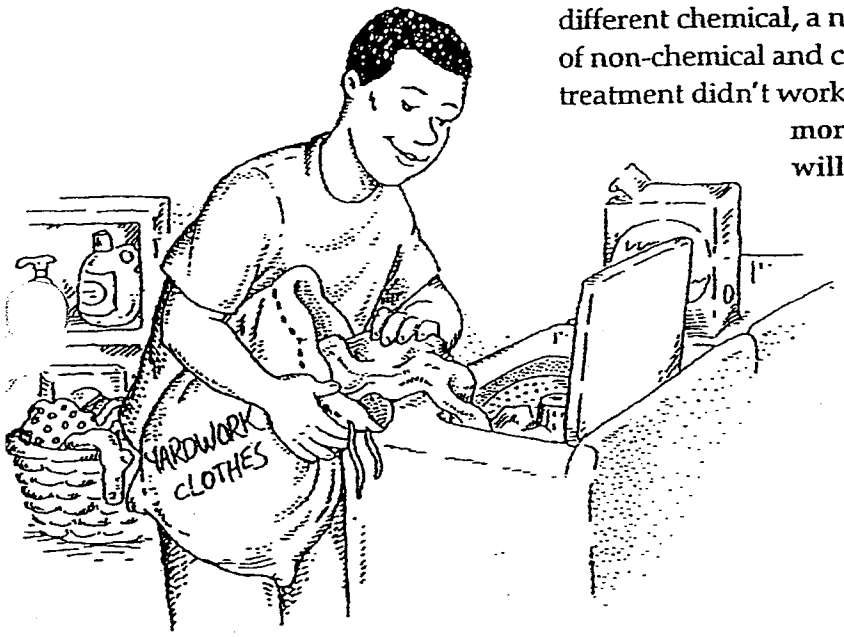
After Applying a Pesticide, Indoors or Outdoors

- To remove pesticide residues, use a bucket to rinse tools or equipment three times, including any containers or utensils that you used when mixing the pesticide. Then pour the rinsewater into the pesticide sprayer and reuse the solution by applying it according to the pesticide product label directions. (See pages 24–25 for safe disposal guidelines.)

- Always wash your hands after applying any pesticide. Wash any other parts of your body that may have come in contact with the pesticide. To prevent tracking pesticides inside, remove or rinse your boots or shoes before entering your home. Wash any clothes that have been exposed to a lot of pesticide separately from your regular wash.

- Evaluate the results of your pesticide use. Consider using a different chemical, a non-chemical method, or a combination of non-chemical and chemical methods if the chemical treatment didn't work. Again, **do not assume** that using more pesticide than the label recommends will do a better job. It won't.

- Watch for negative effects on wildlife (birds, butterflies, and bees) in and near treated areas. If you see any unusual behavior, stop using that pesticide, and contact EPA's Pesticide Incident Response Officer (see page 35).



Vash clothing worn when using pesticides eparately from other laundry.

Storing and Disposing of Pesticides Properly

Improper pesticide storage and disposal can be hazardous to human health and the environment. Follow these safety recommendations:

Safe Storage of Pesticides

- Don't stockpile. Reduce storage needs by buying only the amount of pesticide that you will need in the near future or during the current season when the pest is active.
- Follow all storage instructions on the pesticide label.
- Store pesticides high enough so that they are out of reach of children and pets. Keep all pesticides in a locked cabinet in a well-ventilated utility area or garden shed.
- Store flammable liquids outside your living area and far away from an ignition source such as a furnace, a car, an outdoor grill, or a power lawn mower.
- Never store pesticides in cabinets with or near food, animal feed, or medical supplies.
- Always store pesticides in their original containers, complete with labels that list ingredients, directions for use, and first aid steps in case of accidental poisoning.
- *Never* transfer pesticides to soft drink bottles or other containers. Children or others may mistake them for something to eat or drink.
- Use child-resistant packaging correctly—close the container tightly after using the product. Child resistant does not mean child proof, so you still must be extra careful to store properly—out of children's reach—those products that are sold in child-resistant packaging.
- Do not store pesticides in places where flooding is possible or in places where they might spill or leak into wells, drains, ground water, or surface water.
- If you can't identify the contents of the container, or if you can't tell how old the contents are, follow the advice on safe disposal in the next section.

Store pesticides in a locked cabinet out of reach of children and pets.

***Never* transfer pesticides to soft drink bottles or other containers that children or others may mistake for something to eat or drink.**

Safe Disposal of Pesticides

- The best way to dispose of small amounts of excess pesticides is to use them—apply them—according to the directions on the label. If you cannot use them, ask your neighbors whether they have a similar pest control problem and can use them.

- If all of the remaining pesticide cannot be properly used, check with your local solid waste management authority, environmental agency, or health department to find out whether your community has a household hazardous waste collection program or a similar program for getting rid of unwanted, leftover pesticides. These authorities can also inform you of any local requirements for pesticide waste disposal.

- State and local laws regarding pesticide disposal may be stricter than the Federal requirements on the label. Be sure to check with your state or local agencies before disposing of your pesticide containers.

Do not pour leftover pesticides down the sink, into the toilet, or down a sewer or street drain.

- If no community program or guidance exists, follow the label directions for disposal. In general, to dispose of less than a full container of a liquid pesticide, leave it in the original container with the cap tightly in place to prevent spills or leaks. Wrap the container in several layers of newspaper and tie it securely. Put the package in a covered trash can for routine collection with municipal trash. If you do not have a regular trash collection service, take the package to a permitted landfill (unless your town has other requirements).

  Note: No more than 1 gallon of liquid pesticide at a time should be thrown out with the regular trash in this manner.

- Wrap individual packages of dry pesticides in several layers of newspaper (or place the pesticides in a tight carton or bag), and tape or tie the package closed. Put the package in a covered trash can for routine collection.

  Note: No more than 5 pounds of dry pesticide at a time should be thrown out with the regular trash in this manner.

- Do **not** pour leftover pesticides down the sink, into the toilet, or down a sewer or street drain. Pesticides may interfere with the operation of wastewater treatment systems or pollute waterways. Many municipal systems are not equipped to remove all pesticide residues. If pesticides reach waterways, they may harm fish, plants, and other living things.

- An empty pesticide container can be as hazardous as a full one because of residues left inside. **Never reuse such a container.** When empty, a pesticide container should be rinsed carefully **three times** and the rinsewater thoroughly drained back into the sprayer or the container previously used to mix the pesticide. Use the rinsewater as a pesticide, following label directions. Replace the cap or closure securely. Dispose of the container according to label instructions. Do not puncture or burn a pressurized container like an aerosol—it could explode. Do cut or puncture other empty pesticide containers made of metal or plastic to prevent someone from reusing them. Wrap the empty container and put it in the trash after you have rinsed it.

- Many communities have programs to recycle household waste such as empty bottles and cans. Do not recycle any pesticide containers, however, unless the label specifically states that the empty container may be recycled after cleaning.

Follow the label directions for disposal.

Reducing Your Exposure When Others Use Pesticides

EVEN IF YOU NEVER USE PESTICIDES YOURSELF, you can still be exposed to them—at home, school, work, or play—by being in treated areas, as a consumer of commodities that others have treated with pesticides, or through food, water, and air that may have beencontaminated with pesticides.

This section describes sources of exposure other than your own use of pesticides. It also suggests ways to reduce your overall exposure. If you know or suspect that you, or others close to you, are sensitive to chemicals, consult an expert who can help you develop a strategy for handling your potential exposure problems.

Exposure Through Food

Commercial Food

To ensure a safe food supply, EPA regulates the safety of food by setting safety standards to limit the amount of pesticide residues that legally may remain in or on food or animal feed that is sold in the United States. Both domestic and imported foods are monitored by the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) to ensure compliance with these safety standards.

Because most crops are treated with pesticides at least some of the time, foods you buy at the grocery store may contain small traces of pesticide residues. Pesticide levels tend to decline over time because the residues break down and because crops are usually washed and processed before reaching the marketplace. So, while we all consume small amounts of pesticides regularly, levels in our food generally are well below legal limits by the time the food reaches the grocery shelves.

Although EPA sets safety standards for the amount of pesticide residues allowed both in and on foods, you can take extra precautions to reduce the traces of pesticide residues you and your family consume in the food you buy. Follow these suggestions:

- Trim the fat from meat and poultry because residues of some pesticides concentrate in fat. Remove the skin from fish.
- Discard the fats and oils in broths and pan drippings.

- Rinse fruits and vegetables thoroughly with water. Scrub them with a brush and peel them, if possible. Taking these safety steps will remove most of the existing surface residues, along with any remaining dirt. Note that surface cleaning (rinsing and scrubbing) will not remove pesticide residues that are absorbed into the growing fruit or vegetable before harvest.
- Cook or bake foods to reduce residues of some pesticides even further.

Rinse fruits and vegetables with water. Scrub them with a brush and peel them, if possible.

Home-Grown Food

Growing your own food can be an enjoyable activity. It is also a way to reduce your exposure to pesticide residues in food—especially if you decide not to use chemical pesticides on your produce and you choose a garden site where drift or runoff from a neighbor's use of pesticides will not result in unintended residues on your food. If your house is regularly treated for pest prevention, don't plant your garden where the treatments are applied.

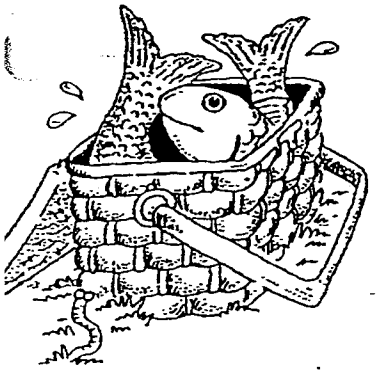
Food from the Wild

While it may seem that hunting your own game, catching your own fish, or gathering wild plant foods would reduce your overall exposure to pesticides, that isn't necessarily true. If you eat wild animals or plants from areas where pesticides are frequently used, this food may contain pesticide residues. In addition, birds such as ducks and geese may absorb pesticide residues if they have stopped to eat treated crops anywhere along their flight path.

If you eat food from the wild, you may want to take the following steps to reduce your exposure to pesticides:

- Do not fish in water bodies where contamination has occurred. Pay attention to posted signs that warn of contamination.
- Consult with fish and game officials or other appropriate officials where you plan to hunt or fish to determine whether there are any chemical problems associated with the area.
- Do not pick wild plants that are growing right next to a road, utility right-of-way, or hedgerow between farm fields. These areas may have been treated with pesticides.
- When preparing wild foods, trim fat from the meat. Discard the skin from fish.

Exposure Through Water



Do not fish in water bodies where contamination has occurred.

When pesticides are applied to land, a certain amount may run off into streams and rivers. This runoff, together with industrial waste, may result in low-level contamination of surface water. In certain settings—for example, when sandy soil lies over a ground-water source that is near the surface—pesticides can seep down through the soil to the ground water.

To ensure a safe supply of drinking water, EPA's Office of Water sets standards for pesticides and other chemicals that may be found in drinking water. Municipal water systems test their water periodically and provide treatment or alternate supply sources if residue problems occur. Generally, private wells are not tested unless the well owner requests an analysis. If you get your drinking water from a private well—

- Contact your state or local health department if you have any questions about pesticide or other chemical residues in your well water.
- If your well water is analyzed and found to contain pesticide residue levels above established or recommended health standards, use an alternate water source such as bottled water for drinking and cooking. The safest choice is distilled spring water in glass bottles. If you buy water from a local bottler, ask for the results of any recent pesticide analysis of the bottled water.

EPA sets standards for chemicals that may be found in drinking water.

Exposure Through Air

Outdoors

Air currents may carry pesticides that were applied on properties nearby. You can reduce your exposure outdoors to airborne pesticide residues, or drift, by following these recommendations:

- If a close neighbor or someone else is applying pesticides outdoors near your home, you may want to stay indoors with your children and pets. Keep windows and exterior doors closed.
- If you live near fields, parks, or other areas that receive regular pesticide treatment, consider planting a group of hardy, thick-branched trees or shrubs to help serve as a buffer zone and windbreak.

- Careless application can lead to drift or direct spraying of non-target sites. If your property is accidentally sprayed during an aerial pesticide application, you should call your local, state, or regional pesticide office. (See pages 44–48 in the Reference Section for phone numbers.) If you or someone in your family is accidentally sprayed, wash pesticide off immediately and change into clean clothes. Then call your local poison control center.

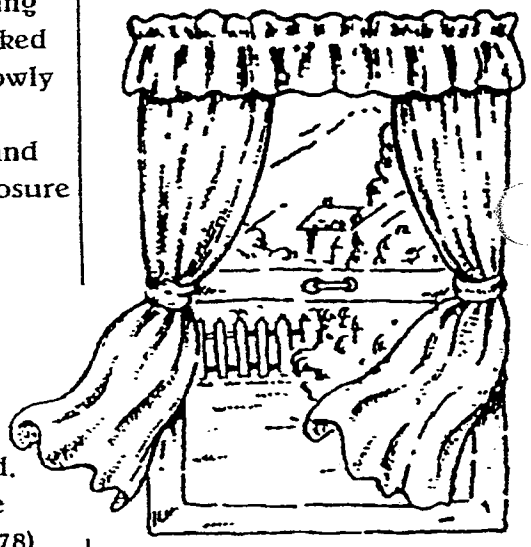
Some local governments require public notice before area-wide or broad-scale pesticide spraying activities take place. Affected residents are notified through newspaper announcements, fliers, letters, or signs posted in areas to be treated. Some communities have also enacted "right-to-know" ordinances that require public notice (usually through posting) of lawn treatments and other small-scale outdoor pesticide uses.

Indoors

The air you breathe may contain low levels of pesticide residues long after a pesticide has been applied to objects inside a building or to indoor surfaces and crawl spaces, or after it has been tracked in from outside. Pesticides break down and disappear more slowly indoors than outdoors. In addition, many homes have built-in energy efficiency features that reduce the exchange of indoor and outdoor air and thus aggravate the problem. To limit your exposure to indoor pesticide residues—

- Air out the building adequately after a pesticide is applied indoors. Open doors and windows, and run overhead, whole-house, or window fans to exchange indoor air for outdoor air rapidly and completely.

- If you suspect that the air in your building is contaminated, consult knowledgeable professionals in your local or state health department or EPA's pesticide hotline (1-800-858-7378, 6:30 a.m.– 4:30 p.m. Pacific time (9:30 a.m.–7:30 p.m. Eastern time) Monday–Friday, for advice on the apropriate steps to take.



Air out the building adequately after a pesticide is applied indoors.

Poisoned by Pesticides: Don't Let This Happen to Your Child!

A 5-year-old boy drinks from a bottle of bleach that he found under the bathroom sink.

A 3-year-old girl tries to spray her hair the way mommy does, but sprays an aerosol disinfectant in her eyes instead.

A baby who has just begun to crawl eats green pebbles from behind the sofa. They look like candy, but are really rat poison.

Where do you store your pesticides?

A 1992 nationwide study conducted by EPA revealed that almost half (approximately 47 percent) of surveyed households with children under the age of 5 had at least one pesticide stored within their reach.

These accidents could happen to your children or to children visiting your home if you don't store pesticides out of their reach or if you don't read the label carefully before using the pesticide product.

The dangers are real. In 1993 alone, an estimated 80,000 children were exposed to or poisoned by a household pesticide product that was used or stored incorrectly.

Whether or not you have young children in your home, take the following precautions to protect all children from unintentional pesticide poisonings or exposures:

- Always store pesticides out of children's reach, in a locked cabinet or garden shed. Installing child-proof safety latches or padlocks on cupboards and cabinets is a good idea. Safety latches are available at your local hardware store or building supply warehouse.
- Before applying pesticides—indoors or outdoors—remove children and their toys, along with any pets and their toys, from the area. Keep them away from the area that has been treated until the pesticide has dried and for at least the length of time recommended on the pesticide label.
- If you are interrupted while applying a pesticide—by a phone call, for example—be sure to close the pesticide container properly and put it out of reach of any child who may come into the area while you are gone.

- Never remove labels from containers, and never transfer pesticides to other containers. Children may mistake them for food or drink.
- Never put rodent or insect baits where small children can find them, pick them up, and put them in their mouths.
- Make sure you close any container marked "child resistant" very tightly after you use the product. Check periodically to make sure the product is securely closed. Child resistant does not mean child proof, so you should still be careful with products that are sold in child-resistant packaging.
- Make sure others—especially babysitters, grandparents, and other caregivers—know about the potential hazards of pesticides.
- Teach children that pesticides are poisons"—something they should never touch or eat.
- Keep the telephone number of younearest poison control center near each phone. Have the pesticide container handy when you call.
- Always keep Syrup of Ipecac on hand (in your medicine cabinet) to use to induce vomiting. (Be sure the date is current.) But do not give it to your child until a physician or poison control center advises you to do so. The pesticide label may not recommend using Syrup of Ipecac.

Store pesticides out of children's reach.

Handling a Pesticide Emergency

"Help! Someone's Been Poisoned!" What To Do in a Pesticide Emergency

If the person is unconscious, having trouble breathing, or having convulsions . . .
ACT FAST! Speed is crucial.

Give needed first aid immediately.

Call 911 or your local emergency service. If possible, have someone else call for emergency help while you give first aid.

If the person is awake or conscious, not having trouble breathing, and not having convulsions . . .

Read the label for first aid instructions.

Call a doctor, a poison control center, a local emergency service (911), or the National Pesticide Telecommunications Network (toll free at 1-800-858-7378).

Give first aid.

First Aid for Pesticide Poisoning

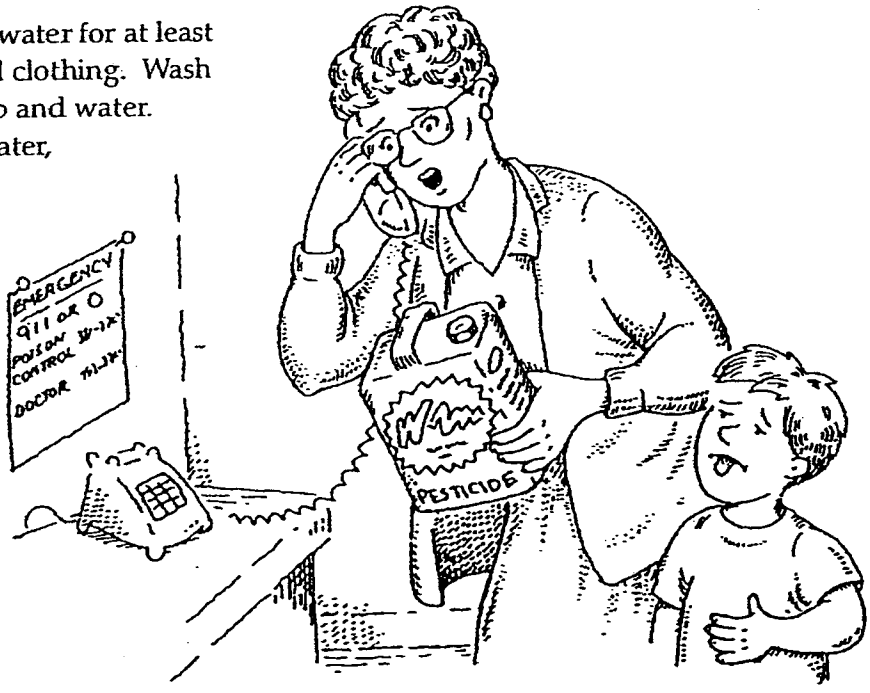
When you realize a pesticide poisoning has occurred or is occurring, try to determine what the victim was exposed to and what part of the body was affected before you take action—taking the right action is as important as taking immediate action. If the person is unconscious, having trouble breathing, or having convulsions, ACT FAST! Speed is crucial. Give needed first aid immediately. Call 911 or your local emergency service. If possible, have someone else call for emergency help while you give first aid. If the person is awake or conscious, not having trouble breathing, and not having convulsions, read the label for first aid instructions. Call a doctor, a poison control center, a local emergency service (911), or the National Pesticide Telecommunications Network (toll free at 1-800-858-7378). Give first aid.

Read the *Statement of Practical Treatment* section on the product label. The appropriate first aid treatment depends on the kind of poisoning that has occurred. Follow these general guidelines:

- **Swallowed poison.** A conscious victim should drink a small amount of water to dilute the pesticide. Always keep Syrup of Ipecac on hand (in your medicine cabinet) to use to induce vomiting. Be sure the date on the bottle is current. Induce vomiting only if a poison control center or physician advises you to do so, or if instructions on the pesticide label say so. If there is no label available to guide you, do not induce vomiting. Never induce vomiting if the victim is unconscious or is having convulsions.

- **Poison on skin.** Drench skin with water for at least 15 minutes. Remove contaminated clothing. Wash skin and hair thoroughly with soap and water. Dry victim and wrap in blanket. Later, discard contaminated clothing or thoroughly wash it separately from other laundry.

- **Chemical burn on skin.** Drench skin with water for at least 15 minutes. Remove contaminated clothing. Cover burned area immediately with loose, clean, soft cloth. Do not apply ointments, greases, powders, or other drugs. Later, discard contaminated clothing or thoroughly wash it separately from other laundry.



If a poisoning has occurred, call for help, and be ready to read information from the pesticide label.

- **Poison in eye.** Hold eyelid open and wash eye quickly and gently with clean cool running water from the tap or a hose for 15 minutes or more. Use only water; do not use eye drops, chemicals, or drugs in the eye. Eye membranes absorb pesticides faster than any other external part of the body, and eye damage can occur in a few minutes with some types of pesticides.

- **Inhaled poison.** If the victim is outside, move or carry the victim away from the area where pesticides were recently applied. If the victim is inside, carry or move the victim to fresh air immediately. If you think you need protection like a respirator before helping the victim, call the Fire Department and wait for emergency equipment before entering the area. Loosen the victim's tight clothing. If the victim's skin is blue or the victim has stopped breathing, give artificial respiration (if you know how) and call 911 for help. Open doors and windows so no one else will be poisoned by fumes.

What To Do After First Aid

- First aid may precede but should not replace professional medical treatment. After giving first aid, call 911 or your local emergency service immediately. Have the pesticide label at hand when you call.

- Take the pesticide product container with its label to the doctor's office or emergency room where the victim will be treated. Carry the container in your trunk or flatbed away from the passengers in your vehicle. The doctor needs to know what active ingredient is in the pesticide before prescribing treatment. This information is on the label, which sometimes also includes a telephone number to call for additional treatment information.

National Pesticide Telecommunications Network (NPTN)

Call Toll Free 1-800-858-7378

Another good resource in a pesticide emergency is NPTN, the National Pesticide Telecommunications Network, a toll-free telephone service that operates Monday through Friday, from 6:30 a.m.– 4:30 p.m. Pacific time (9:30 a.m.– 7:30 p.m. Eastern time). NPTN provides information on pesticides and how to recognize and respond to pesticide poisonings. If necessary, staff at NPTN can transfer your call directly to a local poison control center. Call NPTN toll free at 1-800-858-7378.

NPTN staff answer questions about animal poisonings, too. To keep your pets from being poisoned, follow label directions on flea and tick products carefully. If you are concerned about the chemicals used in these products, consult your veterinarian.

How To Recognize Pesticide Poisoning

External irritants that contact skin may cause skin damage such as redness, itching, or pimples. External irritants may also cause an allergic skin reaction that produces redness, swelling, or blistering. The mucous membranes of the eyes, nose, mouth, and throat are also quite sensitive to chemicals. Pesticide exposure may cause stinging and swelling in these membranes.

Internal injuries also may occur if a pesticide is swallowed, inhaled, or absorbed through the skin. Symptoms vary from organ to organ. Lung injury may result in shortness of breath, drooling (heavy salivation), or rapid breathing. Direct injury to the stomach and intestines may produce nausea, vomiting, abdominal cramps, or diarrhea. Injury to the nervous system may cause excessive fatigue, sleepiness, headache, muscle twitching, and numbness. In general, different types of pesticides produce different sets of symptoms.

If someone develops symptoms after working with pesticides, seek medical help immediately to determine if the symptoms are pesticide related. In certain cases, blood or urine should be collected for analysis, or other specific exposure tests can be made. It is better to be too cautious than too late.

Avoid potential health problems by minimizing your exposure to pesticides. Follow all the safety recommendations on pages 19–25.

EPA wants to know about any adverse effects associated with pesticide exposure. If you have such information, contact—

Pesticide Incident Response Officer
Office of Pesticide Programs (7506C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Choosing a Pest Control Company

IF YOU HAVE a pest control problem that you do not want to handle on your own, you may decide to turn to a professional applicator. How can you be sure that the pest control company you hire will do a good job? Before you choose a company, get answers to these questions:

1 **Is the company licensed?**
Most state or local agencies issue state pest control licenses. Make sure the pest control operator's licence is current if one is required in your state. Also, ask if the company's employees are bonded, meaning that the company reimburses you for any loss or damage caused by the employee.

You may want to contact your state pesticide agency to find out about its pesticide certification and training programs and to ask whether periodic recertification is required for pest control operators. (See pages 45–48 for addresses and phone numbers.)

In addition, possession of a city license—where they are issued—is one more assurance that the company you are dealing with is reputable and responsible.

2 **Is the company willing and able to discuss the treatment proposed for your home?**
Selecting a pest control service is just as important as selecting other professional services. Look for the same high degree of competence you would expect from a doctor or lawyer. Any company, including those advertising themselves as "green," should inspect your premises and outline a recommended control program, including the—

- Pests to be controlled.
- Extent of the problem.
- Active ingredient(s) in the pesticide chosen.
- Potential adverse health effects and typical symptoms of poisoning associated with the active ingredient.
- Form of the pesticide and application techniques.
- Non-chemical alternatives available.

- Special instructions to reduce your exposure to the pesticide (such as vacating the house, emptying the cupboards, and removing pets).
- Steps to take to minimize your pest problems in the future.

3 **Does the company have a good track record?** Don't rely on the company salesperson to answer this question. Research the answer yourself. Ask neighbors and friends if they have ever dealt with the company. Were they satisfied with the service they received? Call the Better Business Bureau or local consumer office and find out if they have received complaints about the company.

4 **Does the company have appropriate insurance? Can the salesperson show proof on paper that the company is insured?** Most contractors carry general liability insurance, including insurance for sudden and accidental pollution. Their insurance gives you a certain degree of protection should an accident occur while pesticides are being applied in your home. Contractors may also carry workmen's compensation insurance, which can help protect you should one of their employees be injured while working in or around your apartment or house. Although most states do not require pest control companies to buy insurance, you should think twice before hiring a company that is not insured.

5 **Does the company guarantee its work?** You should be skeptical about a company that does not guarantee its work. In addition, be sure to find out what you must do to keep your part of the bargain. For example, in the case of termite control treatments, the company's guarantee may become invalid if you make structural alterations to your home without giving prior notice to the pest control company.

6 **Is the company affiliated with a professional pest control association?** Professional associations—national, state, or local—keep members informed of new developments in pest control methods, safety, training, research, and regulations. Members agree to honor a code of ethics. The fact that a company, small or large, chooses to join a professional association signals its concern for quality.

Ask questions before choosing a pesticide company.

You and the company of your choice should develop the contract together. Your safety concerns should be noted and reflected in the choice of pesticides to be used. These concerns may include allergies, sensitivities, age of occupants (infants or elderly), resident pets, and treatment near wildlife and fish. Wise consumers get bids from two or three companies and look at value more than price. What appears to be a bargain may warrant a second look.

If you hire a pest control firm to do the job, ask the company to use the least toxic chemical method available that will do the job. Ask to see the label or Material Safety Data Sheet, which will show precautionary warnings.

Hiring a company to take care of your pest problem does not mean your job is over. You must evaluate the results. If you believe something has gone wrong with the pesticide application, contact the company and/or your state pesticide agency. Be a responsible, wise consumer and keep asking questions until your pests are under control.

Reference Section

Calculating the Correct Amount of Pesticide To Use for Your Target Area

To determine the size of your target area outdoors (usually a square or rectangular part of your lawn or garden), measure each side and multiply the length times the width. For example, if you want to apply a pesticide in an area that is 15 feet long and 15 feet wide, multiply 15 x 15 to get a total of 225 square feet.

When you read the label for pesticides commonly applied outdoors, you will see measurements in square feet or in square yards. A section of lawn that is 1 yard long x 1 yard wide has an area of 1 square yard. Because 1 yard = 3 feet, another way to calculate the same area is this: 3 feet long x 3 feet wide = 9 square feet = 1 square yard.

To know the size of your target area indoors, you may need to determine the volume of a room. You must calculate the volume of a room, for instance, before using a bug bomb (aerosol release) to control cockroaches or fleas. In a case like this, measure and multiply the room's length times width times height. For example, if the kitchen in your apartment is 6 feet long, 5 feet wide, and 8 feet high, its volume is 240 cubic feet (6 x 5 = 30 x 8 = 240).

Tables 1 to 3 (on pages 40–41) give examples for changing measurements you find on the pesticide label to match your specific target area and pest problem.

For most pesticide uses in and around the home, you need to know some common ways to measure volume and some common abbreviations:

1 gallon (gal.)	= 16 cups = 8 pints (pt.) = 4 quarts (qt.) = 128 fluid ounces (fl. oz.)
1 quart (qt.)	= 4 cups = 2 pt. = 32 fl. oz.
1 pint (pt.)	= 2 cups = 16 fl. oz.
1 cup	= 8 fl. oz.
1 tablespoon	= 3 teaspoons = ½ fl. oz.
1 teaspoon	= ⅙ fl. oz.
1 sq. yard	= 9 square feet = 3 ft. long x 3 ft. wide

Not all amounts are included in the tables. For amounts not included, use the following notes as a guide:

- To figure the amount of a ready-to-use pesticide (not to be diluted with water), you must change the quantity of pesticide in the same way that you change the area/volume/number of items treated to keep the correct proportion.

  For example—

  ½ lb. of pesticide per 1,000 sq.ft. = ¼ lb. of pesticide per 500 sq.ft.

- To figure the amount of a pesticide that is to be diluted with water, you must change the quantity of pesticide and the quantity of water in the same way that you change the area/volume/number of items treated to keep the correct proportion.

  For example—

  1 lb. of pesticide in 2 gals. of water per 2,000 sq.ft. = ½ lb. of pesticide in 1 gal. of water per 1,000 sq.ft.

TABLE 1 — Diluting Pesticides with Water

Unit stands for any measure of pesticide quantity. Read across.

Pesticide Label Says: Mix "x" Units of Pesticide . . .	*You mix . . .*		
8 units *per* 1 gal water	2 units *per* 1 qt water	*or*	1 unit *per* 1 pt water
16 units *per* 1 gal water	4 units *per* 1 qt water	*or*	2 units *per* 1 pt water
32 units *per* 1 gal water	8 units *per* 1 qt water	*or*	4 units *per* 1 pt water
128 units *per* 1 gal water	32 units *per* 1 qt water	*or*	16 units *per* 1 pt water

TABLE 2 — Measuring Pesticides for a Surface Application
Unit stands for any measure of pesticide quantity. Read across.

Pesticide Label Says: Apply "x" Units of Pesticide . . .		*Your surface measures . . .* 20,000 sq.ft.	10,000 sq.ft.	500 sq.ft.
1 unit per 1,000 sq.ft.	*Apply:*	20 units	10 units	½ unit
2 units per 1,000 sq.ft.		40 units	20 units	1 unit
5 units per 1,000 sq.ft.		100 units	50 units	2½ units
10 units per 1,000 sq.ft.		200 units	100 units	5 units

TABLE 3 — Buying Pesticides for a Room Application
Read across.

Pesticide Label Says: Release One Aerosol Can . . .		*Your room measures . . .* 20,000 cu.ft.	10,000 cu.ft.	5,000 cu.ft.
1 per 10,000 cu.ft.	*Use:*	2 cans	1 can	don't use
1 per 5,000 cu.ft.		4 cans	2 cans	1 can
1 per 2,500 cu.ft.		8 cans	4 cans	2 cans

You may need to measure quantities of pesticides that are too small to be measured accurately with common measuring tools available at home. In this case, you should—

- ✓ Search for another pesticide product or a less concentrated form of the same pesticide.
- ✓ Find a more accurate measuring device, such as a graduated cylinder or a scale that measures small weights.

For More Information

For additional copies of this booklet, or for more information on subjects discussed in this booklet, contact—

EPA's Public Information Center (PIC), 401 M Street, SW, Washington, DC 20460 (Telephone: 202-260-2080); or the National Center for Environmental Publications and Information (NCEPI), P.O. Box 42419, Cincinnati, OH 45242-2419 (Telephone: 513-489-8190 or Fax: 513-489-8695).

PIC and NCEPI have the following free information available:

- *Healthy Lawn, Healthy Environment* (EPA 700-K-92-005).
- *Pesticides in Drinking Water Wells* (EPA 20T-1004).
- *Pest Control in the School Environment: Adopting Integrated Pest Management* (EPA 735-F-93-012).
- *Pesticides and Child Safety* fact sheet (English and Spanish) (EPA 735-F-93-050 and EPA 735-F-93-051).
- *Using Insect Repellents Safely* fact sheet (English and Spanish).
- *Safety Precautions for Total Release Foggers* fact sheet.
- NCEPI also has EPA's *National Publications Catalog 1995* (EPA 703-B-95-001) and the *Catalog of Office of Pesticide Programs (OPP) Publications and Other Information Media* (EPA 730-B-94-001).

Other sources for information about pesticides and pest control include—

- The National Pesticide Telecommunications Network (NPTN)—1-800-858-7378 (general public), 6:30 a.m.–4:30 p.m. Pacific time (9:30 a.m.–7:30 p.m. Eastern time) Monday–Friday. NPTN provides the following information:
  - Pesticide information.
  - Information on recognizing and managing pesticide poisonings.
  - Safety information.
  - Health and environmental effects.
  - Referrals for investigation of pesticide incidents and emergency treatment information.
  - Cleanup and disposal procedures, and much more.

- County Cooperative Extension Service offices are usually listed in the telephone directory under county or state government; these offices often have a range of resources on lawn care and landscape maintenance, including plant selection, pest control, and soil testing.

- State agriculture and environmental agencies may publish information on pests, pest management strategies, and state pesticide regulations. (See state contacts on pages 45–48.)

- Libraries, bookstores, and garden centers usually have a wide selection of books that identify various pests and discuss lawn care. Garden centers may also have telephone hotlines or experts available on the premises to answer gardening questions.

- The California Department of Pesticide Regulation's Environmental Monitoring and Pest Management Branch publishes a booklet on mail order sources of biological control organisms. Single free copies of *Suppliers of Beneficial Organisms in North America* are available by writing the Department at 1020 N Street, Room 161, Sacramento, CA 95814-5624. Telephone: 916-324-4100.

- Bio-Integral Resource Center (BIRC), a non-profit organization formed in 1978 through an EPA grant, has information on least toxic methods for pest management. Write to P.O. Box 7414, Berkeley, CA 94707.

EPA Addresses

ıdquarters

U.S. Environmental Protection Agency
Office of Pesticide Programs (7506C)
401 M Street, SW
Washington, DC 20460

Telephone: (703) 305-5017
Fax: (703) 305-5558

EPA Regional Offices

U.S. EPA, Region 1
Air, Pesticides and Toxic Management Division
State Assistance Office (ASO)
1 Congress Street
Boston, MA 02203

Telephone: (617) 565-3932
Fax: (617) 565-4939

U.S. EPA, Region 2
Building 10 (MS-105)
Pesticides and Toxics Branch
2890 Woodbridge Avenue
ison, NJ 08837-3679

hone: (908) 321-6765
(908) 321-6788

U.S. EPA, Region 3
Toxics and Pesticides Branch (3AT-30)
841 Chestnut Building
Philadelphia, PA 19107

Telephone: (215) 597-8598
Fax: (215) 597-3156

U.S. EPA, Region 4
Pesticides and Toxics Branch
(4-APT-MD)
345 Courtland Street, NE
Atlanta, GA 30365

Telephone: (404) 347-5201
Fax: (404) 347-5056

U.S. EPA, Region 5
Pesticides and Toxics Branch (SP-14J)
77 West Jackson Boulevard
Chicago, IL 60604

Telephone: (312) 886-6006
Fax: (312) 353-4342

U.S. EPA, Region 6
Pesticides and Toxics Branch (6PD-P)
1445 Ross Avenue
Dallas, TX 75202-2733

Telephone: (214) 665-7240
Fax: (214) 665-7263

U.S. EPA, Region 7
Water, Wetlands and Pesticides Division
726 Minnesota Avenue
Kansas City, KS 66101

Telephone: (913) 551-7030
Fax: (913) 551-7065

U.S. EPA, Region 8
Air, Radiation and Toxics Division
(8ART)
One Denver Place, Suite 500
999 18th Street
Denver, CO 80202-2405

Telephone: (303) 293-1730
Fax: (303) 293-1229

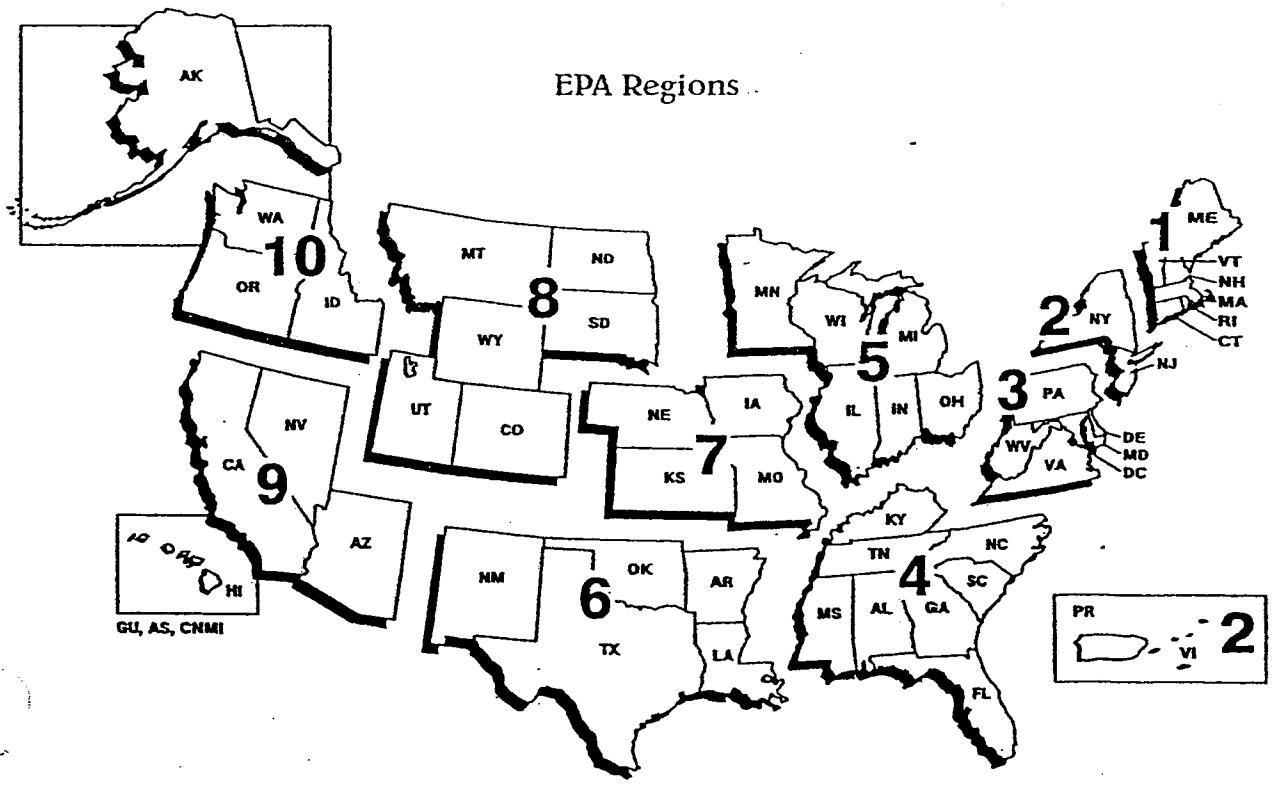
U.S. EPA, Region 9
Pesticides and Toxics Branch (A-4)
75 Hawthorne Street
San Francisco, CA 94105

Telephone: (415) 744-1090
Fax: (415) 744-1073

U.S. EPA, Region 10
Pesticides and Toxics Branch (AT-083)
1200 Sixth Avenue
Seattle, WA 98101

Telephone: (206) 553-1091
Fax: (206) 553-8338

EPA Regions



Addresses for State Pesticide Agencies

Region 1

Connecticut
Director
Pesticide Management Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106
(203) 424-3369

Maine
Director
Board of Pesticide Control
Maine Department of Agriculture
State House Station #28
Augusta, ME 04333
(207) 287-2731

Massachusetts
Chief
Pesticides Bureau
Massachusetts Department of Food and Agriculture
100 Cambridge Street, 21st Floor
Boston, MA 02202
(617) 727-3000

New Hampshire
Director
Division of Pesticide Control
New Hampshire Department of Agriculture, Markets and Food
P.O. Box 2042
Concord, NH 03302-2042
(603) 271-3550

Rhode Island
Chief
Division of Agriculture
Rhode Island Department of Environmental Management
22 Hayes Street
Providence, RI 02908
(401) 277-2782

Vermont
Director
Plant Industry, Laboratory and Standards Division
Vermont Department of Agriculture
116 State Street
Montpelier, VT 05602
(802) 828-2431

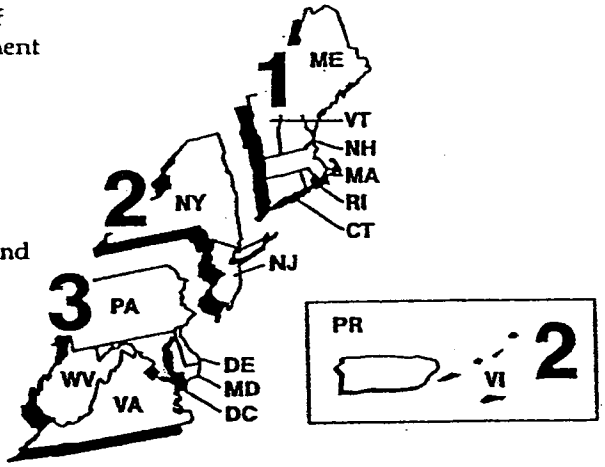
Region 2

New Jersey
Assistant Director
Pesticide Control Program
New Jersey Department of Environmental Protection
CN 411
Trenton, NJ 08625-0411
(609) 530-4011

New York
Chief
Bureau of Pesticides and Radiation
Division of Solid and Hazardous Materials Regulation
New York Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7254
(518) 457-7482

Puerto Rico
Director
Analysis and Registration of Agricultural Materials
Puerto Rico Department of Agriculture
Agrological Laboratory
P.O. Box 10163
Santurce, PR 00908
(809) 796-1735

Virgin Islands
Pesticide Program Director
8000 Nisky Center, Suite 231
Estate Nisky, Charlotte Amalie
St. Thomas, US VI 00802
(809) 774-3320, ext. 135



Region 3

Delaware
Deputy Secretary
Delaware Department of Agriculture
Division of Consumer Protection
2320 South DuPont Highway
Dover, DE 19901
(302) 739-4811

District of Columbia
Program Manager
Pesticide Hazardous Waste and Underground Storage Tank Division
Environmental Regulation Administration
Department of Consumer and Regulatory Affairs
2100 Martin Luther King, Jr. Avenue, SE, Room 203
Washington, DC 20020
(202) 645-6080

Maryland
Chief
Pesticide Regulation Section
Office of Plant Industries and Pest Management
Maryland Department of Agriculture
50 Harry S. Truman Parkway
Annapolis, MD 21401-7080
(410) 841-5710

Pennsylvania
Chief
Agronomic Services Division
Bureau of Plant Industry
Pennsylvania Department of Agriculture
2301 North Cameron Street
Harrisburg, PA 17110-9408
(717) 787-4843

Virginia
Program Manager
Office of Pesticide Services
Virginia Department of Agriculture and Consumer Service
P.O. Box 1163
Richmond, VA 23209
(804) 371-6558

West Virginia
Director
Pesticide Division
West Virginia Department of Agriculture
1900 Kanawha Boulevard, East
Charleston, WV 25305-0190
(304) 558-2209

Region 4

Alabama
Director
Division of Plant Protection and
Pesticide Management
Alabama Department of
Agriculture and Industries
P.O. Box 3336
Montgomery, AL 36109-0336
(334) 242-2656

Florida
Director
Division of Agricultural
Environmental Services
Department of Agriculture
and Consumer Services
3125 Conner Boulevard
Tallahassee, FL 32399-1650
(904) 488-3731

Georgia
Assistant Commissioner
Plant Industry Division
Georgia Department of Agriculture
19 Martin Luther King Drive, SW
Atlanta, GA 30334
(404) 656-4958

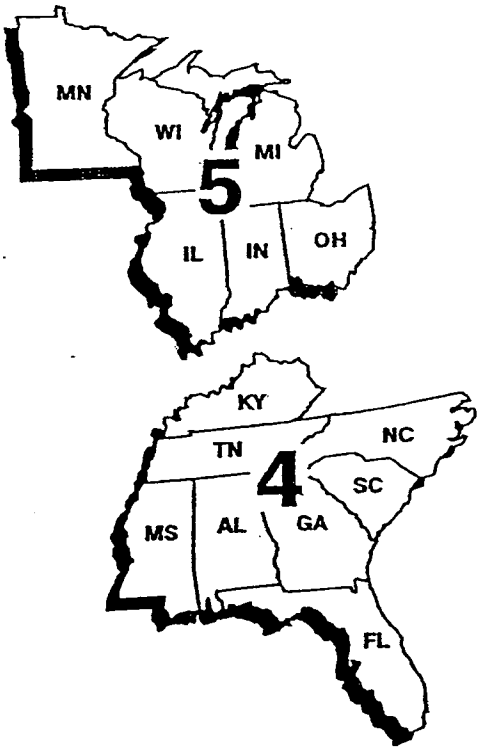
Kentucky
Director
Division of Pesticides
Kentucky Department
of Agriculture
100 Fair Oaks Lane
Frankfort, KY 40601
(502) 564-7274

Mississippi
Director
Bureau of Plant Industry
Mississippi Department of
Agriculture and Commerce
P.O. Box 5207
Mississippi State, MS 39762
(601) 325-3390

North Carolina
Assistant Pesticide Administrator
Food and Drug Protection Division
North Carolina Department of
Agriculture
P.O. Box 27647
Raleigh, NC 27611-0647
(919) 733-3556

South Carolina
Department Head
Department of Pesticide Regulation
257 Poole Agriculture Center
Clemson University
Clemson, SC 29634-0394
(803) 656-3171

Tennessee
Director
Plant Industries Division
Tennessee Department of Agriculture
P.O. Box 40627
Nashville, TN 37204
(615) 360-0130



Region 5

Illinois
Chief
Bureau of Environmental Programs
Illinois Department of Agriculture
P.O. Box 19281
Springfield, IL 62794-9281
(217) 785-2427

Indiana
Pesticide Administrator
Office of the Indiana State Chemist
1154 Biochemistry Building
Purdue University
West Lafayette, IN 47907-1154
(317) 494-1585

Michigan
Director
Pesticide and Plant
Management Division
Michigan Department of Agriculture
P.O. Box 30017
Lansing, MI 48909
(517) 373-1087

Minnesota
Director
Division of Agronomy Services
Minnesota Department of Agriculture
90 West Plato Boulevard
St. Paul, MN 55107
(612) 296-5639

Ohio
Specialist in Charge of
Pesticide Regulation
Division of Plant Industry
Ohio Department of Agriculture
8995 East Main Street
Reynoldsburg, OH 43068-3399
(614) 728-6987

Wisconsin
Administrator
Agricultural Resources
Management Division
Wisconsin Department of Agriculture
Trade and Consumer Protection
2811 Agriculture Drive
Madison, WI 53704
(608) 224-4546

Region 6

Arkansas
Director
Division of Feeds, Fertilizer and Pesticides
Arkansas State Plant Board
#1 Natural Resources Drive
Little Rock, AR 72205
(501) 225-1598

Louisiana
Director
Pesticide and Environmental Programs
Louisiana Department of Agriculture and Forestry
P.O. Box 3596
Baton Rouge, LA 70821-3596
(504) 925-3763

New Mexico
Chief
Bureau of Pesticide Management
Division of Agricultural and Environmental Services
New Mexico State Department of Agriculture
P.O. Box 3005, Department 3AQ
New Mexico State University
Las Cruces, NM 88003-0005
(505) 646-2133

Oklahoma
Director
Department of Environmental Quality
Plant Industry and Consumer Services
Oklahoma Department of Agriculture
2800 North Lincoln Boulevard
Oklahoma City, OK 73105-4298
(405) 271-1400

Texas
Assistant Commissioner for Pesticides
Texas Department of Agriculture
P.O. Box 12847
Austin, TX 78711
(512) 463-7624

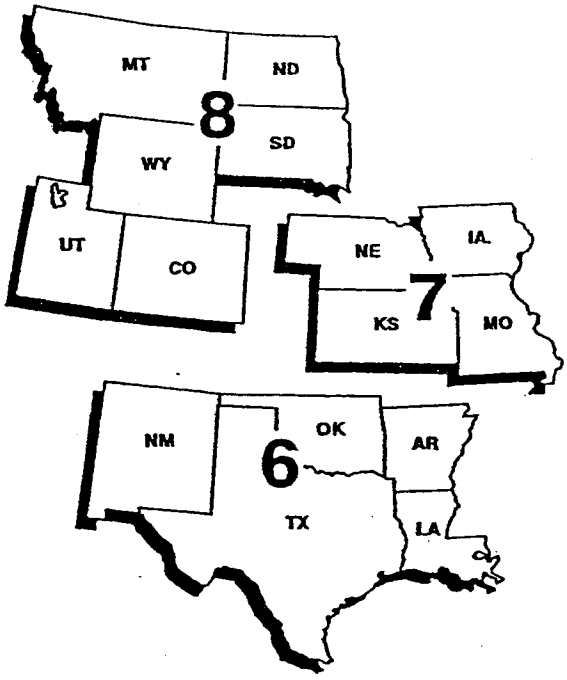
Region 7

Iowa
Chief
Pesticide Bureau
Iowa Department of Agriculture
Henry A. Wallace Building
East 9th Street and Grand Avenue
Des Moines, IA 50319
(515) 281-8591

Kansas
Director
Plant Health Division
Kansas Department of Agriculture
109 S.W. 9th Street
Topeka, KS 66612-1281
(913) 296-2263

Missouri
Director
Bureau of Pesticide Control
Missouri Department of Agriculture
P.O. Box 630
Jefferson City, MO 65102
(314) 751-2462

Nebraska
Director
Bureau of Plant Industry
Nebraska Department of Agriculture
301 Centennial Mall
P.O. Box 94756
Lincoln, NE 68509
(402) 471-2394



Region 8

Colorado
Director
Division of Plant Industry
Colorado Department of Agriculture
700 Kipling Street, Suite 4000
Lakewood, CO 80215-5894
(303) 239-4140

Montana
Administrator
Agricultural Sciences Division
Montana Department of Agriculture
P.O. Box 200201
Helena, MT 59620-0201
(406) 444-2944

North Dakota
Director
Pesticide Division
North Dakota Department of Agriculture
State Capitol, 600 East Boulevard, 6th Floor
Bismarck, ND 58505-0020
(701) 328-4756

South Dakota
Administrator
Office of Agronomy Services
Agricultural Services
South Dakota Department of Agriculture
Foss Building
523 E. Capitol
Pierre, SD 57501-3182
(605) 773-4432

Utah
Director
Division of Plant Industry
Utah Department of Agriculture
Box 146500
Salt Lake City, UT 84114-6500
(801) 538-7180

Wyoming
Director
Technical Services
Wyoming Department of Agriculture
2219 Carey Avenue
Cheyenne, WY 82002-0100
(307) 777-6590

State Pesticide Agencies (cont'd)

Region 9

Arizona
Director
Environmental Services Division
Arizona Department of Agriculture
1688 West Adams
Phoenix, AZ 85007
(602) 542-3578

California
Director
California Department of
Pesticide Regulation
1020 N Street, Room 100
Sacramento, CA 95814-5624
(916) 445-4300

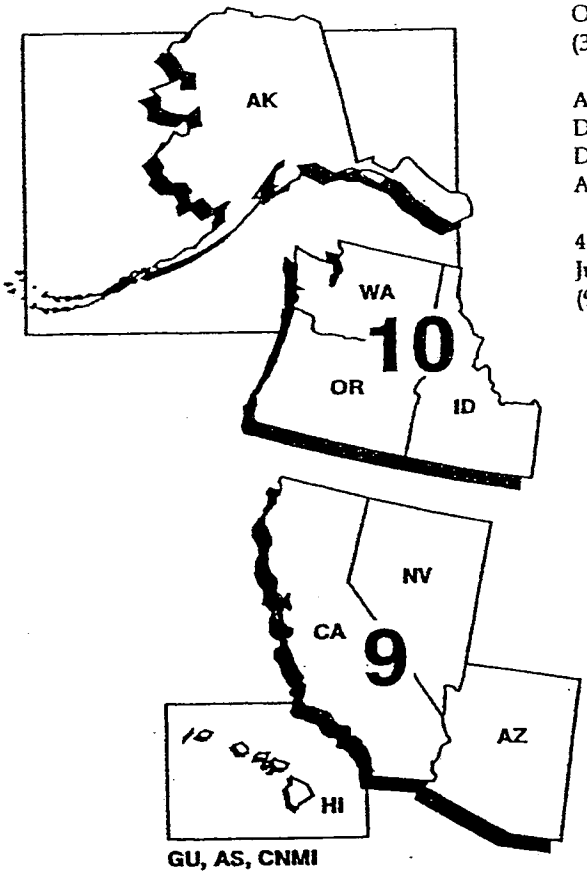
Hawaii
Administrator
Pesticide Programs
Hawaii Department of Agriculture
P.O. Box 22159
Honolulu, HI 96823-2159
(808) 973-9401

Nevada
[illegible]tor
[illegible]u of Plant Industry
[illegible]da Division of
Agriculture
350 Capitol Hill Avenue
Reno, NV 89520
(702) 688-1180

Guam
Pesticide Program Director
Guam Environmental
Protection Agency
P.O. Box 22439-GMF
Barrigada, GU 96921
(671) 472-8863

American Samoa EPA
Office of the Governor
American Samoa Government
P.O. Box 2609
Pago Pago, American Samoa 97699
(684) 633-2304

Commonwealth of the Northern Mariana Islands
Department of Public Works
Division of Environmental Quality
Commonwealth of the Northern
Mariana Islands (CNMI)
P.O. Box 1304
Saipan, Mariana Islands 96950
(670) 234-6984



Region 10

Idaho
Administrator
Division of Agricultural Technology
Idaho Department of Agriculture
P.O. Box 790
Boise, ID 83701-0790
(208) 334-3550

Oregon
Administrator
Plant Division
Oregon Department of Agriculture
635 Capitol Street, NE
Salem, OR 97310-0110
(503) 986-4635

Washington
Assistant Director
Pesticide Management Division
Washington State Department
of Agriculture
P.O. Box 42560
Olympia, WA 98504-2560
(360) 902-2010

Alaska
Director
Division of Environmental Health
Alaska Department of
Environmental Conservation
410 Willoughby Avenue, Room 107
Juneau, AK 99801-1795
(907) 465-5280

Index

"Help! Someone's Been Poisoned!"
What To Do in a Pesticide Emergency

If the person is unconscious, having trouble breathing, or having convulsions . . .
ACT FAST! Speed is crucial.

Give needed first aid immediately.

Call 911 or your local emergency service. If possible, have someone else call for emergency help while you give first aid.

If the person is awake or conscious, not having trouble breathing, and not having convulsions . . .

Read the label for first aid instructions.

Call a doctor, a poison control center, a local emergency service (911), or the National Pesticide Telecommunications Network (toll free at 1-800-858-7378).

Give first aid.

6/15/92

MODEL

WATER EFFICIENT

LANDSCAPE

ORDINANCE

STATE OF CALIFORNIA

TEXT OF PROPOSED REGULATIONS

In Division 2, Title 23, California Code of Regulations, add Chapter 2.7, Sections 490 through 495, inclusive to read as follows:

Chapter 2.7. Model Water Efficient Landscape Ordinance.

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490. Purpose.

(a) The State Legislature has found:

(1) that the limited supply of state waters are subject to ever increasing demands;

(2) that California's economic prosperity depends on adequate supplies of water;

(3) that state policy promotes conservation and efficient use of water;

(4) that landscapes provide recreation areas, clean the air and water, prevent erosion, offer fire protection, and replace ecosystems displaced by development; and

(5) that landscape design, installation, and maintenance can and should be water efficient.

(b) Consistent with the legislative findings, the purpose of this model ordinance is to:

(1) promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;

(2) establish a structure for designing, installing, and maintaining water efficient landscapes in new projects; and

(3) establish provisions for water management practices and water waste prevention for established landscapes.

Note: Authority cited: Sections 65591.5, 65594, Gov. Code. Reference: Sections 65591, 65591.5, 65597, Gov. Code.

491. Definitions.

The words used in this ordinance have the meaning set forth below.

(a) "anti-drain valve" or "check valve" means a valve located under a sprinkler head to hold water in the system so it minimizes drainage from the lower elevation sprinkler heads.

(b) "application rate" means the depth of water applied to a given area, usually measured in inches per hour.

(c) "applied water" means the portion of water supplied by the irrigation system to the landscape.

(d) "automatic controller" means a mechanical or solid state timer, capable of operating valve stations to set the days and length of time of a water application.

(e) "backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

(f) "conversion factor (0.62)" means a number that converts the maximum applied water allowance from acre-inches per acre per year to gallons per square foot per year. The conversion factor is calculated as follows:

(325,851 gallons/ 43,560 square feet)/12 inches = (0.62)
325,851 gallons = one acre foot
43,560 square feet = one acre
12 inches = one foot

To convert gallons per year to 100-cubic-feet per year, another common billing unit for water, divide gallons per year by 748. (748 gallons = 100 cubic feet.)

(g) "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

(h) "effective precipitation" or "usable rainfall" means the portion of total precipitation that is used by the plants. Precipitation is not a reliable source of water, but can contribute to some degree toward the water needs of the landscape.

(i) "emitter" means drip irrigation fittings that deliver water slowly from the system to the soil.

(j) "established landscape" means the point at which plants in the landscape have developed roots into the soil adjacent to the root ball.

(k) "establishment period" means the first year after installing the plant in the landscape.

(l) "Estimated Applied Water Use" means the portion of the Estimated Total Water Use that is derived from applied water. The Estimated Applied Water Use shall not exceed the Maximum Applied Water Allowance. The Estimated Applied Water Use may be the sum of the water recommended through the irrigation schedule, as referenced in Section 492 (c) (3).

(m) "Estimated Total Water Use" means the annual total amount of water estimated to be needed to keep the plants in the landscaped area healthy. It is based upon such factors as the local evapotranspiration rate, the size of the landscaped area, the types of plants, and the efficiency of the irrigation system, as described in Section 492 (c) (4).

(n) "ET adjustment factor" means a factor of 0.8, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape.

A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. The irrigation efficiency for purposes of the ET Adjustment Factor is 0.625.

Therefore, the ET Adjustment Factor (0.8) = (0.5/0.625).

(o) "evapotranspiration" means the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time.

(p) "flow rate" means the rate at which water flows through pipes and valves (gallons per minute or cubic feet per second).

(q) "hydrozone" means a portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated. For example, a naturalized area planted with native vegetation that will not need supplemental irrigation once established is a non-irrigated hydrozone.

(r) "infiltration rate" means the rate of water entry into the soil expressed as a depth of water per unit of time (inches per hour).

(s) "irrigation efficiency" means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum irrigation efficiency for purposes of this ordinance is 0.625. Greater irrigation efficiency can be expected from well designed and maintained systems.

(t) "landscape irrigation audit" means a process to perform site inspections, evaluate irrigation systems, and develop efficient irrigation schedules.

(u) "landscaped area" means the entire parcel less the building footprint, driveways, non-irrigated portions of parking lots, hardscapes- such as decks and patios, and other non-porous areas. Water features are included in the calculation of the landscaped area. Areas dedicated to edible plants, such as orchards or vegetable gardens are not included.

(v) "lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

(w) "main line" means the pressurized pipeline that delivers water from the water source to the valve or outlet.

(x) "Maximum Applied Water Allowance" means, for design purposes, the upper limit of annual applied water for the established landscaped area as specified in Section 492 (c) (2). It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscaped area. The Estimated Applied Water Use shall not exceed the Maximum Applied Water Allowance.

(y) "mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

(z) "mulch" means any material such as leaves, bark, straw or other materials left loose and applied to the soil surface for the beneficial purpose of reducing evaporation .

(aa) "operating pressure" means the pressure at which a system of sprinklers is designed to operate, usually indicated at the base of a sprinkler.

(bb) "overhead sprinkler irrigation systems" means those with high flow rates (pop-ups, impulse sprinklers, rotors, etc.)

(cc) "overspray" means the water which is delivered beyond the landscaped area, wetting pavements, walks, structures, or other non-landscaped areas.

(dd) "plant factor" means a factor that when multiplied by reference evapotranspiration, estimates the amount of water used by plants. For purposes of this ordinance, the average plant factor of low water using plants ranges from .0 to 0.3, for average water using plants the range is 0.4 to 0.6, and for high water using plants the range is 0.7 to 1.0.

(ee) "rain sensing device" means a system which automatically shuts off the irrigation system when it rains.

(ff) "record drawing" or "as-builts" means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

(gg) "recreational area" means areas of active play or recreation such as sports fields, school yards, picnic grounds, or other areas with intense foot traffic.

(hh) "recycled water," "reclaimed water," or "treated sewage effluent water" means treated or recycled waste water of a quality suitable for nonpotable uses such as landscape irrigation; not intended for human consumption.

(ii) "reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants. ETo is given in inches per day, month, or year as represented in Section 495, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated.

(jj) "rehabilitated landscape" means any relandscaping project that requires a permit.

(kk) "run off" means water which is not absorbed by the soil or landscape to which it is applied and flows from the area. For example, run off may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a severe slope.

(ll) "soil moisture sensing device" means a device that measures the amount of water in the soil.

(mm) "soil texture" means the classification of soil based on the percentage of sand, silt, and clay in the soil.

(nn) "sprinkler head" means a device which sprays water through a nozzle.

(oo) "static water pressure" means the pipeline or municipal water supply pressure when water is not flowing.

(pp) "station" means an area served by one valve or by a set of valves that operate simultaneously.

(qq) "turf" means a surface layer of earth containing mowed grass with its roots. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

(rr) "valve" means a device used to control the flow of water in the irrigation system.

(ss) "water conservation concept statement" means a one-page checklist and a narrative summary of the project as shown in Section 492 (c) (1).

Note: Section 65594, Gov. Code. Reference: Section 65597, Gov. Code.

492. Provisions for New or Rehabilitated Landscapes

(a) Applicability

(1) Except as provided in Section 492 (a) (3), this section shall apply to:

(A) all new and rehabilitated landscaping for public agency projects and private development projects that require a permit; and

(B) developer-installed landscaping in single-family and multi-family projects.

(2) Projects subject to this section shall conform to the provisions in Section 492.

(3) This section shall not apply to:

(A) homeowner-provided landscaping at single-family and multi-family projects;

(B) cemeteries;

(C) registered historical sites;

(D) ecological restoration projects that do not require a permanent irrigation system;

(E) mined-land reclamation projects that do not require a permanent irrigation system; or

(F) any project with a landscaped area less than 2,500 square feet.

(b) Landscape Documentation Package

(1) A copy of the landscape documentation package conforming to this chapter shall be submitted to the city or county. No permit shall be issued until the city or county reviews and approves the landscape documentation package.

(2) A copy of the approved landscape documentation package shall be provided to the property owner or site manager along with the record drawings and any other information normally forwarded to the property owner or site manager.

(3) A copy of the Water Conservation Concept Statement and the Certificate of Substantial Completion shall be sent by the project manager to the local retail water purveyor.

(4) Each landscape documentation package shall include the following elements, which are described in Section 492 (c):

(A) Water Conservation Concept Statement
(B) Calculation of the Maximum Applied Water Allowance
(C) Calculation of the Estimated Applied Water Use
(D) Calculation of the Estimated Total Water Use
(E) Landscape Design Plan
(F) Irrigation Design Plan
(G) Irrigation Schedules
(H) Maintenance Schedule
(I) Landscape Irrigation Audit Schedule
(J) Grading Design Plan
(K) Soil Analysis
(L) Certificate of Substantial Completion. (To be submitted after installation of the project.)

(5) If effective precipitation is included in the calculation of the Estimated Total Water Use, then an Effective Precipitation Disclosure Statement from the landscape professional and the property owner shall be submitted with the Landscape Documentation Package.

(c) Elements of Landscape Documentation Package

(1) Water Conservation Concept Statement

Each landscape documentation package shall include a cover sheet, referred to as the Water Conservation Concept Statement similar to the following example. It serves as a check list to verify that the elements of the landscape documentation package have been completed and has a narrative summary of the project.

Sample Water Conservation Concept Statement

Project Site: Project Number:
Project Location:
Landscape Architect/ Irrigation Designer/ Contractor:

Included in this project submittal package are:
(Check to indicate completion)

___ 1. **Maximum Applied Water Allowance:**
_____**gallons or cubic feet/year**

___ 2. **Estimated Applied Water Use:**
_____**gallons or cubic feet/year**

___ 2.(a) **Estimated Amount of Water Expected from Effective Precipitation:** _____**gallons or cubic feet/year**

___ 3. **Estimated Total Water Use:**
_____**gallons or cubic feet/year**

Note: If the design assumes that a part of the Estimated Total Water Use will be provided by precipitation, the Effective Precipitation Disclosure Statement in Section 494 shall be completed and submitted.

___ 4. **Landscape Design Plan**
___ 5. **Irrigation Design Plan**
___ 6. **Irrigation Schedules**
___ 7. **Maintenance Schedule**
___ 8. **Landscape Irrigation Audit Schedule**
___ 9. **Grading Design Plan**
___10. **Soil Analysis**

(Sample Water Conservation Concept Statement, continued)

Description of Project
(Briefly describe the planning and design actions that are intended to achieve conservation and efficiency in water use.)

Date:_____ Prepared By:_____

(2) The Maximum Applied Water Allowance

(A) A project's Maximum Applied Water Allowance shall be calculated using the following formula:

MAWA = (ETo) (0.8) (LA) (0.62) where:

MAWA	= Maximum Applied Water Allowance (gallons per year)
ETo	= Reference Evapotranspiration (inches per year)
0.8	= ET Adjustment Factor
LA	= Landscaped Area (square feet)
0.62	= conversion factor (to gallons per square foot)

(B) Two example calculations of the Maximum Applied Water Allowance are:

(i) PROJECT SITE ONE: Landscaped area of 50,000 sq. ft. in Fresno

MAWA = (ETo) (.8) (LA) (.62)
= (51 inches) (.8) (50,000 square feet) (.62)
Maximum Applied Water Allowance = 1,264,800 gallons per year
(or 1,691 hundred-cubic-feet per year: 1,264,800/748=1,691)

(ii) PROJECT SITE TWO: Landscaped area of 50,000 sq. ft. in San Francisco

MAWA = (ETo) (.8) (LA) (.62)
= (35 inches) (.8) (50,000 square feet) (.62)
Maximum Applied Water Allowance = 868,000 gallons per year
(or 1,160 hundred-cubic-feet per year)

(C) Portions of landscaped areas in public and private projects such as parks, playgrounds, sports fields, golf courses, or school yards where turf provides a playing surface or serves other recreational purposes are considered recreational areas and may require water in addition to the Maximum Applied Water Allowance. A statement shall be included with the landscape design plan, designating recreational areas to be used for such purposes and specifying any needed amount of additional water above the Maximum Applied Water Allowance.

(3) Estimated Applied Water Use

(A) The Estimated Applied Water Use shall not exceed the Maximum Applied Water Allowance.

(B) A calculation of the Estimated Applied Water Use shall be submitted with the Landscape Documentation Package. It may be calculated by summing the amount of water recommended in the irrigation schedule.

(4) Estimated Total Water Use

(A) A calculation of the Estimated Total Water Use shall be submitted with the Landscape Documentation Package. The Estimated Total Water Use may be calculated by summing the amount of water recommended in the irrigation schedule and adding any amount of water expected from effective precipitation (not to exceed 25 percent of the local annual mean precipitation) or may be calculated from a formula such as the following:

The Estimated Total Water Use for the entire landscaped area equals the sum of the Estimated Water Use of all hydrozones in that landscaped area.

$$EWU\ (hydrozone) = \frac{(ETo)\ (PF)\ (HA)\ (.62)}{(IE)}$$

EWU (hydrozone) = Estimated Water Use (gallons per year)
ETo = Reference Evapotranspiration (inches per year)
PF = plant factor
HA = hydrozone area (square feet)
(.62) = conversion factor
IE = irrigation efficiency

(B) If the Estimated Total Water Use is greater than the Estimated Applied Water Use due to precipitation being included as a source of water, an Effective Precipitation Disclosure Statement such as the one in Section 494 shall be included in the Landscape Documentation Package.

(5) Landscape Design Plan

A landscape design plan meeting the following requirements shall be submitted as part of the landscape documentation package.

(A) Plant Selection and Grouping

(i) Any plants may be used in the landscape, providing the Estimated Applied Water Use recommended does not exceed the Maximum Applied Water Allowance and that the plants meet the specifications set forth in (ii), (iii) and (iv).

(ii) Plants having similar water use shall be grouped together in distinct hydrozones.

(iii) Plants shall be selected appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the site. Protection and preservation of native species and natural areas is encouraged. The planting of trees is encouraged wherever it is consistent with the other provisions of this ordinance.

(iv) Fire prevention needs shall be addressed in areas that are fire prone. Information about fire prone areas and appropriate landscaping for fire safety is available from local fire departments or the California Department of Forestry.

(B) Water Features

(i) Recirculating water shall be used for decorative water features.

(ii) Pool and spa covers are encouraged.

(C) Landscape Design Plan Specifications

The landscape design plan shall be drawn on project base sheets at a scale that accurately and clearly identifies:

(i) Designation of hydrozones.

(ii) Landscape materials, trees, shrubs, groundcover, turf, and other vegetation. Planting symbols shall be clearly drawn and plants labeled by botanical name, common name, container size, spacing, and quantities of each group of plants indicated.

(iii) Property lines and street names.

(iv) Streets, driveways, walkways, and other paved areas.

(v) Pools, ponds, water features, fences, and retaining walls.

(vi) Existing and proposed buildings and structures including elevation if applicable.

(vii) Natural features including but not limited to rock outcroppings, existing trees, shrubs that will remain.

(viii) Tree staking, plant installation, soil preparation details, and any other applicable planting and installation details.

(ix) A calculation of the total landscaped area.

(x) Designation of recreational areas.

(6) Irrigation Design Plan

An irrigation design plan meeting the following conditions shall be submitted as part of the Landscape Documentation Package.

(C) Irrigation Design Plan Specifications

Irrigation systems shall be designed to be consistent with hydrozones.

The irrigation design plan shall be drawn on project base sheets. It shall be separate from, but use the same format as, the landscape design plan. The scale shall be the same as that used for the landscape design plan described in Section 492 (c) (5) (C).

The irrigation design plan shall accurately and clearly identify:

(i) Location and size of separate water meters for the landscape.

(ii) Location, type, and size of all components of the irrigation system, including automatic controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, and backflow prevention devices.

(iii) Static water pressure at the point of connection to the public water supply.

(iv) Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (psi) for each station.

(v) Recycled water irrigation systems as specified in the Section 492 (c) (4) (B).

(7) Irrigation Schedules

Irrigation schedules satisfying the following conditions shall be submitted as part of the Landscape Documentation Package.

(A) An annual irrigation program with monthly irrigation schedules shall be required for the plant establishment period, for the established landscape, and for any temporarily irrigated areas.

(B) The irrigation schedule shall:

(i) include run time (in minutes per cycle), suggested number of cycles per day, and frequency of irrigation for each station; and

(ii) provide the amount of applied water (in hundred cubic feet, gallons, or in whatever billing units the local water supplier uses) recommended on a monthly and annual basis.

(C) The total amount of water for the project shall include water designated in the Estimated Total Water Use calculation plus water needed for any water features, which shall be considered as a high water using hydrozone.

(D) Recreational areas designated in the landscape design plan shall be highlighted and the irrigation schedule shall indicate if any additional water is needed above the Maximum Applied Water Allowance because of high plant factors (but not due to irrigation inefficiency.)

(E) Whenever possible, irrigation scheduling shall incorporate the use of evapotranspiration data such as those from the California Irrigation Management Information System (CIMIS) weather stations to apply the appropriate levels of water for different climates.

(F) Whenever possible, landscape irrigation shall be scheduled between 2:00 a.m. and 10:00 a.m. to avoid irrigating during times of high wind or high temperature.

(A) Irrigation Design Criteria

(i) Runoff and Overspray. Soil types and infiltration rate shall be considered when designing irrigation systems. All irrigation systems shall be designed to avoid runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Proper irrigation equipment and schedules, including features such as repeat cycles, shall be used to closely match application rates to infiltration rates therefore minimizing runoff.

Special attention shall be given to avoid runoff on slopes and to avoid overspray in planting areas with a width less than ten feet, and in median strips.

No overhead sprinkler irrigation systems shall be installed in median strips less than ten feet wide.

(ii) Irrigation Efficiency. For the purpose of determining the maximum applied water allowance, irrigation efficiency is assumed to be 0.625. Irrigation systems shall be designed, maintained, and managed to meet or exceed 0.625 efficiency.

(iii) Equipment.

Water meters. Separate landscape water meters shall be installed for all projects except for single family homes or any project with a landscaped area of less than 5,000 square feet.

Controllers. Automatic control systems shall be required for all irrigation systems and must be able to accommodate all aspects of the design.

Valves. Plants which require different amounts of water shall be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use shall be used in that area. Anti-drain (check) valves shall be installed in strategic points to minimize or prevent low-head drainage.

Sprinkler heads. Heads and emitters shall have consistent application rates within each control valve circuit. Sprinkler heads shall be selected for proper area coverage, application rate, operating pressure, adjustment capability, and ease of maintenance.

Rain Sensing Override Devices. Rain sensing override devices shall be required on all irrigation systems.

Soil Moisture Sensing Devices. It is recommended that soil moisture sensing devices be considered where appropriate.

(B) Recycled Water

(i) The installation of recycled water irrigation systems (dual distribution systems) shall be required to allow for the current and future use of recycled water, unless a written exemption has been granted as described in the following section (B) (ii).

(ii) Irrigation systems shall make use of recycled water unless a written exemption has been granted by the local water agency, stating that recycled water meeting all health standards is not available and will not be available in the foreseeable future.

(iii) The recycled water irrigation systems shall be designed and operated in accordance with all local and state codes.

(8) Maintenance Schedules

A regular maintenance schedule satisfying the following conditions shall be submitted as part of the Landscape Documentation Package:

(A) Landscapes shall be maintained to ensure water efficiency. A regular maintenance schedule shall include but not be limited to checking, adjusting, and repairing irrigation equipment; resetting the automatic controller; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning, and weeding in all landscaped areas.

(B) Whenever possible, repair of irrigation equipment shall be done with the originally specified materials or their equivalents.

(9) Landscape Irrigation Audit Schedules

A schedule of landscape irrigation audits, for all but single family residences, satisfying the following conditions shall be submitted to the city or county as part of the Landscape Documentation Package.

(A) At a minimum, audits shall be in accordance with the State of California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook, the entire document, which is hereby incorporated by reference. (See Landscape Irrigation Auditor Handbook (June 1990) version 5.5 [formerly Master Auditor Training].)

(B) The schedule shall provide for landscape irrigation audits to be conducted by certified landscape irrigation auditors at least once every five years.

(10) Grading Design Plan

Grading design plans satisfying the following conditions shall be submitted as part of the Landscape Documentation Package:

(A) A grading design plan shall be drawn on project base sheets. It shall be separate from but use the same format as the landscape design plan.

(B) The grading design plan shall indicate finished configurations and elevations of the landscaped area, including the height of graded slopes, drainage patterns, pad elevations, and finish grade.

(11) Soils

(A) A soil analysis satisfying the following conditions shall be submitted as part of the Landscape Documentation Package.

(i) Determination of soil texture, indicating the percentage of organic matter.

(ii) An approximate soil infiltration rate (either measured or derived from soil texture/infiltration rate tables.) A range of infiltration rates shall be noted where appropriate.

(iii) Measure of pH, and total soluble salts.

(B) A mulch of at least three inches shall be applied to all planting areas except turf.

(12) Certification

(A) Upon completing the installation of the landscaping and the irrigation system, an irrigation audit shall be conducted by a certified landscape irrigation auditor prior to the final field observation. (See Landscape Irrigation Auditor Handbook as referenced in Section 492 (c)(9)(A)).

(B) A licensed landscape architect or contractor, certified irrigation designer, or other licensed or certified professional in a related field shall conduct a final field observation and shall provide a certificate of substantial completion to the city or county. The certificate shall specifically indicate that plants were installed as specified, that the irrigation system was installed as designed, and that an irrigation audit has been performed, along with a list of any observed deficiencies.

(C) Certification shall be accomplished by completing a Certificate of Substantial Completion and delivering it to the city or county, to the retail water supplier, and to the Owner of Record. A sample of such a form, which shall be provided by the city or county is:

SAMPLE CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Site:_____ Project Number:_____
Project Location:_____

Preliminary Project Documentation Submitted: (check indicating submittal)

___ 1. **Maximum Applied Water Allowance:**
_____ **(gallons or cubic feet per year)**

___ 2. **Estimated Applied Water Use:**
_____ **(gallons or cubic feet/year)**

• __ 2a. **Estimated Amount of Water Expected from Effective Precipitation:**_____ **(gallons or cubic feet/year)**

____ 3. **Estimated Total Water Use:**
_____ **(gallons or cubic feet/year)**

Note: • If the design assumes that a part of the Estimated Total Water Use will be provided by precipitation, the Effective Precipitation Disclosure Statement in Section 495 shall be completed and submitted. The Estimated Amount of Water Expected from Effective Precipitation shall not exceed 25 percent of the local annual mean precipitation (average rainfall.)

_____ 4. Landscape Design Plan
_____ 5. Irrigation Design Plan
_____ 6. Irrigation Schedules
_____ 7. Maintenance Schedule
_____ 8. Landscape Irrigation Audit Schedule
_____ 9. Grading Design Plan
_____ 10. Soil Analysis

Post-Installation Inspection: (Check indicating substantial completion)

_____ A. Plants installed as specified
_____ B. Irrigation system installed as designed
___ dual distribution system for recycled water
___ minimal run off or overspray
_____ C. Landscape Irrigation Audit performed

(Certificate of Substantial Completion, continued)

____Project submittal package and a copy of this certification has been provided to owner/manager and local water agency

Comments:

I/we certify that work has been installed in accordance with the contract documents.

Contractor Signature Date State License Number

I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the Water Efficient Landscape Ordinance and that the landscape planting and irrigation installation conform with the approved plans and specifications.

Landscape Architect Signature Date State License Number
or Irrigation Designer/Consultant
or Licensed or Certified Professional in a Related Field

I/we certify that I/we have received all of the contract documents and that it is our responsibility to see that the project is maintained in accordance with the contract documents.

Owner Signature Date

Note: Authority cited: Section 65594, Gov. Code. Reference: Section 65597, Gov. Code.

(d) Public Education

(1) Publications.

(A) Local agencies shall provide information to owners of all new single family residential homes regarding the design, installation, and maintenance of water efficient landscapes.

(B) Information about the efficient use of landscape water shall be provided to water users throughout the community.

(2) Model Homes.

At least one model home that is landscaped in each project consisting of eight or more homes shall demonstrate via signs and information the principles of water efficient landscapes described in this ordinance.

(A) Signs shall be used to identify the model as an example of a water efficient landscape and featuring elements such as hydrozones, irrigation equipment and others which contribute to the overall water efficient theme.

(B) Information shall be provided about designing, installing, and maintaining water efficient landscapes.

Note: Authority cited: Section 65594, Gov. Code. Reference: Section 65597.

493. PROVISIONS FOR EXISTING LANDSCAPES.

(a) Water Management

All existing landscaped areas to which the city or county provides water that are one acre or more, including golf courses, green belts, common areas, multi-family housing, schools, businesses, parks, cemeteries, and publicly owned landscapes shall have a landscape irrigation audit at least every five years. At a minimum, the audit shall be in accordance with the California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook, the entire document which is hereby incorporated by reference. (See Landscape Irrigation Auditor Handbook, Dept. of Water Resources. Water Conservation Office (June 1990) version 5.5.)

(1) If the project's water bills indicate that they are using less than or equal to the Maximum Applied Water Allowance for that project site, an audit shall not be required.

(2) Recognition of projects that stay within the Maximum Applied Water Allowance is encouraged.

(b) Water Waste Prevention

Cities and counties shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Penalties for violations of these prohibitions shall be established locally.

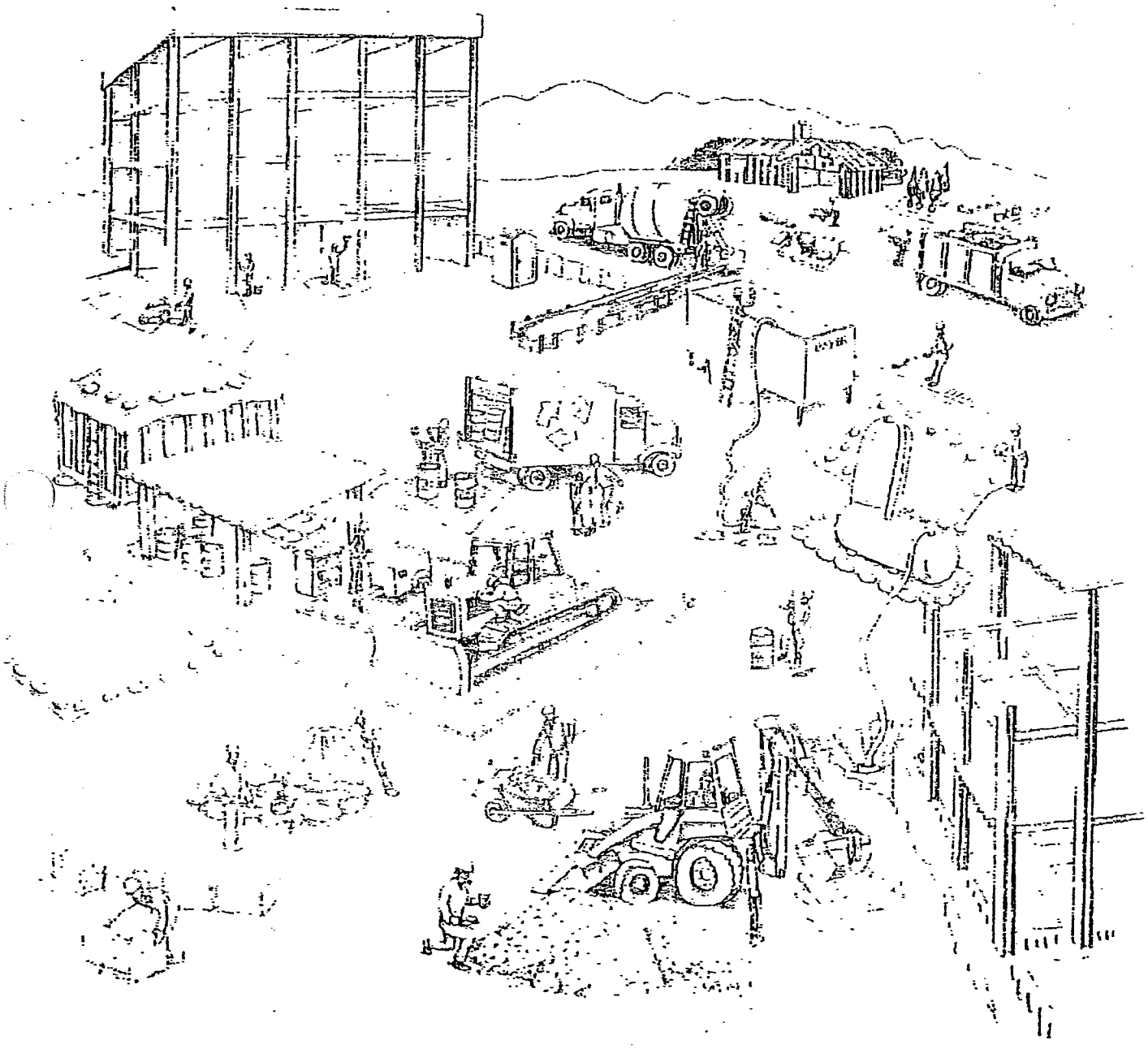
(Authority cited: Section 65594, Gov. Code. Reference: Section 65597, Gov. Code.)

6.0 CONSTRUCTION RELATED

Blueprint for a Clean Ocean
Employee/Subcontractor Training (CA40, CASQA BMP Handbook)
Building Repair, Remodeling and Construction (SC-12, CASQA BMP Handbook)
Waste handling and Disposal (SC-9, CASQA BMPHandbook)

Blueprint for a Clean Ocean

Best Management Practices to Prevent Stormwater Pollution from Construction-Related Activities



LOS ANGELES COUNTY PUBLIC WORKS
Public Service That Works

NO DUMPING • THIS DRAINS TO OCEAN •

This booklet has been developed as a resource for all general contractors, home builders, and subcontractors working on construction sites

CONTENTS

Introduction

Stormwater pollution is rapidly growing in importance as a national environmental issue. In California, stormwater pollution is a major source of water pollution. To help combat the problems of stormwater pollution, federal and state governments have developed a program for monitoring and permitting discharges to municipal storm drain systems, creeks, and water bodies such as the Pacific Ocean.

Municipalities in the Los Angeles Area are required by the Clean Water Act to develop stormwater management programs that include requirements for construction activities. Your construction project will need to comply with local municipal requirements. If your construction activity will disturb five acres or more, you must also obtain coverage under the General Construction Activity Permit (see Requirements for Dischargers).

Blueprint for a Clean Ocean is an introductory guide to stormwater quality control on construction sites. It contains several principles and techniques that you can use to help prevent stormwater pollution. This booklet has been developed as a resource for general contractors, home builders, and subcontractors working on construction sites.

Blueprint for a Clean Ocean is not a design manual or a Stormwater Pollution Prevention Plan (SWPPP) (see Requirements for Dischargers). For more information on the General Permit, designing stormwater quality controls, or producing a Stormwater Pollution Prevention Plan, please refer to the California Storm Water Best Management Practice Handbook for Construction Activity, or consult your local program or the SWRCB (see below). Please note that this booklet is concerned only with the management of construction sites and activities during construction.

Stormwater Pollution

Storm Drain System

Stormwater or runoff from sources like sprinklers and hoses flows over the ground into the storm drain system. In the Los Angeles Area, storm drain systems consist of gutters, storm drains, underground pipes, open channels, culverts, and creeks. Storm drain systems are designed to drain directly to the Pacific Ocean with no treatment.

Pollution From Construction Sites

Stormwater runoff is part of a natural hydrologic process. However, land development and construction activities can significantly alter natural drainage patterns and pollute stormwater runoff. Runoff picks up pollutants as it flows over the ground or paved areas and carries these pollutants into the storm drain system. Common sources of pollutants from construction sites include: sediments from soil erosion; construction materials and waste (e.g., paint, solvents, concrete, drywall); landscaping runoff containing fertilizers and pesticides; and spilled oil, fuel, and other fluids from construction vehicles and heavy equipment.

Adverse Effects from Stormwater Pollution

Stormwater pollution is a major source of water pollution in California. It can cause declines in fisheries, disrupt habitats, and limit water recreation activities. Even more importantly, stormwater pollution poses a serious threat to the overall health of the ecosystem.

For more information on stormwater requirements, call the State Water Resources Control Board's Stormwater Information Line at (916) 657-1146 or your local program.

equirements for Dischargers

ipal Stormwater Program

inicipalities in the Los Angeles Area are required federal regulations to develop programs to control discharge of pollutants to the storm drain system, luding the discharge of pollutants from construc- n sites and areas of new development or significant levelopment. As a result, your development and nstruction projects may be subject to new require- nts designed to improve stormwater quality such expanded plan check and review, new contract ecifications, and increased site inspection. For more ormation on municipal requirements, please contact municipal representative listed on the back cover this booklet.

ojects Equal To Or Greater an 5 Acres

your construction activity will disturb five acres or ore, you must obtain coverage under the General nstruction Activity Storm Water Permit (General nstruction Permit) issued by the State Water ources Control Board (SWRCB) for stormwater ges associated with construction activity. To coverage under the General Permit, a Notice of (NOI) must be filed with the SWRCB. The Gen- al Construction Permit requires you to prepare and rry out a "Stormwater Pollution Prevention Plan" or VPPP. Your SWPPP must identify appropriate storm- ater pollution prevention measures or best manage- ent practices (BMPs), like the ones described in this ooklet, to reduce pollutants in stormwater discharges om the construction site both during and after con- ruction is completed. A best management practice or MP is defined as any program, technology, process, actice, operating method, measure, or device which ntrols, prevents, removes, or reduces pollution.

rojects Less Than 5 Acres

your project is less than five acres, you may still eed to use BMPs to comply with local municipal equirements. Check with the local planning or ngineering department for details.

Best Management Practices

General Practices

The following are some general principles that can significantly reduce pollution from construction activity and help make compliance with stormwater regulations easy:

- ❑ Identify all storm drains, drainage swales and creeks located near the construction site and make sure all subcontractors are aware of their locations to prevent pollutants from entering them.
- ❑ Clean up leaks, drips, and other spills immediately so they do not contact stormwater.
- ❑ Refuel vehicles and heavy equipment in one designated location on the site and take care to clean up spills immediately.
- ❑ Wash vehicles at an appropriate off-site facility. If equipment must be washed on-site, do not use soaps, solvents, degreasers, or steam cleaning equipment, and prevent wash water from entering the storm drain. If possible, direct wash water to a low point where it can evaporate and/or infiltrate.
- ❑ Never wash down pavement or surfaces where materials have spilled. Use dry cleanup methods whenever possible.
- ❑ Avoid contaminating clean runoff from areas adjacent to your site by using berms and/or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams and/or berms where appropriate.
- ❑ Protect all storm drain inlets using filter fabric cloth or other best management practices to prevent sediments from entering the storm drainage system during construction activities.
- ❑ Keep materials out of the rain — prevent runoff pollution at the source. Schedule clearing or heavy earth moving activities for periods of dry weather. Cover exposed piles of soil, construction materials and wastes with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.

For more information on the General Permits, call the State Water Resources Control Board's Stormwater Information Line at (916) 657-1146 or your local program.

:p pollutants off exposed surfaces. Place trash ..ns around the site to reduce litter. Dispose of non-hazardous construction wastes in covered dumpsters or recycling receptacles.

Practice source reduction — reduce waste by ordering only the amount you need to finish the job.

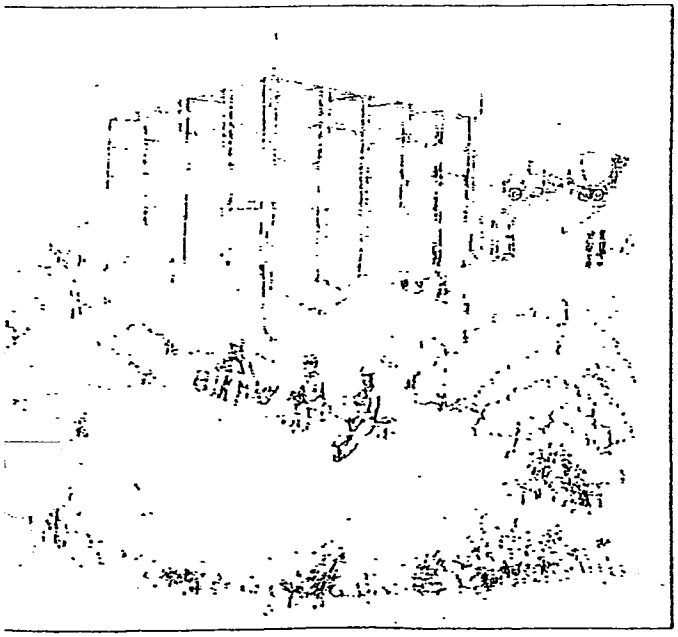
Do not over-apply pesticides or fertilizers and follow manufacturers instructions for mixing and applying materials.

Recycle leftover materials whenever possible. Materials such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires are recyclable.

Dispose of all wastes properly. Materials that cannot be reused or recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never throw debris into channels, creeks or into ..tland areas. Never store or leave debris in the ..et or near a creek where it may contact runoff.

..egal dumping is a violation subject to a fine and/or time in jail. Be sure that trailers carrying your materials are covered during transit. If not, the hauler may be cited and fined.

Train your employees and inform subcontractors about the stormwater requirements and their own responsibilities.



Specific Practices

Following is a summary of specific best management practices for erosion and sediment control and contractor activities. For more information on erosion and sediment control BMPs and their design, please refer to the California Storm Water Best Management Practice Handbook for Construction Activity (March 1993).

Erosion Prevention and Sediment Control

Prevent erosion

Soil erosion is the process by which soil particles are removed from the land surface, by wind, water and/or gravity. Soil particles removed by stormwater runoff are pollutants that when deposited in local creeks, lakes, and the Pacific Ocean, can have negative impacts on aquatic habitat. Exposed soil after clearing, grading, or excavation is easily eroded by wind or water. The following practices will help prevent erosion from occurring on the construction site:

- ☐ Plan the development to fit the topography, soils, drainage pattern and natural vegetation of the site.
- ☐ Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbances and exposure.
- ☐ Phase grading operations to reduce disturbed areas and time of exposure.
- ☐ Avoid excavation and grading during wet weather.
- ☐ Limit on-site construction routes and stabilize construction entrance(s).
- ☐ Remove existing vegetation only when absolutely necessary.
- ☐ Construct diversion dikes and drainage swales to channel runoff around the site.
- ☐ Use berms and drainage ditches to divert runoff around exposed areas. Place diversion ditches across the top of cut slopes.

- ❑ Plant vegetation on exposed slopes. Where replanting is not feasible, use erosion control blankets (e.g., jute or straw matting, glass fiber or excelsior matting, mulch netting).
- ❑ Consider slope terracing with cross drains to increase soil stability.
- ❑ Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them.
- ❑ As a back-up measure, protect drainage courses, creeks, or catch basins with straw bales, silt fences and/or temporary drainage swales.
- ❑ Once grading is completed, stabilize the disturbed areas using permanent vegetation as soon as possible.
- ❑ Conduct routine inspections of erosion control measures especially before and immediately after rainstorms, and repair if necessary.

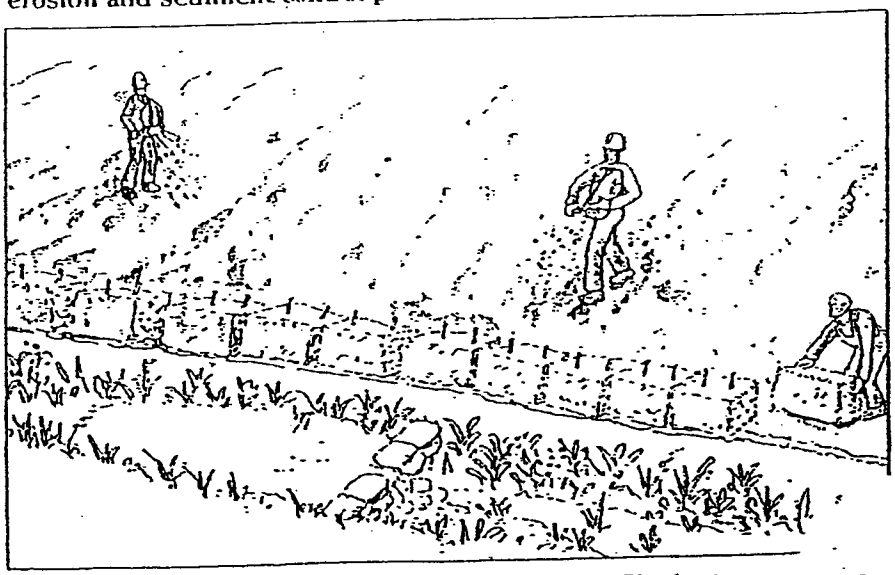
Control sediment

Sedimentation is defined as the process of depositing sediments picked up by runoff. Sediments consist of soil particles, clays, sands, and other minerals. The purpose of sediment control practices is to remove sediments from stormwater before they are transported off-site or reach a storm drain inlet or nearby creek. The most effective sediment control practices reduce runoff velocity and trap or detain runoff allowing sediments to settle out.

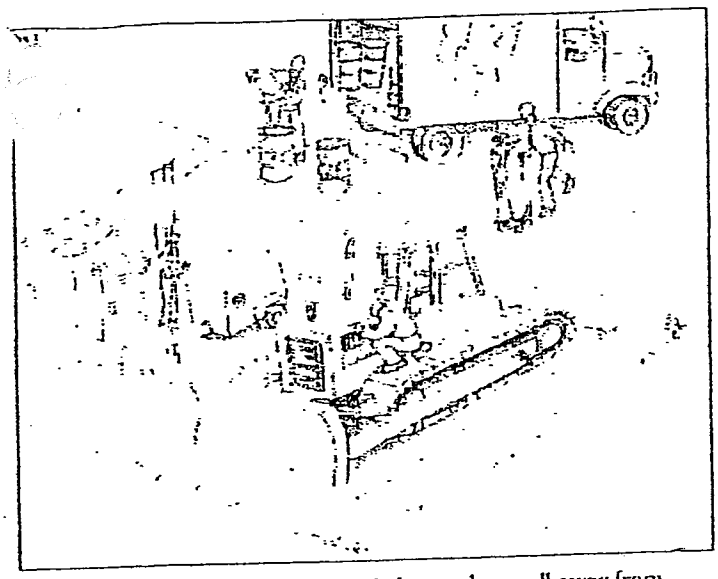
- ❑ Use terracing, rip rap, sand bags, rocks, straw bales, and/or temporary vegetation on slopes to reduce runoff velocity and trap sediments. Do not use asphalt rubble or other demolition debris for this purpose.
- ❑ Use check dams in temporary drains and swales to reduce runoff velocity and promote sedimentation.
- ❑ Protect storm drain inlets from sediment-laden runoff. Storm drain inlet protection devices include sand bag barriers, filter fabric fences, block and gravel filters, and excavated drop inlet sediment traps.
- ❑ Collect and detain sediment-laden runoff in sediment traps (an excavated or bermed area or constructed device) to allow sediments to se out prior to discharge.
- ❑ Use sediment controls and filtration to remove sediments from water generated by dewatering.
- ❑ Prevent construction vehicle tires from tracking soil onto adjacent streets by constructing a temporary stone pad with a filter fabric underliner near the site exit where dirt and mud can be removed.
- ❑ When cleaning sediments from streets, driveways and paved areas on construction sites, use dry sweeping methods where possible. If water must be used to flush pavement, collect runoff to settle out sediments and protect storm drain inlets.

Note: Performance of erosion and sediment controls is dependent on proper installation, routine inspections and maintenance of the controls. Most of the BMPs described above are temporary and if left alone can quickly fall into disrepair and/or become ineffective. Routine inspections and maintenance, particularly before and after a storm event, must be part of a erosion and sediment control plan.

The California Storm Water Best Management Practices Handbook for Construction Activity provides specific details and design criteria for erosion and sediment control plans.



Drainage swales channel runoff around a construction site. Planting tempora ge-tation on freshly graded areas, and trenching and staking straw bales and/or sil es downslope are common techniques for preventing erosion and controlling sedi nt.



Make sure equipment repair area is bermed or well away from creeks and storm drains.

General Site Maintenance

Prevent spills and leaks

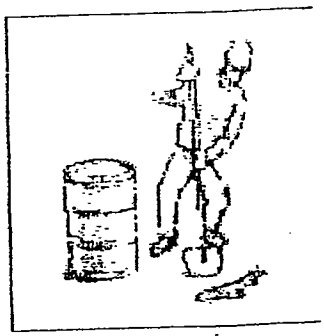
Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other fluids on the construction site are common sources of stormwater pollution and soil contamination. Construction material spills can also cause serious problems. Careful site planning, preventive maintenance, and good materials handling practices can eliminate most spills and leaks.

- ☐ Maintain all vehicles and heavy equipment. Inspect frequently for and repair leaks.
- ☐ Designate specific areas of the construction site, well away from creeks or storm drain inlets, for auto and equipment parking and routine vehicle and equipment maintenance.
- ☐ Perform major maintenance, repair jobs and vehicle and equipment washing off-site when feasible, or in designated and controlled areas on-site.
- ☐ If you must drain and replace motor oil, radiator coolant, or other fluids on-site, use drip pans or drop cloths to catch drips and spills. Collect all spent fluids, store in labeled separate containers, and recycle whenever possible. Note that in order to be recyclable, such liquids must not be mixed with other fluids. Non-recycled fluids generally must be disposed of as hazardous wastes.

Clean up spills immediately after they happen

When vehicle fluids or materials such as paints or solvents are spilled, cleanup should be immediate, automatic, and routine.

- ☐ Sweep up spilled dry materials (e.g., cement, mortar, or fertilizer) immediately. Never attempt to "wash them away" with water, or bury them. Use only minimal water for dust control.
- ☐ Clean up liquid spills on paved or impermeable surfaces using "dry" cleanup methods (e.g., absorbent materials like cat litter, sand or rags).
- ☐ Clean up spills on dirt areas by digging up and properly disposing of the contaminated soil.



Clean up spills on dirt areas by removing contaminated soil.

- ☐ Report significant spills to the appropriate spill response agencies immediately (See reference list on the back cover of this booklet for more information).

Note: Used cleanup rags that have absorbed hazardous materials must either be sent to a certified industrial laundry or dry cleaner, or disposed of through a licensed hazardous waste disposal compay.

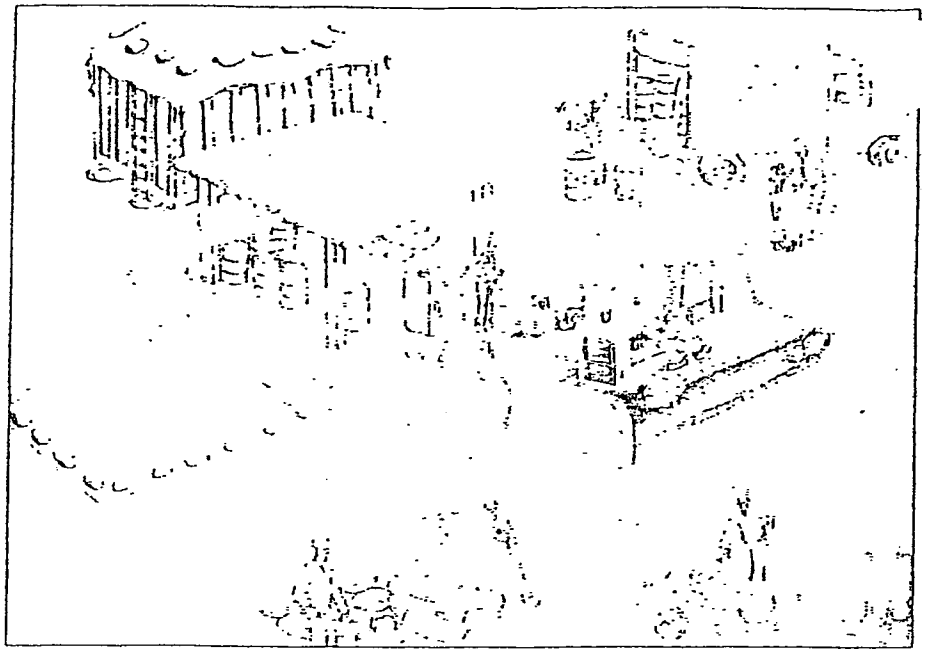
materials under cover

.id dry building materials with e potential to pollute runoff should : stored under cover and/or rrounded by berms when rain is recast or during wet weather.

Store stockpiled materials and wastes under a temporary roof or secured plastic sheeting or tarp.

Berm around storage areas to prevent contact with runoff.

Plaster or other powders can create large quantities of suspended solids in runoff, which may be toxic to aquatic life and cause serious environmental harm even if the materials are inert. Store all such potentially polluting dry materials —especially open bags— under a temporary roof or inside a ·uilding, or cover securely with an impermeable By storing dry materials under a roof, you also help protect air quality, as well as water quality.



Store building materials under cover. Make sure dumpsters are properly covered to keep out rain.

Store containers of paints, chemicals, solvents, and other hazardous materials in accordance with secondary containment regulations and under cover during rainy periods.

ver and maintain dumpsters

en or leaking dumpsters can be a source of rmwater pollution.

Cover open dumpsters with plastic sheeting or a tarp during rainy weather. Secure the sheeting or tarp around the outside of the dumpster. If your dumpster has a cover, close it.

If a dumpster is leaking, contain and collect leaking material. Return the dumpster to the leasing company for repair/exchange.

Do not clean dumpsters on-site. Return to leasing pany for periodic cleaning, if necessary.

Collect and properly dispose of paint removal wastes

Paint removal wastes include chemical paint strippir residues, paint chips and dust, sand blasting material and wash water. These wastes contain chemicals that are harmful to the wildlife in our creeks and the water bodies they flow to. Keep all paint wastes away from the gutter, street, and storm drains.

- ☐ Non-hazardous paint chips and dust from dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash. Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tributyl tin must be disposed of as a hazardous waste.

- ☐ When stripping or cleaning building exteriors with high-pressure water, cover or berm storm drain inlets. If possible (and allowed by your local wastewater treatment plant), collect (mop or vacuum) building cleaning water and discharge to the sanitary sewer. Alternatively, discharge non-contaminated wash water onto a dirt area and spade into the soil. Be sure to shovel or sweep up any debris that remains in the gutter and dispose of as garbage.

Clean up paints, solvents, adhesives, and cleaning solutions properly

Although many paint materials can and should be recycled, liquid residues from paints, thinners, solvents, glues, and cleaning fluids are hazardous wastes. When they are thoroughly dry, empty paint cans, used brushes, rags, absorbent materials, and drop cloths are no longer hazardous and may be disposed of as garbage.

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or creek.
- ❑ For water-based paints, paint out brushes to the extent possible and rinse to a drain leading to the sanitary sewer (i.e., indoor plumbing).
- ❑ For oil-based paints, paint out brushes to the extent possible, and filter and reuse thinners and solvents. Dispose of unusable thinners and residue as hazardous waste.
- ❑ Recycle, return to supplier or donate unwanted water-based (latex) paint. You may be able to recycle clean empty dry paint cans as metal.
- ❑ Dried latex paint may be disposed of in the garbage.
- ❑ Unwanted paint (that is not recycled), thinners, and sludges must be disposed of as hazardous waste.
- ❑ More and more paint companies are recycling excess latex paint (See separate list of "Recyclers and Disposal Services" for more information).

Keep fresh concrete and cement mortars out of gutters, storm drains, and creeks

Concrete and cement-related mortars that wash into gutters and storm drains are toxic to fish and the aquatic environment.

- ❑ Avoid mixing excess amounts of fresh concrete or cement mortar on-site.
- ❑ Store dry and wet materials under cover, protected from rainfall and runoff.
- ❑ Wash out concrete transit mixers only in designated wash-out areas where the water will flow into settling ponds or onto dirt or stockpiles of aggregate base or sand. Pump water from settling ponds to the sanitary sewer, where allowed. Whenever possible, recycle washout by pumping back into mixers for reuse. Never dispose of washout into the street, storm drains, drainage ditches, or creeks.
- ❑ Whenever possible, return contents of mixer barrel to the yard for recycling. Dispose of small amounts of excess concrete, grout, and mortar in the trash.

Service and maintain portable toilets

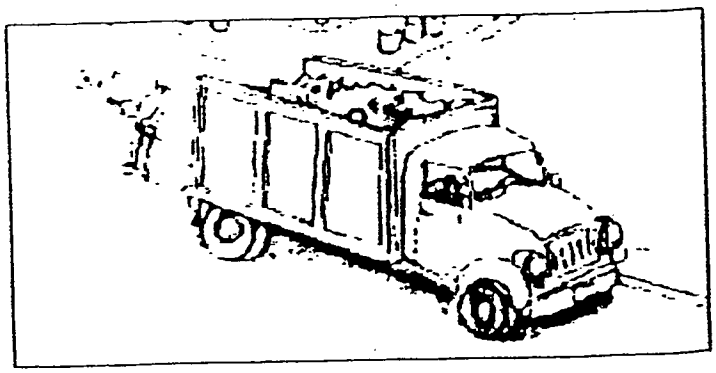
Leaking portable toilets are a potential health and environmental hazard.

- ❑ Inspect portable toilets for leaks.
- ❑ Be sure the leasing company adequately maintains, promptly repairs, and replaces units as needed.
- ❑ The leasing company must have a permit to dispose of waste to the sanitary sewer.

Dispose of cleared vegetation properly

Cleared vegetation, tree trimmings, and other plant material can cause environmental damage if it gets into creeks. Such "organic" material requires large quantities of oxygen to decompose, which reduces the oxygen available to fishes and other aquatic life.

- ❑ Do not dispose of plant material in a creek or drainage facility or leave it in a roadway where it can clog storm drain inlets.
- ❑ Avoid disposal of plant material in trash dumpsters or mixing it with other wastes. Compost plant material or take it to a landfill or other facility that composts yard waste.



Recycle yard waste and tree prunings at a landfill that chips and composts plant material.

molition Waste Management

re all demolition waste is properly d of

olition debris that is left in the street or pushed a bank into a creek bed or drainage facility causes us problems for flood control, storm drain tenance, and the health of our environment. rent types of materials have different disposal irements or recycling options.

laterials that can be recycled from demolition rojects include: metal framing, wood, concrete, sphalt, and plate glass.

laterials that can be salvaged for reuse from old ructures include: doors, banisters, floorboards, indows, 2x4s, and other old, dense lumber.

lnusable, unrecycleable debris should be confined) dumpsters, covered at night and during wet 'eather, and taken to a landfill for disposal.

lazardous debris such as asbestos must be andled in accordance with specific laws and lations and disposed of as a hazardous waste. ore information of asbestos handling and sal regulations, contact the South Coast Air uality Management District.

rrange for an adequate debris disposal schedule o insure that dumpsters do not overflow.

Roadwork and Pavement Construction

Plan roadwork and pavement construction to avoid stormwater pollution

Road paving, surfacing, and asphalt removal happen right in the street, with numerous opportunities for stormwater pollution from the asphalt mix, saw-cut slurry, or excavated material. Properly proportioned asphalt mix and well-compacted pavement avoid a host of water pollution problems.

- ❑ Apply concrete, asphalt, and seal coat during dry weather to prevent contaminants from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when paving or applying seal coat, slurry seal, fog seal, etc.
- ❑ Always park paving machines over drip pans or absorbent materials, since they tend to drip continuously.
- ❑ When making saw-cuts in pavement, use as little water as possible. Cover each catch basin completely with filter fabric during the sawing operation and contain the slurry by placing straw bales, sand bags, or gravel dams around the catch basin. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site.
- ❑ Wash down exposed aggregate concrete only when the wash water can: (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, place straw bales downslope, or divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- ❑ Allow aggregate rinse to settle, and pump the water to the sanitary sewer if allowed by your local wastewater authority.
- ❑ Never wash sweepings from exposed aggregate concrete into a street or storm drain. Collect and return to aggregate base stockpile, or dispose with trash.
- ❑ Recycle broken concrete and asphalt.

... for ponded stormwater, groundwater, ıd/or soil contamination

ınded stormwater, groundwater and soil may become ntaminated if exposed to hazardous materials. If any the following conditions apply, contaminated ponded ɔrmwater, groundwater, and/or soil may be present ıd pose a potential health and environmental hazard:

- The project site is in an area of previous commercial/industrial activity;
- There is a history of illegal dumping on the site or adjacent properties;
- The construction site is subject to a Superfund, state, or local cleanup order;
- Ponded stormwater, groundwater and/or water generated by dewatering exhibits an oily-sheen and/or smells of petroleum;
- Soil appears discolored, smells of petroleum ıd/or exhibits other unusual properties;
- ☐ Abandoned underground storage tanks, drums, or other buried debris are encountered during construction activities; or
- ☐ Spills have occurred on the site or adjacent properties involving pesticides and herbicides; fertilizers; detergents; plaster and other products; petroleum products such as fuel, oil, and grease; or other hazardous chemicals such as acids, lime, glues, paints, solvents, and curing compounds.

Take appropriate action

Ponded stormwater, groundwater, or water generated by dewatering that is contaminated cannot be discharged to a street, gutter, or storm drain. If contamination is suspected, the water should be contained an held for testing. Call the appropriate local agency and/or the Regional Water Quality Control Board for further guidance (See reference list on the back cove: of this booklet for more information).

Remember: The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

Pollution Control Agencies and Sources of Information

m water quality agement program

County of Los Angeles
800) 303-0003

City of Los Angeles
800) 974-9794

Agencies to call for ocal construction ite requirements

n county unincorporated areas nd in the cities of:

rtesia
ellflower
radbury
arson
erritos
ommerce
uarte
ndustry
dale
nada/Flintridge
wood
a Mirada
a Puente
awndale
omita
olling Hills
anta Fe Springs
emple City
Vestlake Village

818) 458-3187

Agencies to call in the event of a spill

You are required by law to report all significant releases or suspected significant releases of hazardous materials, including oil.

To report a spill, call the following agencies:

1. Dial (800) 303-0003 or your local emergency response number.
2. Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

For spills of "Federal Reportable Quantities" of oil, chemicals, or other hazardous materials to land, air, or water, notify the National Response Center (800-424-8802). If you are not sure whether the spill is of a "reportable quantity," call the federal Environmental Protection Agency (800) 424-9346 for clarification.

For further information, see *California Hazardous Material Spill/ Release Notification Guidance* (State Office of Emergency Services, Hazardous Materials Division).

Agencies to call if you find or suspect contaminated soil or groundwater

Regional Water Quality Control Board:

Los Angeles Basin
(213) 266-7500

California Environmental Protection Agency (Cal EPA), Department of Toxic Substances Control (DTSC) (510) 540-3732

Documents and available resources

From State Water Resources Control Board (SWRCB) (916) 657-1146:

General Construction Activity Storm Water Permit

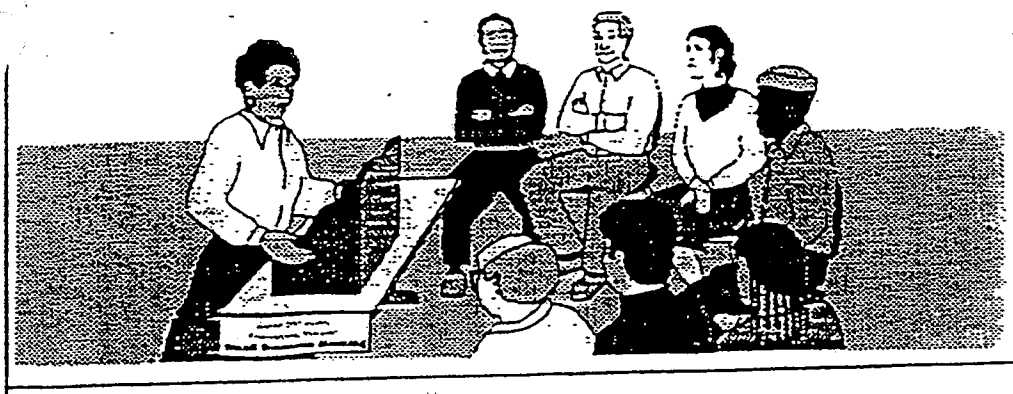
California Storm Water Best Management Practice Handbook - Construction Activity

From Cal EPA, DTSC (916) 322-3670:

Waste Minimization for the Building Construction Industry - Fact Sheet

Los Angeles County gratefully acknowledges the Santa Clara Valley NonPoint Source Pollution Control Program and BASMAA for the concept, content, and artwork for this booklet.

ACTIVITY: EMPLOYEE/SUBCONTRACTOR TRAINING



Objectives

- ~~Housekeeping Practices~~
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion

DESCRIPTION

Employee/subcontractor training, like maintenance or a piece of equipment, is not so much a best management practice as it is a method by which to implement BMPs. This fact sheet highlights the importance of training and of integrating the elements of employee/subcontractor training from the individual source controls into a comprehensive training program as part of a company's Storm Water Pollution Prevention Plan (SWPPP).

The specific employee/subcontractor training aspects of each of the source controls are highlighted in the individual fact sheets. The focus of this fact sheet is more general, and includes the overall objectives and approach for assuring employee/ subcontractor training in storm water pollution prevention.

OBJECTIVES

Employee/subcontractor training will be based on four objectives:

Promote a clear identification and understanding of the problem, including activities with the potential to pollute storm water;
Identify solutions (BMPs);
Promote employee/subcontractor ownership of the problems and the solutions; and
Integrate employee/subcontractor feedback into training and BMP implementation.

APPROACH

Integrate training regarding storm water quality management with existing training programs that may be required for your business by other regulations such as: the Illness and Injury Prevention Program (IIPP) (SB 198) (California Code of Regulations Title 8, Section 3203), the Hazardous Waste Operations and Emergency Response (HAZWOPER) standard (29 CFR 1910.120), the Spill Prevention Control and Countermeasure (SPCC) Plan (40 CFR 112), and the Hazardous Materials Management Plan (Business Plan) (California Health and Safety Code, Section 6.95).

Use the quick reference on disposal alternatives (Table 4.2) to train employee/subcontractors in proper and consistent methods for disposal.

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Best Management Practices

ACTIVITY: EMPLOYEE/SUBCONTRACTOR TRAINING (Continue)

Consider posting the quick reference table around the job site or in the on-site office trailer to reinforce training.

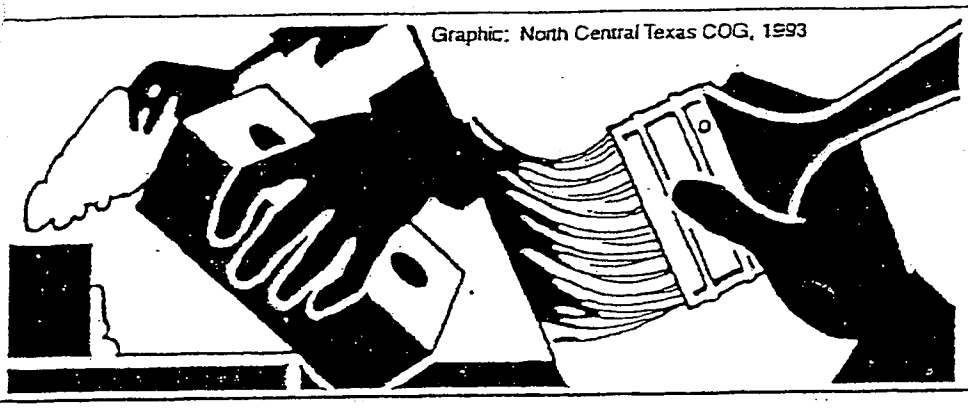
Train employee/subcontractors in standard operating procedures and spill cleanup techniques described in the fact sheets and in the SWPPP. Employee/subcontractors trained in spill containment and cleanup should be present during the loading/unloading and handling of materials.

Personnel who use pesticides will be trained in their use. The California Department of Pesticide Regulation and county agricultural commissioners licensed pesticide dealers, certify pesticide applicators, and conduct on-site inspections.

Proper education of off-site contractors is often overlooked. The conscientious efforts of well trained employee/subcontractors, can be lost by unknowing off-site contractors, so make sure they are well informed about what they are expected to do on-site.

Ensure that workers who are non-English speakers or for whom English is a second language either receive training and materials in their native language or ensure that those persons adequately comprehend materials and training given in English.

ACTIVITY: BUILDING REPAIR, REMODELING AND CONSTRUCTION



Graphic: North Central Texas COG, 1993

DESCRIPTION

Prevent or reduce the discharge of pollutants to storm water from building repair, remodeling, and construction by using soil erosion controls, enclosing or covering building material storage areas, using good housekeeping practices, using safer alternative products, and training employees.

APPROACH

- Use soil erosion control techniques if bare ground is temporarily exposed. See the Construction Activity Best Management Practice Handbook.
- Use permanent soil erosion control techniques if the remodeling clears buildings from an area that are not to be replaced. See SC10 (Contaminted or Erodible Surface Areas).
- Enclose painting operations, consistent with local air quality regulations and OSHA.
- Properly store materials that are normally used in repair and remodeling such as paints and solvents.
- Properly store and dispose waste materials generated from the activity. See CA20, Solid Waste Management, Construction Handbook.
- Maintain good housekeeping practices while work is underway.

REQUIREMENTS

- Costs (Capital, O&M)
  - These BMPs are generally of low to modest in cost.

LIMITATIONS

- This BMP is for minor construction only. The State's General Construction Activity Storm Water Permit has more requirements for larger projects. The companion "Construction Activity Best Management Practice Handbook" contains specific guidance and best management practices for larger-scale projects.
- Hazardous waste that cannot be re-used or recycled must be disposed of by a licensed hazardous waste hauler.
- Safer alternative products may not be available, suitable, or effective in every case.
- Be certain that actions to help storm water quality are consistent with Cal- and Fed-OSHA and air quality regulations.

Modifications are a common occurrence particularly at large industrial sites. The activity

Applications

- *Manufacturing*
- *Material Handling*
- *Vehicle Maintenance*
- *Construction* (●)
- *Commercial Activities* (●)
- *Roadways*
- *Waste Containment*
- *Housekeeping Practices* (●)

Targeted Constituents

- ● *Sediment*
- ○ *Nutrients*
- ● *Heavy Metals*
- ● *Toxic Materials*
- ● *Floatable Materials*
- ○ *Oxygen Demanding Substances*
- ● *Oil & Grease*
- ○ *Bacteria & Viruses*

- ● *Likely to Have Significant Impact*
- ○ *Probable Low or Unknown Impact*

Implementation Requirements

- ○ *Capital Costs*
- ◒ *O&M Costs*
- ◒ *Maintenance*
- ◒ *Training*

● *High* ○ *Low*

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Best Management Practices

Additional Information — Building Repair, Remodeling, and Construction

may vary from minor and normal building repair to major remodeling, or the installation of new facilities on currently open space. These activities can generate pollutants that can reach storm water if proper care is not taken. The sources of these contaminants may be solvents, paints, paint and varnish removers, finishing residues, spent thinners, soap cleaners, kerosene, asphalt and concrete materials, adhesive residues, and old asbestos installation.

Good Housekeeping

Proper care involves a variety of mostly common sense, housekeeping actions such as:

- Keep the work site clean and orderly. Removing debris in a timely fashion. Sweep the area.
- Cover materials of particular concern that must be left out, particularly during the rainy season.
- Educate employees who are doing the work.
- Inform on-site contractors of company policy on these matters and include appropriate provisions in their contract to make certain proper housekeeping and disposal practices are implemented.
- Make sure that nearby storm drains are well marked to minimize the chance of inadvertent disposal of residual paints and other liquids.
- Do not dump waste liquids down the storm drain.
- Advise concrete truck drivers to not wash their truck over the storm drain. Have a designated area that does not drain to the storm drain.
- Clean the storm drain system in the immediate vicinity of the construction activity after it is completed.

Proper education of off-site contractors is often overlooked. The conscientious efforts of well trained employees can be lost by unknowing off-site contractors, so make sure they are well informed about what they are expected to do.

Painting operations should be properly enclosed or covered to avoid drift. Use temporary scaffolding to hang drop cloths or draperies to prevent drift. Application equipment that minimizes overspray also helps. Local air pollution regulations may, in many areas of the state, specify painting procedures which if properly carried out are usually sufficient to protect water quality. If painting requires scraping or sand blasting of the existing surface, use a ground cloth to collect the chips. Dispose the residue properly. If the paint contains lead or tributyl tin, it is considered a hazardous waste.

Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective. Dried paint will erode from a surface and be washed away by storms. If using water based paints, clean the application equipment in a sink that is connected to the sanitary sewer. Properly store leftover paints if they are to be kept for the next job, or dispose properly.

When using sealants on wood, pavement, roofs, etc, quickly clean up spills. Remove excess liquid with absorbent material or rags. If when repairing roofs, small particles have accumulated in the gutter, either sweep out the gutter or wash the gutter and trap the particles at the outlet of the downspout. A sock or geofabric placed over the outlet may effectively trap the materials. If the downspout is tight lined, place a temporary plug at the first convenient point in the storm drain and pump out the water with a vactor truck, and clean the catch basin sump where you placed the plug.

Soil/Erosion Control

If the work involves exposing large areas of soil employ the appropriate soil erosion and control techniques. See the Construction Best Management Practice Handbook. If old buildings are being torn down and not replaced in the near future, stabilize the site using measures described in SC10, Contaminated or Erodible Surface Areas.

If a building is to be placed over an open area with a storm drainage system, make sure the storm inlets within the

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building are covered or removed, or the storm line is connected to the sanitary sewer. If because of the remodeling a new drainage system is to be installed or the existing system is to be modified, consider installing catch basins as they serve as effective "in-line" treatment devices. See TC2 (Wet Ponds) in Chapter 5 regarding design criteria. Include in the catch basin a "turn-down" elbow or similar device to trap floatables.

Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical. Buy recycled products to the maximum extent practical..

REFERENCES

Best Management Practices for Industrial Storm Water Pollution Control, Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.

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ACTIVITY: WASTE HANDLING AND DISPOSAL

DESCRIPTION

Prevent or reduce the discharge of pollutants to storm water from waste handling and disposal by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing runon and runoff from waste management areas.

APPROACH

- Maintain usage inventory to limit waste generation.
- Raw material substitution or elimination.
- Process or equipment modification.
- Production planning and sequencing.
- SARA Title III, Section 313 requires reporting for over 300 listed chemicals and chemical compounds. This requirement should be used to track these chemicals although this is not as accurate a means of tracking as other approaches.

  Track waste generated.
  - Characterize waste stream.
  - Evaluate the process generating the waste.
  - Prioritize waste streams using: manifests, biennial reports, permits, environmental audits, SARA Title III reports, emission reports, NPDES monitoring reports.
  - Inventory reports.
  - Data on chemical spills.
  - Emissions.
  - Shelf life expiration.
- Use design data and review: process flow diagram, materials and applications diagram, piping and instructions, equipment list, plot plan.
- Use raw material and production data and review: composition sheets, materials safety data sheets (MSDS), batch sheets, product or raw material inventory records, production schedule, operator data log.
- Use economic data and review:
  - Waste treatment and disposal cost.
  - Product utility and economic cost.
  - Operation and maintenance labor cost.
- Recycle materials whenever possible.
- Maintain list of and the amounts of materials disposed.
- Waste segregation and separation.
- Check industrial waste management areas for spills and leaks.
- Cover, enclose, or berm industrial wastewater management areas whenever possible to prevent contact with runon or runoff.

  Equip waste transport vehicles with anti-spill equipment.

Applications

- *Manufacturing*
- *Material Handling*
- *Vehicle Maintenance*
- *Construction*
- *Commercial Activities*
- *Roadways*
- *Waste Containment*
- *Housekeeping Practices*

Targeted Constituents

- ○ *Sediment*
- ○ *Nutrients*
- ● *Heavy Metals*
- ● *Toxic Materials*
- ○ *Floatable Materials*
- ○ *Oxygen Demanding Substances*
- ● *Oil & Grease*
- ○ *Bacteria & Viruses*

- ● *Likely to Have Significant Impact*
- ○ *Probable Low or Unknown Impact*

Implementation Requirements

- ○ *Capital Costs*
- ◒ *O&M Costs*
- ○ *Maintenance*
- ◒ *Training*

● *High* ○ *Low*

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Best Management Practices

- Minimize spills and fugitive losses such as dust or mist from loading systems.
- Ensure that sediments or wastes are prevented from being tracked off-site.
- Training and supervision.
- Stencil storm drains on the facility's property with prohibitive message regarding waste disposal.
- For a quick reference on disposal alternatives for specific wastes see Table 4.1, SC1.
- Consider ordering industry-specific or waste stream-specific guidance from PPIC (see Appendix G).

REQUIREMENTS

- Costs (Capital, O&M)
  - Capital and O&M costs for these programs will vary substantially depending on the size of the facility and the types of waste handled. Costs should be low if there is an inventory program in place.
- Maintenance
  - None except for maintaining equipment for material tracking program.

LIMITATIONS

- Hazardous waste that cannot be re-used or recycled must be disposed of by a licensed hazardous waste hauler.

Additional Information — Waste Handling and Disposal

Industrial waste management activities occur in areas that can contaminate storm water and include landfills, waste piles, wastewater and solid waste treatment and disposal, and land application. Typical operations which affect storm water pollution may include waste pumping, treatment chemicals storage, mixing, aeration, clarification, and solids dewatering.

Waste Reduction

Waste spilled, leaked, or lost from waste management areas or outside manufacturing activities may build up in soils or in other surfaces and be carried away by storm water runoff. There is also a potential for liquid waste from lagoons or surface impoundments to overflow to surface waters or soak the soil where pollutants may be picked up by storm water runoff.

Waste reduction for manufacturing activities is the best way to reduce the potential of storm water contamination from waste management areas. Reduction in the amount of industrial waste generated can be accomplished using many different types of source controls such as:

- Production planning and sequencing.
- Process or equipment modification.
- Raw material substitution or elimination.
- Loss prevention and housekeeping.
- Waste segregation and separation.
- Close loop recycling.

An approach to reduce storm water pollution from waste handling and disposal is to assess process activities at the facility and reduce waste generation. The assessment is designed to find situations where waste can be eliminated or reduced and emissions and environmental damage can be minimized. The assessment involves collecting process specific information, setting pollution prevention targets, and developing, screening and selecting waste reduction options for further study. Starting a waste reduction program is economically beneficial because of reduced raw material purchases and lower waste disposal fees. In addition, material tracking systems to increase awareness about material usage can reduce spills and minimize contamination, thus reducing the amount of waste produced.

Spill/Leak Control

Waste can be prevented from contaminating storm water by checking waste management areas for leaking containers or spills. Corroded or damaged containers can begin to leak at any time. Transfer waste from these damaged containers into safe containers. Dumpsters should be covered to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster. Leaking equipment including valves, lines, seals, or pumps should be repaired promptly.

Vehicles transporting waste should have spill prevention equipment that can prevent spills during transport. The spill prevention equipment includes:

- Vehicles equipped with baffles for liquid waste.
- Trucks with sealed gates and spill guards for solid waste.

Loading or unloading wastes can contaminate storm water when the wastes are lost from the transfer. Loading systems can also be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.

Runon/Runoff Prevention

Storm water runon should be prevented from entering the waste management area. Storm water pollution from runon can be prevented by enclosing the area or building a berm around the area. Other alternatives for reducing storm water pollution include:

- Preventing the waste materials from directly contacting rain.

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Additional Information — Waste Handling and Disposal

- Moving the activity indoor after ensuring that all safety concerns such as fire hazard and ventilation are addressed.
- Covering the area with a permanent roof.
- Covering waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropylene or hypalon.

To avoid tracking materials off-site, the waste management area should be kept clean at all times by sweeping and cleaning up spills immediately. Vehicles should never drive through spills. If necessary, wash vehicles in designated areas before they leave the site, and control the wash water.

Minimizing the runoff of polluted storm water from land application of industrial waste on-site can be accomplished by:

- Choosing a site where:
  - slopes are under 6 percent
  - the soil is permeable
  - there is a low water table
  - it is located away from wetlands or marshes
  - there is a closed drainage system
- Avoiding applying waste to the site:
  - when it is raining
  - when the ground is frozen
  - when the ground is saturated with water
- Growing vegetation on land disposal areas to stabilize soils and reduce the volume of surface water runoff from the site.
- Maintaining adequate barriers between the land application site and the receiving waters. Planted strips are particularly good.
- Using erosion control techniques
  - mulching and matting,
  - filter fences,
  - straw bales,
  - diversion terracing,
  - sediment basins.
- Performing routine maintenance to ensure the erosion control or site stabilization measures are working.

Examples of Effective Programs

The port of Long Beach has a state-of-the-art database for identifying potential pollutant sources, documenting facility management practices, and tracking pollutants.

REFERENCES

Best Management Practices for Industrial Storm Water Pollution Control, Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.

Publications Than Can Work For You!; California Department of Toxic Substances Control, Sacramento, CA, 1991 (A list and order form for waste minimization publications from the State).

Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans, and Best Management Practices, EPA 832-R-92-006, USEPA, 1992.

Distribute List, Pollution Prevention Information Clearinghouse, USEPA 1992.

SC9

Waste Handling & Disposal SC-34

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing runon and runoff.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Pollution Prevention

- Reduction in the amount of waste generated can be accomplished using the following source controls such as:
  - Production planning and sequencing
  - Process or equipment modification
  - Raw material substitution or elimination
  - Loss prevention and housekeeping
  - Waste segregation and separation
  - Close loop recycling
- Establish a material tracking system to increase awareness about material usage. This may reduce spills and minimize contamination, thus reducing the amount of waste produced.
- Recycle materials whenever possible.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Suggested Protocols

General

- Cover storage containers with leak proof lids or some other means. If waste is not in containers, cover all waste piles (plastic tarps are acceptable coverage) and prevent stormwater runon and runoff with a berm. The waste containers or piles must be covered except when in use.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Collected grease must be properly disposed of as garbage.
- Check storage containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the storage area regularly. If it is paved, do not hose down the area to a storm drain.
- Dispose of rinse and wash water from cleaning waste containers into a sanitary sewer if allowed by the local sewer authority. Do not discharge wash water to the street or storm drain.
- Transfer waste from damaged containers into safe containers.
- Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide a sufficient number of litter receptacles for the facility.
- Clean out and cover litter receptacles frequently to prevent spillage.

Waste Collection

- Keep waste collection areas clean.
- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Place waste containers under cover if possible.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be

disposed of in solid waste containers (see chemical/ hazardous waste collection section below).

- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

Good Housekeeping

- Use all of the product before disposing of the container.
- Keep the waste management area clean at all times by sweeping and cleaning up spills immediately.
- Use dry methods when possible (e.g. sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Stencil storm drains on the facility's property with prohibitive message regarding waste disposal.

Chemical/Hazardous Wastes

- Select designated hazardous waste collection areas on-site.
- Store hazardous materials and wastes in covered containers protected from vandalism, and in compliance with fire and hazardous waste codes.
- Place hazardous waste containers in secondary containment.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.

Runon/Runoff Prevention

- Prevent stormwater runon from entering the waste management area by enclosing the area or building a berm around the area.
- Prevent the waste materials from directly contacting rain.
- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropyleneor hypalon.
- Cover the area with a permanent roof if feasible.
- Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.
- Move the activity indoor after ensuring all safety concerns such as fire hazard and ventilation are addressed.

Inspection

- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Check waste management areas for leaking containers or spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.

Training

- Train staff pollution prevention measures and proper disposal methods.
- Train employees and contractors proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
- Train employees and subcontractors in proper hazardous waste management.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.
- Vehicles transporting waste should have spill prevention equipment that can prevent spills during transport. The spill prevention equipment includes:
  - Vehicles equipped with baffles for liquid waste
  - Trucks with sealed gates and spill guards for solid waste

Other Considerations

- Hazardous waste cannot be re-used or recycled; it must be disposed of by a licensed hazardous waste hauler.

Requirements

Costs

- Capital and operation and maintenance costs will vary substantially depending on the size of the facility and the types of waste handled. Costs should be low if there is an inventory program in place.

Maintenance

- None except for maintaining equipment for material tracking program.

Supplemental Information

Further Detail of the BMP

Land Treatment System

- Minimize the runoff of polluted stormwater from land application of municipal waste on-site by:
  - Choosing a site where slopes are under 6%, the soil is permeable, there is a low water table, it is located away from wetlands or marshes, there is a closed drainage system.
  - Avoiding application of waste to the site when it is raining or when the ground is saturated with water.
  - Growing vegetation on land disposal areas to stabilize soils and reduce the volume of surface water runoff from the site.
  - Maintaining adequate barriers between the land application site and the receiving waters. Planted strips are particularly good.
  - Using erosion control techniques such as mulching and matting, filter fences, straw bales, diversion terracing, and sediment basins.
  - Performing routine maintenance to ensure the erosion control or site stabilization measures are working.

References and Resources

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Associations (BASMAA). On-line: http://www.basmaa.org

Building & Grounds Maintenance SC-41

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, and abnormal pH. Utilizing the following protocols will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.
- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

CASQA California Stormwater Quality Association

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a waste water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash water runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in he catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement. Ensure that this practice does not kill grass.

Landscaping Activities

- Do not apply any chemicals (insecticide, herbicide, or fertilizer) directly to surface waters, unless the application is approved and permitted by the state.
- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.
- Check irrigation schedules so pesticides will not be washed away and to minimize non-stormwater discharge.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paint brushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.

- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.
- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. In which case you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover with secondary containment during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water; do not put it in the storm drain, pour over landscaped areas.
- Use hand or mechanical weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Follow manufacturers' recommendations and label directions. Pesticides must never be applied if precipitation is occuring or predicted. Do not apply insecticides within 100 feet of surface waters such as lakes, ponds, wetlands, and streams.
- Use less toxic pesticides that will do the job, whenever possible. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g. spray drift) of pesticides, including consideration of alternative application techniques.

- Apply pesticides only when wind speeds are low.
- Work fertilizers into the soil rather than dumping or broadcasting them onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.
- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on use of pesticides and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Overall costs should be low in comparison to other BMPs.

Maintenance

- Sweep paved areas regularly to collect loose particles, and wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping but it is subject to rusting and results in lower quality water. Initially the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time, typically a year, between flushes and may accumulate iron, manganese, lead, copper, nickel and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

King County - ftp://dnr.metrokc.gov/wlr/dss/spcm/Chapter%203.PDF

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASSMA) http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA) http://www.basmaa.org/

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP) -
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

Building Repair and Construction SC-42

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Recycle

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Modifications are common particularly at large industrial sites. The activity may vary from minor and normal building repair to major remodeling, or the construction of new facilities. These activities can generate pollutants including solvents, paints, paint and varnish removers, finishing residues, spent thinners, soap cleaners, kerosene, asphalt and concrete materials, adhesive residues, and old asbestos installation. Protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants to stormwater from building repair, remodeling, and construction by using soil erosion controls, enclosing or covering building material storage areas, using good housekeeping practices, using safer alternative products, and training employees.

Approach

Pollution Prevention

- Recycle residual paints, solvents, lumber, and other materials to the maximum extent practical.
- Buy recycled products to the maximum extent practical.
- Inform on-site contractors of company policy on these matters and include appropriate provisions in their contract to ensure certain proper housekeeping and disposal practices are implemented.

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- Make sure that nearby storm drains are well marked to minimize the chance of inadvertent disposal of residual paints and other liquids.

Suggested Protocols

Repair & Remodeling

- Follow BMPs identified in Construction BMP Handbook.
- Maintain good housekeeping practices while work is underway.
- Keep the work site clean and orderly. Remove debris in a timely fashion. Sweep the area.
- Cover materials of particular concern that must be left outside, particularly during the rainy season.
- Do not dump waste liquids down the storm drain.
- Dispose of wash water, sweepings, and sediments properly.
- Store materials properly that are normally used in repair and remodeling such as paints and solvents.
- Sweep out the gutter or wash the gutter and trap the particles at the outlet of the downspout if when repairing roofs, small particles have accumulated in the gutter. A sock or geofabric placed over the outlet may effectively trap the materials. If the downspout is tight lined, place a temporary plug at the first convenient point in the storm drain and pump out the water with a vactor truck, and clean the catch basin sump where you placed the plug.
- Properly store and dispose waste materials generated from construction activities. See Construction BMP Handbook.
- Clean the storm drain system in the immediate vicinity of the construction activity after it is completed.

Painting

- Enclose painting operations consistent with local air quality regulations and OSHA.
- Local air pollution regulations may, in many areas of the state, specify painting procedures which if properly carried out are usually sufficient to protect water quality.
- Develop paint handling procedures for proper use, storage, and disposal of paints.
- Transport paint and materials to and from job sites in containers with secure lids and tied down to the transport vehicle.
- Test and inspect spray equipment prior to starting to paint. Tighten all hoses and connections and do not overfill paint containers.
- Mix paint indoors before using so that any spill will not be exposed to rain. Do so even during dry weather because cleanup of a spill will never be 100% effective.
- Transfer and load paint and hot thermoplastic away from storm drain inlets.

- Do not transfer or load paint near storm drain inlets.
- Plug nearby storm drain inlets prior to starting painting and remove plugs when job is complete when there is significant risk of a spill reaching storm drains.
- Cover nearby storm drain inlets prior to starting work if sand blasting is used to remove paint.
- Use a ground cloth to collect the chips if painting requires scraping or sand blasting of the existing surface. Dispose the residue properly.
- Cover or enclose painting operations properly to avoid drift.
- Clean the application equipment in a sink that is connected to the sanitary sewer if using water based paints.
- Capture all cleanup-water and dispose of properly.
- Dispose of paints containing lead or tributyl tin and considered a hazardous waste properly.
- Store leftover paints if they are to be kept for the next job properly, or dispose properly.
- Recycle paint when possible. Dispose of paint at an appropriate household hazardous waste facility.

Training

Proper education of off-site contractors is often overlooked. The conscientious efforts of well trained employees can be lost by unknowing off-site contractors, so make sure they are well informed about what they are expected to do.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Clean up spills immediately.
- Excavate and remove the contaminated (stained) soil if a spill occurs on dirt.

Limitations

- This BMP is for minor construction only. The State's General Construction Activity Stormwater Permit has more requirements for larger projects. The companion "Construction Best Management Practice Handbook" contains specific guidance and best management practices for larger-scale projects.
- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Be certain that actions to help stormwater quality are consistent with Cal- and Fed-OSHA and air quality regulations.

SC-42 Building Repair and Construction

Requirements

Costs

These BMPs are generally low to modest in cost.

Maintenance

N/A

Supplemental Information

Further Detail of the BMP

Soil/Erosion Control

If the work involves exposing large areas of soil, employ the appropriate soil erosion and control techniques. See the Construction Best Management Practice Handbook. If old buildings are being torn down and not replaced in the near future, stabilize the site using measures described in SC-40 Contaminated or Erodible Areas.

If a building is to be placed over an open area with a storm drainage system, make sure the storm inlets within the building are covered or removed, or the storm line is connected to the sanitary sewer. If because of the remodeling a new drainage system is to be installed or the existing system is to be modified, consider installing catch basins as they serve as effective "in-line" treatment devices. See Treatment Control Fact Sheet TC-20 Wet Pond/Basin in Section 5 of the New Development and Redevelopment Handbook regarding design criteria. Include in the catch basin a "turn-down" elbow or similar device to trap floatables.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Parking/Storage Area Maintenance SC-43

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓
Oxygen Demanding	✓

Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The following protocols are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

Approach

Pollution Prevention

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook).
- Keep accurate maintenance logs to evaluate BMP implementation.

Suggested Protocols

General

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low concentrations.

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- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel and dispose of litter in the trash.

Surface cleaning

- Use dry cleaning methods (e.g. sweeping or vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- If water is used follow the procedures below:
  - Block the storm drain or contain runoff.
  - Wash water should be collected and pumped to the sanitary sewer or discharged to a pervious surface, do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- When cleaning heavy oily deposits:
  - Use absorbent materials on oily spots prior to sweeping or washing.
  - Dispose of used absorbents appropriately.

Surface Repair

- Pre-heat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination form contacting stormwater runoff.
- Cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc., where applicable. Leave covers in place until job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.

- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Inspection

- Have designated personnel conduct inspections of the parking facilities and stormwater conveyance systems associated with them on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

Training

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, nad implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

Requirements

Costs

Cleaning/sweeping costs can be quite large, construction and maintenance of stormwater structural controls can be quite expensive as well.

Maintenance

- Sweep parking lot to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities on a regular basis to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

SC-43 Parking/Storage Area Maintenance

Supplemental Information

Further Detail of the BMP

Surface Repair

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination form contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and until all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Use only as much water as necessary for dust control, to avoid runoff.

References and Resources

http://www.stormwatercenter.net/

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality control Board. July 1998 (Revised February 2002 by the California Coastal Commission).

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA) http://www.basma.org

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)
http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf

Site Design & Landscape Planning SD-10

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Roof Runoff Controls SD-11

Rain Garden

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Description

Various roof runoff controls are available to address stormwater that drains off rooftops. The objective is to reduce the total volume and rate of runoff from individual lots, and retain the pollutants on site that may be picked up from roofing materials and atmospheric deposition. Roof runoff controls consist of directing the roof runoff away from paved areas and mitigating flow to the storm drain system through one of several general approaches: cisterns or rain barrels; dry wells or infiltration trenches; pop-up emitters, and foundation planting. The first three approaches require the roof runoff to be contained in a gutter and downspout system. Foundation planting provides a vegetated strip under the drip line of the roof.

Approach

Design of individual lots for single-family homes as well as lots for higher density residential and commercial structures should consider site design provisions for containing and infiltrating roof runoff or directing roof runoff to vegetative swales or buffer areas. Retained water can be reused for watering gardens, lawns, and trees. Benefits to the environment include reduced demand for potable water used for irrigation, improved stormwater quality, increased groundwater recharge, decreased runoff volume and peak flows, and decreased flooding potential.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Designing New Installations

Cisterns or Rain Barrels

One method of addressing roof runoff is to direct roof downspouts to cisterns or rain barrels. A cistern is an above ground storage vessel with either a manually operated valve or a permanently open outlet. Roof runoff is temporarily stored and then released for irrigation or infiltration between storms. The number of rain

barrels needed is a function of the rooftop area. Some low impact developers recommend that every house have at least 2 rain barrels, with a minimum storage capacity of 1000 liters. Roof barrels serve several purposes including mitigating the first flush from the roof which has a high volume, amount of contaminants, and thermal load. Several types of rain barrels are commercially available. Consideration must be given to selecting rain barrels that are vector proof and childproof. In addition, some barrels are designed with a bypass valve that filters out grit and other contaminants and routes overflow to a soak-away pit or rain garden.

If the cistern has an operable valve, the valve can be closed to store stormwater for irrigation or infiltration between storms. This system requires continual monitoring by the resident or grounds crews, but provides greater flexibility in water storage and metering. If a cistern is provided with an operable valve and water is stored inside for long periods, the cistern must be covered to prevent mosquitoes from breeding.

A cistern system with a permanently open outlet can also provide for metering stormwater runoff. If the cistern outlet is significantly smaller than the size of the downspout inlet (say ¼ to ½ inch diameter), runoff will build up inside the cistern during storms, and will empty out slowly after peak intensities subside. This is a feasible way to mitigate the peak flow increases caused by rooftop impervious land coverage, especially for the frequent, small storms.

Dry wells and Infiltration Trenches

Roof downspouts can be directed to dry wells or infiltration trenches. A dry well is constructed by excavating a hole in the ground and filling it with an open graded aggregate, and allowing the water to fill the dry well and infiltrate after the storm event. An underground connection from the downspout conveys water into the dry well, allowing it to be stored in the voids. To minimize sedimentation from lateral soil movement, the sides and top of the stone storage matrix can be wrapped in a permeable filter fabric, though the bottom may remain open. A perforated observation pipe can be inserted vertically into the dry well to allow for inspection and maintenance.

In practice, dry wells receiving runoff from single roof downspouts have been successful over long periods because they contain very little sediment. They must be sized according to the amount of rooftop runoff received, but are typically 4 to 5 feet square, and 2 to 3 feet deep, with a minimum of 1-foot soil cover over the top (maximum depth of 10 feet).

To protect the foundation, dry wells must be set away from the building at least 10 feet. They must be installed in solids that accommodate infiltration. In poorly drained soils, dry wells have very limited feasibility.

Infiltration trenches function in a similar manner and would be particularly effective for larger roof areas. An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. These are described under Treatment Controls.

Pop-up Drainage Emitter

Roof downspouts can be directed to an underground pipe that daylights some distance from the building foundation, releasing the roof runoff through a pop-up emitter. Similar to a pop-up irrigation head, the emitter only opens when there is flow from the roof. The emitter remains flush to the ground during dry periods, for ease of lawn or landscape maintenance.

Foundation Planting

Landscape planting can be provided around the base to allow increased opportunities for stormwater infiltration and protect the soil from erosion caused by concentrated sheet flow coming off the roof. Foundation plantings can reduce the physical impact of water on the soil and provide a subsurface matrix of roots that encourage infiltration. These plantings must be sturdy enough to tolerate the heavy runoff sheet flows, and periodic soil saturation.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Supplemental Information

Examples

- City of Ottawa's Water Links Surface –Water Quality Protection Program
- City of Toronto Downspout Disconnection Program
- City of Boston, MA, Rain Barrel Demonstration Program

Other Resources

Hager, Marty Catherine, Stormwater, "Low-Impact Development", January/February 2003. www.stormh2o.com

Low Impact Urban Design Tools, Low Impact Development Design Center, Beltsville, MD. www.lid-stormwater.net

Start at the Source, Bay Area Stormwater Management Agencies Association, 1999 Edition

Efficient Irrigation SD-12

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include "NO DUMPING

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– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Maintenance Bays & Docks SD-31

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Description

Several measures can be taken to prevent operations at maintenance bays and loading docks from contributing a variety of toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to the stormwater conveyance system.

Approach

In designs for maintenance bays and loading docks, containment is encouraged. Preventative measures include overflow containment structures and dead-end sumps. However, in the case of loading docks from grocery stores and warehouse/distribution centers, engineered infiltration systems may be considered.

Suitable Applications

Appropriate applications include commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for vehicle maintenance and repair are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code requirements.

Designing New Installations

Designs of maintenance bays should consider the following:

- Repair/maintenance bays and vehicle parts with fluids should be indoors; or designed to preclude urban run-on and runoff.
- Repair/maintenance floor areas should be paved with Portland cement concrete (or equivalent smooth impervious surface).

- Repair/maintenance bays should be designed to capture all wash water leaks and spills. Provide impermeable berms, drop inlets, trench catch basins, or overflow containment structures around repair bays to prevent spilled materials and wash-down waters form entering the storm drain system. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.
- Other features may be comparable and equally effective.

The following designs of loading/unloading dock areas should be considered:

- Loading dock areas should be covered, or drainage should be designed to preclude urban run-on and runoff.
- Direct connections into storm drains from depressed loading docks (truck wells) are prohibited.
- Below-grade loading docks from grocery stores and warehouse/distribution centers of fresh food items should drain through water quality inlets, or to an engineered infiltration system, or an equally effective alternative. Pre-treatment may also be required.
- Other features may be comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Hydrodynamic Separator MP-51

Description

Hydrodynamic separators: (alternatively, gravity separator, oil and grit separators, swirl concentrators or vortex separators) are typically manhole or vault based systems employing flow shaping features to enhance gravitational separation of floating and sinking pollutants. Compared to conventional wet vaults, hydrodynamic separators can typically provide the desired pollutant removal performance within a more compact system. Unlike a rectangular wet vault a hydrodynamic separator is round and directs incoming stormwater in a circular fashion, separating suspended sediments, trash and attached pollutants with centrifugal force. There are practical limitations to performance of most designs, where a certain minimum flow rate must be maintained, below which flow shaping features are ineffective and the system operates more as a simple gravity separator. In practice hydrodynamic separators are usually not designed to target sediment particles finer than about 50 microns.

Design Considerations

- Service Area
- Settling Velocity
- Appropriate Sizing
- Inlet Pipe Diameter

Targeted Constituent	Removal
Sediment	Med/High
Nutrients	Low
Trash	High
Metals	Low/Med
Bacteria	Low
Oil and Grease	Med
Organics	Low

California Experience

There are currently over 5,000 installations in California.

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Advantages

- May provide the desired sediment and oil removal performance in a smaller footprint compared to conventional wet vaults.
- Scalable designs can treat a wide range of flow rates from <1 cfs to >100 cfs.
- Functions as a cost effective pre-treatment device.
- May provide significant spill protection.
- Captures and holds solids, oil and trash out of public view and out of contact with wildlife, native soils and groundwater.
- Subsurface design allows overlying land to be used for pedestrian or vehicular traffic or for landscaping.

Limitations

- As some of the systems have standing water that remains between storms, there is concern about mosquito breeding.
- It is likely that vortex separators are not as effective as wet vaults at removing fine sediments, on the order 50 to 100 microns in diameter and less.
- Does not remove dissolved pollutants.

- An export of dissolved pollutants may occur as accumulated organic matter (e.g., leaves) decomposes in the units.

Design and Sizing Guidelines

Stormwater enters the separator, typically below the effluent line, tangentially into the basin, thereby imparting a circular motion in the system (Figure 1). Due to centrifugal forces created by the circular motion, the suspended particles move to the wall of the device, and fall along the wall to the bottom. Trash accumulates in the low pressure area of the center of the vortex.

Figure 1. Looking down a hydrodynamic separator from the top where stormwater tangentially enters the unit.

There are a wide variety of system designs commercially available with treatment capacities ranging from less than 1 cfs to more than 100 cfs. Some designs include internal screens suitable for capturing neutrally buoyant materials. Some incorporate internal bypass features that direct peak flows exceeding the design water quality flow rate around the separation zone. Many systems can accommodate multiple inlet pipes, grate inlets or curb inlets. Most systems are designed within standard manhole or utility vaults and can support HS20 loading, with additional reinforcement for greater loads available as an option.

Design of hydrodynamic separators is flow-based with the system size increasing as the design water quality flow rate increases. Some hydrodynamic separators have a characteristic hydraulic loading rate expressed as flow rate per system volume or separation chamber surface area that is associated with a specific targeted pollutant concentration reduction or effluent concentration. Sizing most commonly entails dividing the design water quality flow rate by the hydraulic loading rate to get a minimum system size.

Most, if not all commercially available systems also have sizing tables available for standard models listing the maximum treatment flow rate for a particular model and target performance level. It should be noted that the default target particle diameter and removal rate varies widely between manufactured systems so direct comparison of different models can be difficult. In most cases, a specific system can also be scaled larger or smaller to achieve a greater or lesser performance target at a particular flow rate. Results of full scale field monitoring or standardized laboratory testing with a standard sediment gradation are available for many hydrodynamic separators and should be the basis for selection and sizing decisions.

Construction/Inspection Considerations

No special considerations.

Performance

The primary mechanism of pollutant removal is gravitational separation for all hydrodynamic separators, with some models also employing screens to capture neutrally buoyant materials such as trash. There are numerous hydrodynamic separator design variations commercially available with performance of a particular design depending primarily on the residence time within the system.

Protocols for testing and verifying the performance of innovative stormwater treatment systems have been developed by the Washington State Department of Ecology and the New Jersey Department of Environmental Protection. Both programs provide certification or approval of treatment systems following independent verification that those systems meet certain performance targets. Both programs have been endorsed by numerous states and public agencies including EPA and the Water Environment Federation (WEF) and have been supported by the Stormwater Equipment Manufacturers Association (SWEMA).

The Technology Assessment Protocol – Ecology (TAPE) from the Washington State Department of Ecology program has a "Pretreatment" standard that is applicable to hydrodynamic separators. It is intended to achieve 50% removal of fine (50 micron-mean size) and 80% removal of coarse (125-micron-mean size) total suspended solids.

A list of technologies, including several hydrodynamic separators that have met this treatment standard can be found on the Ecology web page for emerging technologies at:
http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html

The New Jersey DEP laboratory protocol for hydrodynamic separators requires 50% removal of a TSS gradation with a mean particle diameter of 75 microns. A list of technologies, including several hydrodynamic separators that have met this standard can be found on the NJ DEP web page for Stormwater Manufactured Treatment Devices at:
http://www.njstormwater.org/treatment.html

To ensure acceptable hydrodynamic separator performance and operational feasibility, selection of systems that have been verified by the Ecology and/or NJ DEP programs is recommended. Furthermore, design and sizing should be consistent with approvals issued by those programs.

Siting Criteria

Hydrodynamic separators can be configured to receive runoff from the surface through a curb inlet, grate inlet, or through one or more inlet pipes. They can be installed under vehicular or pedestrian traffic areas or under landscaped areas. Maintenance typically requires a vacuum truck so hydrodynamic separators should be located where they can be accessed without unduly disrupting traffic flow or site operations.

Additional Design Guidelines

Hydrodynamic separators may be susceptible to washout if flows significantly higher than the design treatment capacity are directed through the separation chamber or the sediment storage zone. Therefore, it is important that the system either be designed in an off-line configuration

where peak flows are routed around the treatment system, or that the peak flow rate does not exceed the rate at which significant resuspension of previously captured materials will occur. For most designs, the maximum flow rate that the system can handle without resuspension is significantly higher than the design treatment flow rate for particles in the range of 100 microns. The New Jersey DEP protocol for hydrodynamic separator testing includes scour testing which is used to establish the maximum allowable hydraulic loading rate prior to bypass.

Maintenance

Maintenance consists of the removal of accumulated material with a vacuum truck which should be performed annually unless experience indicates the need for more or less frequent maintenance. It may be necessary to remove and dispose of the floatables separately due to the presence of petroleum product.

Cost

Manufacturers provide costs for the units including delivery. Installation costs are generally on the order of 25 to 50% of the manufacturer's cost. For most sites the units are cleaned annually.

Cost Considerations

- Treatment with one larger systems is typically more cost effective than using multiple smaller systems.

References and Sources of Additional Information

Field, R., D. Averill, T.P. O'Connor, and P. Steel, 1997, Vortex separation technology, Water Qual. Res. J. Canada, 32, 1, 185

New Jersey manufactured stormwater devices' performance verification:
http://www.njcat.org/verification-process/technology-verification-database.html

New Jersey Department of Environmental Protection Laboratory Protocol to Assess Total Suspended Solids Removal by a Hydrodynamic Sedimentation Manufactured Treatment Device:
http://www.njstormwater.org/pdf/hds-protocol-1-25-13.pdf

Washington State manufactured stormwater devices' performance verification:
http://www.ecy.wa.gov/programs/wq/stormwater/newtech/technologies.html

Drain Inlet Inserts MP-52

Description

Drain inlet inserts are manufactured filters placed in a drop inlet to remove sediment and debris. There are a multitude of inserts of various shapes and configurations, typically falling into one of three different groups: socks, boxes, and trays. The sock consists of a fabric, usually constructed of polypropylene. The fabric may be attached to a frame or the grate of the inlet holds the sock. Socks are meant for vertical (drop) inlets. Boxes are constructed of plastic or wire mesh. Typically a polypropylene "bag" is placed in the wire mesh box. The bag takes the form of the box. Most box products are one box; that is, the setting area and filtration through media occur in the same box. Some products consist of one or more trays or mesh grates. The trays may hold different types of media. Filtration media vary by manufacturer. Types include polypropylene, porous polymer, treated cellulose, and activated carbon.

Design Considerations

- Use with other BMPs
- Fit and Seal within Inlet

Targeted Constituents	Removal
Sediment	Low/Med
Nutrients	Low/Med
Trash	High
Metals	Low/Med
Bacteria	Low
Oil and Grease	Low/Med
Organics	Low

California Experience

The number of installations is unknown but likely exceeds a thousand. Some users have reported that these systems require considerable maintenance to prevent plugging and bypass.

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Advantages

- Does not require additional space as the drain inlets are already a component of the standard drainage systems.
- Easy access for inspection and maintenance.
- As there is no standing water, there is little concern for mosquito breeding.
- A relatively inexpensive retrofit option.

Limitations

- Performance is likely significantly less than treatment systems that are located at the end of the drainage system such as ponds and vaults.
- Usually not suitable for large areas or areas with trash or leaves than can plug the insert.
- Distributed maintenance compared to centralized treatment devices.

Design and Sizing Guidelines

Drain inserts come in a variety of configurations but are generally a polypropylene fabric installed around a grate, box or tray. Some products can consist of one or more trays, boxes or grates and can hold different types of media. Filtration media vary with the manufacturer: types include polypropylene, porous polymer, treated cellulose, and activated carbon. Manufacturer's specifications can be referred to for more detail.

Construction/Inspection Considerations

The stormwater must enter the unit and not leak around the perimeter. Leakage between the frame of the insert and the frame of the drain inlet can easily occur with vertical (drop) inlets.

Performance

Few products have performance data collected under field conditions.

Siting Criteria

It is recommended that inserts be used only for retrofit situations or as pretreatment where other treatment BMPs presented in this section area used.

Additional Design Guidelines

Follow guidelines provided by individual manufacturers.

Maintenance

Likely require frequent maintenance, on the order of several times per year.

Cost

- The initial cost of individual inserts ranges from less than $100 to about $2,000. The cost of using multiple units in curb inlet drains varies with the size of the inlet.
- The low cost of inserts may tend to favor the use of these systems over other, more effective treatment BMPs. However, the low cost of each unit may be offset by the number of units that are required, more frequent maintenance, and the shorter structural life (and therefore replacement).

References and Sources of Additional Information

Hrachovec, R., and G. Minton, 2001, Field testing of a sock-type catch basin insert, Planet CPR, Seattle, Washington.

Interagency Catch Basin Insert Committee, Evaluation of Commercially-Available Catch Basin Inserts for the Treatment of Stormwater Runoff from Developed Sites, 1995

Larry Walker Associates, June 1998, NDMP Inlet/In-Line Control Measure Study Report

Manufacturer's literature

Santa Monica (City), Santa Monica Bay Municipal Stormwater/Urban Runoff Project - Evaluation of Potential Catch basin Retrofits, Woodward Clyde, September 24, 1998

Woodward Clyde, June 11, 1996, Parking Lot Monitoring Report, Santa Clara Valley Nonpoint Source Pollution Control Program.

Bioretention TC-32

General Description

The bioretention best management practice (BMP) functions as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. These facilities normally consist of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants. The runoff's velocity is reduced by passing over or through a sand bed and is subsequently distributed evenly along a ponding area. Exfiltration of the stored water in the bioretention area planting soil into the underlying soils occurs over a period of days.

Inspection/Maintenance Considerations

Bioretention requires monthly landscaping maintenance, including measures to ensure that the area is functioning properly and irrigation during dry periods. In many cases, bioretention areas initially require intense maintenance, but less maintenance is needed over time. Maintenance tasks may be conducted by a landscaping contractor, who may already be hired at the site.

Sediment may enter the bioretention cell and form a crust on the soil surface, limiting the porosity of the soil. Raking of the mulch and soil surface may be needed to maintain high infiltration rates. In cold climates the soil may freeze, preventing runoff from infiltrating into the planting soil.

Bioretention systems can become a nuisance due to mosquito and midge breeding. Maintaining soil porosity and basic housekeeping practices such as removal of debris accumulations and vegetation management are necessary to ensure that the system dewaters completely (recommended 72 hour residence time or less) to prevent creating mosquito and other vector habitats.

Advanced BMPs Covered

Maintenance Concerns

- *Clogged Soil or Outlet Structures*
- *Sediment Accumulation*
- *Invasive Species Management*
- *Vegetation/Landscape Maintenance*
- *Erosion*
- *Channelization of Flow*
- *Vector Control*
- *Aesthetics*

Targeted Constituents

Sediment	■
Nutrients	▲
Trash	■
Metals	■
Bacteria	■
Oil and Grease	■
Organics	■

Legend (Removal Effectiveness)

● Low ■ High ▲ Medium

✱ Requires Pretreatment

Note: The removal effectiveness ratings shown in the table are for properly designed, sited, and maintained BMPs; some configurations will have variations in pollutant effectiveness.

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Inspection Activities	Suggested Frequency
☐ Inspect soil and repair eroded areas.	Monthly
☐ Inspect for erosion or damage to vegetation, preferably at the end of the wet season to schedule summer maintenance and before major fall runoff to be sure the strips are ready for winter. However, additional inspection after periods of heavy runoff is desirable.	Semi-annual inspection
☐ Inspect to ensure vegetation is well established. If not, either prepare soil and reseed or replace with alternative species. Install erosion control blanket. ☐ Check for debris and litter, and areas of sediment accumulation. ☐ Inspect health of trees and shrubs.	
Maintenance Activities	**Suggested Frequency**
☐ Water plants daily for 2 weeks.	At project completion
☐ Remove litter and debris.	Monthly
☐ Remove sediment. ☐ Remulch void areas. ☐ Irrigate during dry periods. ☐ Treat diseased trees and shrubs. ☐ Mow turf areas. ☐ Repair erosion at inflow points. ☐ Repair outflow structures. ☐ Unclog underdrain. ☐ Regulate soil pH. ☐ Make structural changes or repairs as needed to eliminate pools of water that stand longer than 96 hrs to prevent mosquito production, particularly during the warmer months of the year. Identify and eliminate sources of non-stormwater runoff that feed standing water pools. Coordinate with the local mosquito and vector control agency to control mosquitoes, if necessary.	As needed
☐ Remove and replace dead and diseased vegetation.	Semi-annual
☐ Add mulch. ☐ Replace tree stakes and wires.	Annual
☐ Mulch should be replaced every 2 to 3 years or when bare spots appear or infiltration rates are reduced. Remulch prior to the wet season.	Every 2-3 years, or as needed

Additional Information

Landscaping is critical to the function and aesthetic value of bioretention areas. It is preferable to plant the area with native vegetation, or plants that provide habitat value, where possible. Another important design feature is to select species that can withstand the hydrologic regime they will experience. At the bottom of the bioretention facility, plants that tolerate both wet and dry conditions are preferable. At the edges, which will remain primarily dry, upland species will be the most resilient. It is best to select a combination of trees, shrubs, and herbaceous materials.

For areas with low permeability native soils or steep slopes, bioretention areas can be designed with an underdrain system that routes the treated runoff to the storm drain system rather than depending entirely on infiltration.

Special considerations are required for bioretention to be effective in cold climates – see the Stormwater Managers Resource Center for more information.

References

California Stormwater Quality Association. *Stormwater Best Management Practice Handbook, New Development and Redevelopment,* 2003. Available online at: https://www.casqa.org/resources/bmp-handbooks/new-development-redevelopment-bmp-handbook.

Riverside County Flood Control and Water Conservation District. *Riverside County Design Handbook for Low Impact Development Best Management Practices,* 2011, Available online at: http://rcflood.org/downloads/NPDES/Documents/LIDManual/LID_BMP_Design_Handbook.pdf.

San Francisco Public Utilities Commission, et al. San Francisco Stormwater Design Guidelines. Appendix A, Stormwater BMP Fact Sheets, 2010. Available online at: http://www.sfwater.org/modules/showdocument.aspx?documentid=2778.

Stormwater Managers Resource Center. http://www.stormwatercenter.net.

Stormwater Mangers Resource Center, Stormwater Practices for Cold Climates. http://www.stormwatercenter.net/Cold%20Climates/cold-climates.htm.

U.S. Environmental Protection Agency, Post-Construction Stormwater Management in New Development and Redevelopment. BMP Fact Sheets. Available online at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=5.

Ventura Countywide Stormwater Quality Management Program. *Technical Guidance Manual for Stormwater Quality Control Measures*, 2010. Available online at: http://www.vcstormwater.org/documents/workproducts/technicalguidancemanual/201orevisions/Ventura%20Technical%20Guidance%20Document_5-6-10.pdf.

Watershed Management Institute, Inc. *Operation, Maintenance, and Management of Stormwater Management Systems* 1997. Available online at: http://www.stormwater.ucf.edu/research/stormwaterOMM/stormwateromm.pdf.

Water Quality Inlet TC-50

General Description

Water quality inlets (WQIs), also typically called trapping catch basins, oil/grit separators or oil/water separators, consist of one or more chambers that promote sedimentation of coarse materials and separation of free oil (as opposed to emulsified or dissolved oil) from stormwater. Some WQIs also contain screens to help retain larger or floating debris, and many of the newer designs also include a coalescing unit that helps promote oil/water separation.

These devices are appropriate for capturing hydrocarbon spills, but provide very marginal sediment removal and are not very effective for treatment of stormwater runoff. WQIs typically capture only the first portion of runoff for treatment and are generally used for pretreatment before discharging to other best management practices (BMPs).

Inspection/Maintenance Considerations

High sediment loads can interfere with the ability of the WQI to effectively separate oil and grease from the runoff. During periods of high flow, sediment can be re-suspended and released from the WQI into surface waters if this in the only BMP on site prior to discharge. Maintenance of WQIs can be easily neglected because they are underground. Establishment of a maintenance schedule is helpful for ensuring proper maintenance occurs. The required maintenance effort will be site-specific due to variations in sediment and hydrocarbon loading. Since WQI residuals contain hydrocarbon by-products, they may require disposal as hazardous waste. Many WQI owners coordinate with waste haulers to collect and dispose of these residuals.

Advanced BMPs Covered

Maintenance Concerns

- *High Sediment Loads*
- *Hazardous Waste*
- *Vector Control*
- *Pollutant Release*

Targeted Constituents

Sediment	●
Nutrients	●
Trash	▲
Metals	●
Bacteria	●
Oil and Grease	▲
Organics	●

Legend (Removal Effectiveness)

● Low ▲ Medium ■ High

✱ Requires Pretreatment

Note: The removal effectiveness ratings shown in the table are for properly designed, sited, and maintained BMPs; some configurations will have variations in pollutant effectiveness.

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Inspection Activities	Suggested Frequency
☐ Inspect regularly to determine if maintenance is required.	Monthly during the wet season, or after significant rain events
☐ Contact the local mosquito and vector control agency if mosquito breeding is observed or suspected.	As needed

Maintenance Activities	Suggested Frequency
☐ Clean out and dispose of accumulated oil, grease, and sediments. Remove accumulated trash and debris. The clean out and disposal techniques should be environmentally acceptable and in accordance with local regulations.	Annual, before the wet season, or more frequent as needed

Additional Information

Water quality inlets are most effective for drainage areas of 1 acre or less. They are often used in industrial applications such as airport runways, equipment washdown areas, and gas station parking lots. WQIs can be situated at the ground surface or underground, and they are available as pre-manufactured or cast-in-place units, typically constructed with reinforced concrete. They should be water-tight to prevent possible groundwater contamination, and should be sited such that vactor trucks can easily access and remove sediment and pollutants.

Since WQIs can be relatively deep, they may be designated as confined spaces. Caution should be exercised to comply with confined space entry safety regulations if it is required.

References

California Department of Transportation. *Treatment BMP Technology Report (CTSW-RT-09-239.06)*, 2010. Available online at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-09-239-06.pdf.

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San Francisco Public Utilities Commission, et al. San Francisco Stormwater Design Guidelines. Appendix A, Stormwater BMP Fact Sheets, 2010. Available online at: http://www.sfwater.org/modules/showdocument.aspx?documentid=2778.

Tahoe Regional Planning Agency. Best Management Practices Handbook, 2012. Available online at: http://www.tahoebmp.org/Documents/2012%20BMP%20Handbook.pdf.

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

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- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Drainage System Maintenance SC-44

Description

As a consequence of its function, the stormwater drainage facilities on site convey stormwater that may contain certain pollutants either to the offsite conveyance system that collects and transports urban runoff and stormwater, or directly to receiving waters. The protocols in this fact sheet are intended to reduce pollutants leaving the site to the offsite drainage infrastructure or to receiving waters through proper on-site conveyance system operation and maintenance. The targeted constituents will vary depending on site characteristics and operations.

Approach

Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

General Pollution Prevention Protocols

- ☐ Maintain catch basins, stormwater inlets, and other stormwater conveyance structures on a regular basis to remove pollutants, reduce high pollutant concentrations during the first flush of storms, prevent clogging of the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system functions properly hydraulically to avoid flooding.
- ☐ Develop and follow a site specific drainage system maintenance plan that describes maintenance locations, methods, required equipment, water sources, sediment collection areas, disposal requirements, and any other pertinent information.

Good Housekeeping

Illicit Connections and Discharges

- ☐ Look for evidence of illegal discharges or illicit connections during routine maintenance of conveyance system and drainage structures:

Objectives
■ *Cover*
■ *Contain*
■ *Educate*
■ *Reduce/Minimize*

Targeted Constituents	
Sediment	✓
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Minimum BMPs Covered	
Good Housekeeping	✓
Preventative Maintenance	✓
Spill and Leak Prevention and Response	✓
Material Handling & Waste Management	
Erosion and Sediment Controls	
Employee Training Program	✓
Quality Assurance Record Keeping	✓

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- ✓ Identify evidence of spills such as paints, discoloring, odors, etc.
- ✓ Record locations of apparent illegal discharges/illicit connections.
- ✓ Track flows back to potential discharges and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
- ✓ Eliminate the discharge once the origin of flow is established.

- ☐ Stencil or demarcate storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" or similar stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- ☐ Refer to fact sheet SC-10 Non-Stormwater Discharges for additional information.

Illegal Dumping

- ☐ Inspect and clean up hot spots and other storm drainage areas regularly where illegal dumping and disposal occurs.
- ☐ Establish a system for tracking incidents. The system should be designed to identify the following:
  - ✓ Illegal dumping hot spots;
  - ✓ Types and quantities (in some cases) of wastes;
  - ✓ Patterns in time of occurrence (time of day/night, month, or year);
  - ✓ Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills); and
  - ✓ Responsible parties.
- ☐ Post "No Dumping" signs in problem areas with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- ☐ Refer to fact sheet SC-10 Non-Stormwater Discharges for additional information.

Preventative Maintenance

Catch Basins/Inlet Structures

- ☐ Staff should regularly inspect facilities to ensure compliance with the following:
  - ✓ Immediate repair of any deterioration threatening structural integrity.
  - ✓ Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.

- Clean catch basins, storm drain inlets, and other conveyance structures before the wet season to remove sediments and debris accumulated during the summer.
- Conduct inspections more frequently during the wet season for problem areas where sediment or trash accumulates more often. Prioritize storm drain inlets; clean and repair as needed.
- Keep accurate logs of the number of catch basins cleaned.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

Storm Drain Conveyance System

- Locate reaches of storm drain with deposit problems and develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect and pump flushed effluent to the sanitary sewer for treatment whenever possible.

Pump Stations

- Clean all storm drain pump stations prior to the wet season to remove silt and trash.
- Do not allow discharge to reach the storm drain system when cleaning a storm drain pump station or other facility.
- Conduct routine maintenance at each pump station.
- Inspect, clean, and repair as necessary all outlet structures prior to the wet season.

Open Channel

- Modify storm channel characteristics to improve channel hydraulics, increase pollutant removals, and enhance channel/creek aesthetic and habitat value.
- Conduct channel modification/improvement in accordance with existing laws. Any person, government agency, or public utility proposing an activity that will change the natural state of any river, stream, or lake in California, must enter into a Steam or Lake Alteration Agreement with the Department of Fish and Wildlife. The developer-applicant should also contact local governments (city, county, special districts), other state agencies (SWRCB, RWQCB, Department of Forestry, Department of Water Resources), and Army Corps of Engineers and USFWS.

Spill Response and Prevention Procedures

- Keep your spill prevention control plan up-to-date.

- Investigate all reports of spills, leaks, and/or illegal dumping promptly.
- Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- Clean up all spills and leaks using "dry" methods (with absorbent materials and/or rags) or dig up, remove, and properly dispose of contaminated soil.

Employee Training Program

- Educate employees about pollution prevention measures and goals.
- Train employees how to properly handle and dispose of waste using the source control BMPs described above.
- Train employees and subcontractors in proper hazardous waste management.
- Use a training log or similar method to document training.
- Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
- Have staff involved in detection and removal of illicit connections trained in the following:
  - ✓ OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).
  - ✓ OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and Federal OSHA 29 CFR 1910.146).
  - ✓ Procedural training (field screening, sampling, smoke/dye testing, TV inspection).

Quality Assurance and Record Keeping

- Keep accurate maintenance logs that document minimum BMP activities performed for drainage system maintenance, types and quantities of waste disposed of, and any improvement actions.
- Keep accurate logs of spill response actions that document what was spilled, how it was cleaned up, and how the waste was disposed.
- Keep accurate logs of illicit connections, illicit discharges, and illegal dumping into the storm drain system including how wastes were cleaned up and disposed.
- Establish procedures to complete logs and file them in the central office.

Potential Limitations and Work-Arounds

Provided below are typical limitations and recommended "work-arounds" for drainage system maintenance:

- Clean-up activities may create a slight disturbance for local aquatic species. Access to items and material on private property may be limited. Trade-offs may exist between channel hydraulics and water quality/riparian habitat. If storm channels or basins are recognized as wetlands, many activities, including maintenance, may be subject to regulation and permitting.

  ✓ Perform all maintenance onsite and do not flush accumulated material downstream to private property or riparian habitats.

- Storm drain flushing is most effective in small diameter pipes (36-inch diameter pipe or less, depending on water supply and sediment collection capacity). Other considerations associated with storm drain flushing may include the availability of a water source, finding a downstream area to collect sediments, and liquid/sediment disposal.

  ✓ Develop and follow a site specific drainage system maintenance plan that describes maintenance locations, methods, required equipment, water sources, sediment collection areas, disposal requirements, and any other pertinent information.

- Regulations may include adoption of substantial penalties for illegal dumping and disposal.

  ✓ Do not dump illegal materials anywhere onsite.

  ✓ Identify illicit connections, illicit discharge, and illegal dumping.

  ✓ Cleanup spills immediately and properly dispose of wastes.

- Local municipal codes may include sections prohibiting discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the sanitary sewer system.

  ✓ Collect all materials and pollutants accumulated in drainage system and dispose of according to local regulations.

  ✓ Install debris excluders in areas with a trash TMDL.

Potential Capital Facility Costs and Operation & Maintenance Requirements

Facilities

- Capital costs will vary substantially depending on the size of the facility and characteristics of the drainage system. Significant capital costs may be associated with purchasing water trucks, vacuum trucks, and any other necessary cleaning equipment or improving the drainage infrastructure to reduce the potential .

- Developing and implementing a site specific drainage system maintenance plan will require additional capital if a similar program is not already in place.

Maintenance

- Two-person teams may be required to clean catch basins with vactor trucks.
- Teams of at least two people plus administrative personnel are required to identify illicit discharges, depending on the complexity of the storm sewer system.
- Arrangements must be made for proper disposal of collected wastes.
- Technical staff are required to detect and investigate illegal dumping violations.
- Methods used for illicit connection detection (smoke testing, dye testing, visual inspection, and flow monitoring) can be costly and time-consuming. Site-specific factors, such as the level of impervious area, the density and ages of buildings, and type of land use will determine the level of investigation necessary.

Supplemental Information

Storm Drain Flushing

Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in storm drainage systems. Flushing may be designed to hydraulically convey accumulated material to strategic locations, such as an open channel, another point where flushing will be initiated, or the sanitary sewer and the treatment facilities, thus preventing re-suspension and overflow of a portion of the solids during storm events. Flushing prevents "plug flow" discharges of concentrated pollutant loadings and sediments. Deposits can hinder the designed conveyance capacity of the storm drain system and potentially cause backwater conditions in severe cases of clogging.

Storm drain flushing usually takes place along segments of pipe with grades that are too flat to maintain adequate velocity to keep particles in suspension. An upstream manhole is selected to place an inflatable device that temporarily plugs the pipe. Further upstream, water is pumped into the line to create a flushing wave. When the upstream reach of pipe is sufficiently full to cause a flushing wave, the inflated device is rapidly deflated with the assistance of a vacuum pump, thereby releasing the backed up water and resulting in the cleaning of the storm drain segment.

To further reduce impacts of stormwater pollution, a second inflatable device placed well downstream may be used to recollect the water after the force of the flushing wave has dissipated. A pump may then be used to transfer the water and accumulated material to the sanitary sewer for treatment. In some cases, an interceptor structure may be more practical or required to recollect the flushed waters.

It has been found that cleansing efficiency of periodic flush waves is dependent upon flush volume, flush discharge rate, sewer slope, sewer length, sewer flow rate, sewer diameter, and population density. As a rule of thumb, the length of line to be flushed should not exceed 700 feet. At this maximum recommended length, the percent removal efficiency ranges between 65-75% for organics and 55-65% for dry weather grit/inorganic material. The percent removal efficiency drops rapidly beyond that. Water is commonly supplied by a water truck, but fire hydrants can also supply water. To make the best use of water, it is recommended that reclaimed water be used if allowed or that fire hydrant line flushing coincide with storm sewer flushing.

References and Resources

City of Seattle, Seattle Public Utilities Department of Planning and Development, 2009. *Stormwater Manual Vol. 1 Source Control Technical Requirements Manual.*

Knox County Tennessee *Stormwater Management Manual* Chapter 5 Drainage System Maintenance, 2008. Available online at: http://www.knoxcounty.org/stormwater/manual/Volume%201/knoxco_swmm_v1_chap5_jan2008.pdf.

US EPA. Storm Drain System Cleaning, 2012. Available online at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=102.

Infiltration Basin TC-11

General Description

An infiltration basin is a shallow impoundment that is designed to infiltrate stormwater. Infiltration basins store stormwater runoff until it gradually exfiltrates into the underlying soil. Pollutant removal occurs through the infiltration of runoff and the adsorption of pollutants into the soil and vegetation. Additional benefits include:

- Reduced runoff volume and attenuation of peak flows, and
- Facilitated groundwater recharge thus helping to maintain low flows in stream systems.

Inspection/Maintenance Considerations

The use and regular maintenance of pretreatment BMPs will significantly minimize maintenance requirements for the basin. Installing vegetated swales or a sediment forebay upstream from the infiltration basin can provide effective pretreatment and reduce maintenance.

Spill response procedures and controls should be implemented to prevent spills from reaching the infiltration system. This BMP may require groundwater monitoring, and basins cannot be put into operation until the upstream tributary area is stabilized.

Advanced BMPs Covered

Maintenance Concerns

- *Vector Control*
- *Clogged soil or outlet structures*
- *Vegetation/Landscape Maintenance*
- *Groundwater contamination*
- *Accumulation of metals*
- *Aesthetics*

Targeted Constituents

Sediment	■
Nutrients	■
Trash	■
Metals	■
Bacteria	■
Oil and Grease	■
Organics	■

Legend (Removal Effectiveness)

● Low ▲ Medium ■ High

✱ Requires Pretreatment

Note: The removal effectiveness ratings shown in the table are for properly designed, sited, and maintained BMPs; some configurations will have variations in pollutant effectiveness.

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Inspection Activities	Suggested Frequency
☐ Observe drain time for a storm after completion or modification of the facility to confirm that the desired drain time has been obtained. ☐ Newly established vegetation should be inspected several times to determine if any landscape maintenance (reseeding, irrigation, etc.) is necessary. ☐ Inspect for upslope or adjacent contributing sediment sources and ensure that pretreatment systems are in place.	Post construction and semi-annually (beginning and end of rainy season)
☐ Inspect for the following issues: differential accumulation of sediment, signs of wetness or damage to structures, erosion of the basin floor, dead or dying grass on the bottom, condition of riprap, drain time, signs of petroleum hydrocarbon contamination, standing water, trash and debris, sediment accumulation, slope stability, pretreatment device condition	Semi-annually and after extreme events
Maintenance Activities	**Suggested Frequency**
☐ Factors responsible for clogging should be repaired immediately.	Immediately
☐ Remove invasive weeds once monthly during the first two growing seasons.	Monthly during growing season
☐ Stabilize eroded banks with erosion control mat or mulch and revegetate. ☐ Repair undercut and eroded areas at inflow and outflow structures. ☐ Maintain access to the basin for regular maintenance activities. ☐ Mow as appropriate for vegetative cover species. ☐ Monitor health of vegetation and replace as necessary. ☐ Control mosquitoes as necessary. ☐ Remove litter and debris from infiltration basin area as required. ☐ Trim vegetation to prevent establishment of woody vegetation that decreases storage volume.	Standard maintenance (as needed)
☐ Mow and remove grass clippings, litter, and debris. ☐ Replant eroded or barren spots to prevent erosion and accumulation of sediment.	Semi-annual
☐ Scrape bottom and remove sediment when accumulated sediment reduces original infiltration rate by 25-50%. Restore original cross-section and infiltration rate. Properly dispose of sediment. ☐ Seed or sod to restore ground cover. ☐ Disc or otherwise aerate bottom. ☐ Dethatch basin bottom.	3-5 year maintenance

If there are actual signs of clogging or significant loss of infiltrative capacity the following maintenance activities should be considered:

- ☐ Mechanically de-thatching and/or aerating the top soils along the sides and bottom of the basin.
- ☐ Tilling or dicing to scarify the bottom of the basin

These activities should be on an "as-needed" rather than on a routine basis. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller, if possible, or a disc harrow pulled by a light tractor.

Clogged infiltration basins with surface standing water can become a breeding area for mosquitoes and midges. Maintenance efforts associated with infiltration basins should include frequent inspections to ensure that water infiltrates into the subsurface completely (recommended infiltration rate of 96 hours or less) and that vegetation is carefully managed to prevent creating mosquito and other vector habitats.

Additional Information

In most cases, surface sediment removed from an infiltration basin during periodic maintenance to restore capacity does not contain toxic materials (e/g metals, oil and grease, or organics) at levels posing a hazardous concern. Studies to date indicate that pond sediments are generally below toxicity limits and can be safely landfilled or disposed onsite. Onsite sediment disposal is always preferable (if local authorities permit) as long as the sediments are deposited away from the perimeter to prevent their reentry into the basin. Sediments should be tested for toxic materials in compliance with current landfill requirements and disposed of properly.

Maintenance activities should use lightweight equipment (e.g. bobcat), which will not compact the underlying soil to remove the top layer of sediment. The remaining soil should be tilled and revegetated as soon as possible.

Sediment removal within the basin should be performed when the sediment is dry enough so that it is cracked and readily separates from the basin floor. This minimizes intermixing of the finer sediment with underlying coarser material on the basin floor.

Special maintenance considerations are required maintain infiltration basins effectiveness in cold climates. Treating runoff containing salt-based deicers in an infiltration basin may reduce soil fertility cause vegetation to fail. Incorporating mulch into the soil can help to mitigate this problem. Infiltration basins should not be used to store snow plowed from highways or parking lots. The sand in this snow can clog the basin. In addition, the chlorides and other pollutants can contaminate the groundwater.

References

California Department of Transportation. *Treatment BMP Technology Report (CTSW-RT-09-239.06)*, 2010. Available online at: http://www.dot.ca.gov/hq/env/stormwater/pdf/CTSW-RT-09-239-06.pdf.

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Ventura Countywide Stormwater Quality Management Program. *Technical Guidance Manual for Stormwater Quality Control Measures*, 2010. Available online at:http://www.vcstormwater.org/documents/workproducts/technicalguidancemanual/2010revisions/Ventura%20Technical%20Guidance%20Document_5-6-10.pdf.

Watershed Management Institute, Inc. *Operation, Maintenance, and Management of Stormwater Management Systems*, 1997. Available online at: http://www.stormwater.ucf.edu/research/stormwaterOMM/stormwateromm.pdf.

Appendix E

A preliminary Soils Report is attached, location specific infiltration testing to be included in Final WQMP

This pages are extracted from prior geotechnical investigation of the subject property

Reference:
Stagecoach Business Park (March 16, 2018). *Results of Infiltration Testing*. (Project No. 18G115-2). Southern California Geotechnical.

Laboratory Testing

Grain Size Analysis

The grain size distribution of selected soils from the base of each infiltration test trench has been determined using a range of wire mesh screens. These tests were performed in general accordance with ASTM D-422 and/or ASTM D-1140. The weight of the portion of the sample retained on each screen is recorded and the percentage finer or coarser of the total weight is calculated. The results of these tests are presented at the end of this report.

Design Recommendations

A total of six (6) infiltration tests were performed at the subject site. As noted above, the calculated infiltration rates at the infiltration test locations range from 4.7 to 18.6 inches per hour. The primary reasons for the varying infiltration rates are the varying relative densities and the silt content of the soils encountered, which vary at different depths and locations. Higher silt content was observed within the soil exposed at the bottom of Infiltration Test No. I-1, which exhibited a slower infiltration rate.

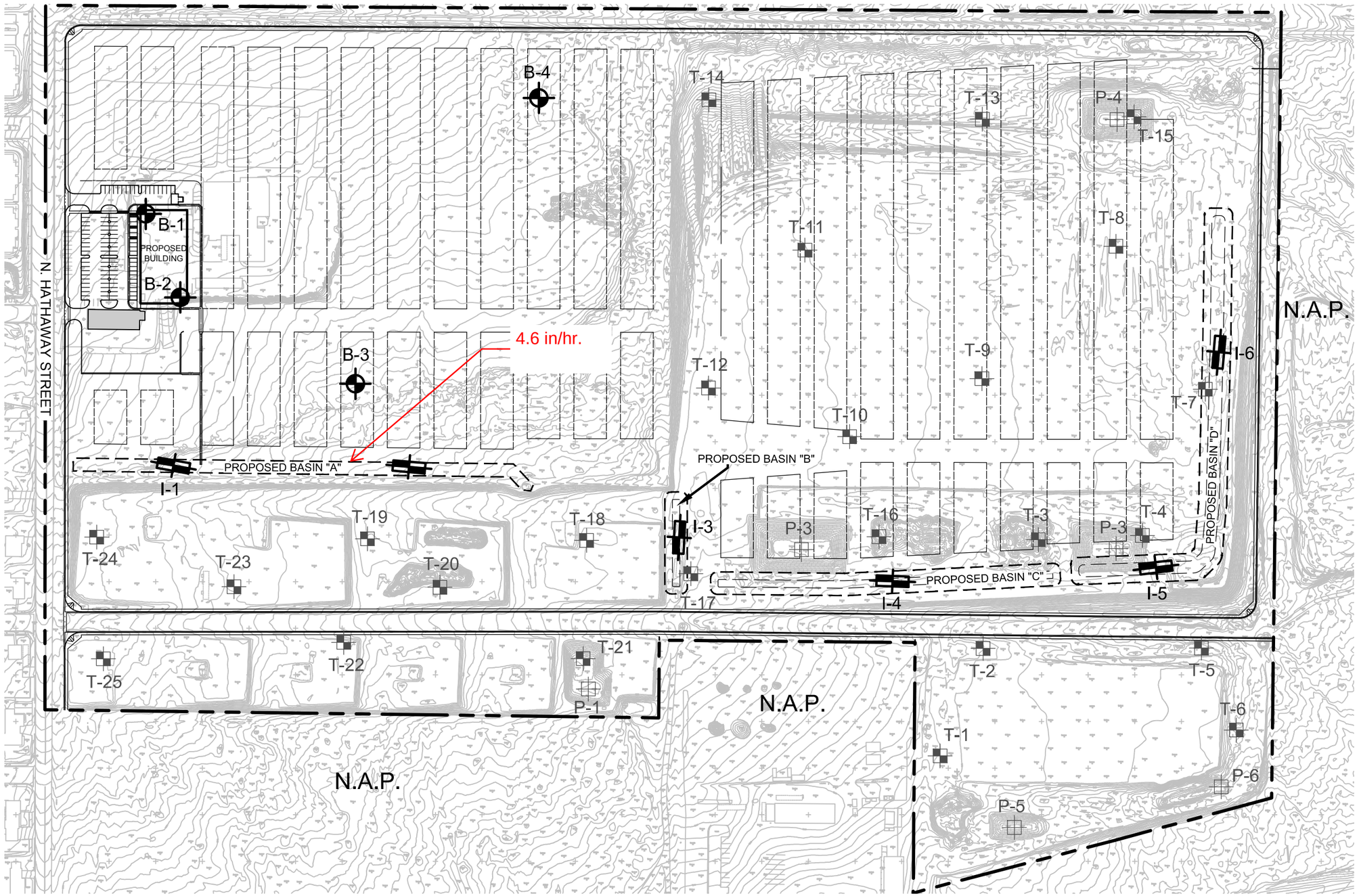
Based on the infiltration test results, the following infiltration rates are recommended:

Infiltration Basin	Infiltration Rate (in/hr)
A	4.7
B	15.4
C	14.2
D	16.2

The design of the proposed storm water infiltration systems should be performed by the project civil engineer, in accordance with the City of Banning and/or Riverside County guidelines. However, it is recommended that the systems be constructed so as to facilitate removal of silt and clay, or other deleterious materials from any water that may enter the systems. The presence of such materials would decrease the effective infiltration rates. **The project civil engineer should apply an appropriate factor of safety. The infiltration rates recommended above are based on the assumption that only clean water will be introduced to the subsurface profile. Any fines, debris, or organic materials could significantly impact the infiltration rate.** It should be noted that the recommended infiltration rates are based on infiltration testing at six (6) discrete locations and the overall infiltration rates of the storm water infiltration systems could vary considerably.

Infiltration versus Permeability

Infiltration rates are based on unsaturated flow. As water is introduced into soils by infiltration, the soils become saturated and the wetting front advances from the unsaturated zone to the saturated zone. Once the soils become saturated, infiltration rates become zero, and water can only move through soils by hydraulic conductivity at a rate determined by pressure head and soil



For reference Only.

Infiltration rates used in this preliminary were abstracted from prior Infiltration tests performed at Location I-1.

GEOTECHNICAL LEGEND

- APPROXIMATE INFILTRATION TEST LOCATION
- APPROXIMATE BORING LOCATION FROM CONCURRENT STUDY (SCG PROJECT NO. 18G115-1)
- EXISTING BUILDING TO BE DEMOLISHED
- PREVIOUS TRENCH LOCATION (SCG PROJECT NO. 06G227-1)
- PREVIOUS INFILTRATION TRENCH LOCATION (SCG PROJECT NO. 06G227-5)

NOTE: SITE PLAN PREPARED BY STANTEC, INC.

INFILTRATION TEST LOCATION PLAN

PROPOSED STAGECOACH BUSINESS PARK

BANNING, CALIFORNIA

SCALE: 1" = 220'	
DRAWN: SM CHKD: GKM	
SCG PROJECT 18G115-2	
PLATE 2	

SOUTHERN CALIFORNIA GEOTECHNICAL

INFILTRATION CALCULATIONS

Project Name	Proposed Stagecoach Business Park
Project Location	Banning, CA
Project Number	18G115-2
Engineer	Scott McCann

Infiltration Test No: I-1

Constants

	Diameter (ft)	Area (ft^2)	Area (cm^2)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval **Elapsed** (min)	Flow Readings: Inner Ring (ml)	Flow Readings: Ring Flow (cm^3)	Flow Readings: Annular Ring (ml)	Flow Readings: Space Flow (cm^3)	Infiltration Rates: Inner Ring* (cm/hr)	Infiltration Rates: Annular Space* (cm/hr)	Infiltration Rates: Inner Ring* (in/hr)	Infiltration Rates: Annular Space* (in/hr)
1	Initial	1:00 PM	5	350	900	700	2900	14.80	15.90	5.83	6.26
	Final	1:05 PM	**5**	1250		3600					
2	Initial	1:06 PM	5	125	775	500	2650	12.75	14.53	5.02	5.72
	Final	1:11 PM	**11**	900		3150					
3	Initial	1:12 PM	5	900	800	3150	2450	13.16	13.43	5.18	5.29
	Final	1:17 PM	**17**	1700		5600					
4	Initial	1:18 PM	5	925	775	2650	2400	12.75	13.16	5.02	5.18
	Final	1:23 PM	**23**	1700		5050					
5	Initial	1:24 PM	5	1700	750	5200	2400	12.33	13.16	4.86	5.18
	Final	1:29 PM	**29**	2450		7600					
6	Initial	1:30 PM	5	2450	750	8100	2400	12.33	13.16	4.86	5.18
	Final	1:35 PM	**35**	3200		10500					
7	Initial	1:36 PM	5	100	750	300	2400	12.33	13.16	4.86	5.18
	Final	1:41 PM	**40**	850		2700					
8	Initial	1:42 PM	5	200	725	250	2400	11.92	13.16	4.69	5.18
	Final	1:47 PM	**46**	925		2650					

GEOTECHNICAL INVESTIGATION
PROPOSED BANNING INDUSTRIAL PARK

NEC Hathaway Street and Nicolet Street
Banning, California
for
First Industrial Realty Trust

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

March 24, 2021

First Industrial Realty Trust
898 N. Pacific Coast Highway, Suite 175
El Segundo, California 90245

Attention: Mr. Matt Pioli
Investment Officer

Project No.: **21G119-1**

Subject: **Geotechnical Investigation**
Proposed Banning Industrial Park
NEC Hathaway Street and Nicolet Street
Banning, California

References: 1) Geotechnical Investigation, Proposed Commercial/Industrial Development, Hathaway Street, North of Ramsey Street, APNs 532-11-003, -008, -009, -010, Banning, California, prepared by SCG for The O'Donnell Group, SCG Project No. 06G227-1, dated October 25, 2006.

2) Interim Rough Grade Compaction Report, Proposed Banning Business Park, Hathaway Street, North of Ramsey Street, Banning, California, prepared by SCG for The O'Donnell Group, SCG Project No. 10M132-4, dated October 13, 2011.

3) Update of Geotechnical Investigation Report, Proposed Stagecoach Business Park, Hathaway Street at Nicolet Street, Banning, California, prepared by SCG for Copart, Inc., SCG Project No. 18G115-1R, dated March 15, 2018.

Dear Mr. Pioli:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,
SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Ricardo Frias, RCE 91772
Project Engineer

Robert G. Trazo, GE 2655
Principal Engineer

Distribution: (1) Addressee

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

Geotechnical Design Considerations

- The subject site is located in a mapped liquefaction hazard zone. However, based on the in-situ soil strength and a groundwater depth that exceeds 50 feet, the liquefaction potential is considered to be very low.
- Engineered fill soils were encountered in all of the borings and trenches performed within the previously overexcavated areas of the site, extending from the ground surface to depths of 6 to 12± feet.
- Artificial fill soils were encountered at some of the boring and trench locations, extending from the ground surface to depths of 4½ to 10½± feet.
- Native alluvial soils were encountered at all of the boring and trench locations, extending at least to the maximum depth explored of 15± feet.
- The near-surface native alluvial soils generally consist of non-expansive medium dense to very dense silty sands, gravelly sands and well-graded sands.

Site Preparation Recommendation

- Initial site stripping should include removal of the surficial vegetation from the site. These materials should be properly disposed of off-site.
- Demolition of the existing structures and pavements will be required in order to facilitate construction of the new building(s). Demolition should also include all utilities and any other subsurface improvements that will not remain in place for use with the new development. Debris resultant from demolition should be disposed of offsite. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills.
- Remedial grading should be performed within the new building pad area to remove all of the undocumented fill soils and a portion of the upper portion of the native alluvium and engineered fill soils. Based on the conditions encountered at the borings, these fill soils extend to depths of 4½ to 10½± feet below the existing site grades. In addition, the building pad overexcavation should extend to a depth of at least 4 feet below existing grade and to a depth of at least 4 feet below proposed pad grade throughout the building area that was not previously overexcavated.
- The proposed foundation influence zones should be overexcavated to a depth of at least 3 feet below proposed foundation bearing grade.
- Depending on the proposed site grades in the new building area, additional grading may be necessary in previously graded areas in order to provide at least 3 feet of compacted fill below foundation bearing grades and to a depth of at least 2 feet below existing grade.
- Following completion of the overexcavation, the exposed soils should be scarified to a depth of at least 12 inches, and thoroughly flooded to raise the moisture content of the underlying soils to at least 0 to 4 percent above optimum moisture content, extending to a depth of at least 24 inches. The overexcavation subgrade soils should then be recompacted to at least

90 percent of the ASTM D-1557 maximum dry density. The previously excavated soils may then be replaced as compacted structural fill.

- The on-site soils contain significant amounts of oversized materials, including cobbles and boulders. Selective grading techniques will be required to remove the cobbles and/or boulders from these soils prior to reuse as fill.
- It is recommended that all materials greater than 6-inches in size be excluded from the upper 1 foot of the surface of any compacted fills. Materials greater than 6-inches in size but smaller than 12-inches in size can be placed within the upper 8 feet of any compacted fills. Larger boulders (24±-inches in size and larger) should be sorted, hauled off-site or stockpiled. A portion of the 24-inch and greater diameter material can be placed at the bottom of the deeper overexcavations (10 feet or greater below the proposed grades). On-site sandy soils should then be flooded around the oversize material that was placed at the bottom of the overexcavation.
- The new pavement and flatwork subgrade soils are recommended to be scarified to a depth of 12± inches, thoroughly moisture conditioned and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.

Foundation Design Recommendations

- Conventional shallow foundations, supported in newly placed compacted fill.
- 3,000 lbs/ft^2 maximum allowable soil bearing pressure.
- Reinforcement consisting of at least two (2) No. 5 rebars (1 top and 1 bottom) in strip footings. Additional reinforcement may be necessary for structural considerations.

Building Floor Slab Design Recommendations

- Conventional Slab-on-Grade: minimum 6 inches thick.
- Modulus of Subgrade Reaction: k = 150 psi/in.
- Reinforcement is not expected to be necessary for geotechnical considerations.
- The actual thickness and reinforcement of the floor slab should be determined by the structural engineer.

Pavement Design Recommendations

ASPHALT PAVEMENTS (R = 50)					
Materials	**Thickness (inches)**				
	Parking Stalls (TI = 4.0)	Auto Drive Lanes (TI = 5.0)	Truck Traffic		
			(TI = 6.0)	(TI = 7.0)	(TI = 8.0)
Asphalt Concrete	3	3	3½	4	5
Aggregate Base	3	3	4	5	5
Compacted Subgrade (90% minimum compaction)	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 50)				
Materials	**Thickness (inches)**			
	Automobile Parking and Drive Areas (TI = 5.0)	Truck Traffic		
		(TI =6.0)	(TI =7.0)	(TI =8.0)
PCC	5	5	5½	6½
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 21P140, dated January 28, 2021. The scope of services included a visual site reconnaissance, subsurface exploration, field and laboratory testing, and geotechnical engineering analysis to provide criteria for preparing the design of the building foundations, building floor slab, and parking lot pavements along with site preparation recommendations and construction considerations for the currently proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical investigation.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The subject site is located at the northeast corner of Hathaway Street and Nicolet Street in Banning, California. The site is bounded to the north by the future Wilson Street and the Morongo Indian Reservation, to the west by Hathaway Street, to the south by the future Nicolet Street and the I-10 freeway, and to the east by the future O'Donnell Street and a vacant lot. The general location of the site is illustrated on the Site Location Map, enclosed as Plate 1 in Appendix A of this report.

The overall site consists of six (6) rectangular to irregular-shaped parcels, totaling 82.81± acres in size. The two (2) northwestern parcels were formerly occupied by ORCO Block & Hardscape, as a concrete block manufacturing facility, which is presently unoccupied. Most of the structures and other improvements associated with this facility have been demolished, with the exception of one building located in the west-central area. The building is a single-story structure of masonry block construction, approximately 4,300 ft^2 in size, and is and is assumed to be supported on conventional shallow foundations with a slab-on-grade floor. Some slabs and foundations of former structures are also present in the area surrounding the existing building. A retaining wall ranging from 1 to 6± feet in height and approximately 200 feet in length is present near the southern and eastern areas of the existing building. Ground surface cover in this area consists of asphaltic concrete and Portland cement concrete (PCC) pavements. The pavements are in poor condition with moderate to severe cracking throughout. Ground surface cover in the remaining areas of these two northwestern parcels consist of exposed soil and sparse to moderate native grass, weed, and small shrub growth.

The remaining four (4) parcels are located in the southern and eastern areas of the overall site. These parcels were graded in 2011 for a previously proposed development which was not completed. SCG provided geotechnical observation and testing services during the rough grading of portions of these parcels. A summary of the grading operations and the results of our observation and testing are discussed in the referenced Interim Rough Grade Compaction Report (Reference No. 2). These parcels are generally vacant with the exception of six (6) existing detention basins. The basins have depths ranging from 10 to 17± feet. Several slopes are present within these parcels, generally located along the boundaries of the four parcels. The inclinations of the slopes range from 2h:1v to 5h:1v and are 5 to 24± feet in height. Several large stockpiles of boulders and large cobbles are present in the south-central region of the northeastern parcels. The stockpiles are 40 to 90± feet in width and 95 to 180± feet in length and are approximately 4 to 11± feet in height. Ground surface cover throughout the parcels consists of exposed soil with sparse to moderate native grass and weed growth.

Detailed topographic information was not available at the time of this report. Based on elevations obtained from Google Earth, and visual observations made at the time of the subsurface investigation, with the exception of the aforementioned slopes, the existing site grades range from a maximum elevation of 2,331± feet mean sea level (msl) in the

northwestern corner of the site to a minimum elevation of 2,211± feet msl in the southeastern corner. The overall site topography generally slopes gently downward to the southeast at a gradient of 1± percent with the exception of slopes and rough-graded building pads.

3.2 Proposed Development

Based on the preliminary site plan, provided by the client, the site will be developed with one new (1) commercial/industrial building, 1,400,640± ft² in size. The building will be located in the north-central area of the site. The site plan indicates that dock-high doors will be constructed along portions of the north and south building walls. The building will be surrounded by asphaltic concrete pavements in the automobile parking and drive areas, Portland cement concrete (PCC) pavements in the truck court, and areas of concrete flatwork and landscape planters.

Detailed structural information has not been provided. We assume that the new warehouse will be a single-story structure of tilt-up concrete construction, typically supported on a conventional shallow foundation system with a concrete slab-on-grade floor. Based on the assumed construction, maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below-grade construction, such as basements or crawl spaces, are expected to be included in the proposed development. At the time of this report precise grading plans were not available. Based on the assumed topography, preliminary cuts and fills of up to 10± feet are expected to be necessary to achieve the proposed site grades.

3.3 Previous Studies

SCG prepared the three referenced geotechnical reports for the previously proposed development at the subject site. Pertinent details of these studies are described below.

SCG previously performed a geotechnical investigation for this site, the results of which were presented in Reference No. 1, dated October 25, 2006. The subject area of this report consisted of the entire subject are with the exception of the two northwestern-most parcels which were previously occupied by the ORCO Block facility. The subsurface exploration conducted for this project consisted twenty-five (25) trenches (identified as Trench Nos. T-1 through T-25). The trenches were excavated to depths of 4 to 14± feet below grade. Immediately beneath any surficial topsoil, all of the trenches encountered native alluvial soils. The alluvium generally consisted of silty fine to coarse sand, with some fine to coarse gravel content, extensive cobbles, and occasional boulders. At depths below 4± feet, the alluvium became coarser, generally consisting of medium dense to dense fine to coarse sands with some fine to coarse gravel content, extensive cobbles and some boulders extending to at least the maximum depth explored of 14± feet.

Based on the conditions encountered at the trench locations, it was recommended that remedial grading be performed within the building pad areas. The building pad areas were recommended to be overexcavated to a depth of at least 4 feet below existing grade and to a depth of at least 4 feet below the proposed pad grade. Additional overexcavation was recommended within the

foundation influence zones extending to a depth of 3 feet below the bearing grade of all foundations.

Reference No. 2 was prepared to document our observation and testing performed at the subject site. At the time of this interim report, remedial grading activities had only been performed in the portions of the future building pad areas which required fill in order to establish the finished rough finished grades. No remedial grading was performed within the "cut" portions of the future building pads. Remedial grading was performed in areas that were to receive fill. The remedial grading consisted of the removal of the upper 4± feet of soils present in the "fill" portion of the proposed building pad areas. Generally, the fill areas were overexcavated to depths ranging from 4 to 24± feet below the proposed pad grades. The on-site soils were then used for structural compacted fill in order to establish the planned pad grades within the fill areas.

Sorting of oversize rock material was performed during the rough grading operations. Cobbles greater than 6± inches in diameter were generally removed from the top 12 inches of the fill in the building pad areas. Rocks greater than 12± inches in diameter were sorted from the top 8 feet of fill in the pad areas. Materials greater than 18± inches in diameter were sorted and hauled off-site or stockpiled. A portion of the 18-inch and greater diameter material was placed at the bottom of the deeper overexcavation (15 to 20 feet below pad grade) at the east end of northeast building pad. On-site sandy soils were then flooded around the oversize material that was placed at the bottom of the overexcavation.

SCG prepared an updated geotechnical report (Reference No. 3) for the subject site, dated March 15, 2018. As part of this update report, subsurface exploration was performed with the area of the former ORCO Block facility. The subsurface exploration consisted of four (4) borings (identified as Boring Nos. B-1 through B-4) advanced to depths of 10 to 20± feet. Asphaltic concrete pavements were present at the ground surface at Boring No. B-2. The asphalt pavements consisted of 1± inch of asphaltic concrete, with no discernable layer of underlying aggregate base. Artificial fill soils were encountered beneath the asphaltic concrete at Boring B-2 and at the ground surface at Boring Nos. B-3. The fill soils extend to a depth of 2½ to 3± feet below the existing site grades. The fill soils generally consisted of loose to medium dense silty fine to medium sands and fine to coarse sands with varying gravel content. The fill soils possess a disturbed appearance resulting in their classification as artificial fill. Soils classified as possible fill were encountered beneath artificial fill soils at Boring B-2 and at the ground surface at Boring Nos. B-1 and B-4, extending to depths of 2½ to 4± feet below the existing site grades. The possible fill soils generally consisted of medium dense fine to coarse sands and fine to coarse sandy gravels to gravelly fine to coarse sands with occasional cobbles. These soils possess a somewhat disturbed appearance, but lack obvious indicators of fill, resulting in their classification as possible fill. Native alluvial soils were encountered beneath the artificial fill and/or possible fill soils at all of the boring locations, extending to at least the maximum depth explored of 20± feet below existing site grades. The alluvium generally consisted of medium dense to very dense gravelly fine to coarse sands, fine to coarse sandy gravels, and fine to coarse sands with occasional cobbles.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of six (6) borings advanced to depths of 6 to 15± feet below the existing site grades and ten (10) trenches excavated to depths of 6½ to 10½± feet. Three of the borings and seven of the trenches were terminated at depths shallower than proposed after encountering refusal on cobbles and boulders. All of the borings and trenches were logged during the drilling and excavation by members of our staff.

The borings were advanced with hollow-stem augers, by a truck-mounted drilling rig. The trenches were excavated using a backhoe with a 36-inch-wide bucket. Representative bulk and undisturbed soil samples were taken during drilling. Relatively undisturbed samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. Samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings (identified as Boring Nos. B-1 through B-6) and trenches (identified as Trench Nos. T-1 through T-10) are indicated on the Boring and Trench Location Plan, included as Plate 2 in Appendix A of this report. The Boring and Trench Logs, which illustrate the conditions encountered at the boring and trench locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Engineered Fill

Boring Nos. B-5 and B-6 and Trench Nos. T-9 and T-10 were performed within the previously overexcavated areas of the site. Within this area, Boring Nos. B-5 and B-6 and Trench Nos. T-9 and T-10 encountered engineered fill soils, extending to depth of 12, 10, 6½, and 6± feet below the existing site grades, respectively. It should be noted that Boring Nos. B-5 and B-6 and Trench No. T-9 were terminated in engineered fill due to refusal on dense to very dense cobbles and boulders. The engineered fill soils consist of dense to very dense gravelly sands and silty sands with trace amounts of silt and occasional to extensive amounts of cobbles. These materials were placed and compacted during rough grading procedures, as discussed in the referenced rough grade report.

Artificial Fill

Artificial fill soils were encountered at the ground surface at Boring No. B-2 and at Trench Nos. T-4 and T-5, extending to depths of 4½ to 10½± feet below ground surface. The fill soils generally consist of medium dense to very dense silty sands, gravelly sands, and well-graded sands, with varying gravel and cobble content. The fill soil possesses a disturbed and mottled appearance, as well as asphaltic concrete, PCC, and CMU fragments and steel pipes, resulting in their classification as artificial fill. It should be noted that Trench Nos. T-4 and T-5 were terminated within artificial fill soils.

Alluvium

Native alluvium was encountered beneath the engineered fill soils and the artificial fill soils, and at the ground surface at all of the boring and trench locations, extending to at least the maximum depth explored of 15± feet below ground surface. The alluvial soils generally consist of medium dense to very dense silty sands, gravelly sands, and well- and poorly-graded sands, with varying silt, cobble and boulder content.

Groundwater

Groundwater was not encountered at any of the borings or trenches. Based on the lack of any water within the borings and trenches, and the moisture contents of the recovered soil samples, the static groundwater table is considered to have existed at a depth in excess of 15± feet below existing site grades, at the time of the subsurface investigation.

As part of our research, we reviewed available groundwater data in order to determine the historic high groundwater level for the site. The primary reference used to determine the groundwater depths in this area is the California Department of Water Resources website, http://www.water.ca.gov/waterdatalibrary/. The nearest monitoring well in this database is located approximately 1,600 feet northwest of the site. Water level readings within this monitoring well indicate a high groundwater level of 541± feet below the ground surface in June 2013.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. The field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring and Trench Logs and are periodically referenced throughout this report.

Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring and Trench Logs.

Consolidation

Selected soil samples were tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-4 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

A representative bulk sample has been tested for its maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557 and are presented on Plate C-5 in Appendix C of this report. This test is generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Soluble Sulfates

Representative samples of the near-surface soil were submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which

comes into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-4 @ 0 to 5 feet	0.001	Not Applicable (S0)
B-6 @ 0 to 5 feet	0.001	Not Applicable (S0)

Corrosivity Testing

Representative samples of the near-surface soils were submitted to a subcontracted corrosion engineering laboratory to identify potentially corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, and chloride and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

Sample Identification	Saturated Resistivity (ohm-cm)	pH	Chlorides (mg/kg)	Nitrates (mg/kg)
B-4 @ 0 to 5 feet	18,400	8.2	4.1	10
B-6 @ 0 to 5 feet	7,200	7.1	4.6	49

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. The recommendations contained in this report should be taken into the design, construction, and grading considerations.

The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record. The recommendations are provided with the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to verify compliance with these recommendations. Maintaining Southern California Geotechnical, Inc., (SCG) as the geotechnical consultant from the beginning to the end of the project will provide continuity of services. The geotechnical engineering firm providing testing and observation services shall assume the responsibility of Geotechnical Engineer of Record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site-specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structures should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigation. Therefore, the possibility of significant fault rupture on the site is considered to be low.

The potential for other geologic hazards such as seismically induced settlement, lateral spreading, tsunamis, inundation, seiches, flooding, and subsidence affecting the site is considered low.

Seismic Design Parameters

The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site.

Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake (MCE_R) site accelerations at 0.01-degree intervals for each of the code documents. The tables below were created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped Spectral Acceleration at 0.2 sec Period	S_S	2.108
Mapped Spectral Acceleration at 1.0 sec Period	S_1	0.844
Site Class	---	C
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	2.529
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	1.182
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	1.686
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.788

Based on the presence of dense to very dense soils, generally encountered in a majority of the boring and trench locations, we have classified this site as Site Class C in accordance with ASCE 7-16, Chapter 20. Additionally, ASCE 7-16 allows for the determination of site-specific seismic design parameters in accordance with ASCE 7-16 Chapter 21 instead of using the code derived values presented above. Depending upon structural considerations, and the site classification of Site Class C, it may be desirable to perform a ground motion hazard analysis for this site in accordance with ASCE 7-16 Section 21.2. At the client's request, SCG can prepare a proposal to perform a ground motion hazard analysis.

Liquefaction

Liquefaction is the loss of strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include

groundwater table elevation, soil type and plasticity characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Non-sensitive clayey (cohesive) soils which possess a plasticity index of at least 18 (Bray and Sancio, 2006) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The Riverside County GIS website indicates that the subject site is located within a zone of moderate liquefaction susceptibility. However, the subsurface conditions encountered at the boring and trench locations are not considered to be conducive to liquefaction. These conditions consist of moderate to high strength engineered fill and native alluvial soils and no evidence of a long-term groundwater table within the depths explored by the borings or trenches. Based on these considerations, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

Boring Nos. B-5 and B-6 and Trench Nos. T-9 and T-10 were drilled or excavated within the future building area, in the previously overexcavated area of the subject site. Based on their strength characteristics, and the previous SCG rough grade compaction report (Reference 2), the existing fill soils encountered within the previously-overexcavated area are considered to represent engineered fill soils. These materials are considered to be suitable for support of the new structure, subject to limited remedial grading discussed below. Boring No. B-2 and Trench Nos. T-4 and T-5 were performed within the area of the former ORCO Block facility. The near-surface fill soils encountered at these locations are considered to represent undocumented fill and are not suitable for support of new structure. In addition, some of the near-surface alluvial soils possess moisture contents well below the optimum moisture content for compaction.

Based on the existing conditions, remedial grading is considered warranted within the proposed building area in order to remove the existing artificial fill soils and a portion of the near-surface alluvial soils and replace these materials as compacted structural fill.

Settlement

The recommended remedial grading will remove all of the undocumented fill soils and a portion of the near-surface native alluvium and replace these soils as compacted structural fill. The native soils that will remain in place below the recommended depth of overexcavation will not be subject to significant load increases from the foundations of the new structure. Provided that the recommended remedial grading is completed, the post-construction static settlements of the proposed structure are expected to be within tolerable limits.

Slope Stability

No evidence of landslides or deep seated slope instability was noted during our investigation. However, the loose granular soils on sloping ground surfaces could be prone to surficial failures.

Newly constructed fill slopes, comprised of properly compacted engineered fill, at inclinations of 2h:1v or less will possess adequate gross stability. Cut slopes excavated within the existing granular alluvial soils may be subject to surficial instability due to the lack of cohesion within these materials. Therefore, stability fills may be required within these areas. This condition may affect the proposed cut slopes at the site. The need for stability fills should be determined by SCG as part of the detailed grading plan review and/or during grading.

Expansion

The on-site soils generally consist of silty sands, gravelly sands, and well-graded sands with varying amounts of gravel, cobbles, and boulders. These materials have been visually classified as non-expansive. Therefore, no design considerations related to expansive soils are considered warranted for this site.

Soluble Sulfates

The results of the soluble sulfate testing indicated a sulfate concentration of approximately 0.001 percent for the selected samples of the near-surface soils. This concentration is considered to be "not applicable" (S0) with respect to the American Concrete Institute (ACI) Publication 318-14 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building area.

Corrosion Potential

The results of laboratory testing indicate that the on-site soils possess saturated resistivity values ranging of 7,200 to 18,400 ohm-cm, and pH values ranging of 7.1 to 8.2. These test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Sulfides, and redox potential are factors that are also used in the evaluation procedure. We have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH, and moisture content. Based on these factors, and utilizing the DIPRA procedure, the on-site soils are not considered to be corrosive to ductile iron pipe. Therefore, polyethylene encasement or some other appropriate method of protection may be required for iron pipes.

Based on American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary, reinforced concrete that is exposed to external sources of chlorides requires corrosion protection for the steel reinforcement contained within the concrete. ACI 318 defines concrete exposed to moisture and an external source of chlorides as "severe" or exposure category C2. ACI 318 does not clearly define a specific chloride concentration at which contact with the adjacent soil will constitute a "C2" or severe exposure.

However, the Caltrans Memo to Designers 10-5, Protection of Reinforcement Against Corrosion Due to Chlorides, Acids and Sulfates, dated June 2010, indicates that soils possessing chloride concentrations greater than 500 mg/kg are considered to be corrosive to reinforced concrete. The results of the laboratory testing indicate chloride concentrations of 4.1 to 4.6 mg/kg. Although the soils contain some chlorides, we do not expect that the chloride concentrations of the tested soils are high enough to constitute a "severe" or C2 chloride exposure. Therefore, a chloride exposure category of C1 is considered appropriate for this site.

Nitrates present in soil can be corrosive to copper tubing at concentrations greater than 50 mg/kg. The tested samples possess nitrate concentrations of 10 to 49 mg/kg. Based on this test result, the on-site soils are not considered to be corrosive to copper pipe.

Since SCG does not practice in the area of corrosion engineering, we recommend that the client contact a corrosion engineer to provide a more thorough evaluation of these test results.

Shrinkage/Subsidence

Removal and recompaction of the existing fill soils and near-surface alluvium is estimated to result in an average shrinkage of 3 to 13 percent. It should be noted that the potential shrinkage estimate is based on our experience with similar projects at nearby sites. It was not practical to obtain undisturbed samples based on the gravel, cobble, and boulder content of the onsite soils. Therefore, the actual amount of shrinkage could vary considerably from these estimates. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1± feet. This estimate may be used for grading in areas that are underlain by native alluvial soils.

These estimates are based on previous experience and the subsurface conditions encountered at the trench locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Grading and Foundation Plan Review

Grading and foundation plans were not available at the time of this report. It is recommended that we be provided with copies of the preliminary grading and foundation plans, when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report.

6.3 Site Grading Recommendations

The grading recommendations presented below are based on the subsurface conditions encountered at the trench locations and our understanding of the proposed development. We recommend that all grading activities be completed in accordance with the Grading Guide

Specifications included as Appendix D of this report, unless superseded by site-specific recommendations presented below.

Site Stripping

Initial site preparation should include stripping of any surficial vegetation. This includes the removal of the sparse native grass, weeds, and shrubs present at the site. These materials should be disposed of off-site. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

The proposed development will require extensive demolition of the existing buildings and pavements. Additionally, any existing improvements that will not remain in place for use with the new development should be removed in their entirety. This should include all foundations, floor slabs, utilities, and any other subsurface improvements associated with the existing structures. The existing pavements are not expected to be reused with the new development. Debris resultant from demolition should be disposed of off-site. Alternatively, concrete and asphalt debris may be pulverized to a maximum 2-inch particle size, well mixed with the on-site soils, and incorporated into new structural fills. These materials may also be crushed and made into miscellaneous base for use in the proposed pavement areas**.**

Treatment of Existing Soils: Building Pad

Remedial grading should be performed within the new building pad area to remove all of the undocumented fill soils and a portion of the upper portion of the native alluvium and engineered fill soils. Based on the conditions encountered at the borings, these fill soils extend to depths of 4½ to 10½± feet below the existing site grades. In addition, the building pad overexcavation should extend to a depth of at least 4 feet below existing grade and to a depth of at least 4 feet below proposed pad grade throughout the building area that was not previously overexcavated.

Additional overexcavation should be performed within the influence zones of the new foundations, to provide for a new layer of compacted structural fill extending to a depth of at least 3 feet below proposed foundation bearing grade.

SCG should be provided with the grading and foundation plans for the proposed building, when they become available, in order to determine the extent of the remedial grading necessary in the previously graded areas. As discussed above and in Reference No. 2, no remedial grading was performed in the proposed cut areas of the graded building pads. Therefore, it will be necessary to perform the recommended remedial grading in these areas that were not overexcavated during the previous rough grading operations. Additionally, depending on the proposed site grades in the new building area, additional grading may be necessary in previously graded areas in order to provide at least 3 feet of compacted fill below foundation bearing grades and to a depth of at least 2 feet below existing grade.

The overexcavation areas should extend at least 5 feet beyond the building and foundation perimeters, and to an extent equal to the depth of fill below the new foundations. If the proposed structure incorporates any exterior columns (such as for a canopy or overhang) the overexcavations should also encompass these areas.

Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. This evaluation should include proofrolling with a heavy rubber-tire vehicle to identify any soft, loose or otherwise unstable soils that must be removed. Some localized areas of deeper excavation may be required if dry, loose, porous, low density or otherwise unsuitable materials are encountered at the base of the overexcavation.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches, and thoroughly flooded to raise the moisture content of the underlying soils to at least 0 to 4 percent above optimum moisture content, extending to a depth of at least 24 inches. The moisture conditioning of the overexcavation subgrade soils should be verified by the geotechnical engineer. The subgrade soils should then be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The previously excavated soils may then be replaced as compacted structural fill.

Treatment of Existing Soils: Cut and Fill Slopes

New cut and fill slopes will be constructed within and around the perimeter of the project. Slope heights were not indicated on the provided site plan. Maximum heights of cut and fill slopes were assumed to be within the range of 20± and 30± feet. A keyway should be excavated at the toe of new fill slopes which are not located in fill areas. The keyway should be at least 15 feet in width and 2 feet deep. The recommended width of the keyway is based on 1.5 times the width of typical grading equipment. If smaller equipment is utilized, a smaller keyway may be suitable, at the discretion of the geotechnical engineer. The base of the keyway should slope at least 1 foot downward into the slope. Following completion of the keyway cut, the subgrade soils should be evaluated by the geotechnical engineer to verify that the keyway is founded into competent materials. The resulting subgrade soils should then be scarified to a depth of 10 to 12 inches, moisture conditioned to 0 to 4 percent above optimum moisture content and recompacted. During construction of new fill slopes, the existing slope should be benched in accordance with the detail presented on Plate D-4. Benches less than 4 feet in height may be used at the discretion of the geotechnical engineer.

Should a stability fill for cut slope be necessary, the recommendations for the stability fill will be the same as the recommendations for the fill slopes, mentioned above.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of proposed retaining and non-retaining site walls should be overexcavated to a depth of at least 3 feet below foundation bearing grade and replaced as compacted structural fill. Any undocumented fill soils within any of these foundation areas should be removed in their entirety. Erection pads for concrete tilt-up walls are considered part of the foundation system, and the recommended overexcavation should also be performed beneath erection pads. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning and recompacting the upper 12 inches of exposed subgrade soils. The previously excavated soils may then be replaced as compacted structural fill.

If the full lateral extent of overexcavation is not achievable for the proposed walls, the foundations should be redesigned using a lower bearing pressure. The geotechnical engineer of record should be contacted for recommendations pertaining to this type of condition.

Treatment of Existing Soils: Parking and Drive Areas

Based on economic considerations, overexcavation of the existing near-surface soils in the new parking and drive areas is not considered warranted, with the exception of areas where lower strength or unstable soils are identified by the geotechnical engineer during grading.

Subgrade preparation in the new parking and drive areas should initially consist of removal of all soils disturbed during stripping operations. The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. The subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within the proposed parking areas. The grading recommendations presented above do not mitigate the extent of undocumented fill soils in the parking and drive areas. As such, settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Treatment of Existing Soils: Flatwork Areas

Subgrade preparation in the new flatwork areas should initially consist of removal of all soils disturbed during stripping operations. The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. The subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above optimum, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer. The on-site soils, especially below depths of 1 to 4± feet, possess significant quantities of oversized material, including cobbles and boulders. Some sorting and/or crushing of these materials may be required to generate soils that are suitable for reuse as compacted structural fill.

- All grading and fill placement activities should be completed in accordance with the requirements of the CBC and the grading code of the city of Banning and/or the county of Riverside.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Fill soils should be well mixed.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Selective Grading and Oversized Material Placement

The native alluvial soils possess significant cobble and boulder content. It is expected that large scrapers (Caterpillar 657 or equivalent) will be adequate to move the cobble-containing soils as well the soils containing smaller boulders. However, some larger boulders (2± feet in size) are expected to be encountered. It will likely be necessary to move such larger boulders individually, and remove them from the site or place them as oversized materials in accordance with the Grading Guide Specifications, in Appendix D of this report.

It is recommended that all materials greater than 6-inches in size be excluded from the upper 1 foot of the surface of any compacted fills. Materials greater than 6-inches in size but smaller than 12-inches in size can be placed within the upper 8 feet of any compacted fills. Larger boulders (24±-inches in size and larger) should be sorted, hauled off-site or stockpiled. A portion of the 24-inch and greater diameter material can be placed at the bottom of the deeper overexcavations (10 feet or greater below the proposed grades). On-site sandy soils should then be flooded around the oversize material that was placed at the bottom of the overexcavation.

The placement of any oversized materials should be performed in accordance with the Grading Guide Specifications included in Appendix D of this report. If disposal of oversized materials is required, rock blankets or windrows should be used and such areas should be observed during construction and placement by a representative of the geotechnical engineer.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). As discussed previously, imported fill for use below new flatwork should consist of very low expansive (EI < 20) material. Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the city of Banning and/or the County of Riverside. All utility trench backfills should be witnessed by the

geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

6.4 Construction Considerations

Excavation Considerations

The near surface soils generally consist of silty sands, gravelly sands, and well-graded sands with varying gravel, cobble, and boulder content. Based on their composition, moderate to severe caving of shallow excavations may occur in shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, temporary excavations should be laid back at a slope no steeper than 2h:1v. Deeper excavations may require some form of external stabilization such as shoring or bracing. Maintaining adequate moisture content within the near surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Groundwater

The static groundwater table at this site is considered to exist at a depth in excess of 15± feet. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

6.5 Foundation Design and Construction

Based on the preceding grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils used to replace existing undocumented fill and the upper portion of the native soils. The new structural fill soils are expected to extend to a depth of at least 3 feet below foundation bearing grade underlain by existing native soils that have been densified in place. Based on this subsurface profile, the proposed structure may be supported on shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 3,000 lbs/ft^2.
- Minimum wall/column footing width: 14 inches/24 inches.

- Minimum longitudinal steel reinforcement within strip footings: Two (2) No. 5 rebars (1 top and 1 bottom).

- Minimum foundation embedment: 12 inches into suitable structural fill soils, and at least 18 inches below adjacent exterior grade. Interior column footings may be placed immediately beneath the floor slab.

- It is recommended that the perimeter building foundations be continuous across all exterior doorways. Any flatwork adjacent to the exterior doors should be doweled into the perimeter foundations in a manner determined by the structural engineer.

The allowable bearing pressures presented above may be increased by 1/3 when considering short duration wind or seismic loads. The minimum steel reinforcement recommended above is based on standard geotechnical practice. The actual design of the foundations should be determined by the structural engineer.

Foundation Construction

The foundation subgrade soils should be evaluated at the time of overexcavation, as discussed in Section 6.3 of this report. It is further recommended that the foundation subgrade soils be evaluated by the geotechnical engineer immediately prior to steel or concrete placement. Soils suitable for direct foundation support should consist of newly placed structural fill, compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Any unsuitable materials should be removed to a depth of suitable bearing compacted structural fill, with the resulting excavations backfilled with compacted fill soils. As an alternative, lean concrete slurry (500 to 1,500 psi) may be used to backfill such isolated overexcavations.

The foundation subgrade soils should also be properly moisture conditioned to 0 to 4 percent above the Modified Proctor optimum, to a depth of at least 12 inches below bearing grade. **Since it is typically not feasible to increase the moisture content of the floor slab and foundation subgrade soils once rough grading has been completed, care should be taken to maintain the moisture content of the building pad subgrade soils throughout the construction process.**

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively, under static conditions. Differential movements are expected to occur over a 30-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slabs and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 300 lbs/ft^3

- Friction Coefficient: 0.32

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill. The maximum allowable passive pressure is 3,000 lbs/ft^2.

6.6 Floor Slab Design and Construction

Subgrades which will support new floor slabs should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Based on the anticipated grading which will occur at this site, the floor of the proposed structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill, extending to a depth of at least 4 feet below finished pad grade. Based on geotechnical considerations, the floor-slab may be designed as follows:

- Minimum slab thickness: 6 inches.

- Modulus of Subgrade Reaction: k = 150 psi/in.

- Minimum slab reinforcement: Not required for geotechnical considerations. The actual floor slab reinforcement should be determined by the structural engineer, based on the imposed loading.

- Slab underlayment: If moisture sensitive floor coverings will be used then minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area of the proposed slab where such moisture floor coverings will be used. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. Given that a rock free subgrade is anticipated and that a capillary break is not required, sand below the barrier is not required. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview. Where moisture sensitive floor coverings are not anticipated, the vapor barrier may be eliminated.

- Moisture condition the floor slab subgrade soils to 0 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Retaining Wall Design and Construction

Although not indicated on the site plan, some small (less than 6 feet in height) retaining walls may be required to facilitate the new site grades as well as in the dock-high portions of the building. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring and trench locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The near surface soils generally consist of silty sands, gravelly sands, and well-graded sands, with varying amounts of gravel, cobbles and boulders. Based on their classifications, the gravelly sand, sand, and silty sand materials are expected to possess a friction angle of at least 33 degrees when compacted to 90 percent of the ASTM-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		Soil Type
		On-site Silty Sands and Sands
Internal Friction Angle (ϕ)		32°
Unit Weight		136 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	42 lbs/ft^3
	Active Condition (2h:1v backfill)	64 lbs/ft^3
	At-Rest Condition (level backfill)	64 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.32 and an equivalent passive pressure of 300 lbs/ft^3. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to

deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Seismic Lateral Earth Pressures

In accordance with the CBC, any retaining walls more than 6 feet in height must be designed for seismic lateral earth pressures. If walls 6 feet or more are required for this site, the geotechnical engineer should be contacted for supplementary seismic lateral earth pressure recommendations.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed compacted structural fill, extending to a depth of at least 3 feet below proposed foundation bearing grade. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Backfill Material

On-site soils may be used to backfill the retaining walls. **However, all backfill material placed within 3 feet of the back wall face should have a particle size no greater than 3 inches.** Some sorting and/or crushing operations may be required. The retaining wall backfill materials should be well graded.

It is recommended that a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls be used. If the drainage composite material is not covered by an impermeable surface, such as a structure or pavement, a 12-inch thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils. The drainage composite should be separated from the backfill soils by a suitable geotextile, approved by the geotechnical engineer.

All retaining wall backfill should be placed and compacted under engineering controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 4-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 8-foot on-center spacing. The weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system.

6.8 Pavement Design Parameters

Site preparation in the pavement area should be completed as previously recommended in the ***Site Grading Recommendations*** section of this report. The subsequent pavement recommendations assume proper drainage and construction monitoring, and are based on either PCA or CALTRANS design parameters for a twenty (20) year design period. However, these designs also assume a routine pavement maintenance program to obtain the anticipated 20-year pavement service life.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The on-site soils generally consist of silty sands, gravelly sands, and well graded sands with varying amounts of gravel, cobble, and boulders. Based on their classification, these materials are expected to possess good to excellent pavement support characteristics, with R-values in the range of 50 to 70. Since R-value testing was not included in the scope of services for this project, the subsequent pavement design is based upon a conservatively assumed R-value of 50. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering controlled conditions. It is recommended that R-value testing be performed after completion of rough grading.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20 year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 50)					
Materials	**Thickness (inches)**				
	Parking Stalls (TI = 4.0)	Auto Drive Lanes (TI = 5.0)	Truck Traffic		
			(TI = 6.0)	(TI = 7.0)	(TI = 8.0)
Asphalt Concrete	3	3	3½	4	5
Aggregate Base	3	3	4	5	5
Compacted Subgrade (90% minimum compaction)	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the batch plant-reported maximum density. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within Portland cement concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 50)				
Materials	**Thickness (inches)**			
	Automobile Parking and Drive Areas (TI = 5.0)	Truck Traffic		
		(TI =6.0)	(TI =7.0)	(TI =8.0)
PCC	5	5	5½	6½
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. Reinforcing within all pavements should be designed by the structural engineer. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness. The actual joint spacing and reinforcing of the Portland cement concrete pavements should be determined by the structural engineer.

7.0 GENERAL COMMENTS

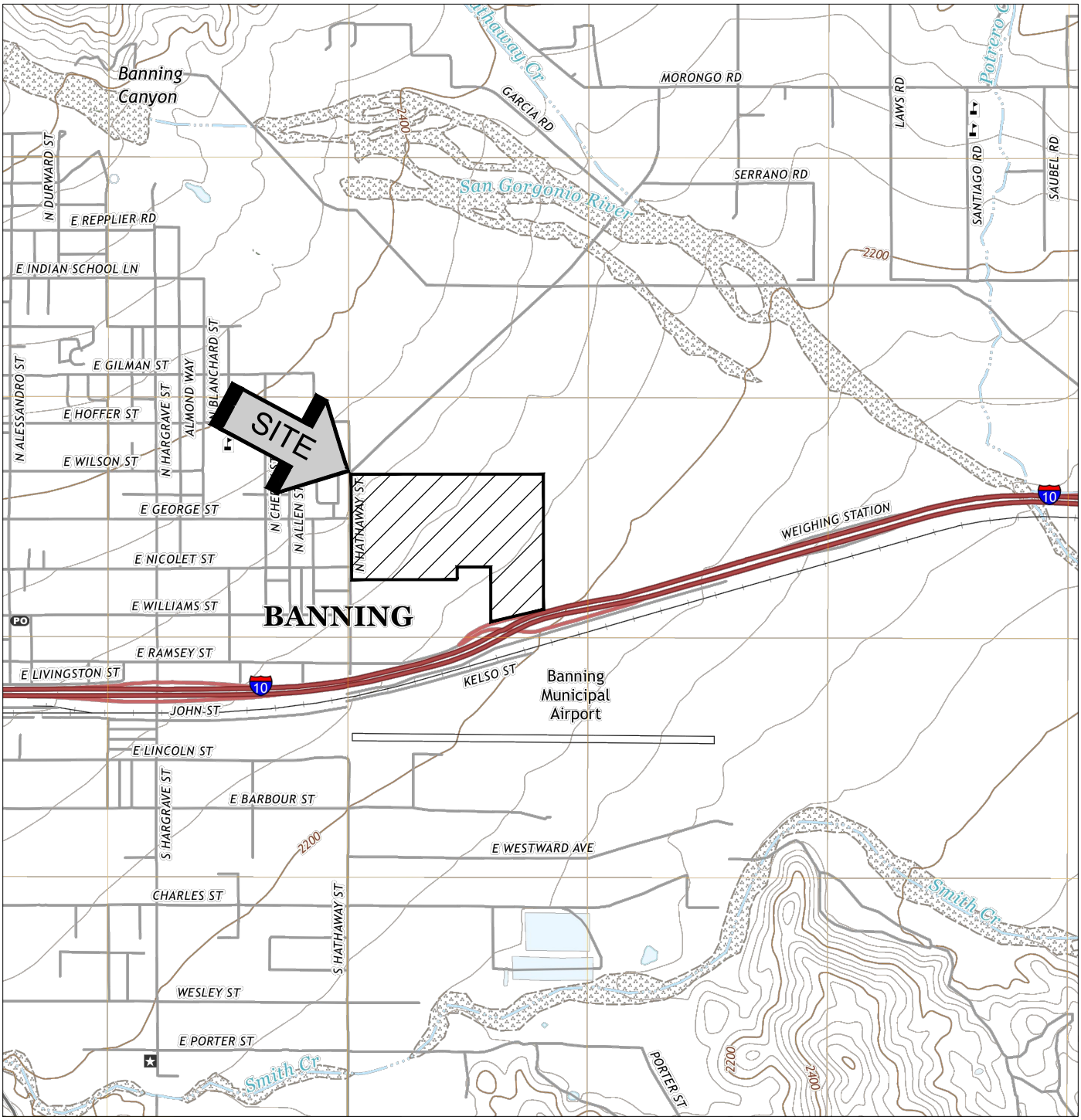
This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between trench locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A



SOURCE: USGS TOPOGRAPHIC MAP OF THE CABAZON QUADRANGLE, RIVERSIDE COUNTY, CALIFORNIA, 2018

SITE LOCATION MAP

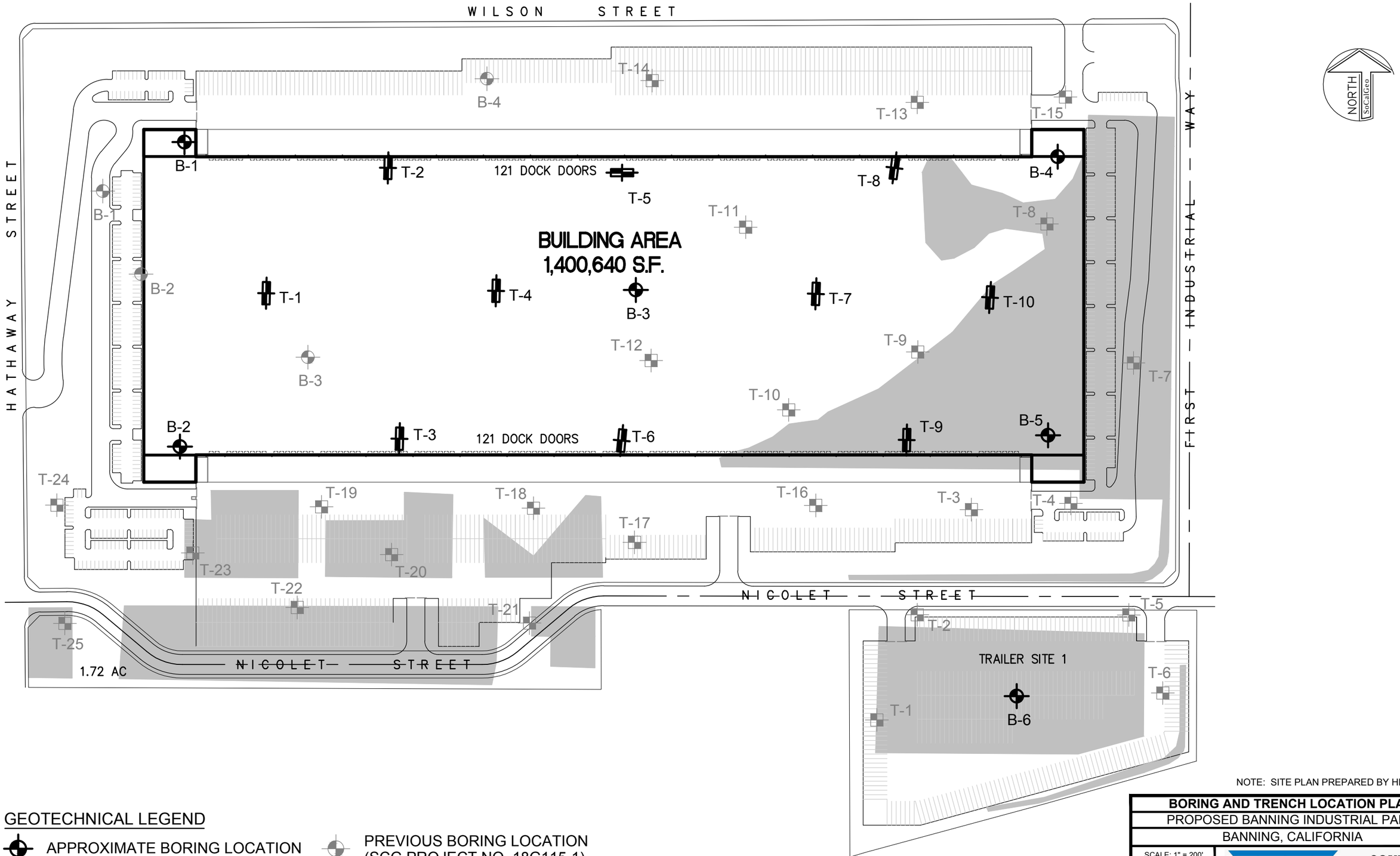
PROPOSED BANNING INDUSTRIAL PARK

BANNING, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JAH CHKD: RGT	
SCG PROJECT 21G119-1	
PLATE 1	

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE: SITE PLAN PREPARED BY HPA, INC.

GEOTECHNICAL LEGEND

- APPROXIMATE BORING LOCATION
- APPROXIMATE TRENCH LOCATION
- PREVIOUS BORING LOCATION (SCG PROJECT NO. 18G115-1)
- PREVIOUS TRENCH LOCATION (SCG PROJECT NO. 18G115-1)
- APPROXIMATE LIMITS OF OVER EXCAVATION (SCG PROJECT NO. 10M132-1)

BORING AND TRENCH LOCATION PLAN

PROPOSED BANNING INDUSTRIAL PARK

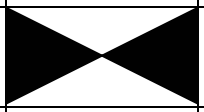
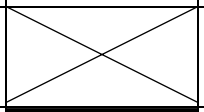
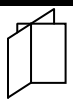
BANNING, CALIFORNIA

SCALE: 1" = 200'	
DRAWN: JAH CHKD: RGT	
SCG PROJECT 21G119-1	
PLATE 2	

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

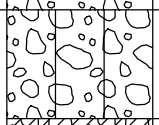
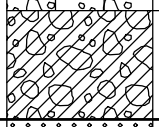
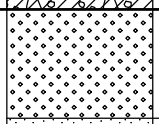
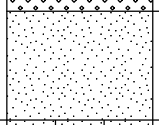
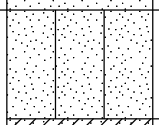
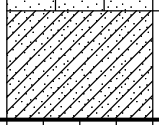
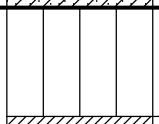
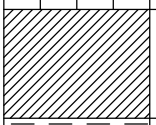
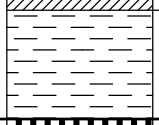
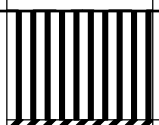
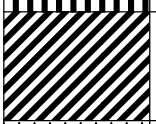
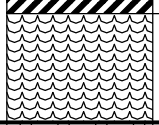
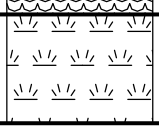
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 21G119-1
PROJECT: Prop. Banning Industrial Park
LOCATION: Banning, California

DRILLING DATE: 2/25/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 3 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		50/5"			ALLUVIUM: Light Gray Gravelly fine to coarse Sand, occasional Cobbles, very dense-dry to damp		1					Disturbed Sample
		80					1					Disturbed Sample
5		82				117	2					
					Boring Terminated at 6' due to refusal on very dense Cobbles							

TBL 21G119-1.GPJ SOCALGEO.GDT 3/24/21

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 21G119-1
PROJECT: Prop. Banning Industrial Park
LOCATION: Banning, California

DRILLING DATE: 2/25/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 4 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		26			UNDOCUMENTED FILL: Brown Silty fine to coarse Sand, trace fine to coarse Gravel, occasional Cobbles, medium dense-damp	98	4					
		32										No Sample Recovery
5		56			ALLUVIUM: Light Gray Brown Gravelly fine to coarse Sand, extensive Cobbles, medium dense to very dense-dry to damp		1					Disturbed Sample
		41				113	2					
		68				105	2					
10												
		86					2					
15					Boring Terminated at 15'							

TBL 21G119-1.GPJ SOCALGEO.GDT 3/24/21

TEST BORING LOG

PLATE B-2

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 21G119-1
PROJECT: Prop. Banning Industrial Park
LOCATION: Banning, California

DRILLING DATE: 2/25/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 4 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		72			ALLUVIUM: Gray Brown Gravelly fine to coarse Sand, occasional Cobbles, dense to very dense-dry to damp	117	2					
		72										No Sample Recovery
5		50/3"										No Sample Recovery
		50/5"					1					Disturbed Sample
		79/9"					1					Disturbed Sample
10												
		90/5"					1					
15					Boring Terminated at 15'							

TBL 21G119-1.GPJ SOCALGEO.GDT 3/24/21

TEST BORING LOG **PLATE B-3**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 21G119-1
PROJECT: Prop. Banning Industrial Park
LOCATION: Banning, California

DRILLING DATE: 2/25/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 3 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		88			ALLUVIUM: Gray Brown Gravelly fine to coarse Sand, occasional Cobbles, very dense-dry	124	1					
		79/11"				133	1					
5		50/5"					1					Disturbed Sample
					Boring Terminated at 6.5' due to refusal on very dense Cobbles							

TBL 21G119-1.GPJ SOCALGEO.GDT 3/24/21

TEST BORING LOG **PLATE B-4**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 21G119-1
PROJECT: Prop. Banning Industrial Park
LOCATION: Banning, California

DRILLING DATE: 2/25/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 7 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		76			ENGINEERED FILL: Brown Silty fine to coarse Sand, trace fine to coarse Gravel, occasional Cobbles, very dense-dry to damp	127	3					
		50/6"					4					Disturbed Sample
5		86/9"				125	2					
		50/4"			ENGINEERED FILL: Brown Gravelly fine to coarse Sand, trace Silt, occasional Cobbles, very dense-dry to damp	114	2					
10		50/4"				126	3					
					Boring Terminated at 12' due to refusal on very dense Cobbles							

TBL 21G119-1.GPJ SOCALGEO.GDT 3/24/21

TEST BORING LOG

PLATE B-5

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 21G119-1
PROJECT: Prop. Banning Industrial Park
LOCATION: Banning, California

DRILLING DATE: 2/25/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

WATER DEPTH: Dry
CAVE DEPTH: 8 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		94/11"			ENGINEERED FILL: Brown Silty fine to coarse Sand, little to some fine to coarse Gravel, very dense-damp		4					
		78/11"					4					
5												
		80/11"					4					
					ENGINEERED FILL: Light Gray Brown Gravelly fine to coarse Sand, occasional Cobbles, very dense-dry							
		88/9"					1					
10					Boring Terminated at 10'							

TBL 21G119-1.GPJ SOCALGEO.GDT 3/24/21

TEST BORING LOG

PLATE B-6

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-1

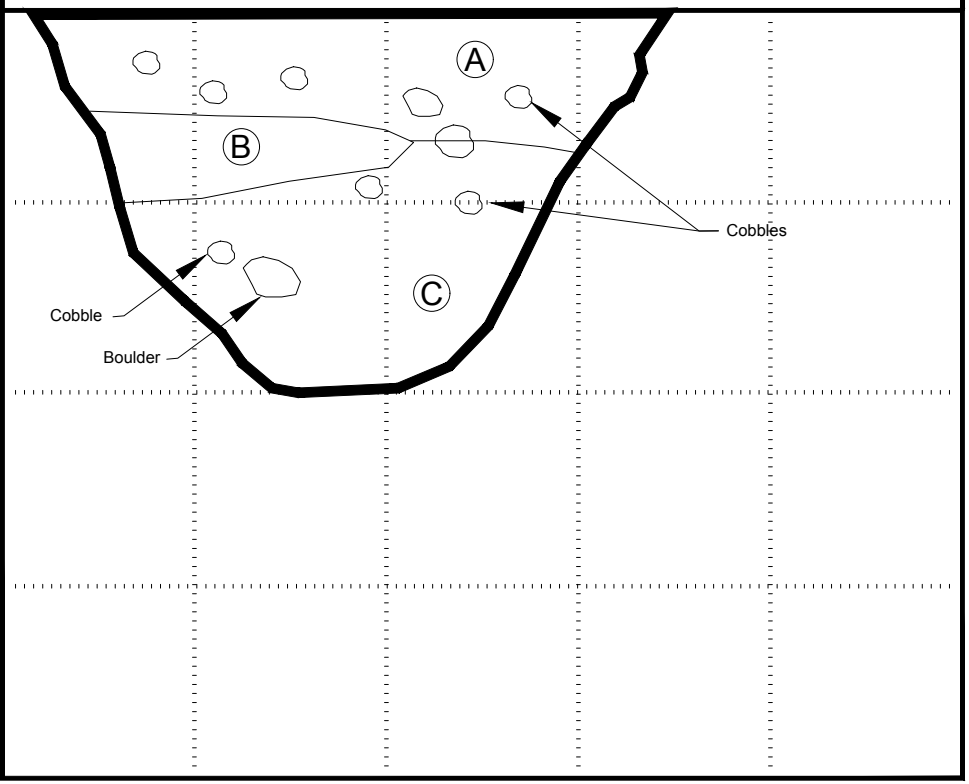
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: N 01 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		4	A: ALLUVIUM: Dark Brown fine Sand, little Silt, little fine to coarse Gravel, occasional Cobbles, medium dense-damp
				B: Light Brown Gravelly fine to coarse Sand, medium dense-dry to damp
5	b		2	C: Brown fine to coarse Sand, little fine to coarse Gravel, occasional Cobbles, occasional Boulders, dense to very dense-dry to damp
	b		3	
	b		2	
10				Trench Terminated @ 10 feet
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-7

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-2

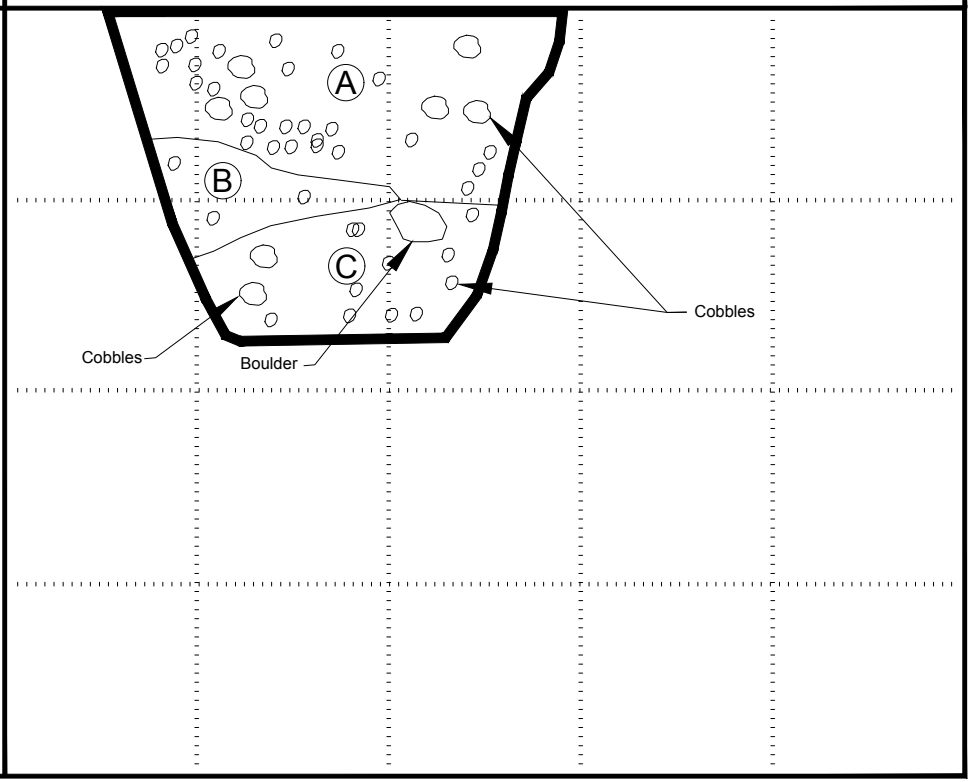
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: N 01 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		2	A: ALLUVIUM: Dark Brown Gravelly fine to medium Sand, trace coarse Sand, extensive Cobbles, dense-dry
				B: Light Brown Gravelly fine to coarse Sand, occasional Cobbles, dense-dry
5	b		2	
	b		3	C: Light Brown Gravelly fine to coarse Sand, extensive Cobbles, occasional Boulders, dense-dry to damp
				Refusal @ 8.5 feet due to dense Cobbles and Boulders
10				
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-8

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-3

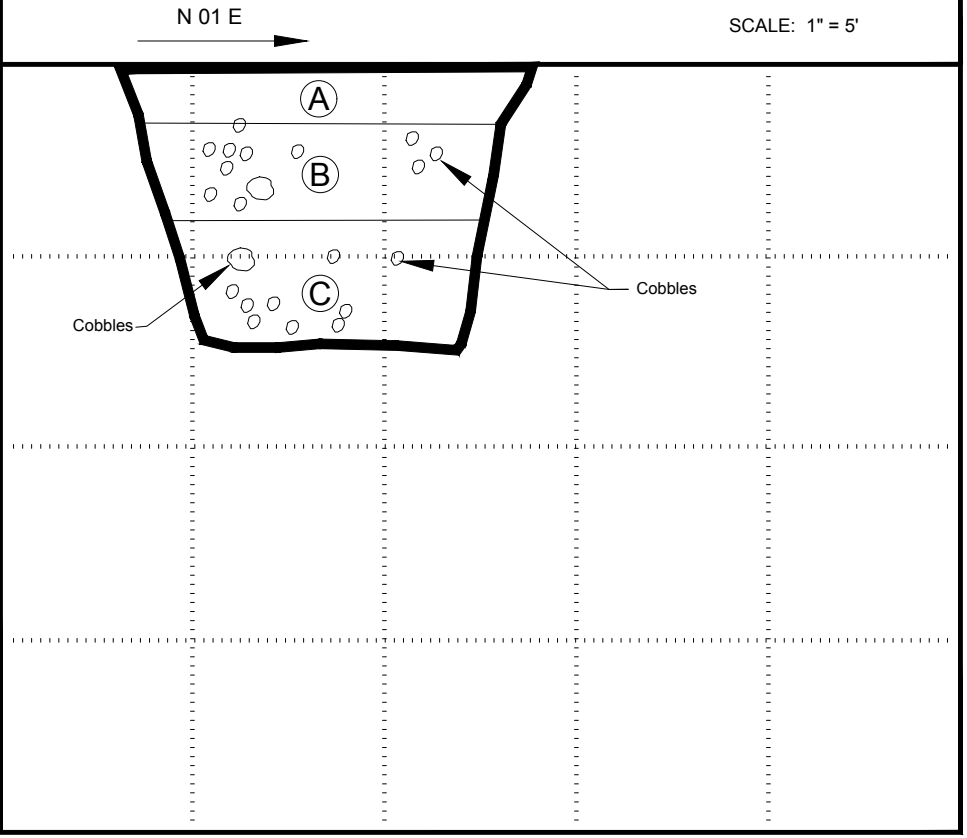
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: N 01 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		6	A: ALLUVIUM: Dark Brown Silty fine Sand, little fine to coarse Gravel, medium dense-damp
	b		6	B: Brown fine Sand, little fine to coarse Gravel, trace Silt, occasional Cobbles, medium dense-damp
5	b		2	C: Light Brown fine to coarse Sand, little fine to coarse Gravel, extensive Cobbles, dense-dry to damp
	b		3	Refusal @ 7 feet due to dense Cobbles
10				
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-9

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-4

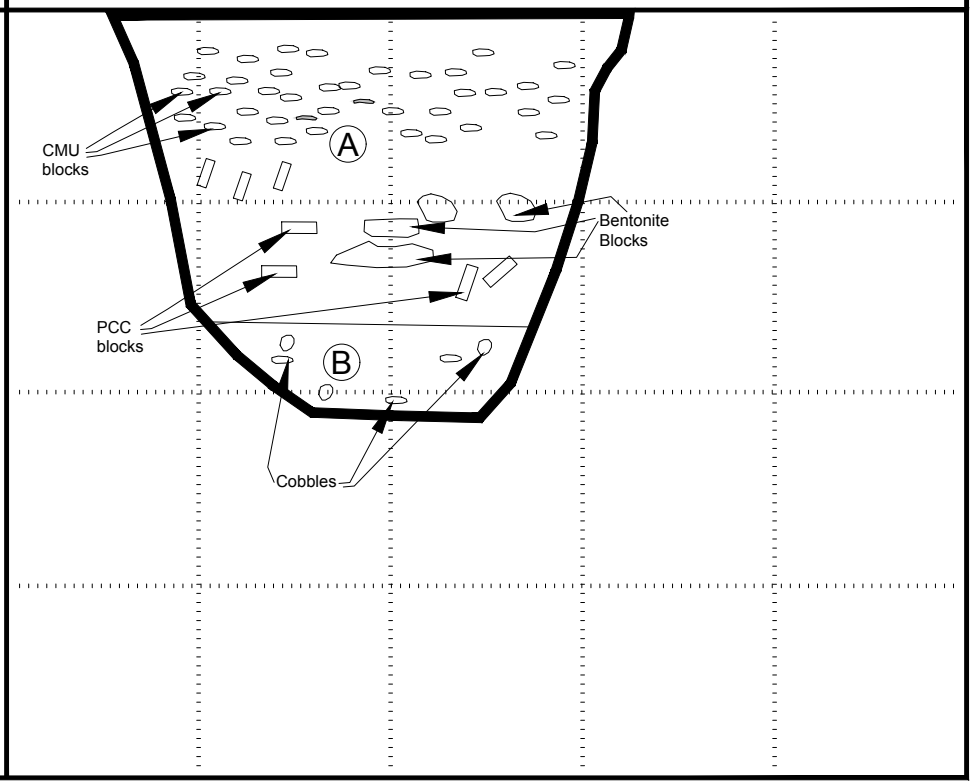
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Excavator
LOGGED BY: Jose Zuniga
ORIENTATION: N 01 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		6	A: UNDOCUMENTED FILL: Brown fine to coarse Sand, little fine to coarse Gravel, trace Brick fragments, medium dense-moist
5				@ 6 feet, Bentonite Blocks
	b		5	B: UNDOCUMENTED FILL: Dark Brown fine to coarse Sand, trace Asphaltic concrete fragments, medium dense-moist @ 9.5 feet, occasional Cobbles
10				Trench Terminated @ 10.5 feet
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-10

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-5

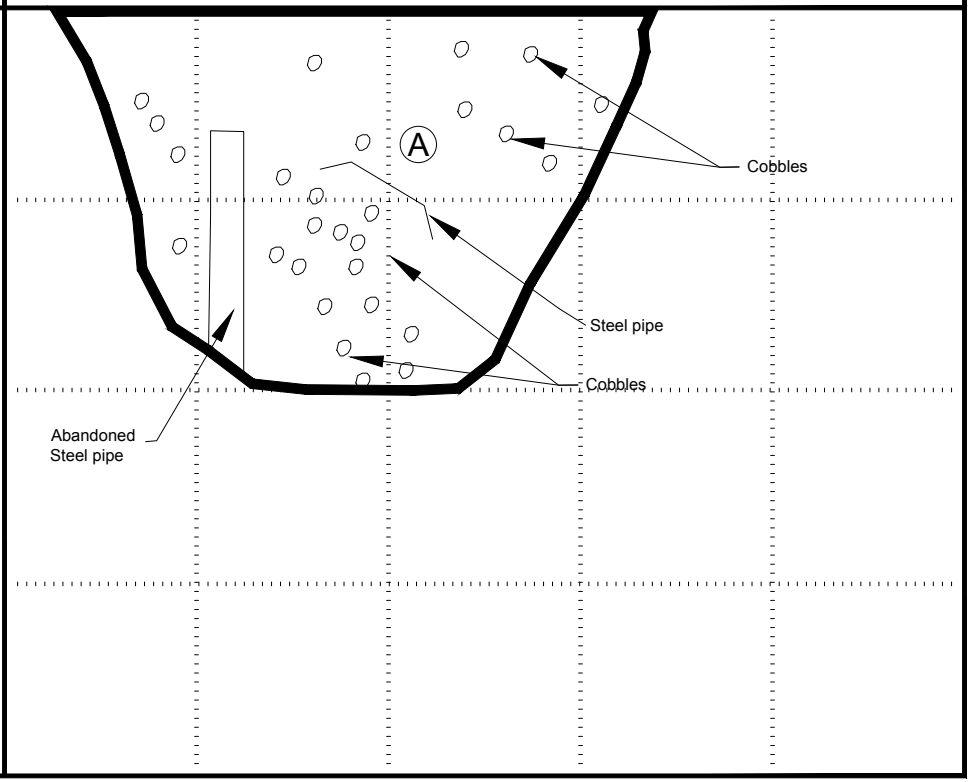
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Excavator
LOGGED BY: Jamie Hayward
ORIENTATION: N 90 W
ELEVATION: feet msl

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
				A: UNDOCUMENTED FILL: Brown Gravelly fine to coarse Sand, extensive Cobbles, occasional steel pipes, dense to very dense-dry to damp
10	b		2	Trench Terminated @ 10 feet

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-11

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-6

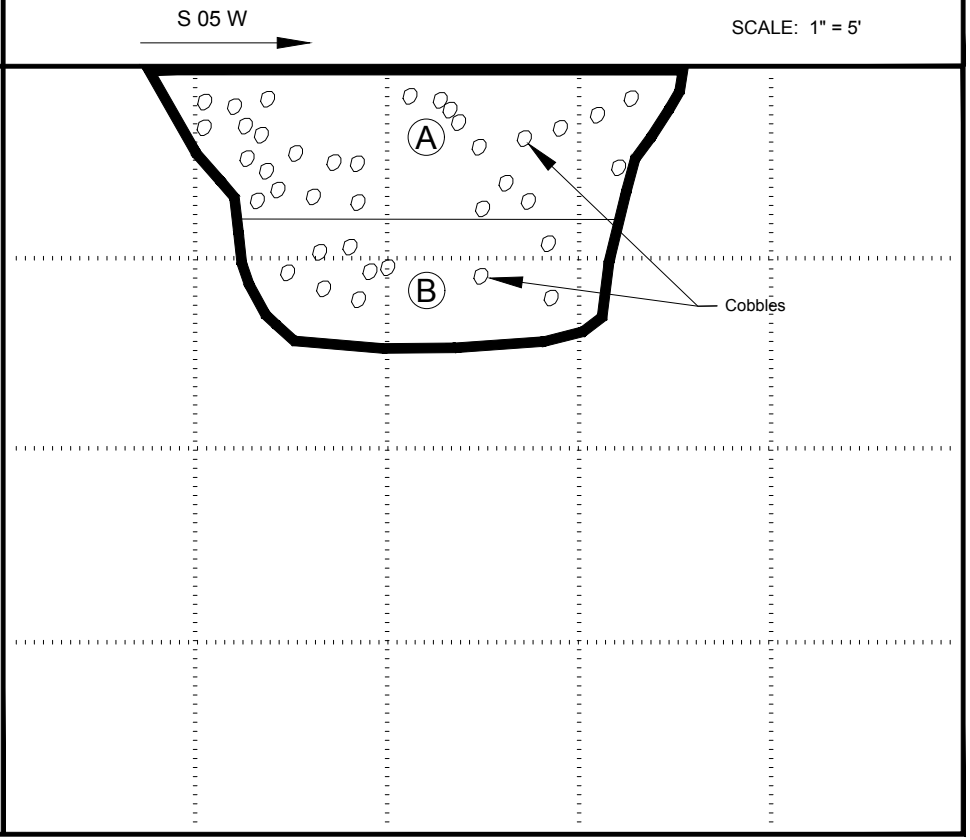
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: S 05 W
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		2	A: ALLUVIUM: Brown Gravelly fine to coarse Sand, extensive Cobbles, dense-dry to damp
5	b		3	B: Brown Gravelly fine to medium Sand, extensive Cobbles, very dense-damp
	b		3	Refusal @ 7.5 feet, due to dense Cobbles
10				
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-12

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-7

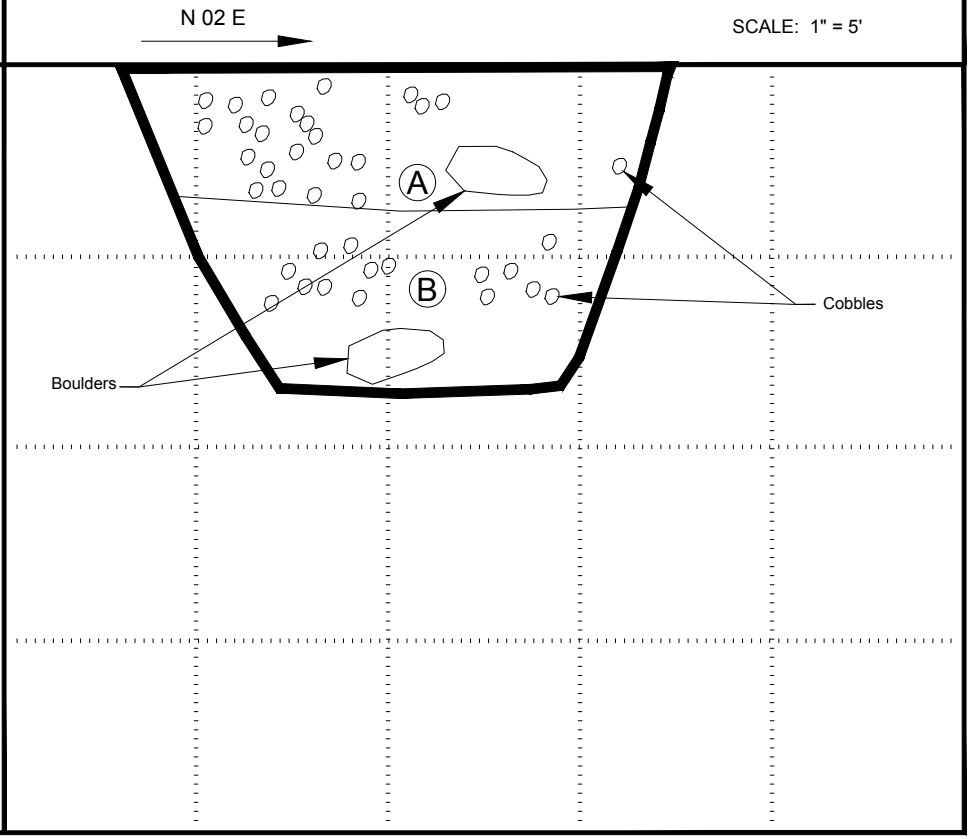
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: N 02 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		2	A: ALLUVIUM: Brown fine to coarse Sand, trace fine to coarse Gravel, extensive Cobbles, occasional Boulders, dense-dry to damp
5	b		2	B: Brown Gravelly fine to coarse Sand, occasional Cobbles, occasional Boulders, very dense-dry to damp
				Refusal @ 8.5 feet, due to dense Cobbles
10				
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-13

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO.
T-8

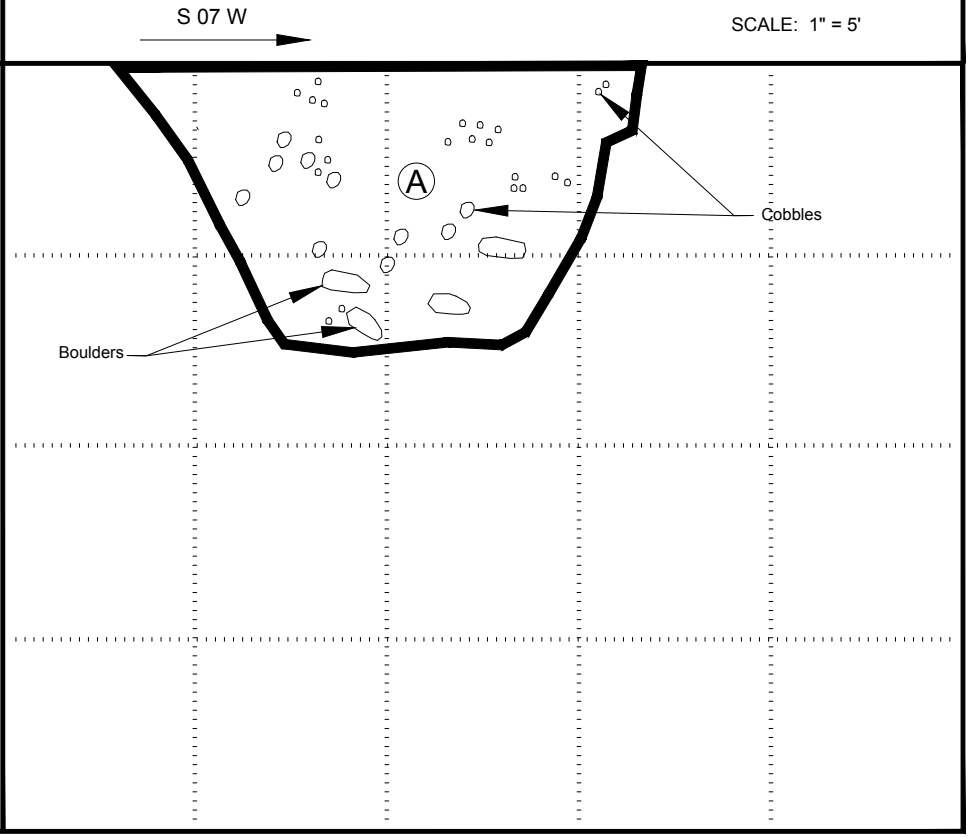
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: S 07 W
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		2	A: ALLUVIUM: Brown Gravelly fine to coarse Sand, occasional Cobbles, occasional Boulders, dense-dry to damp
5	b		2	Refusal @ 7.5 feet, due to dense Boulders
10				
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER
(RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-14

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-9

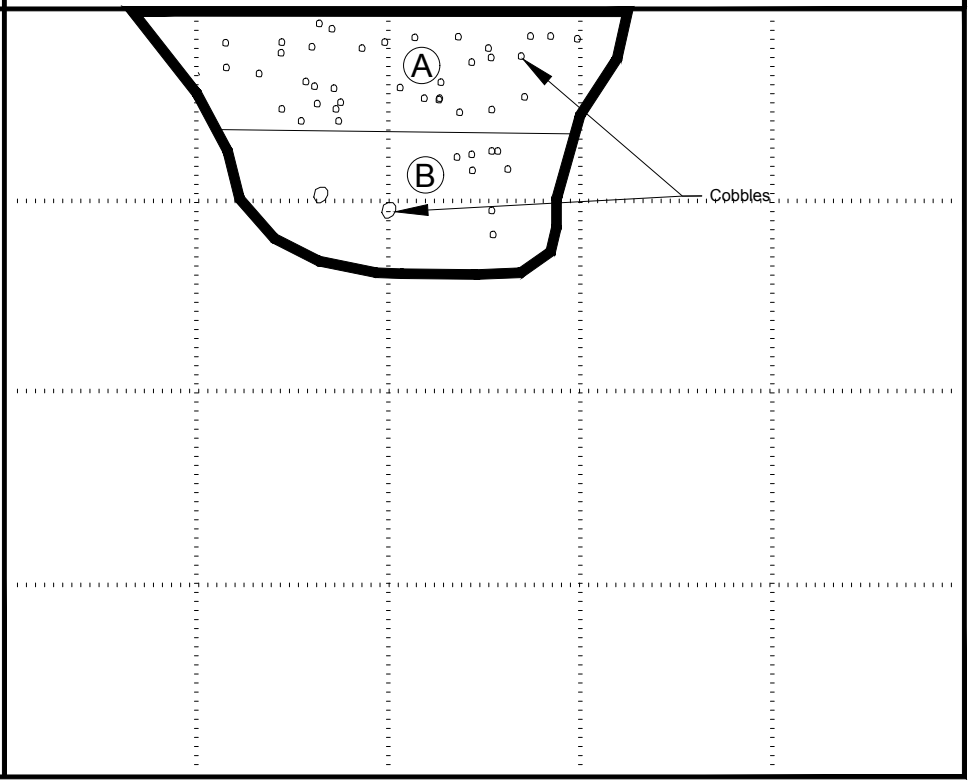
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: N 01 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		2	A: ENGINEERED FILL: Light Brown Gravelly fine to coarse Sand, extensive Cobbles, dense-dry to damp
5	b		3	B: ENGINEERED FILL: Dark Brown Gravelly fine to coarse Sand, occasional Cobbles, dense-damp
				Refusal @ 6.5 feet, due to dense Cobbles
10				
15				

GRAPHIC REPRESENTATION



KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-15

SOUTHERN CALIFORNIA GEOTECHNICAL

TRENCH NO. T-10

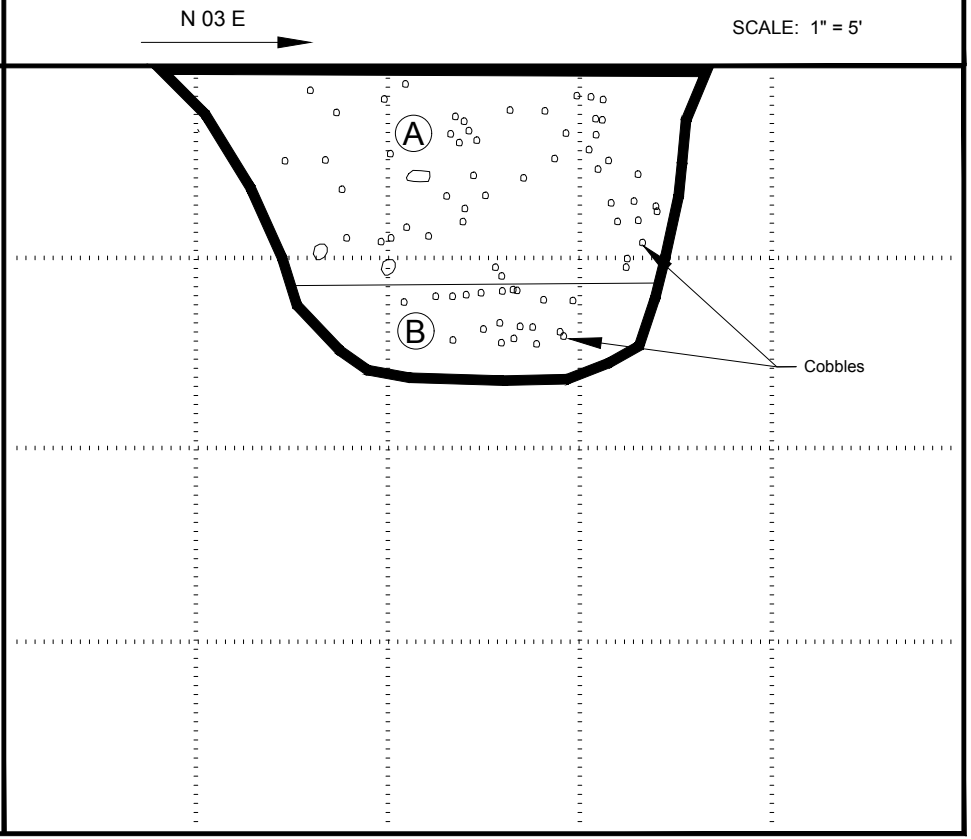
JOB NO.: 21G119-1
PROJECT: Proposed Banning Industrial Park
LOCATION: Banning, California
DATE: 2/25/2021

EQUIPMENT USED: Backhoe
LOGGED BY: Jose Zuniga
ORIENTATION: N 03 E
ELEVATION: ---

WATER DEPTH: Dry
SEEPAGE DEPTH: Dry
READINGS TAKEN: At Completion

DEPTH	SAMPLE	DRY DENSITY (PCF)	MOISTURE (%)	EARTH MATERIALS DESCRIPTION
	b		3	A: ENGINEERED FILL: Brown Gravelly fine to coarse Sand, trace Silt, extensive Cobblers, dense-damp
5				B: ALLUVIUM: Light Brown Gravelly fine to coarse Sand, extensive Cobbles, very dense-damp
	b		4	
				Refusal @ 8.5 feet, due to very dense Cobbles
10				
15				

GRAPHIC REPRESENTATION



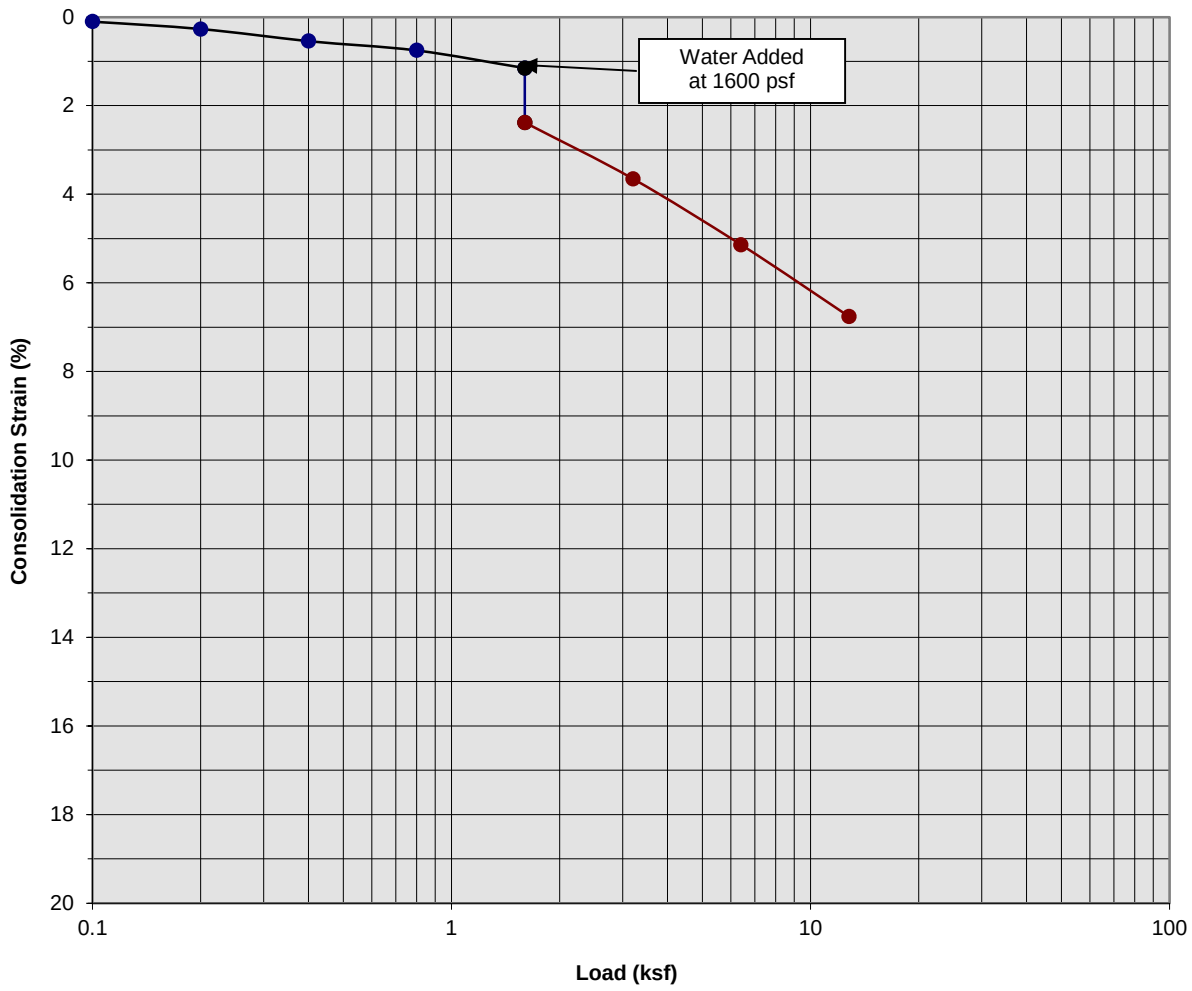
KEY TO SAMPLE TYPES:
B - BULK SAMPLE (DISTURBED)
R - RING SAMPLE 2-1/2" DIAMETER (RELATIVELY UNDISTURBED)

TRENCH LOG

PLATE B-16

APPENDIX C

Consolidation/Collapse Test Results



Classification: ENGINEERED FILL: Silty fine to coarse Sand, trace fine to coarse Gravel

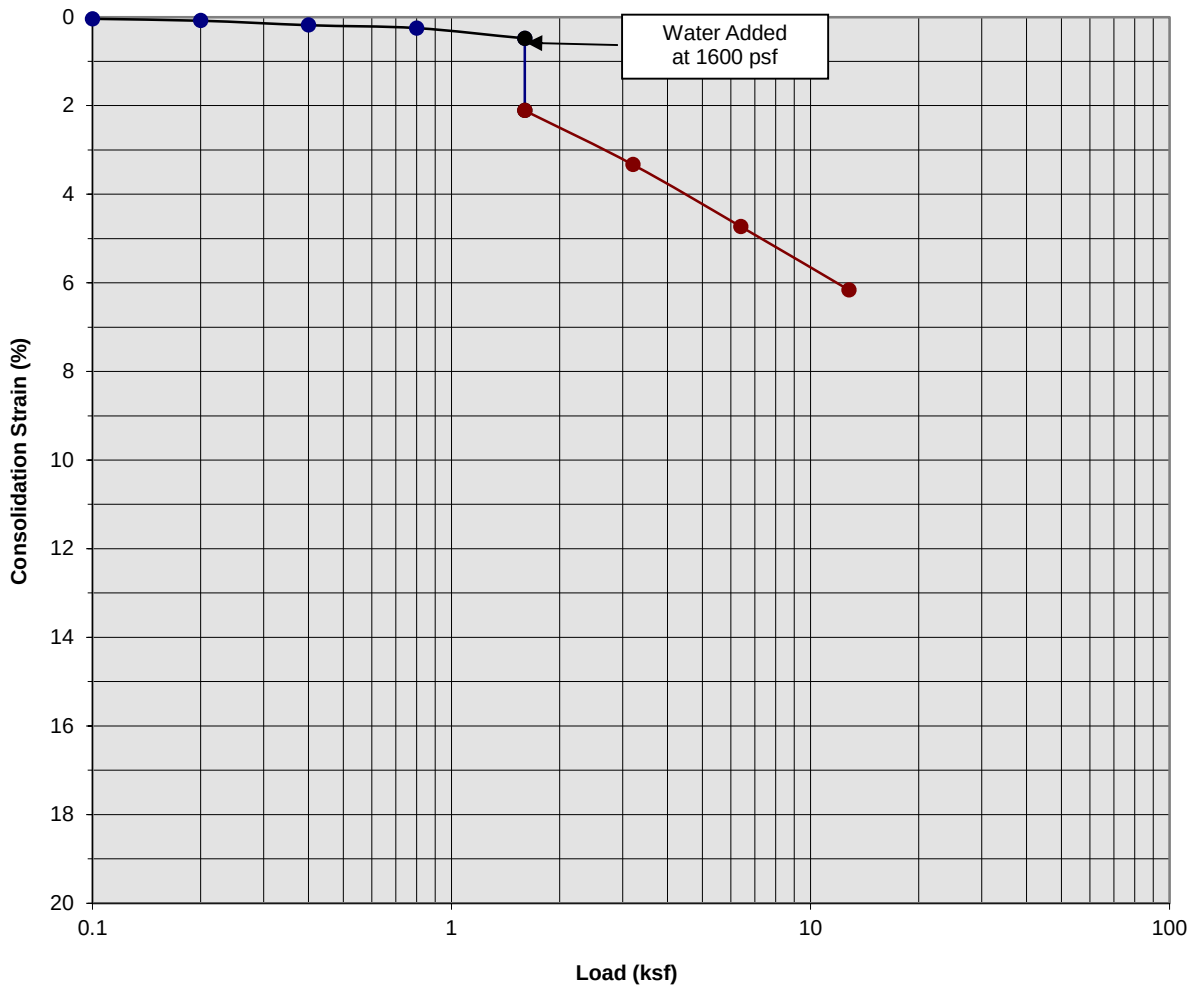
Boring Number:	B-5	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	17
Depth (ft)	1 to 2	Initial Dry Density (pcf)	127.1
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	136.2
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.23

Proposed Banning Industrial Park
Banning, California
Project No. 21G119-1

PLATE C-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: ENGINEERED FILL: Silty fine to coarse Sand, trace fine to coarse Gravel

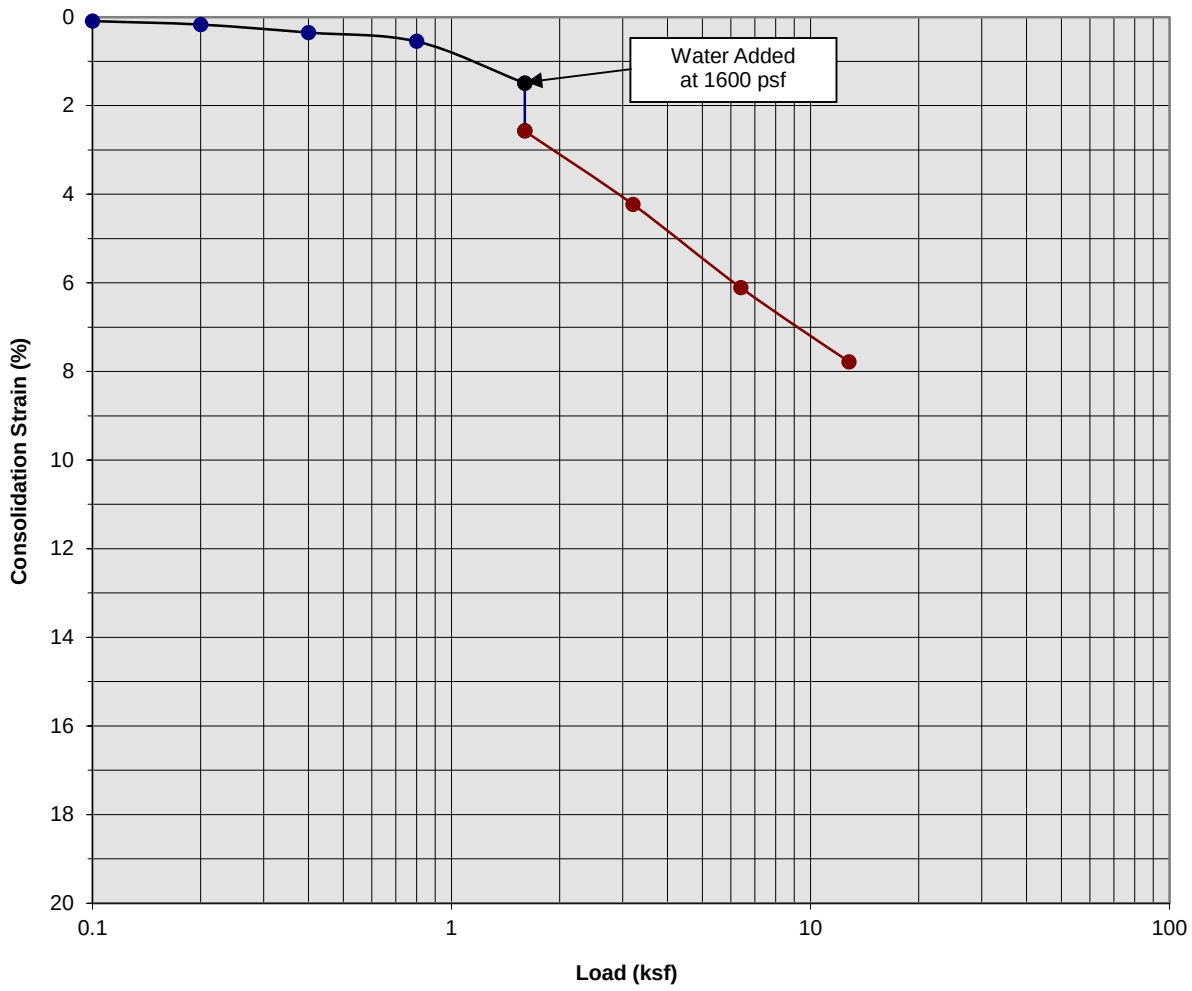
Boring Number:	B-5	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	5 to 6	Initial Dry Density (pcf)	125.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	133.2
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.63

Proposed Banning Industrial Park
Banning, California
Project No. 21G119-1

PLATE C-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: ENGINEERED FILL: Gravelly fine to coarse Sand, trace Silt

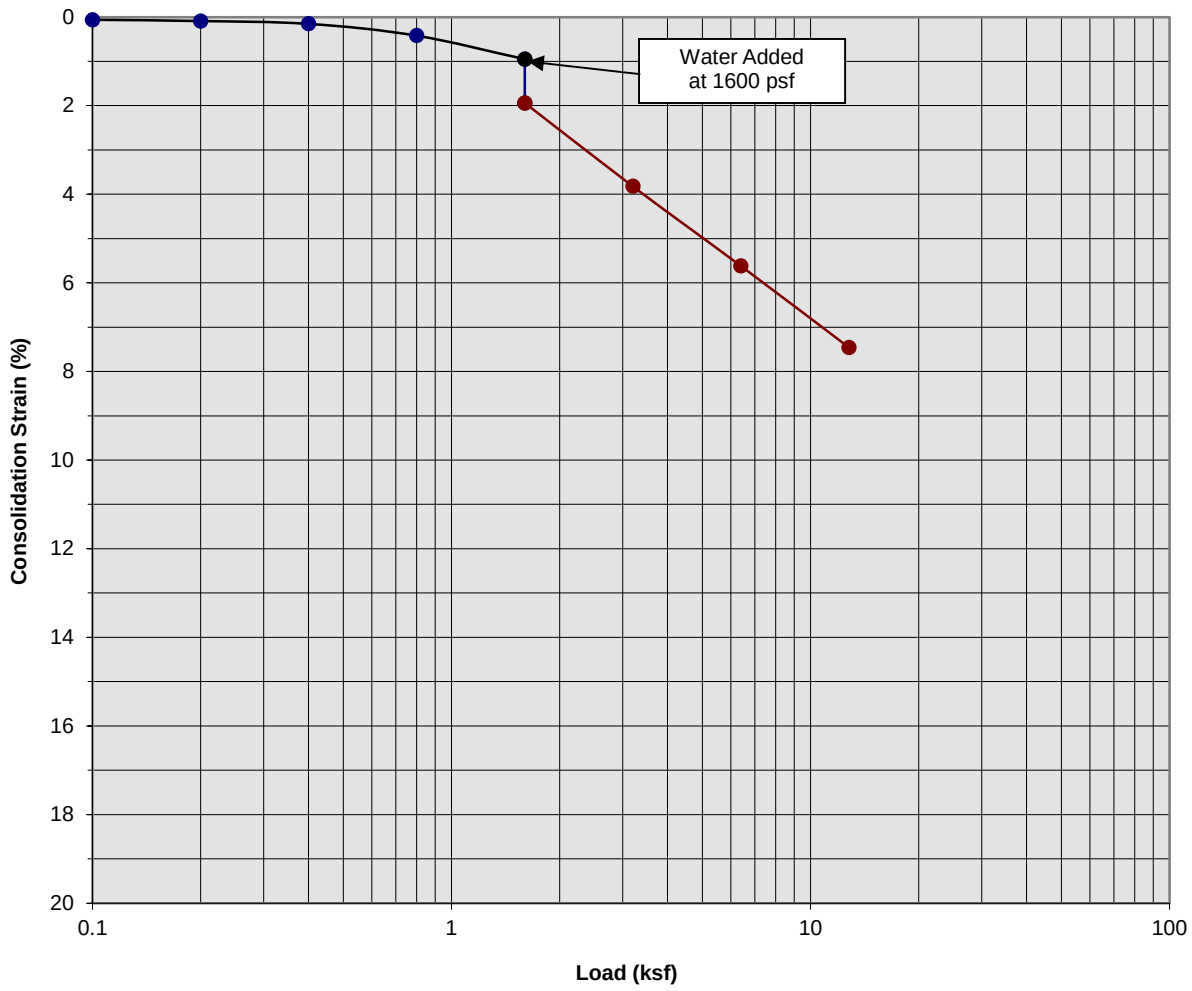
Boring Number:	B-5	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	12
Depth (ft)	7 to 8	Initial Dry Density (pcf)	114.1
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	124.0
Specimen Thickness (in)	1.0	Percent Collapse (%)	1.08

Proposed Banning Industrial Park
Banning, California
Project No. 21G119-1

PLATE C-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: ENGINEERED FILL: Gravelly fine to coarse Sand, trace Silt

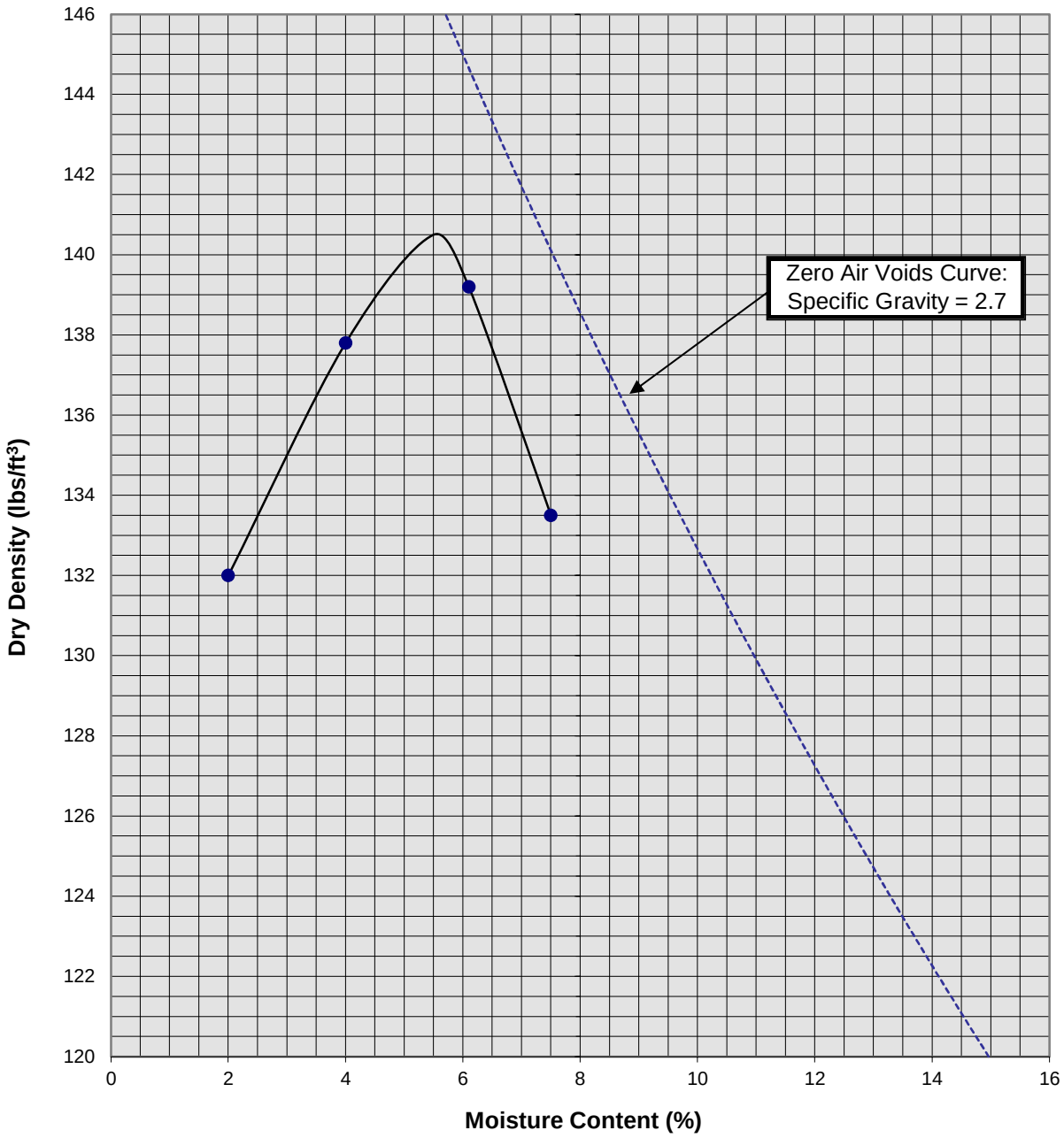
Boring Number:	B-5	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	9 to 10	Initial Dry Density (pcf)	126.4
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	136.5
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.99

Proposed Banning Industrial Park
Banning, California
Project No. 21G119-1

PLATE C-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557



Soil ID Number	B-4 @ 0-5'
Optimum Moisture (%)	5.5
Maximum Dry Density (pcf)	140.5
Soil Classification	Gray Brown Gravelly fine to coarse Sand

Proposed Banning Industrial Park
Banning, California
Project No. 21G119-1

PLATE C-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as “contaminated,” and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

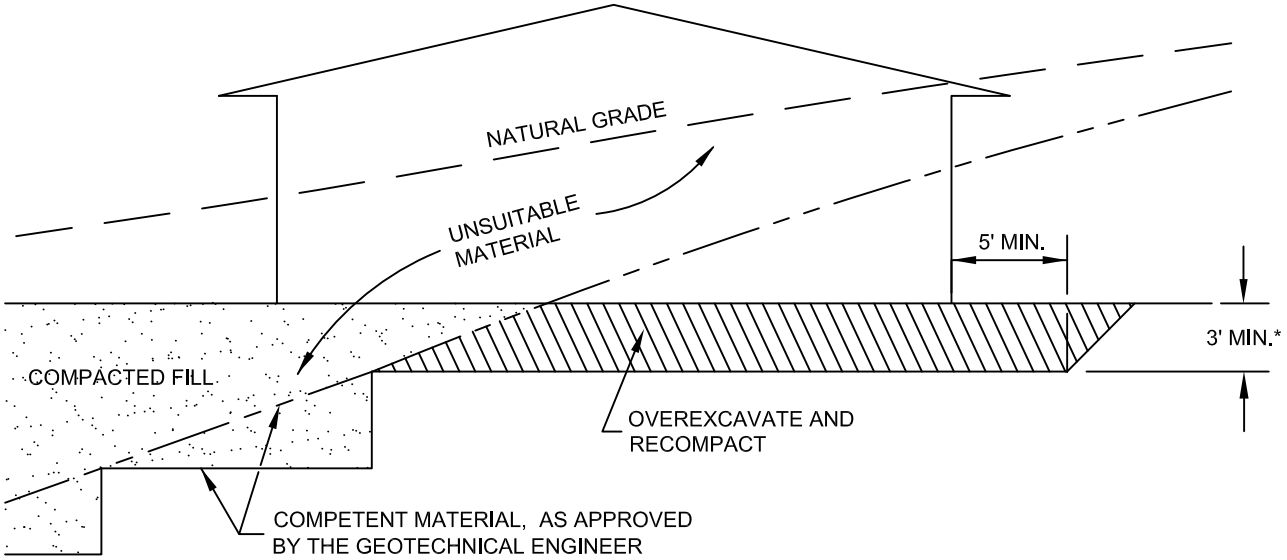
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

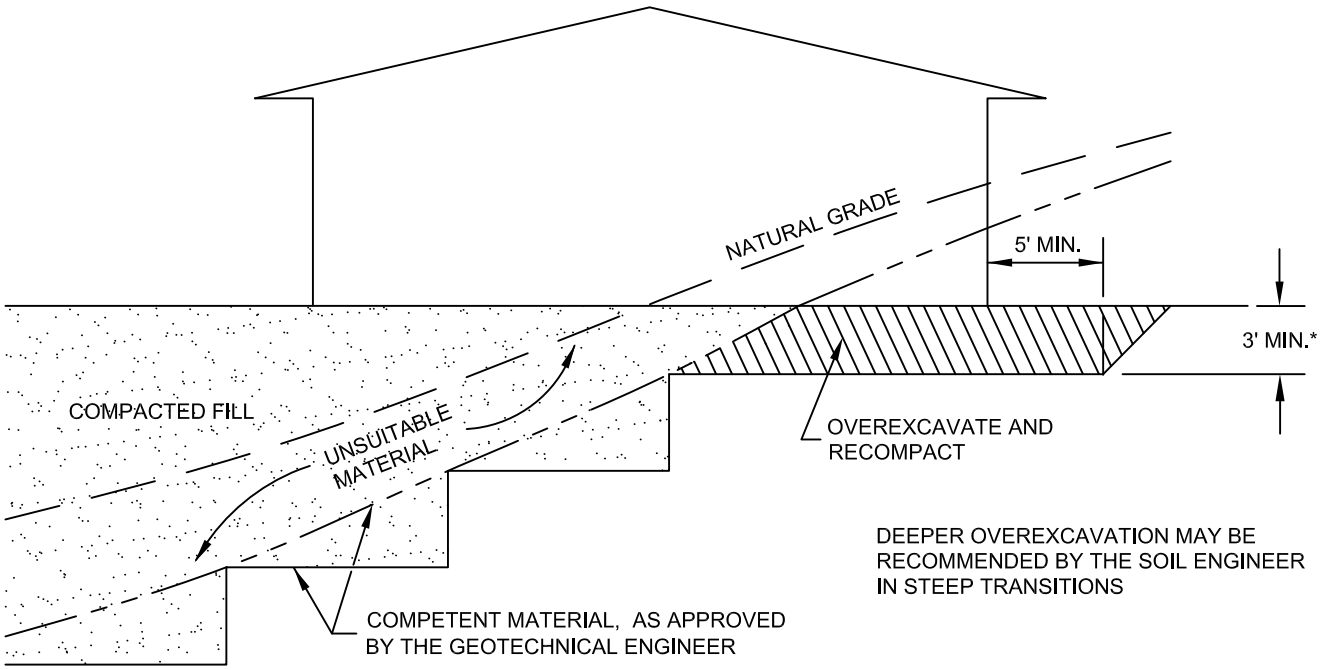
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)

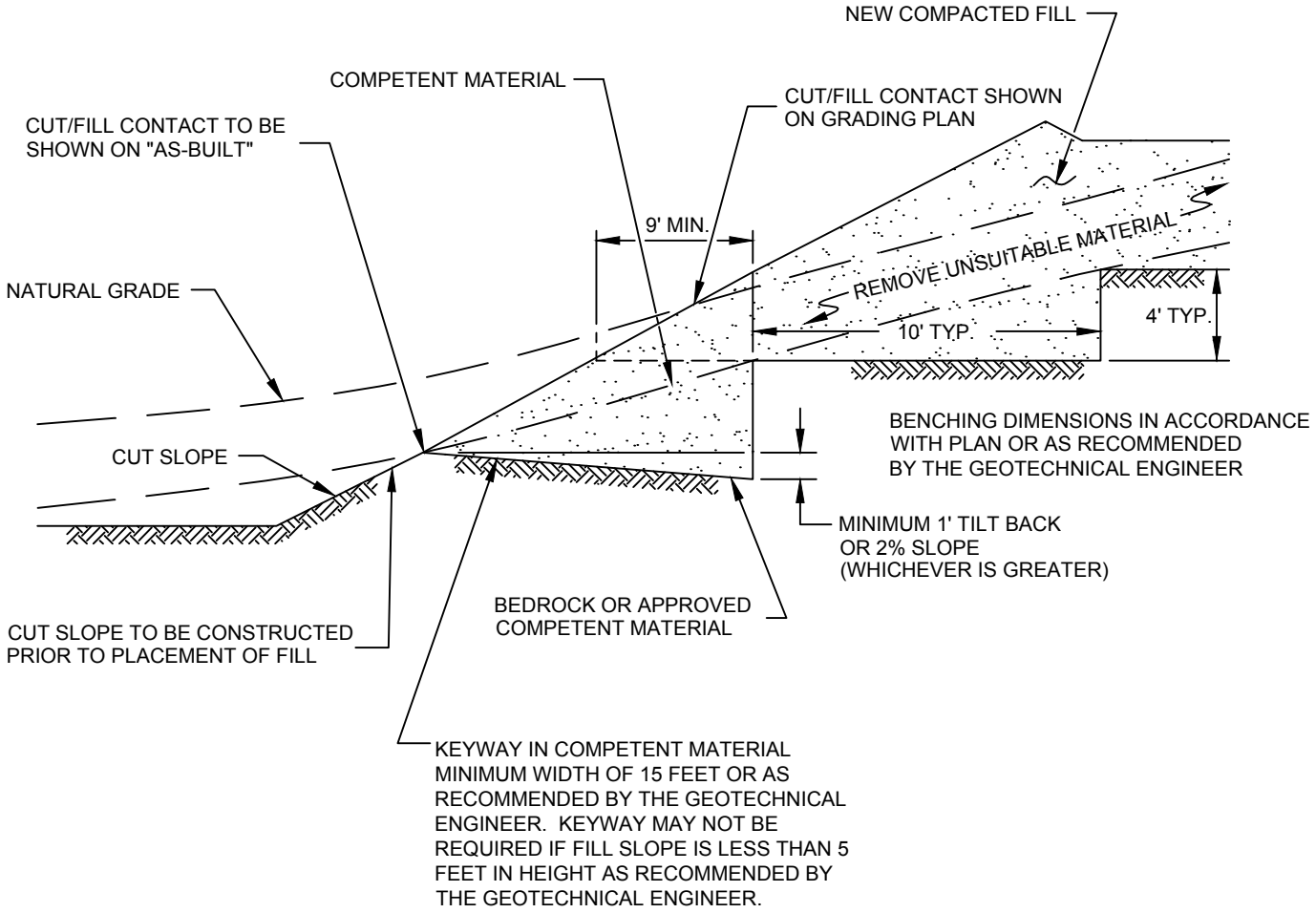


*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE	SoCalGeo SOUTHERN CALIFORNIA GEOTECHNICAL
DRAWN: JAS CHKD: GKM	
PLATE D-1	



FILL ABOVE CUT SLOPE DETAIL

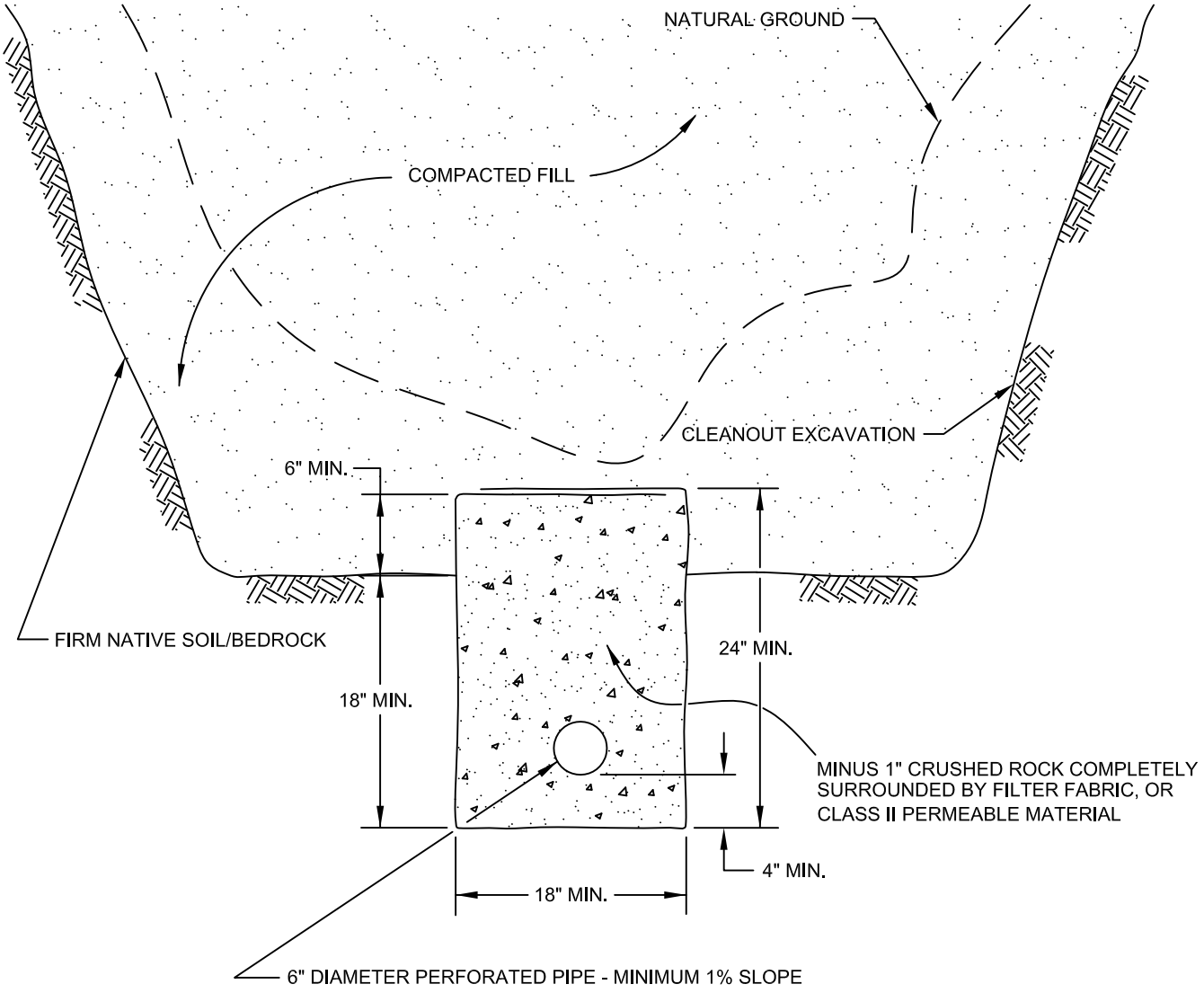
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

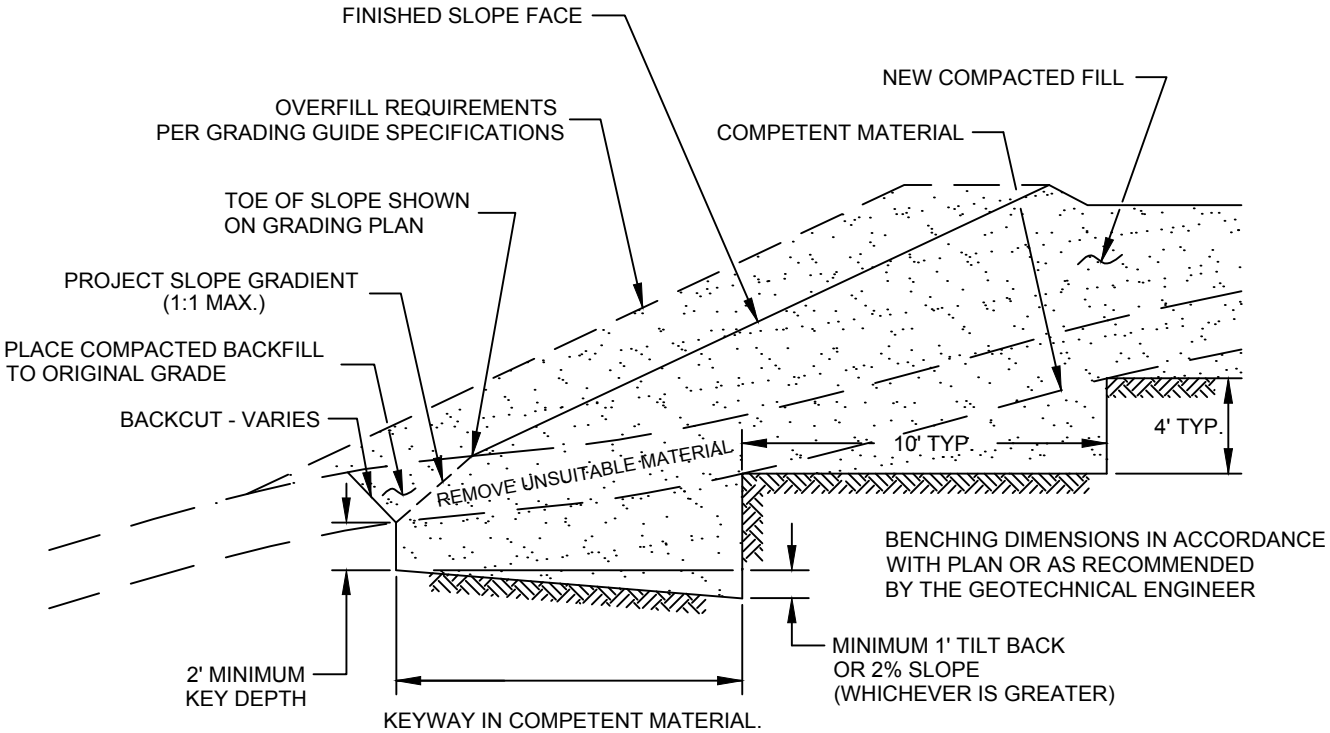
SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE
DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE:
BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

FILL ABOVE NATURAL SLOPE DETAIL

GRADING GUIDE SPECIFICATIONS

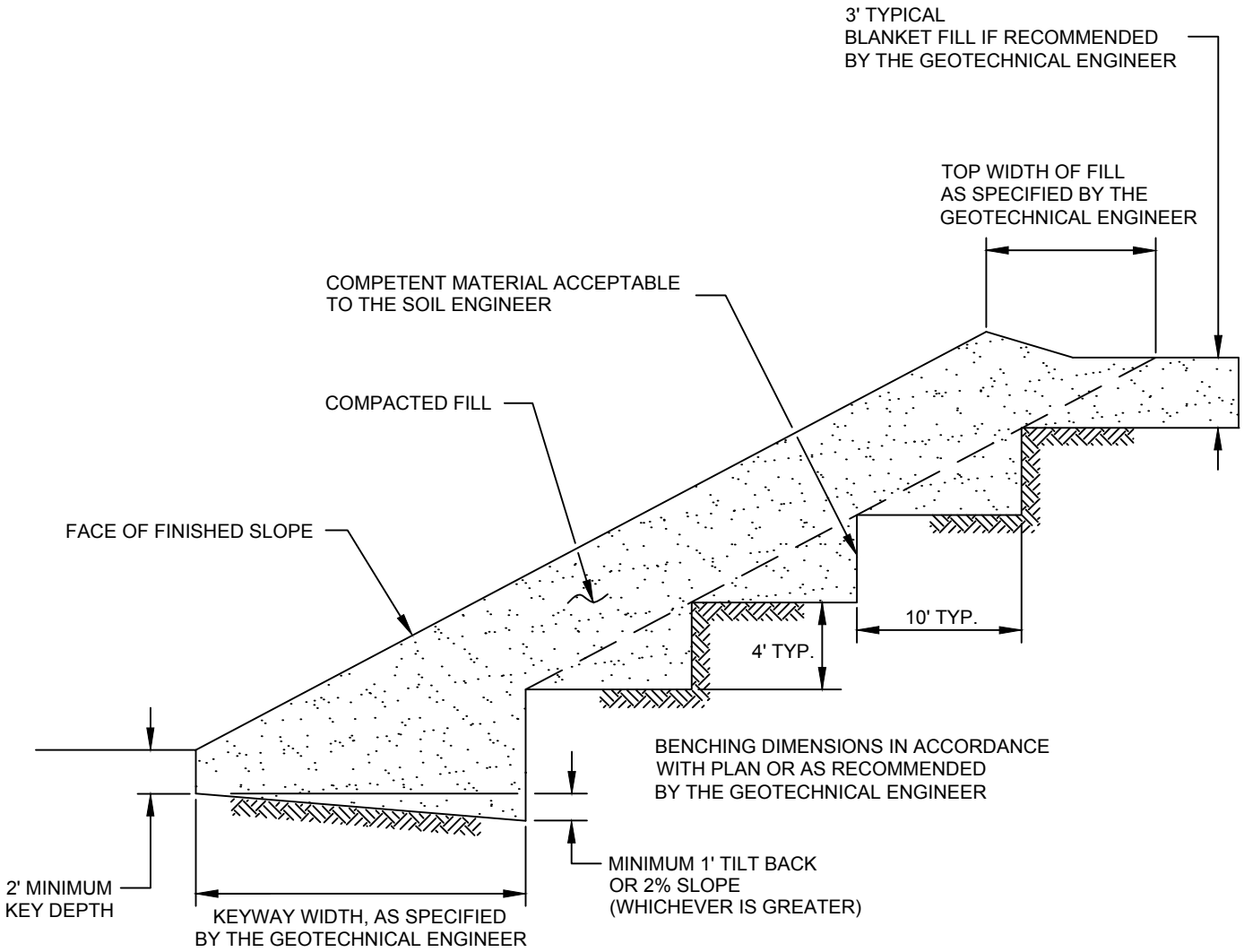
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-4

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



STABILIZATION FILL DETAIL

GRADING GUIDE SPECIFICATIONS

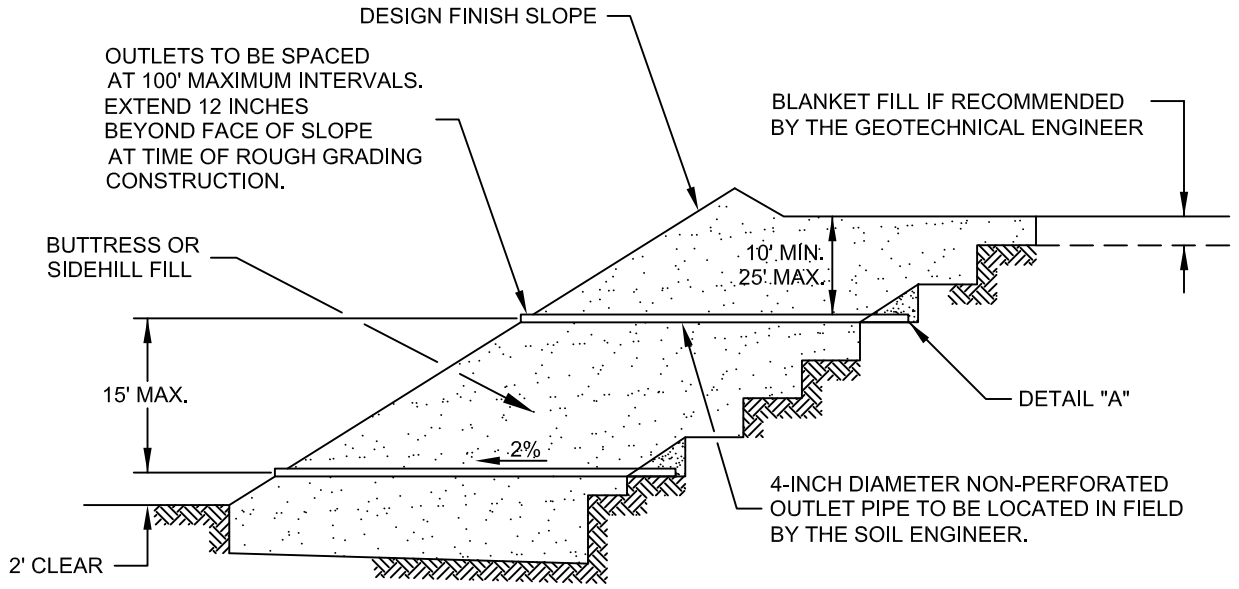
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-5

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



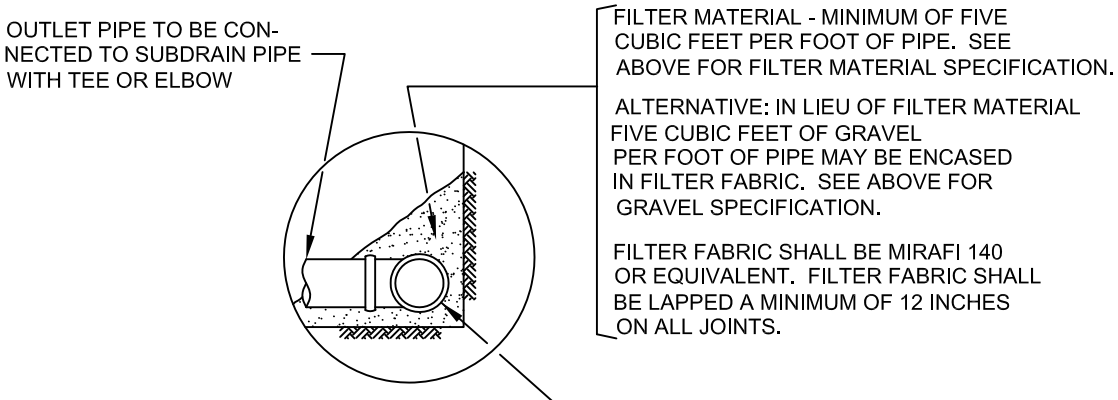
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

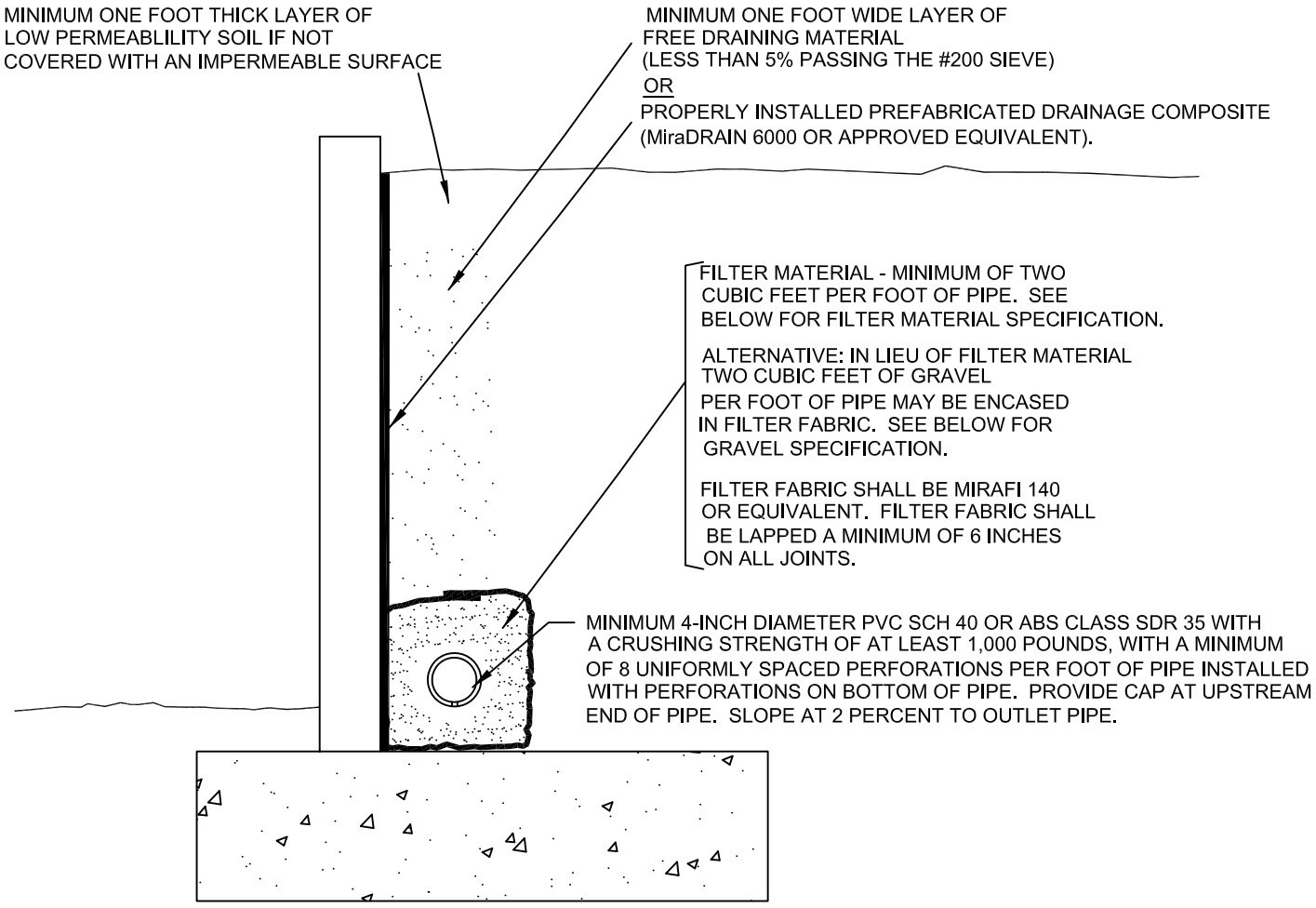
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

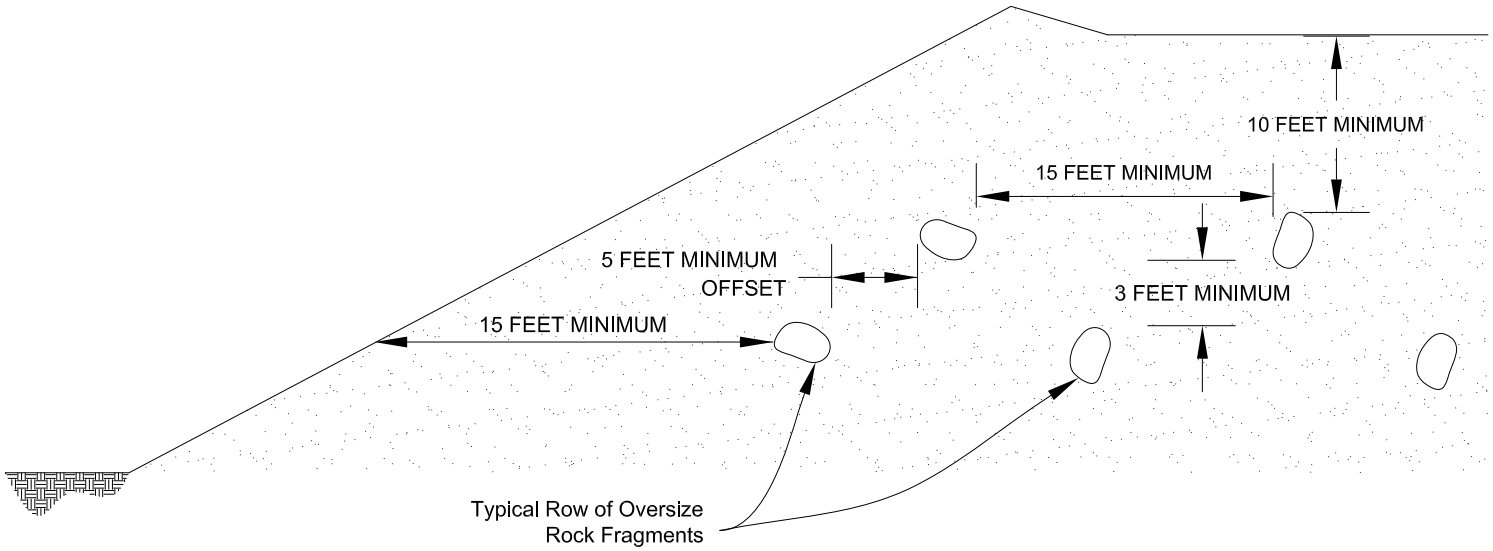
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

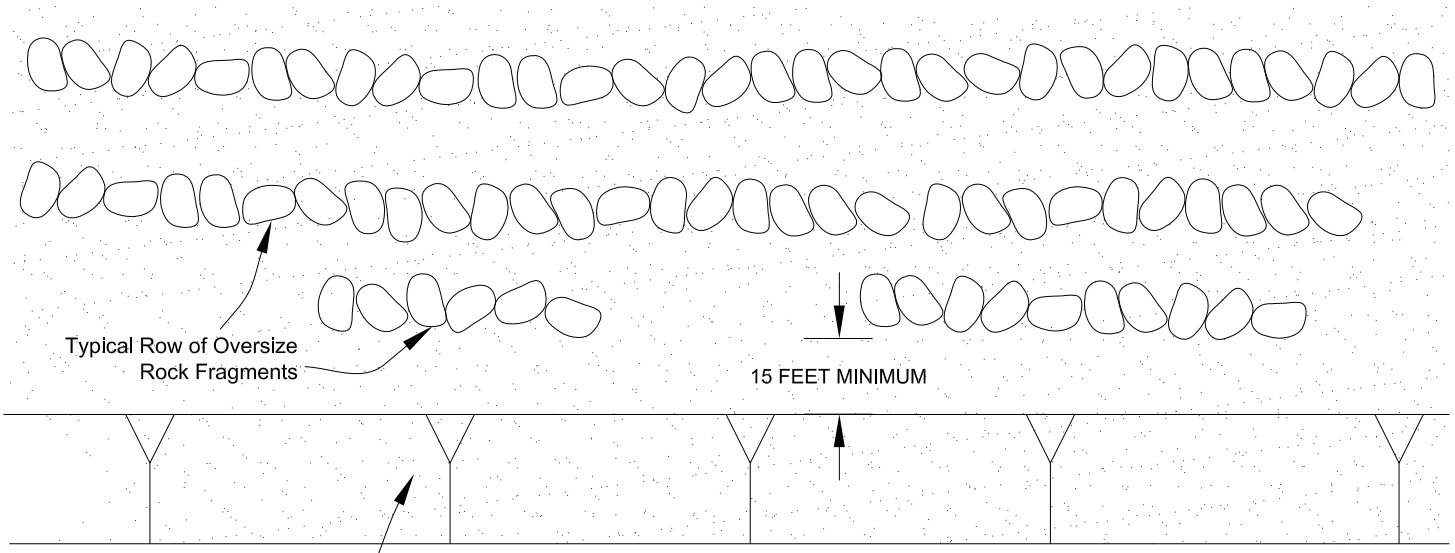
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

PLATE D-8

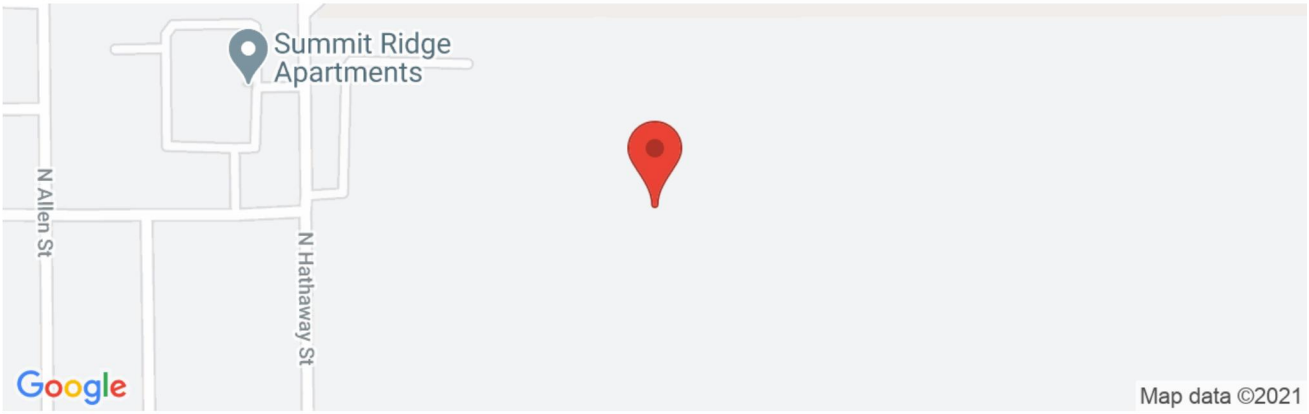
SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

OSHPD

Latitude, Longitude: 33.930856, -116.855585



Date	3/17/2021, 4:40:11 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	2.108	MCE_R ground motion. (for 0.2 second period)
S_1	0.844	MCE_R ground motion. (for 1.0s period)
S_{MS}	2.108	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.405	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.876	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.964	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	2.528	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.78	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	2.108	Factored deterministic acceleration value. (0.2 second)
S1RT	0.975	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	1.098	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.844	Factored deterministic acceleration value. (1.0 second)
PGAd	0.876	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.91	Mapped value of the risk coefficient at short periods
C_{R1}	0.888	Mapped value of the risk coefficient at a period of 1 s

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
https://seismicmaps.org/

SEISMIC DESIGN PARAMETERS - 2019 CBC

PROPOSED BANNING INDUSTRIAL PARK

BANNING, CALIFORNIA

DRAWN: JAH
CHKD: RGT

SCG PROJECT
21G119-1

PLATE E-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

Appendix F

Structural BMP and/or Retention Facility Sizing Calculations
and Design Details

Preliminary Sizing for Retention Volume is attached.

RCFC & WCD	SYNTHETIC UNIT HYDROGRAPH METHOD Unit Hydrograph and Effective Rain Calculation Form	Project: **First Hathaway** Banning, CA	Date: 06.05.2023	Sheet 1 of 1

[1] Concentration Point	**104.05**	[2] Area Designation	**Post Project A**
[3] Drainage Area Sq Miles (THIS WORKSHEET in ACRES)	**33.3**	[4] Ultimate Discharge-CFS-HRS/IN (645*[3])	**n/a**
[5] Unit Time Minutes (SAMPLE 100% -200% of LAG)	**10**	[6] LAG Time Minutes (0.8*Tc)	**8**
[7] Unit Time-Percent of Lag (100*[5]/[6])	**n/a**	[8] S-Curve	**n/a**
[9] Storm Frequency & Duration (SAMPLE 100 year 3 Hour)	**100yr-3hr**	[10] Total Adjusted Storm Rain- INCHES	**2.72**
[11] Variable Loss Rate(AVG) - INCHES/HOUR	**n/a**	[12] Minimum Loss Rate (for VAR. LOSS) - IN/HR	**n/a**
[13] Constant Loss Rate - INCHES/HOUR (see note 1)	**0.14**	[14] Low Loss Rate- PERCENT	**18**

	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]		[23]	[24]
	Unit time period	Time percent of LAG	Cumlative average percent of ultimate discharge	Distrib Graph percent	Unit Hydrograph CFS-HRS/IN	Pattern Percent	Storm Rain IN/HR	LOSS RATE IN/HR		Effective Rain IN/HR	FLOW CFS
		[7] * [15]	(S-Graph)	[17]m-[17]m-1	([4]*[18])/100	(PL E-5.9)	60*[10]*[20]/100*[5]	Max	Low	[21]-[22]	[3]*[23]
							0.1632*[20]		[21]-(([21]*([14]/100))		[3]*[23]
1		**n/a**	**n/a**	**n/a**	**n/a**	2.6	0.424	0.14		0.28	9.5
2						2.6	0.424	0.14		0.28	9.5
3						3.3	0.539	0.14		0.40	13.3
4						3.3	0.539	0.14		0.40	13.3
5						3.3	0.539	0.14		0.40	13.3
6						3.4	0.555	0.14		0.41	13.8
7						4.4	0.718	0.14		0.58	19.3
8		**SHORTCUT METHOD**				4.2	0.685	0.14		0.55	18.2
9						5.3	0.865	0.14		0.72	24.1
10						5.1	0.832	0.14		0.69	23.1
11						6.4	1.044	0.14		0.90	30.1
12						5.9	0.963	0.14		0.82	27.4
13						7.3	1.191	0.14		1.05	35.0
14						8.5	1.387	0.14		1.25	41.5
15						14.1	2.301	0.14		2.16	72.0
16						14.1	2.301	0.14		2.16	72.0
17						3.8	0.620	0.14		0.48	16.0
18						2.4	0.392	0.14		0.25	8.4
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
						100			SUM	13.78	

Notes:

1. Fp obtained from Plate E-6.2; Loss Rate (F) from page E-8
where F=Fp if 100 percent pervious cover

Effective Rain= Sum[23] * Unit Time (HRS)
= 13.78*(10/60)= 13.78*0.1667
= **2.30** **INCHES**

Flood Volume = Effective Rain * Area
= 2.3*(1/12)*33.3 ACRES
6.37 **ACRE-FEET**

Plate E-2.2

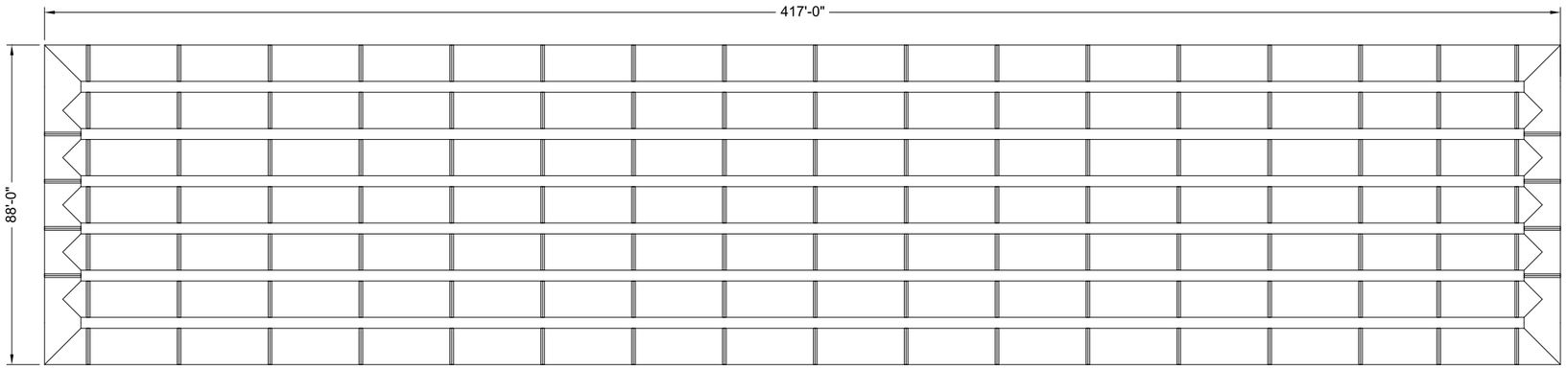
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 2,955 LF

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 305,000 CF
- PIPE STORAGE VOLUME = 232,085 CF
- BACKFILL STORAGE VOLUME = 73,090 CF
- TOTAL STORAGE PROVIDED = 305,175 CF

PIPE DETAILS
- DIAMETER = 120"
- CORRUGATION = 5x1
- GAGE = 14
- COATING = ALT2
- WALL TYPE = PERFORATED
- BARREL SPACING = 36"

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 6"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 6"



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY
SCALE: 1" = 40'

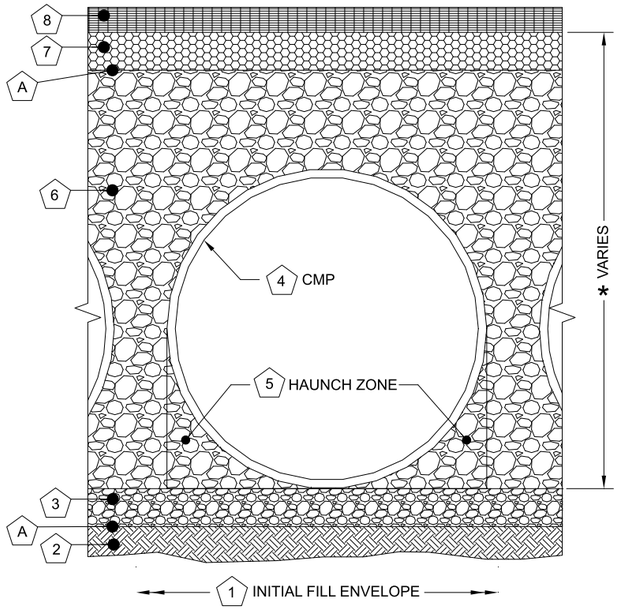
DATE	REVISION DESCRIPTION	BY

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH **DYODS** DRAWING

DYO21805 First Hathaway Logistics
120" CMP Detention - 305,000 C.F. - BASIN A
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21805	9/23/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		



	Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
	Material Location	Description	Material Designation	Designation
8	Rigid or Flexible Pavement (if applicable)			
7	Road Base (if applicable			
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6	Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145-A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
3	Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A	Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infiltration systems due to the propensity for geotextiles to clog over time.
*	Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

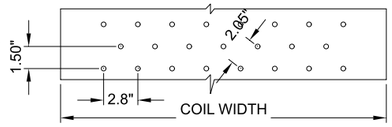
BACKFILL

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

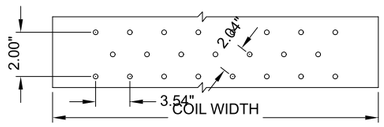
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES



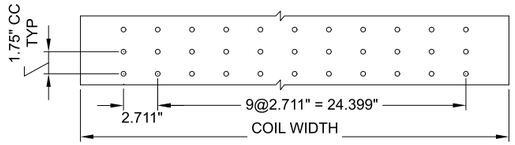
OPEN AREA = 3.76 SQ IN/SQ FT

3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)



OPEN AREA = 4.16 SQ IN/SQ FT

5" x 1" CORRUGATION - STEEL ONLY
EDGE SPACING EQUAL ON BOTH SIDES



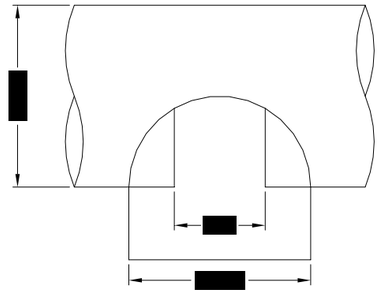
OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:

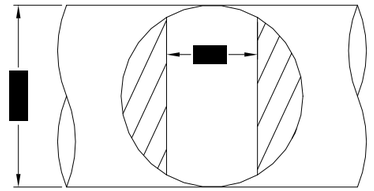
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES ⌀3/8".

TYPICAL PERFORATION DETAIL

SCALE: N.T.S.



PLAN

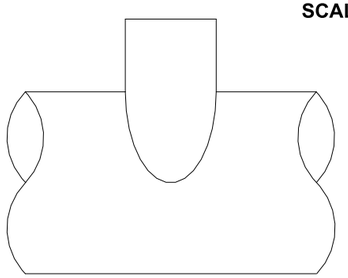


FRONT

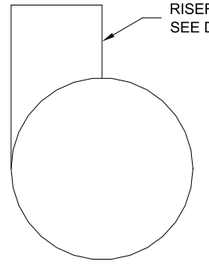
TYPICAL MANWAY DETAIL

SCALE: N.T.S.

NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.



ELEVATION

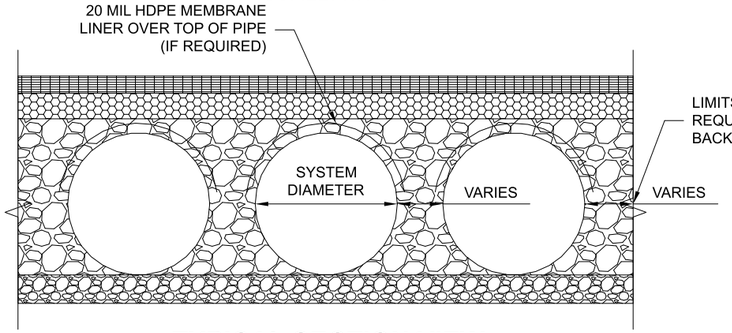


END

TYPICAL RISER DETAIL

SCALE: N.T.S.

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

DATE	REVISION DESCRIPTION	BY

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CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21805 First Hathaway Logistics
120" CMP Detention - 305,000 C.F. - BASIN A
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21805	9/23/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

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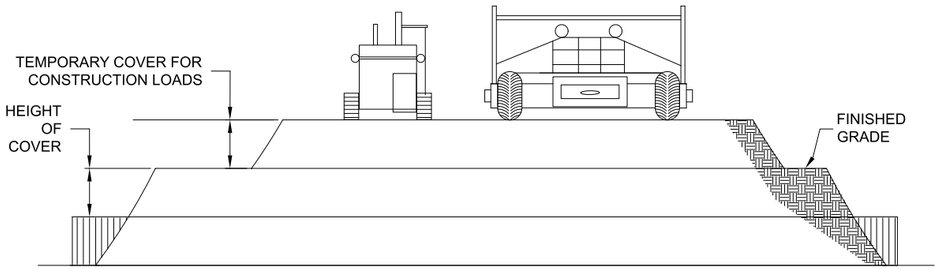


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

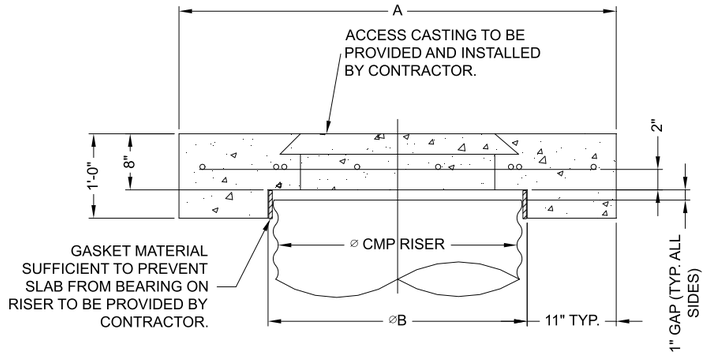
APPLICABLE POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

APPLICABLE
HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.
REQUIREMENTS
INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

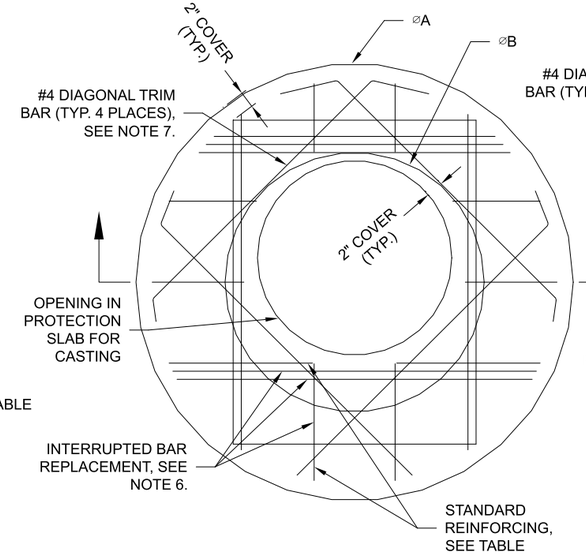
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



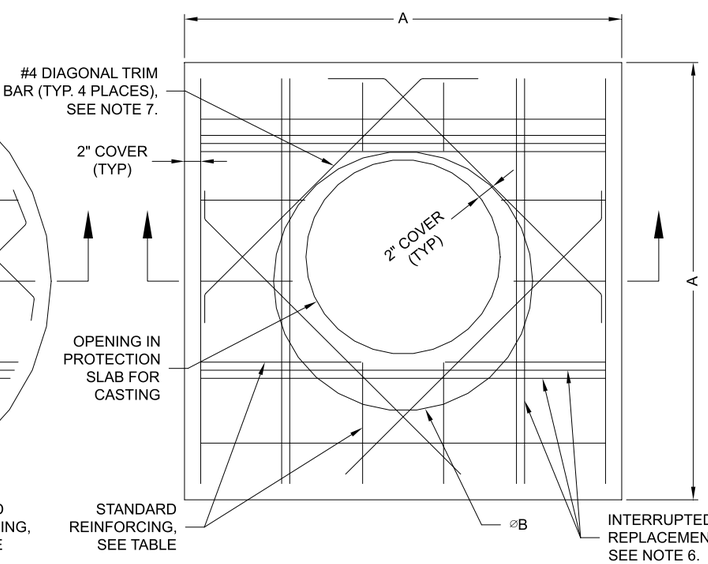
SECTION VIEW

REINFORCING TABLE				
⌀ CMP RISER	A	⌀ B	REINFORCING	**BEARING PRESSURE (PSF)
24"	⌀ 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	⌀ 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	⌀ 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	⌀ 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	⌀ 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21805 First Hathaway Logistics
120" CMP Detention - 305,000 C.F. - BASIN A
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21805	9/23/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

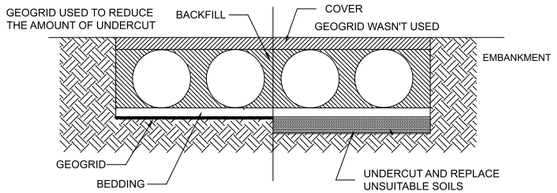
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

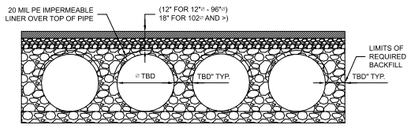


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

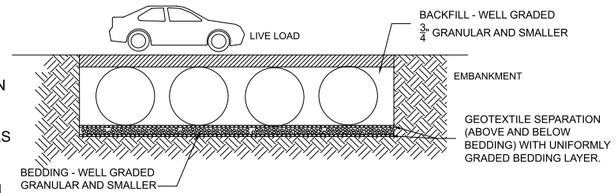
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

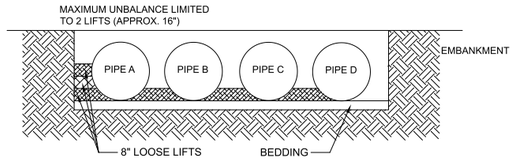
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



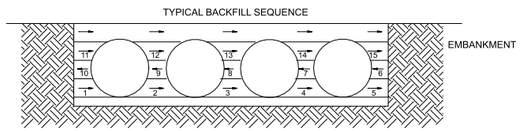
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

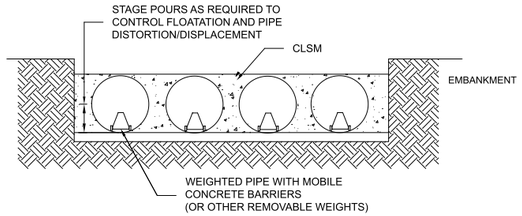


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

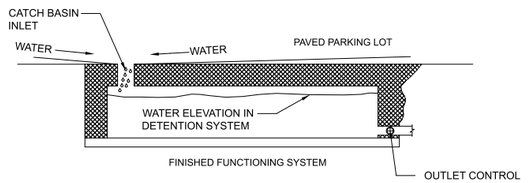


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

C:\EXPORTS\TEMPLATES\CMP_V8.DWG 10/18/2019 10:02 AM

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21805 First Hathaway Logistics
120" CMP Detention - 305,000 C.F. - BASIN A
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21805	9/23/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

Whitewater Watershed

BMP Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend: Required Entries / Calculated Cells

Company Name	Stantec -	Date	2.01.2023
Designed by	vadjr	County/City Case No	TPM 38256
Company Project Number/Name	First Hathaway Logistics (pn:2042611700)		
Drainage Area Number/Name	Drainage Management Area A		

Enter the Area Tributary to this Feature (A_{TRIB}) A_{TRIB} = 23.5 acres

Determine the Impervious Area Ratio

Determine the Impervious Area within A_{TRIB} (A_{IMP}) A_{IMP} = 21.20 acres

Calculate Impervious Area Ratio (I_f) I_f = 0.90

$I_f = A_{IMP}/A_{TRIB}$

Calculate the composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ C_{BMP} = 0.73

BMP Design Flow Rate

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ Q_{BMP} = 3.45 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

Design Flow rate for Hydroseparator Unit

Hydrodynamic Separation Product Calculator

First Hathaway Logistics

Pre-Treat: Area A

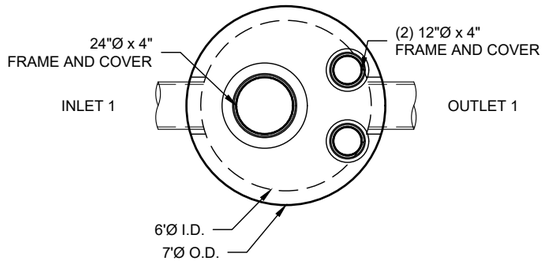
CDS CDS3035-6-C

Project Information					
Project Name	First Hathaway Logistics			**Option #**	A
Country	UNITED_STATES	**State**	California	**City**	Banning

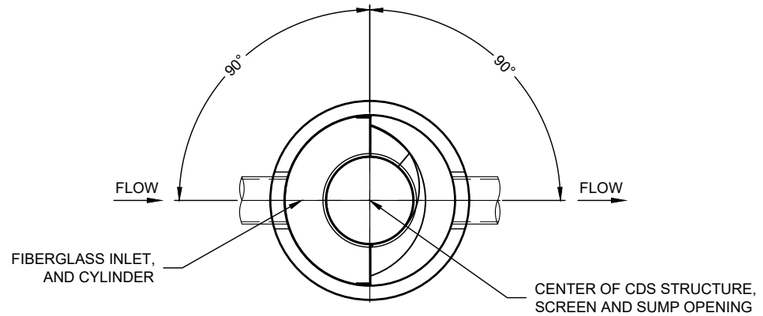
Contact Information			
First Name	Vince	**Last Name**	Delgado
Company	Stantec	**Phone #**	909-255-8208
Email	vince.delgadojr@stantec.com		

Design Criteria					
Site Designation	Pre-Treat: Area A			**Sizing Method**	Treatment Flow Rate
Screening Required?	No	**Treatment Flow Rate**	3.50	**Peak Flow (cfs)**	3.50
Groundwater Depth (ft)	>15	**Pipe Invert Depth (ft)**	5 - 10	**Bedrock Depth (ft)**	>15
Multiple Inlets?	Yes	**Grate Inlet Required?**	No	**Pipe Size (in)**	18.00
Required Particle Size Distribution?	No	**90° between two inlets?**	Yes		

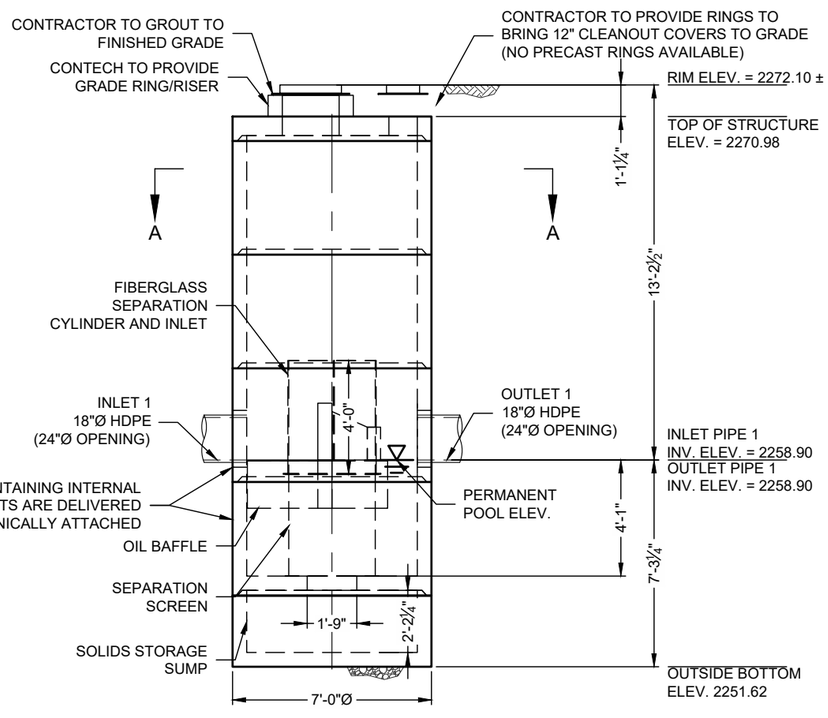
Treatment Selection				
Treatment Unit	CDS	**System Model**	CDS3035-6-C	
Target Removal	80%	**Particle Size Distribution (PSD)**	125	



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	4700 micron, 3' O.D. x 3.58' SEP. SCREEN	CONTECH
1	HARDWARE KIT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	24"Ø x 4" FRAME AND COVER, NON-VENTED EJ#416003009A01, OR EQUIV.	CONTRACTOR
2	12"Ø x 4" FRAME AND COVER, NON-VENTED EJ#41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	3.45 CFS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 14500 LBS.
STRUCTURE IS DELIVERED IN 5 PIECES

MAX FOOTPRINT = Ø7'

CONTECH
PROPOSAL
DRAWING

OLSAZ
5944 / 570484
LAYOUT 1A
3035-6-FGIS

MARK	DATE	REVISION DESCRIPTION	BY

CDS3035-6-C - 740686-10
FIRST HATHAWAY LOGISTICS
BANNING, CA
for SYSTEM: A

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
2201 W. Royal Lane, Suite 200, Irving, TX 75063
972-590-2000 972-590-2039 FAX

DATE: 02/06/23	SCALE: 3/16" = 1'-0"
DESIGNED: RLH	DRAWN: RLH
CHECKED:	APPROVED:
PROJECT No.: 740686	SEQUENCE No.: 10
SHEET: 1 OF 1	

WASHINGTON STATE DEPARTMENT OF ECOLOGY

July 2016

GENERAL USE LEVEL DESIGNATION FOR PRETREATMENT (TSS) AND CONDITIONAL USE LEVEL DESIGNATION FOR OIL CONTROL

For

CONTECH Engineered Solutions CDS® System

Ecology's Decision:

Based on the CONTECH Engineered Solutions (CONTECH) application submissions for the CDS® System, Ecology hereby issues the following use designations for the CDS storm water treatment system:

1. **General Use Level Designation (GULD) for pretreatment use, as defined in Ecology's 2011 *Technical Guidance Manual for Evaluating Emerging Stormwater Treatment Technologies Technology Assessment Protocol – Ecology (TAPE)* Table 2, (a) ahead of infiltration treatment, or (b) to protect and extend the maintenance cycle of a basic, enhanced, or phosphorus treatment device (e.g., sand or media filter). This GULD applies to 2,400 micron screen CDS® units sized per the table below.**

2. **Conditional Use Level Designation (CULD) for oil and grease treatment. This CULD applies to 2400 micron screen CDS units sized per the table above at the water quality design flowrate as determined using the Western Washington Hydrology Model (WWHM).**

3. **The following table shows flowrates associated with various CDS models:**

		CDS Model	Water Quality Flow cfs	Water Quality Flow L/s
Precast**	Inline or Offline	CDS 2015-4	0.7	19.8
		CDS 2015-5	0.7	19.8
		CDS 2020-5	1.1	31.2
		CDS2025-5	1.6	45.3
		CDS3020-6	2	56.6
		CDS3030-6	3	85.0
		CDS3035-6	3.8	106.2
		CDS4030-8	4.5	127.4
		CDS4040-8	6	169.9
		CDS4045-8	7.5	212.4
		CDS5640-10	9	254.9
		CDS5653-10	14	396.5
		CDS5668-10	19	538.1

		CDS5678-10	25	7.08
Precast**	Offline Only	CDS3030-V	3	85
		CDS4030-7	4.5	127.4
		CDS4040-7	6	169.9
		CDS4045-7	7.5	212.4
		CDS5640-8	9	254.9
		CDS5653-8	14	396.5
		CDS5668-8	19	538.1
		CDS5678-8	25	708
		CDS5042	9	254.9
		CDS5050	11	311.5
		CDS7070	26	736.3
		CDS10060	30	849.6
		CDS10080	50	1416
		CDS100100	64	1812.5
Cast In Place		CDS150134-22	148	4191.4
		CDS200164-26	270	7646.6
		CDS240160-32	300	8496.2

***Specially Designed CDS Units may be approved by Ecology on a on a site-by-site basis.**
****Contact Contech for updated model numbers if PMIU, PMSU, PSW, PSWC are specified.**

4. **The water quality design flow rates are calculated using the following procedures:**

   - **Western Washington: For treatment installed upstream of detention or retention, the water quality design flow rate is the peak 15-minute flow rate as calculated using the latest version of the Western Washington Hydrology Model or other Ecology-approved continuous runoff model.**

   - **Eastern Washington: For treatment installed upstream of detention or retention, the water quality design flow rate is the peak 15-minute flow rate as calculated using one of the three methods described in Chapter 2.2.5 of the Stormwater Management Manual for Eastern Washington (SWMMEW) or local manual.**

   - **Entire State: For treatment installed downstream of detention, the water quality design flow rate is the full 2-year release rate of the detention facility.**

5. **The pretreatment GULD has no expiration date; however, Ecology may amend or revoke the designation.**

6. **The oil and grease CULD expires on December 31, 2017 unless extended by Ecology.**

7. **All designations are subject to the conditions specified below.**

8. **Properly designed and operated CDS systems may also have applicability in other situations (example: low-head situations such as bridges or ferry docks), for TSS and oil/grease removal where, on a case-by-case basis, it is found to be infeasible or impracticable to use any other approved practice. Jurisdictions covered under the Phase I or II municipal stormwater permits should use variance/exception procedures and criteria as required by their NPDES permit.**

9. **Ecology finds that the CDS, sized according to the table above, could also provide water quality benefits in retrofit situations.**

Ecology's Conditions of Use:

CDS systems shall comply with these conditions:

1. **Design, assemble, install, operate, and maintain CDS Systems in accordance with Contech's applicable manuals and documents and the Ecology decision and conditions specified herein. Ecology recommends use of the inspection and maintenance schedule included as Attachment 1.**

2. **Discharges from the CDS System shall not cause or contribute to water quality standards violations in receiving waters.**

3. **Contech commits to testing the QAPP accepted by Ecology on September 17, 2014 for attaining a GULD for Oil Treatment. Ecology must review and approve additional QAPPs for each CULD field site in Washington State. Choose sites to reflect the product's treatment intent.**

4. **Contech shall complete all required testing and submit a TER on pretreatment and oil and grease removal for Ecology review by September 15, 2017.**

5. **Contech may request Ecology to grant deadline or expiration date extensions, upon showing cause for such extensions.**

Applicant: Contech Engineered Solutions

Applicant's Address: 11835 NE Glen Widing Drive
Portland, OR 97220

Application Documents:

- Contech Stormwater Solutions Application to: Washington State Department of Ecology Water Quality Program for General Use Level Designation – Pretreatment Applications and Conditional Use Level Designation – Oil Treatment of the Continuous Deflective Separation (CDS™) Technology (June 2007)

- Strynchuk, Royal, and England, *The Use of a CDS Unit for Sediment Control in Brevard County*.

- Walker, Allison, Wong, and Wootton, *Removal of Suspended Solids and Associated Pollutants by a CDS Gross Pollutant Trap*, Cooperative Research Centre for Catchment Hydrology, Report 99/2, February 1999

- Allison, Walker, Chiew, O'Neill, McMahon, *From Roads to Rivers Gross Pollutant Removal from Urban Waterways*, Cooperative Research Centre for Catchment Hydrology, Report 98/6, May 1998

- Quality Assurance Project Plan CDS® for Oil Treatment Performance Evaluation received by Ecology January 15th 2013.

- CDS with Sorbents Preliminary Report received by Ecology October 15, 2015.

Applicant's Use Level Request:

- General use level designation as a pretreatment device and conditional use level designation as an oil and grease device in accordance with Ecology's *Stormwater Management Manual for Western Washington.*

Applicant's Performance Claims:

Based on laboratory trials, the CDS™ System will achieve 50% removal of total suspended solids with d_{50} of 50-µm and 80% removal of total suspended solids with d_{50} of 125-µm at 100% design flowrate with typical influent concentration of 200-mg/L.

Contech can design the CDS™ system to achieve the effluent concentration less than 10 mg/L for total petroleum hydrocarbons.

The CDS system equipped with standard oil baffle and addition of oil sorbent is effective in control of oil and maintain the TPH level below the Ecology-specified level (<10-mg/L) for applications in typical urban runoff pollution control.

Ecology's Recommendation:

Ecology finds that:

- The CDS™ system, sized per the table above, should provide, at a minimum, equivalent performance to a presettling basin as defined in the most recent *Stormwater Management Manual for Western Washington, Volume V, Chapter 6*.

Findings of Fact:

1. Laboratory testing was completed on a CDS 2020 unit equipped with 2400-µm screen using OK-110 sand (d_{50} of 106-µm) at flowrates ranging from 100 to 125% of the design flowrate (1.1 cfs) with a target influent of 200 mg/L. Laboratory results for the OK-110 sand showed removal rates from about 65% to 99% removal with 80% removal occurring near 70% of the design flowrate.
2. Laboratory testing was completed on a CDS 2020 unit equipped with 2400-µm screen using "UF" sediment (d_{50} of 20 to 30-µm) at flowrates ranging from 100 to 125% of the design flowrate (1.1 cfs) with a target influent of 200 mg/L. Laboratory results for the "UF" sediment showed removal rates from about 42% to 94% removal with 80% removal occurring at 5% of the design flowrate.
3. Laboratory testing was completed on a CDS 2020 unit equipped with 4700-µm screen using OK-110 sand (d_{50} of 106-µm) at flowrates ranging from 100 to 125% of the design flowrate (1.1 cfs) with a target influent of 200 mg/L. Laboratory results for the OK-110 sand showed removal rates from about 45% to 99% removal with an average removal of 83.1%.
4. Laboratory testing was completed on a CDS 2020 unit equipped with 4700-µm screen using "UF" sediment (d_{50} of 20 to 30-µm) at flowrates ranging from 100 to 125% of the design flowrate (1.1 cfs) with a target influent of 200 mg/L. Laboratory results for the "UF" sediment showed removal rates from about 39% to 88% removal with an average removal of 56.1%.
5. Contech completed laboratory testing on a CDS2020 unit using motor oil at flowrates ranging from 25% to 75% of the design flowrate (1.1 cfs) with influents ranging from 7 to 47 mg/L. Laboratory results showed removal rates from 27% to 92% removal. A spill test was also run at 10% of the design flowrate with an influent of 82,000 mg/L with an average percent capture of 94.5%
6. Independent parties in California, Florida, and Australia completed various field studies. Field studies showed the potential for the unit to remove oils and grease and total suspended solids, and capture 100% gross solids greater than the aperture size of the screen under treatment flow rate.
7. Contech is conducting a field evaluation of a CDS2015 with Sorbents for oil and grease removal. To date, the unit has been evaluated at flow rates ranging from 42% to 119% of the design flow rate (0.28cfs) with influent motor oil concentrations ranging from 0.46 to 64.8 mg/L (median of 4.5 mg/L; mean of 12.6 mg/L). A preliminary report showed a mean motor oil removal efficiency of 72%, with a UCL95 for effluent concentration of 0.75 mg/L.
8. CDS Technology has been widely accepted with over 6,200 installations in the United States and Canada. There are over 1,380 installations in Washington and Oregon.

Technology Description:

Engineers can download a technology description from the company's website.
www.conteches.com

Recommended Research and Development:

Ecology encourages Contech to pursue continuous improvements to the CDS system. To that end, Ecology makes the following recommendations:

1. Conduct testing to quantify the flowrate at which resuspension occurs.
2. Conduct testing on various sized CDS units to verify the sizing technique is appropriate.
3. Test the system under normal operating conditions, pollutants partially filling the swirl concentrator. Results obtained for "clean" systems may not be representative of typical performance.

Contact Information:

Applicant Contact:	Sean Darcy Contech Engineered Solutions (800) 548-4667 sdarcy@conteches.com
Applicant website:	http://www.conteches.com/

Ecology web link: http://www.ecy.wa.gov/programs/wq/stormwater/newtech/index.html

Ecology: Douglas C. Howie. P.E.
Department of Ecology
Water Quality Program
(360) 407-6444
douglas.howie@ecy.wa.gov

Revision History

Date	Revision
July 2008	Original use-level-designation document
February 2010	Reinstate Contech's Oil Control PULD
August 2012	Revised design storm criteria, revised oil control QAPP, TER, and Expiration dates
December 2012	Revised Contech Engineered Solutions Contact Information; Added QAPP for Oil Treatment
May 2013	Revised model numbers in Attachment 1
April 2014	Revised Due dates for QAPP and TER and changed Expiration date
August 2014	Revised Due dates for QAPP and TER and changed Expiration date
July 2016	Updated Oil Control PULD to a CULD based on preliminary field monitoring results

Attachment 1
CDS Stormwater Treatment Unit Checklist

Frequency	Drainage System Feature	Problem	Conditions to Check For	Recommended Action	Date Inspected*											
					J	F	M	A	M	J	J	A	S	O	N	D
M & S	Inlet Chamber	Accumulation of trash, debris and sediment	Trash blocking inlet throat opening & sediment accumulation exceeds 2 inches	Remove trash, debris, and sediments. Inlet throat opening should not be blocked by any materials.												
A	Screen	Blockage/Damage	Biological growth on the surface of the screen; broken screen or loose screen	Powerwash screen to clean the surface and Contact CSS for screen repair (broken or loose)												
M	Separation Chamber	Trash and floatable debris accumulation	Excessive trash and floatable debris accumulation on the surface in separation chamber	Remove trash or other floatable debris in separation chamber to minimum level												
A	Oil Baffle**	Damaged	Baffles corroding, cracking, warping, and/or showing signs of failure as determined by maintenance/inspection person.	Baffles repaired or replaced to design specifications.												
M & S	Oil sorbent**	Consumed	Change of color in sorbents (fresh sorbents typically appears to be white or light yellow)	Remove spent oil sorbent and replace with new sorbent												
M	Sediment Depth in the Sump	Sediment accumulation	Sediment accumulation exceeds 75-85% sump depth (varies depending on the Model, see attached Table)	Sediment in sump should be removed using vactor truck.												
M	Sediment Depth behind the screen	Sediment accumulation	Sediment accumulation exceeds 2 inches behind the screen	Sediment behind the screen should be removed using vactor truck.												

Frequency	Drainage System Feature	Problem	Conditions to Check For	Recommended Action	Date Inspected*											
					J	F	M	A	M	J	J	A	S	O	N	D
M	Access Cover (MH, Grate, cleanout)	Access cover Damaged/ Not working	One maintenance person cannot remove lid after applying 80 pounds of lift, corrosion of deformation of cover.	Cover repaired to proper working specifications or replaced.												
A	Inlet and Outlet Piping	Damaged Piping/Leaking	Any part of the pipes are crushed or damaged due to corrosion and/or settlement.	Pipe repaired or replaced.												
A	Concrete Structure	Concrete structure (MH or diversion vault) has cracks in wall, bottom, and damage to frame and/or top slab.	Cracks wider than ½ inch or evidence of soil particles entering the structure through the cracks, or maintenance/inspection personnel determine that the structure is not structurally sound.	Structure repaired so that no cracks exist wider than 0.25 inch at the joint of inlet/outlet pipe.												
A	Access Ladder	Ladder rungs unsafe	Maintenance person judges that ladder is unsafe due to missing rungs, misalignment, rust, or cracks. Ladder must be fixed or secured immediately.	Ladder meets design standards and allows maintenance persons safe access.												

*Note dates when maintenance was performed and type of maintenance performed in notes section below.
**May not be present on all units.

(M) Monthly from November through April.
(A) Once in late summer (preferable September)
(S) After any major storm (use 1-inch in 24 hours as a guideline).

If you are unsure whether a problem exists, please contact a Professional Engineer.

Notes:

Maintenance of CDS stormwater treatment unit typically does not require confined space entry. Visual inspections should be performed above ground. If entry is required, it should be performed by qualified personnel.

Refer to CDS Unit Operation & Maintenance Guideline for maintenance details. Typically the CDS unit needs to be inspected before and after the rainfall seasons (November to April), after any major storms (>1-inch within 24 hour) and in the event of chemical spills.

Contact Contech Engineered Solutions (CSS) (800-548-4667) if there is any damage to the internal components of CDS Unit.

CDS Maintenance Indicators and Sediment Storage Capacities

CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	yd^3	m^3
CDS2015	5	1.5	3.0	0.9	1.3	1.0
CDS2020	5	1.5	3.5	1.1	1.3	1.0
CDS2025	5	1.5	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3

Whitewater Watershed

BMP Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend: Required Entries / Calculated Cells

Company Name	Stantec -	Date	2.01.2023
Designed by	vadjr	County/City Case No	TPM 38256
Company Project Number/Name	First Hathaway Logistics (pn:2042611700)		
Drainage Area Number/Name	Drainage Management Area A1		

Enter the Area Tributary to this Feature (A_{TRIB}) A_{TRIB} = 9.8 acres

Determine the Impervious Area Ratio

Determine the Impervious Area within A_{TRIB} (A_{IMP}) A_{IMP} = 8.80 acres

Calculate Impervious Area Ratio (I_f) I_f = 0.90

$I_f = A_{IMP}/A_{TRIB}$

Calculate the composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ C_{BMP} = 0.73

BMP Design Flow Rate

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ Q_{BMP} = 1.43 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

Design Flow rate for Hydroseparator Unit

Hydrodynamic Separation Product Calculator

First Hathaway Logistics

Pre Treatment - System A1

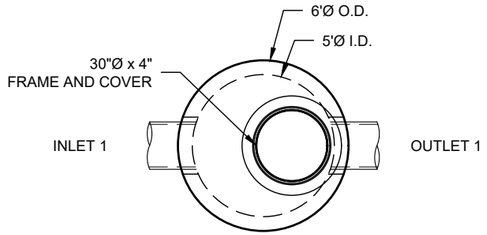
CDS CDS2025-5-C

Project Information					
Project Name	First Hathaway Logistics			**Option #**	A
Country	UNITED_STATES	**State**	California	**City**	Banning

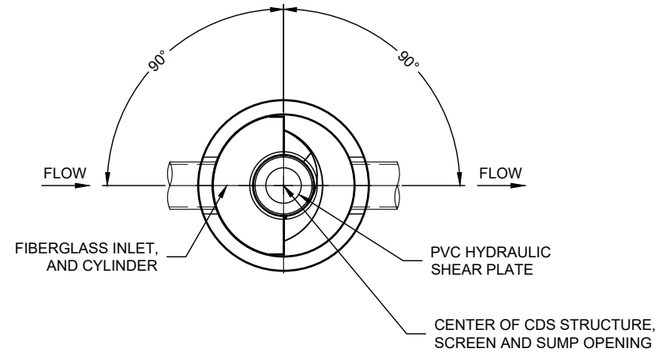
Contact Information			
First Name	Vince	**Last Name**	Delgado
Company	Stantec	**Phone #**	909-255-8208
Email	vince.delgadojr@stantec.com		

Design Criteria					
Site Designation	Pre Treatment - System A1			**Sizing Method**	Treatment Flow Rate
Screening Required?	No	**Treatment Flow Rate**	1.43	**Peak Flow (cfs)**	1.43
Groundwater Depth (ft)	>15	**Pipe Invert Depth (ft)**	10 - 15	**Bedrock Depth (ft)**	>15
Multiple Inlets?	Yes	**Grate Inlet Required?**	No	**Pipe Size (in)**	18.00
Required Particle Size Distribution?	Yes	**90° between two inlets?**	Yes		

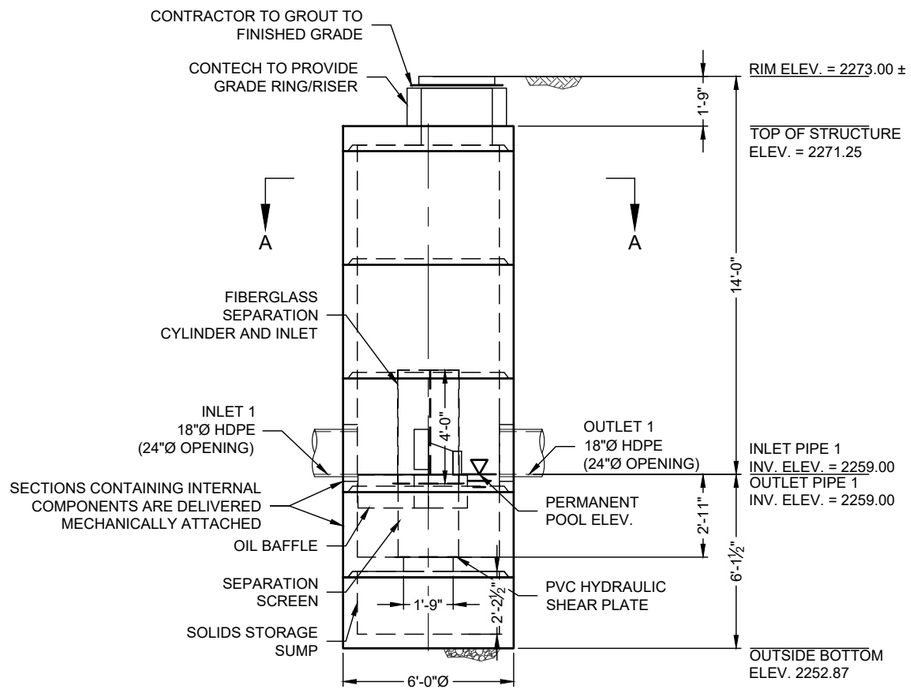
Treatment Selection				
Treatment Unit	CDS	**System Model**	CDS2025-5-C	
Target Removal	80%	**Particle Size Distribution (PSD)**	125	



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	4700 micron, 2' O.D. x 2.58' SEP. SCREEN	CONTECH
1	HARDWARE KIT	CONTECH
1	3/16 INCH PVC HYDRAULIC SHEAR PLATE *	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	30"Ø x 4" FRAME AND COVER, NON-VENTED EJ#001810119A01, OR EQUIV.	CONTRACTOR

* SEE HYDRAULIC SHEAR PLATE DETAIL

SITE DESIGN DATA

WATER QUALITY FLOW RATE	1.43 CFS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 10500 LBS.
STRUCTURE IS DELIVERED IN 5 PIECES

MAX FOOTPRINT = Ø6'

CONTECH
PROPOSAL
DRAWING

OLSAZ
5944 / 570484
LAYOUT 1A
2025-5-FGIS

MARK	DATE	REVISION DESCRIPTION	BY

CDS2025-5-C - 740686-20
FIRST HATHAWAY LOGISTICS
BANNING, CA
for SYSTEM: A1

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
2201 W. Royal Lane, Suite 260, Irving, TX 75063
972-590-2000 972-590-2039 FAX

DATE:	SCALE:
02/06/23	3/16" = 1'-0"
DESIGNED: RLH	DRAWN: RLH
CHECKED:	APPROVED:
PROJECT No.: 740686	SEQUENCE No.: 20
SHEET: 1 OF 1	

PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 1,697 LF

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 175,000 CF
- PIPE STORAGE VOLUME = 133,282 CF
- BACKFILL STORAGE VOLUME = 42,149 CF
- TOTAL STORAGE PROVIDED = 175,432 CF

PIPE DETAILS
- DIAMETER = 120"
- CORRUGATION = 5x1
- GAGE = 14
- COATING = ALT2
- WALL TYPE = PERFORATED
- BARREL SPACING = 36"

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 6"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 6"

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY
SCALE: 1" = 40'

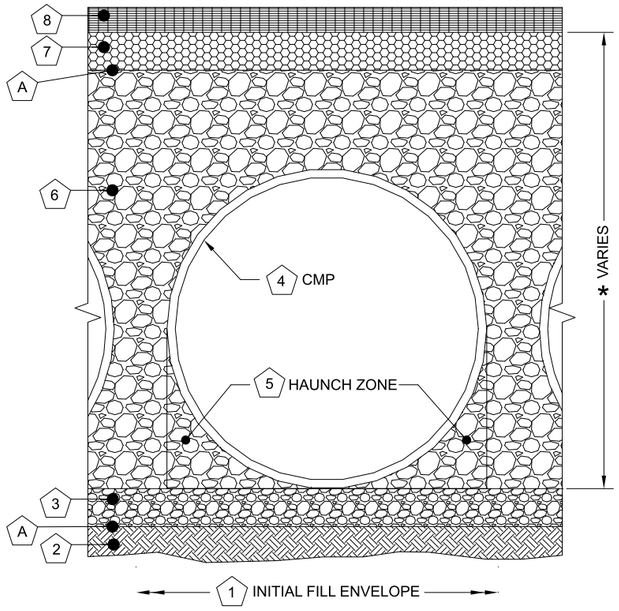
DATE	REVISION DESCRIPTION	BY

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21982 First Hathaway Logistics
120" CMP Detention - 175,000 C.F. - BASIN C
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21982	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		



	Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
	Material Location	Description	Material Designation	Designation
8	Rigid or Flexible Pavement (if applicable)			
7	Road Base (if applicable			
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6	Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145-A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
3	Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A	Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infiltration systems due to the propensity for geotextiles to clog over time.
*	Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

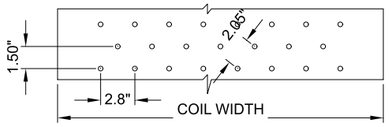
BACKFILL

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

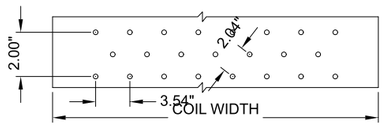
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES



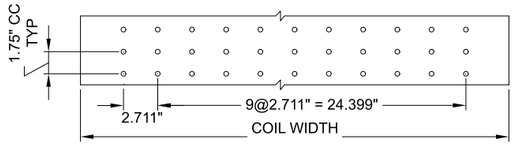
OPEN AREA = 3.76 SQ IN/SQ FT

3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)



OPEN AREA = 4.16 SQ IN/SQ FT

5" x 1" CORRUGATION - STEEL ONLY
EDGE SPACING EQUAL ON BOTH SIDES



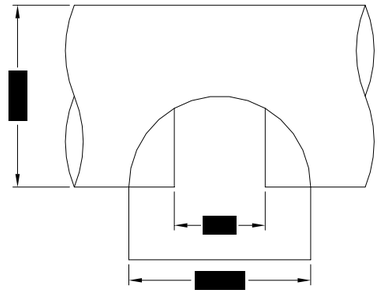
OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:

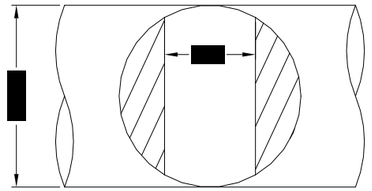
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES ⌀3/8".

TYPICAL PERFORATION DETAIL

SCALE: N.T.S.



PLAN

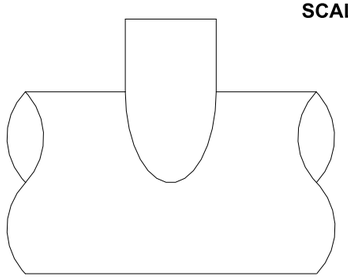


FRONT

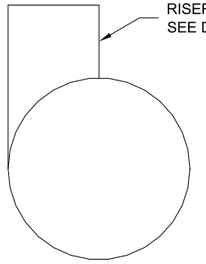
TYPICAL MANWAY DETAIL

SCALE: N.T.S.

NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.



ELEVATION

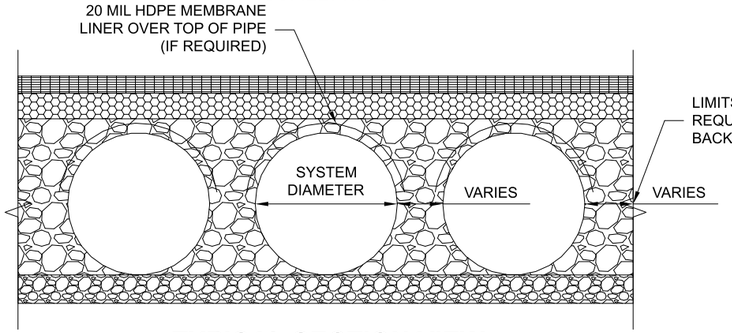


END

TYPICAL RISER DETAIL

SCALE: N.T.S.

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
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800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21982 First Hathaway Logistics
120" CMP Detention - 175,000 C.F. - BASIN C
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21982	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

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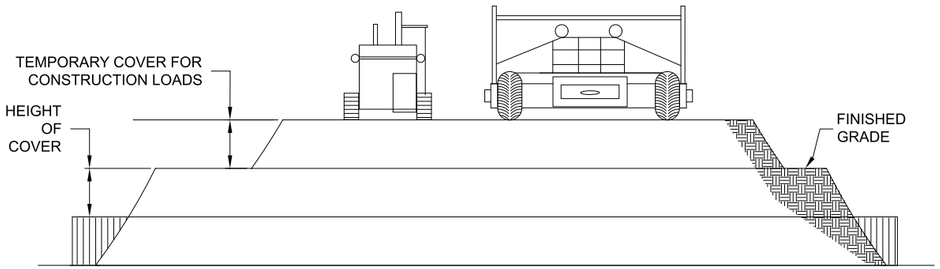


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

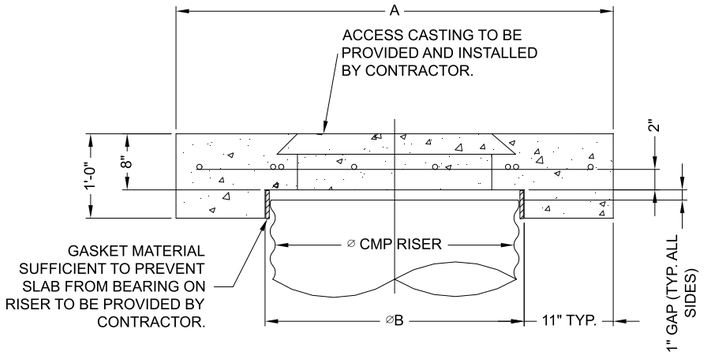
APPLICABLE POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

APPLICABLE
HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.
REQUIREMENTS
INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

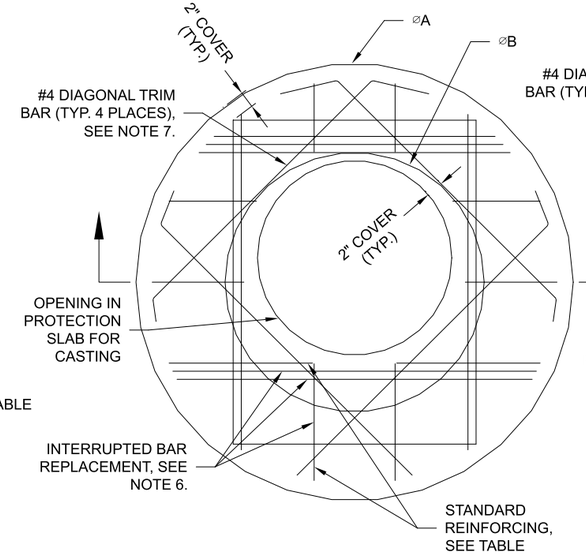
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



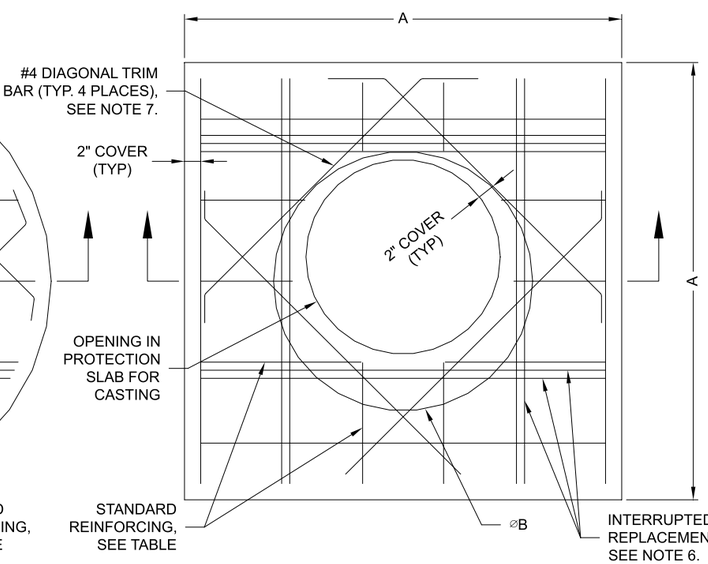
SECTION VIEW

REINFORCING TABLE				
⌀ CMP RISER	A	⌀ B	REINFORCING	**BEARING PRESSURE (PSF)
24"	⌀ 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	⌀ 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	⌀ 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	⌀ 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	⌀ 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

DATE	REVISION DESCRIPTION	BY

CONTECH® ENGINEERED SOLUTIONS LLC
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9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21982 First Hathaway Logistics
120" CMP Detention - 175,000 C.F. - BASIN C
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21982	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

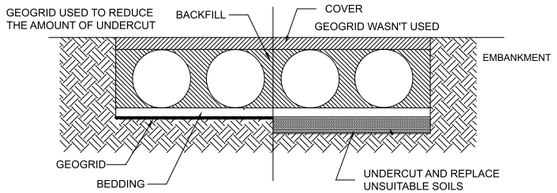
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

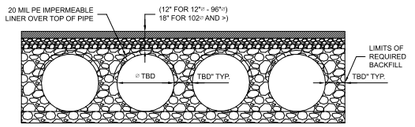


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

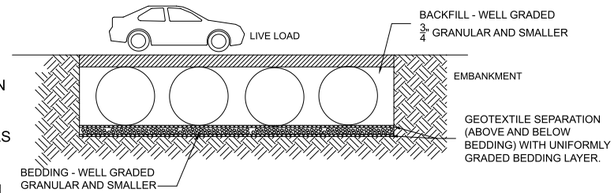
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

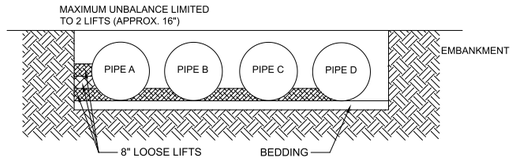
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



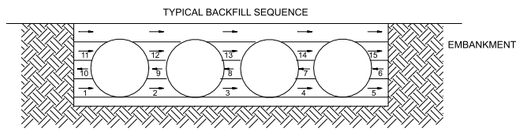
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

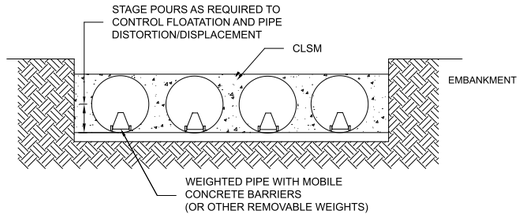


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

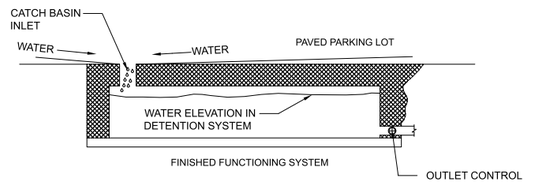


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

C:\EXPORTS\TEMPLATES\CMP_V8.DWG 10/18/2019 10:02 AM

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21982 First Hathaway Logistics
120" CMP Detention - 175,000 C.F. - BASIN C
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21982	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

Whitewater Watershed

BMP Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend: Required Entries / Calculated Cells

Company Name	Stantec -	Date	2.01.2023
Designed by	vadjr	County/City Case No	TPM 38256
Company Project Number/Name	First Hathaway Logistics (pn:2042611700)		
Drainage Area Number/Name	Drainage Management Area C		

Enter the Area Tributary to this Feature (A_{TRIB}) A_{TRIB} = 43 acres

Determine the Impervious Area Ratio

Determine the Impervious Area within A_{TRIB} (A_{IMP}) A_{IMP} = 39.00 acres

Calculate Impervious Area Ratio (I_f) I_f = 0.91

$I_f = A_{IMP}/A_{TRIB}$

Calculate the composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ C_{BMP} = 0.74

BMP Design Flow Rate

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ Q_{BMP} = 6.37 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

Design Flow rate for Hydroseparator Unit

Hydrodynamic Separation Product Calculator

First Hathaway Logistics

Pretreatment System Area C

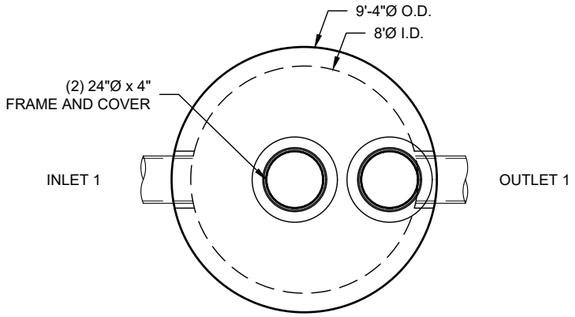
CDS CDS4045-8-C

Project Information					
Project Name	First Hathaway Logistics			**Option #**	A
Country	UNITED_STATES	**State**	California	**City**	Banning

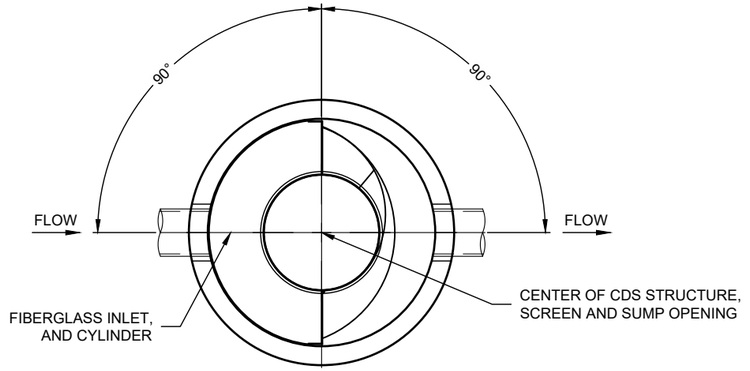
Contact Information			
First Name	Vince	**Last Name**	Delgado
Company	Stantec	**Phone #**	909-255-8208
Email	vince.delgadojr@stantec.com		

Design Criteria					
Site Designation	Pretreatment System Area C			**Sizing Method**	Treatment Flow Rate
Screening Required?	No	**Treatment Flow Rate**	6.40	**Peak Flow (cfs)**	6.40
Groundwater Depth (ft)	>15	**Pipe Invert Depth (ft)**	10 - 15	**Bedrock Depth (ft)**	>15
Multiple Inlets?	Yes	**Grate Inlet Required?**	No	**Pipe Size (in)**	18.00
Required Particle Size Distribution?	No	**90° between two inlets?**	Yes		

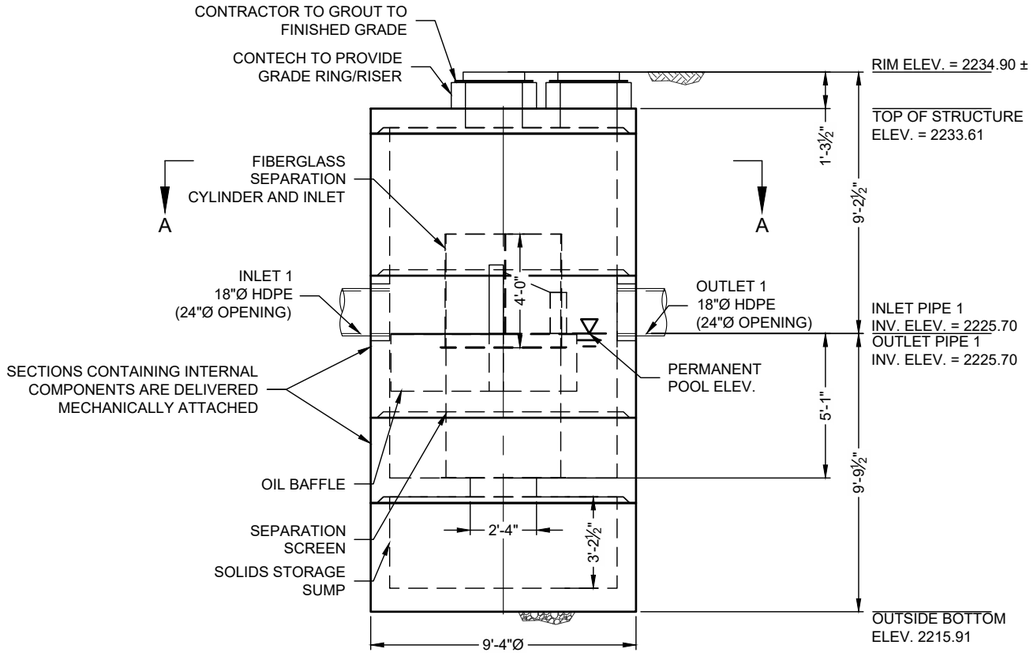
Treatment Selection				
Treatment Unit	CDS	**System Model**	CDS4045-8-C	
Target Removal	80%	**Particle Size Distribution (PSD)**	125	



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	4700 micron, 4' O.D. x 4.58' SEP. SCREEN	CONTECH
1	HARDWARE KIT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
2 PLC	GRADE RINGS/RISERS	CONTRACTOR
2	24"Ø x 4" FRAME AND COVER, NON-VENTED EJ#416003009A01, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	6.37 CFS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 27000 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = Ø9'-4"

CONTECH
PROPOSAL
DRAWING

OLSAZ
5944 / 570484
LAYOUT 1A
4045-8-FGIS

MARK	DATE	REVISION DESCRIPTION	BY

CDS4045-8-C - 740686-30
FIRST HATHAWAY LOGISTICS
BANNING, CA
for SYSTEM: C

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
2201 W. Royal Lane, Suite 200, Irving, TX 75063
972-580-2000 972-580-2039 FAX

DATE:	SCALE:
02/06/23	3/16" = 1'-0"
DESIGNED: RLH	DRAWN: RLH
CHECKED:	APPROVED:
PROJECT No.: 740686	SEQUENCE No.: 30
SHEET: 1 OF 1	

RCFC & WCD	SYNTHETIC UNIT HYDROGRAPH METHOD Unit Hydrograph and Effective Rain Calculation Form	Project: **First Hathaway** Banning, CA	Date: 06.05.2023	Sheet 1 of 1

[1] Concentration Point	**300.06**	[2] Area Designation	**Post Project C**
[3] Drainage Area Sq Miles (THIS WORKSHEET in ACRES)	**37.6**	[4] Ultimate Discharge-CFS-HRS/IN (645*[3])	**n/a**
[5] Unit Time Minutes (SAMPLE 100% -200% of LAG)	**10**	[6] LAG Time Minutes (0.8*Tc)	**9.1**
[7] Unit Time-Percent of Lag (100*[5]/[6])	**n/a**	[8] S-Curve	**n/a**
[9] Storm Frequency & Duration (SAMPLE 100 year 3 Hour)	**100yr-3hr**	[10] Total Adjusted Storm Rain- INCHES	**2.72**
[11] Variable Loss Rate(AVG) - INCHES/HOUR	**n/a**	[12] Minimum Loss Rate (for VAR. LOSS) - IN/HR	**n/a**
[13] Constant Loss Rate - INCHES/HOUR (see note 1)	**0.18**	[14] Low Loss Rate- PERCENT	**18**

	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]		[23]	[24]
	Unit time period	Time percent of LAG	Cumlative average percent of ultimate discharge	Distrib Graph percent	Unit Hydrograph CFS-HRS/IN	Pattern Percent	Storm Rain IN/HR	LOSS RATE IN/HR		Effective Rain IN/HR	FLOW CFS
		[7] * [15]	(S-Graph)	[17]m-[17]m-1	([4]*[18])/100	(PL E-5.9)	60*[10]*[20]/100*[5]	Max	Low	[21]-[22]	[3]*[23]
							0.1632*[20]		[21]-(([21]*([14]/100))		[3]*[23]
1		n/a	n/a	n/a	n/a	2.6	0.424	0.18		0.24	9.2
2						2.6	0.424	0.18		0.24	9.2
3						3.3	0.539	0.18		0.36	13.5
4						3.3	0.539	0.18		0.36	13.5
5						3.3	0.539	0.18		0.36	13.5
6						3.4	0.555	0.18		0.37	14.1
7						4.4	0.718	0.18		0.54	20.2
8						4.2	0.685	0.18		0.51	19.0
9						5.3	0.865	0.18		0.68	25.8
10						5.1	0.832	0.18		0.65	24.5
11						6.4	1.044	0.18		0.86	32.5
12						5.9	0.963	0.18		0.78	29.4
13						7.3	1.191	0.18		1.01	38.0
14						8.5	1.387	0.18		1.21	45.4
15						14.1	2.301	0.18		2.12	79.8
16						14.1	2.301	0.18		2.12	79.8
17						3.8	0.620	0.18		0.44	16.6
18						2.4	0.392	0.18		0.21	8.0
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
						100			SUM	13.06	

SHORTCUT METHOD

Bypass flow from Streets is excluded from this hydrograph analysis

Notes:

1. Fp obtained from Plate E-6.2; Loss Rate (F) from page E-8

where F=Fp if 100 percent pervious cover

Effective Rain= Sum[23] * Unit Time (HRS)

= 13.06*(10/60)= 13.06*0.1667

= **2.18** **INCHES**

Flood Volume = Effective Rain * Area

= 2.18*(1/12)*37.6 ACRES

6.82 **ACRE-FEET**

Plate E-2.2

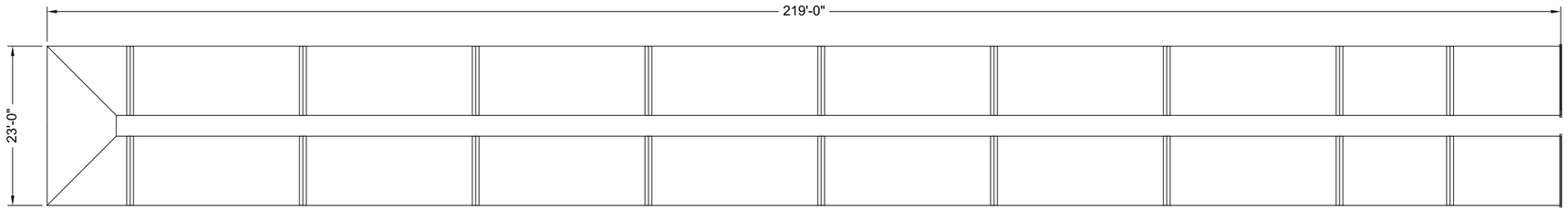
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20/HS25
- APPROX. LINEAR FOOTAGE = 441 LF

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 45,000 CF
- PIPE STORAGE VOLUME = 34,636 CF
- BACKFILL STORAGE VOLUME = 10,456 CF
- TOTAL STORAGE PROVIDED = 45,092 CF

PIPE DETAILS
- DIAMETER = 120"
- CORRUGATION = 5x1
- GAGE = 14
- COATING = ALT2
- WALL TYPE = PERFORATED
- BARREL SPACING = 36"

BACKFILL DETAILS
- WIDTH AT ENDS = 12"
- ABOVE PIPE = 6"
- WIDTH AT SIDES = 12"
- BELOW PIPE = 6"



NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE $2\frac{2}{3}$" x $\frac{1}{2}$" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

ASSEMBLY
SCALE: 1" = 20'

DATE	REVISION DESCRIPTION	BY

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www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21983 First Hathaway Logistics
120" CMP Detention - 45,000 C.F. - BASIN D
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21983	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

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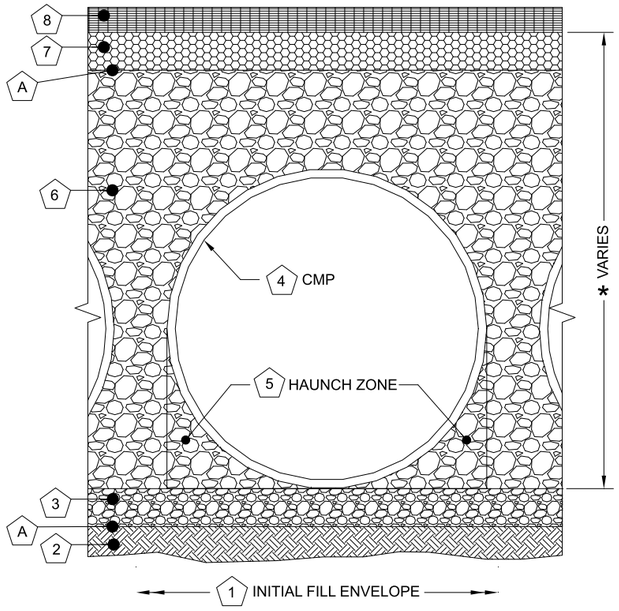


	Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
	Material Location	Description	Material Designation	Designation
8	Rigid or Flexible Pavement (if applicable)			
7	Road Base (if applicable			
A	Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6	Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145-A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
3	Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A	Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infiltration systems due to the propensity for geotextiles to clog over time.
*	Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

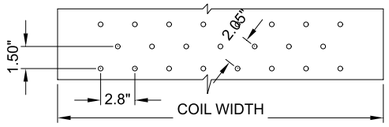
BACKFILL

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

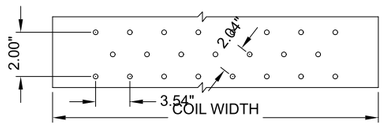
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES



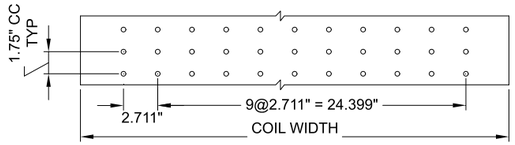
OPEN AREA = 3.76 SQ IN/SQ FT

3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)



OPEN AREA = 4.16 SQ IN/SQ FT

5" x 1" CORRUGATION - STEEL ONLY
EDGE SPACING EQUAL ON BOTH SIDES



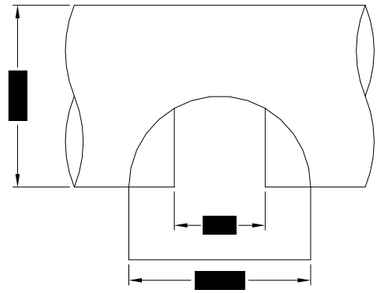
OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:

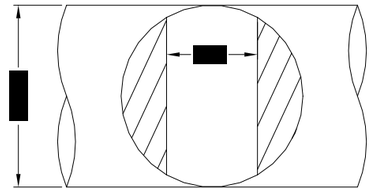
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES ⌀3/8".

TYPICAL PERFORATION DETAIL

SCALE: N.T.S.



PLAN

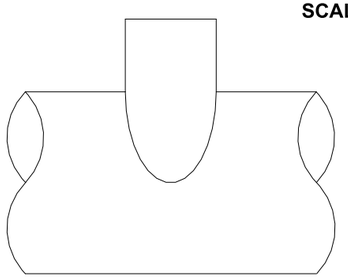


FRONT

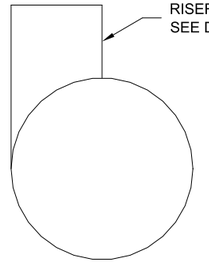
NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

TYPICAL MANWAY DETAIL

SCALE: N.T.S.



ELEVATION

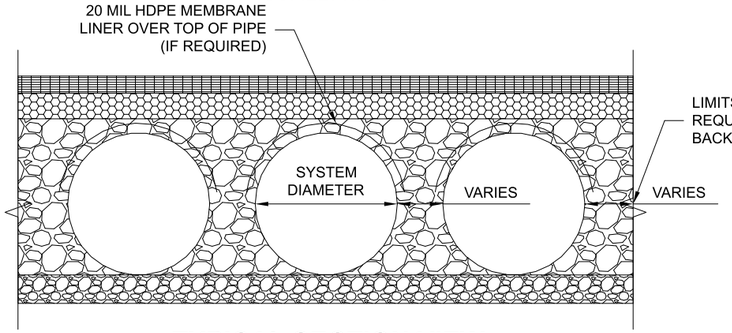


END

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.

TYPICAL RISER DETAIL

SCALE: N.T.S.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

DATE	REVISION DESCRIPTION	BY

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21983 First Hathaway Logistics
120" CMP Detention - 45,000 C.F. - BASIN D
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21983	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

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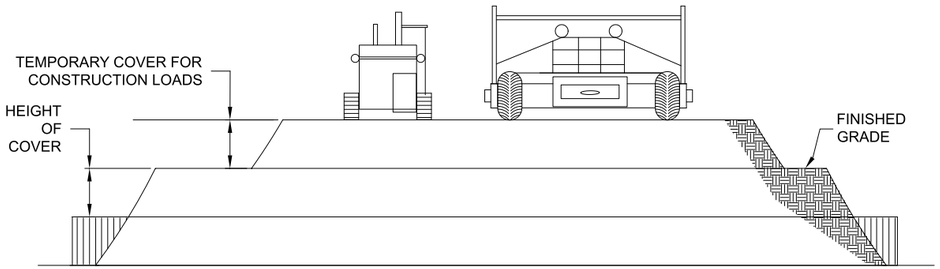


CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

APPLICABLE POLYMER COATED: AASHTO M-245 OR ASTM A-762

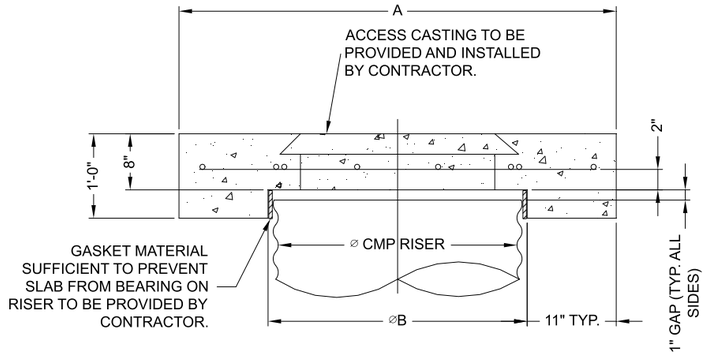
ALUMINUM: AASHTO M-196 OR ASTM B-745

APPLICABLE HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

REQUIREMENTS INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

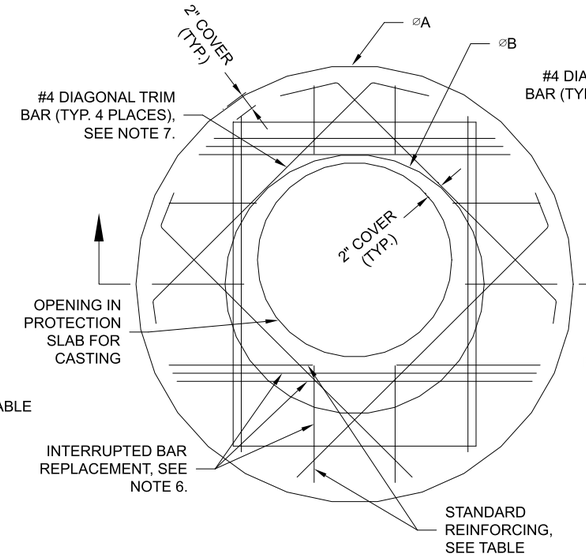
NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.



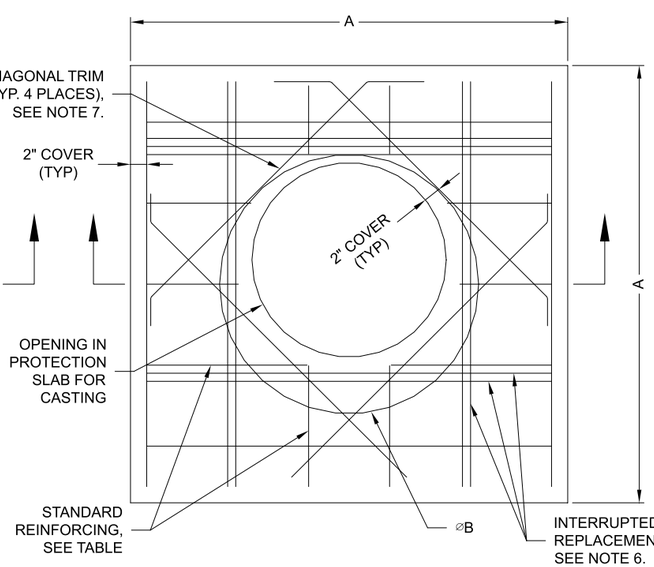
SECTION VIEW

REINFORCING TABLE				
⌀ CMP RISER	A	⌀ B	REINFORCING	**BEARING PRESSURE (PSF)
24"	⌀ 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	⌀ 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	⌀ 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	⌀ 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	⌀ 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

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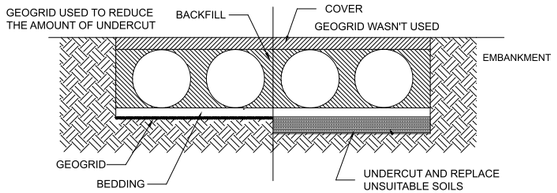
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

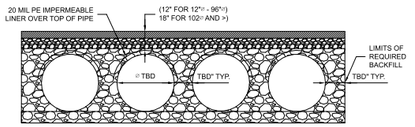


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

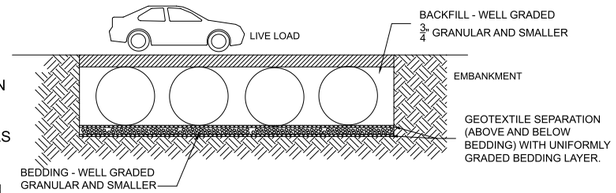
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

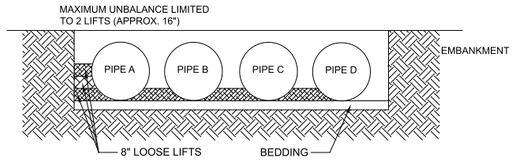
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



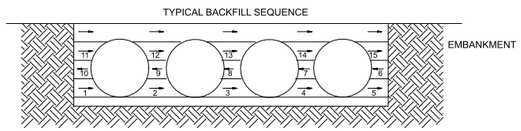
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

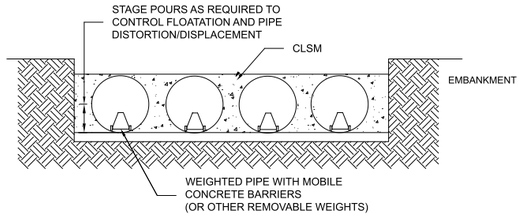


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

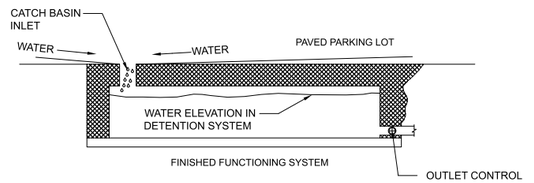


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRASH LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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CONTECH CMP DETENTION SYSTEMS
CONTECH DYODS DRAWING

DYO21983 First Hathaway Logistics
120" CMP Detention - 45,000 C.F. - BASIN D
Banning, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
4469	21983	9/29/2022
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: 1		

Whitewater Watershed

BMP Design Flow Rate, Q_{BMP} (Rev. 06-2014)

Legend: Required Entries / Calculated Cells

Company Name	Stantec -	Date	2.01.2023
Designed by	vadjr	County/City Case No	TPM 38256
Company Project Number/Name	First Hathaway Logistics (pn:2042611700)		
Drainage Area Number/Name	Drainage Management Area D		

Enter the Area Tributary to this Feature (A_{TRIB}) A_{TRIB} = 12 acres

Determine the Impervious Area Ratio

Determine the Impervious Area within A_{TRIB} (A_{IMP}) A_{IMP} = 10.80 acres

Calculate Impervious Area Ratio (I_f) I_f = 0.90

$I_f = A_{IMP}/A_{TRIB}$

Calculate the composite Runoff Coefficient, C for the BMP Tributary Area

Use the following equation based on the WEF/ASCE Method

$C_{BMP} = 0.858I_f^3 - 0.78I_f^2 + 0.774I_f + 0.04$ C_{BMP} = 0.73

BMP Design Flow Rate

$Q_{BMP} = C_{BMP} \times I \times A_{TRIB}$ Q_{BMP} = 1.75 ft^3/s

I = Design Rainfall Intensity, 0.2 in/hr

Notes:

Design Flow rate for Hydroseparator Unit

Hydrodynamic Separation Product Calculator

First Hathaway Logistics

Pretreatment System Area D

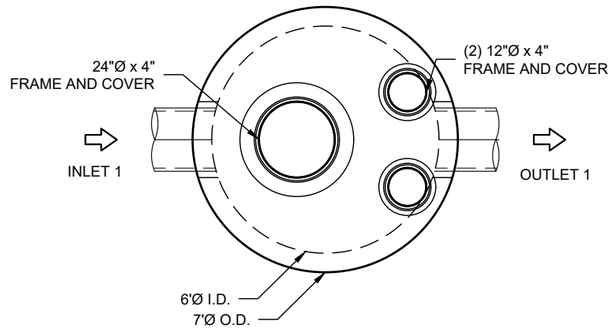
CDS CDS3020-6-C

Project Information					
Project Name	First Hathaway Logistics			**Option #**	A
Country	UNITED_STATES	**State**	California	**City**	Banning

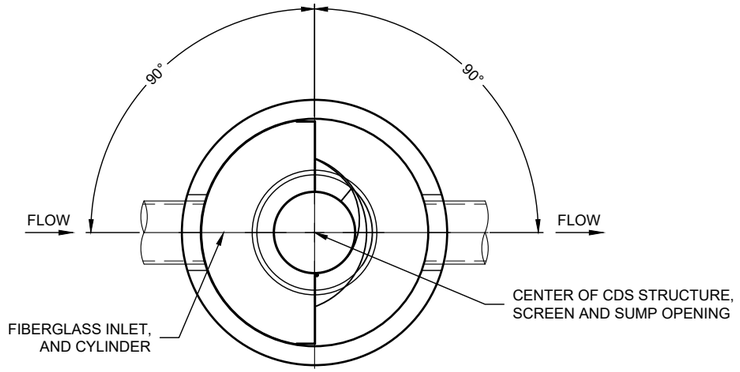
Contact Information			
First Name	Vince	**Last Name**	Delgado
Company	Stantec	**Phone #**	909-255-8208
Email	vince.delgadojr@stantec.com		

Design Criteria					
Site Designation	Pretreatment System Area D			**Sizing Method**	Treatment Flow Rate
Screening Required?	No	**Treatment Flow Rate**	1.80	**Peak Flow (cfs)**	1.80
Groundwater Depth (ft)	>15	**Pipe Invert Depth (ft)**	5 - 10	**Bedrock Depth (ft)**	>15
Multiple Inlets?	No	**Grate Inlet Required?**	No	**Pipe Size (in)**	36.00
Required Particle Size Distribution?	No	**90° between two inlets?**	N/A		

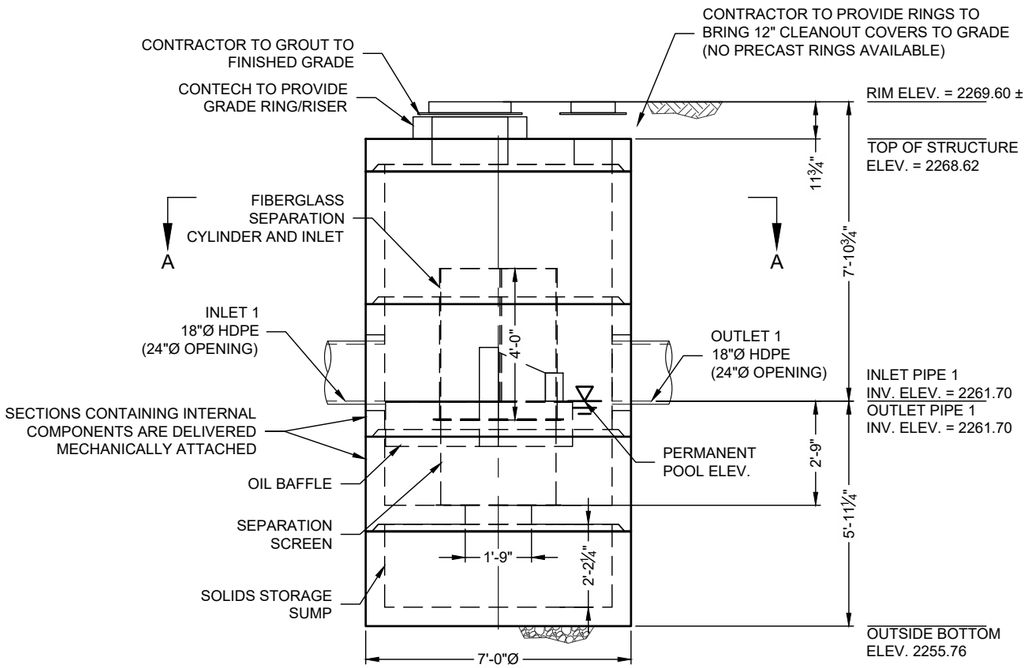
Treatment Selection				
Treatment Unit	CDS	**System Model**	CDS3020-6-C	
Target Removal	80%	**Particle Size Distribution (PSD)**	125	



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	4700 micron, 3' O.D. x 2.25' SEP. SCREEN	CONTECH
1	HARDWARE KIT	CONTECH
1	SEALANT FOR JOINTS	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	24"Ø x 4" FRAME AND COVER, NON-VENTED EJ#416003009A01, OR EQUIV.	CONTRACTOR
2	12"Ø x 4" FRAME AND COVER, NON-VENTED EJ#41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	1.75 CFS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 11500 LBS.
STRUCTURE IS DELIVERED IN 4 PIECES

MAX FOOTPRINT = Ø7'

CONTECH
PROPOSAL
DRAWING

OLSAZ
5944 / 570484
LAYOUT 1A
3020-6-FGIS

MARK	DATE	REVISION DESCRIPTION	BY

CDS3020-6-C - 740686-40
FIRST HATHAWAY LOGISTICS
BANNING, CA
for SYSTEM: D

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
2201W. Royal Lane, Suite 260, Irving, TX 75063
972-580-2000 972-580-2039 FAX

DATE:	SCALE:
02/06/23	1/4" = 1'-0"
DESIGNED: RLH	DRAWN: RLH
CHECKED:	APPROVED:
PROJECT No.: 740686	SEQUENCE No.: 40
SHEET: 1 OF 1	

RCFC & WCD	SYNTHETIC UNIT HYDROGRAPH METHOD Unit Hydrograph and Effective Rain Calculation Form	Project: **First Hathaway** Banning, CA	Date: 06.05.2023	Sheet 1 of 1

[1] Concentration Point	**400.04**	[2] Area Designation	**Post Project D**
[3] Drainage Area Sq Miles (THIS WORKSHEET in ACRES)	**12**	[4] Ultimate Discharge-CFS-HRS/IN (645*[3])	**n/a**
[5] Unit Time Minutes (SAMPLE 100% -200% of LAG)	**10**	[6] LAG Time Minutes (0.8*Tc)	**6.9**
[7] Unit Time-Percent of Lag (100*[5]/[6])	**n/a**	[8] S-Curve	**n/a**
[9] Storm Frequency & Duration (SAMPLE 100 year 3 Hour)	**100yr-3hr**	[10] Total Adjusted Storm Rain- INCHES	**2.72**
[11] Variable Loss Rate(AVG) - INCHES/HOUR	**n/a**	[12] Minimum Loss Rate (for VAR. LOSS) - IN/HR	**n/a**
[13] Constant Loss Rate - INCHES/HOUR (see note 1)	**0.14**	[14] Low Loss Rate- PERCENT	**18**

	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]		[23]	[24]
	Unit time period	Time percent of LAG	Cumlative average percent of ultimate discharge	Distrib Graph percent	Unit Hydrograph CFS-HRS/IN	Pattern Percent	Storm Rain IN/HR	LOSS RATE IN/HR		Effective Rain IN/HR	FLOW CFS
		[7] * [15]	(S-Graph)	[17]m-[17]m-1	([4]*[18])/100	(PL E-5.9)	60*[10]*[20]/100*[5]	Max	Low	[21]-[22]	[3]*[23]
							0.1632*[20]		[21]-(([21]*([14]/100))		[3]*[23]
1		**n/a**	**n/a**	**n/a**	**n/a**	2.6	0.424	0.14		0.28	3.4
2						2.6	0.424	0.14		0.28	3.4
3						3.3	0.539	0.14		0.40	4.8
4						3.3	0.539	0.14		0.40	4.8
5						3.3	0.539	0.14		0.40	4.8
6						3.4	0.555	0.14		0.41	5.0
7						4.4	0.718	0.14		0.58	6.9
8		**SHORTCUT METHOD**				4.2	0.685	0.14		0.55	6.5
9						5.3	0.865	0.14		0.72	8.7
10						5.1	0.832	0.14		0.69	8.3
11						6.4	1.044	0.14		0.90	10.9
12						5.9	0.963	0.14		0.82	9.9
13						7.3	1.191	0.14		1.05	12.6
14						8.5	1.387	0.14		1.25	15.0
15						14.1	2.301	0.14		2.16	25.9
16						14.1	2.301	0.14		2.16	25.9
17						3.8	0.620	0.14		0.48	5.8
18						2.4	0.392	0.14		0.25	3.0
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
						100			SUM	13.78	

Notes:

1. Fp obtained from Plate E-6.2; Loss Rate (F) from page E-8
where F=Fp if 100 percent pervious cover

Effective Rain= Sum[23] * Unit Time (HRS)
= 13.78*(10/60)= 13.78*0.1667
= **2.30** **INCHES**

Flood Volume = Effective Rain * Area
= 2.3*(1/12)*12 ACRES
2.30 **ACRE-FEET**

Plate E-2.2

SECTION (_____)
STORM WATER TREATMENT DEVICE

1.0 GENERAL

1.1 This item shall govern the furnishing and installation of the CDS® by Contech Engineered Solutions LLC, complete and operable as shown and as specified herein, in accordance with the requirements of the plans and contract documents.

1.2 The Contractor shall furnish all labor, equipment and materials necessary to install the storm water treatment device(s) (SWTD) and appurtenances specified in the Drawings and these specifications.

1.3 The manufacturer of the SWTD shall be one that is regularly engaged in the engineering design and production of systems deployed for the treatment of storm water runoff for at least five (5) years and which have a history of successful production, acceptable to the Engineer. In accordance with the Drawings, the SWTD(s) shall be a CDS® device manufactured by:

Contech Engineered Solutions LLC
9025 Centre Pointe Drive
West Chester, OH, 45069
Tel: 1 800 338 1122

1.4 Related Sections

1.4.1 Section 02240: Dewatering
1.4.2 Section 02260: Excavation Support and Protection
1.4.3 Section 02315: Excavation and Fill
1.4.4 Section 02340: Soil Stabilization

1.5 All components shall be subject to inspection by the engineer at the place of manufacture and/or installation. All components are subject to being rejected or identified for repair if the quality of materials and manufacturing do not comply with the requirements of this specification. Components which have been identified as defective may be subject for repair where final acceptance of the component is contingent on the discretion of the Engineer.

1.6 The manufacturer shall guarantee the SWTD components against all manufacturer originated defects in materials or workmanship for a period of twelve (12) months from the date the components are delivered to the owner for installation. The manufacturer shall upon its determination repair, correct or replace any manufacturer originated defects advised in writing to the manufacturer within the referenced warranty period. The use of SWTD components shall be limited to the application for which it was specifically designed.

1.7 The SWTD manufacturer shall submit to the Engineer of Record a “Manufacturer’s Performance Certification” certifying that each SWTD is capable of achieving the specified removal efficiencies listed in these specifications. The certification shall be supported by independent third-party research

1.8 No product substitutions shall be accepted unless submitted 10 days prior to project bid date, or as directed by the Engineer of Record. Submissions for substitutions require review and approval by the Engineer of Record, for hydraulic performance, impact to project designs, equivalent treatment performance, and any required project plan and report (hydrology/hydraulic, water quality, stormwater pollution) modifications that would be required by the approving jurisdictions/agencies. Contractor to coordinate with the Engineer of Record any applicable modifications to the project estimates of cost, bonding amount determinations, plan check fees for changes to approved documents, and/or any other regulatory requirements resulting from the product substitution.

2.0 MATERIALS

2.1 Housing unit of stormwater treatment device shall be constructed of pre-cast or cast-in-place concrete, no exceptions. Precast concrete components shall conform to applicable sections of ASTM C 478, ASTM C 857 and ASTM C 858 and the following:

- 2.1.1 Concrete shall achieve a minimum 28-day compressive strength of 4,000 pounds per square-inch (psi);
- 2.1.2 Unless otherwise noted, the precast concrete sections shall be designed to withstand lateral earth and AASHTO H-20 traffic loads;
- 2.1.3 Cement shall be Type III Portland Cement conforming to ASTM C 150;
- 2.1.4 Aggregates shall conform to ASTM C 33;
- 2.1.5 Reinforcing steel shall be deformed billet-steel bars, welded steel wire or deformed welded steel wire conforming to ASTM A 615, A 185, or A 497.
- 2.1.6 Joints shall be sealed with preformed joint sealing compound conforming to ASTM C 990.
- 2.1.7 Shipping of components shall not be initiated until a minimum compressive strength of 4,000 psi is attained or five (5) calendar days after fabrication has expired, whichever occurs first.

2.2 Internal Components and appurtenances shall conform to the following:

- 2.2.1 Screen and support structure shall be manufactured of Type 316 and 316L stainless steel conforming to ASTM F 1267-01;
- 2.2.2 Hardware shall be manufactured of Type 316 stainless steel conforming to ASTM A 320;
- 2.2.3 Fiberglass components shall conform to applicable sections of ASTM D-4097
- 2.2.4 Access system(s) conform to the following:
- 2.2.5 Manhole castings shall be designed to withstand AASHTO H-20 loadings and manufactured of cast-iron conforming to ASTM A 48 Class 30.

3.0 PERFORMANCE

3.1 The SWTD shall be sized to either achieve an 80 percent average annual reduction in the total suspended solid load with a particle size distribution having a mean particle size (d_{50}) of 125 microns unless otherwise stated.

3.2 The SWTD shall be capable of capturing and retaining 100 percent of pollutants greater than or equal to 2.4 millimeters (mm) regardless of the pollutant's specific gravity (i.e.: floatable and neutrally buoyant materials) for flows up to the device's rated-treatment capacity. The SWTD shall be designed to retain all previously captured pollutants addressed by this

subsection under all flow conditions. The SWTD shall be capable of capturing and retaining total petroleum hydrocarbons. The SWTD shall be capable of achieving a removal efficiency of 92 and 78 percent when the device is operating at 25 and 50 percent of its rated-treatment capacity. These removal efficiencies shall be based on independent third-party research for influent oil concentrations representative of storm water runoff (20 ± 5 mg/L). The SWTD shall be greater than 99 percent effective in controlling dry-weather accidental oil spills.

3.3 The SWTD shall be designed with a sump chamber for the storage of captured sediments and other negatively buoyant pollutants in between maintenance cycles. The minimum storage capacity provided by the sump chamber shall be in accordance with the volume listed in Table 1. The boundaries of the sump chamber shall be limited to that which do not degrade the SWTD's treatment efficiency as captured pollutants accumulate. The sump chamber shall be separate from the treatment processing portion(s) of the SWTD to minimize the probability of fine particle re-suspension. In order to not restrict the Owner's ability to maintain the SWTD, the minimum dimension providing access from the ground surface to the sump chamber shall be 16 inches in diameter.

3.4 The SWTD shall be designed to capture and retain Total Petroleum Hydrocarbons generated by wet-weather flow and dry-weather gross spills and have a capacity listed in Table 1 of the required unit.

3.5 The SWTD shall convey the flow from the peak storm event of the drainage network, in accordance with required hydraulic upstream conditions as defined by the Engineer. If a substitute SWTD is proposed, supporting documentation shall be submitted that demonstrates equal or better upstream hydraulic conditions compared to that specified herein. This documentation shall be signed and sealed by a Professional Engineer registered in the State of the work. All costs associated with preparing and certifying this documentation shall be born solely by the Contractor.

3.6 The SWTD shall have completed field tested following TARP Tier II protocol requirements

4.0 EXECUTION

4.1 The contractor shall exercise care in the storage and handling of the SWTD components prior to and during installation. Any repair or replacement costs associated with events occurring after delivery is accepted and unloading has commenced shall be borne by the contractor.

4.2 The SWTD shall be installed in accordance with the manufacturer's recommendations and related sections of the contract documents. The manufacturer shall provide the contractor installation instructions and offer on-site guidance during the important stages of the installation as identified by the manufacturer at no additional expense. A minimum of 72 hours notice shall be provided to the manufacturer prior to their performance of the services included under this subsection.

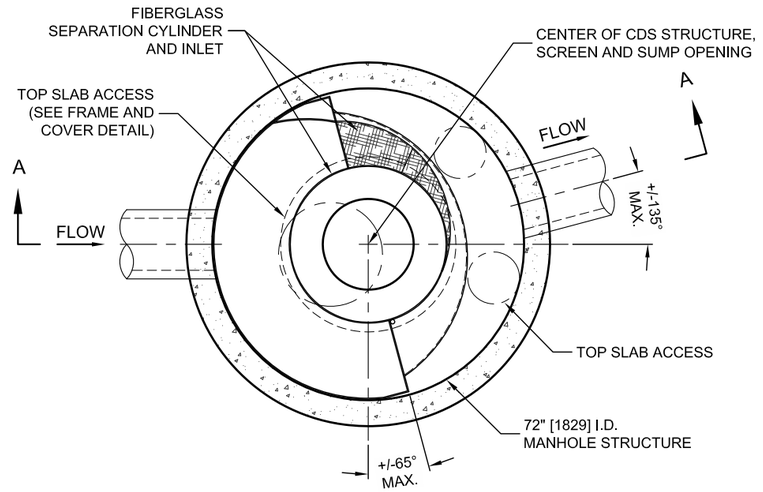
4.3 The contractor shall fill all voids associated with lifting provisions provided by the manufacturer. These voids shall be filled with non-shrinking grout providing a finished surface consistent with adjacent surfaces. The contractor shall trim all protruding lifting provisions flush with the adjacent concrete surface in a manner, which leaves no sharp points or edges.

4.4 The contractor shall removal all loose material and pooling water from the SWTD prior to the transfer of operational responsibility to the Owner.

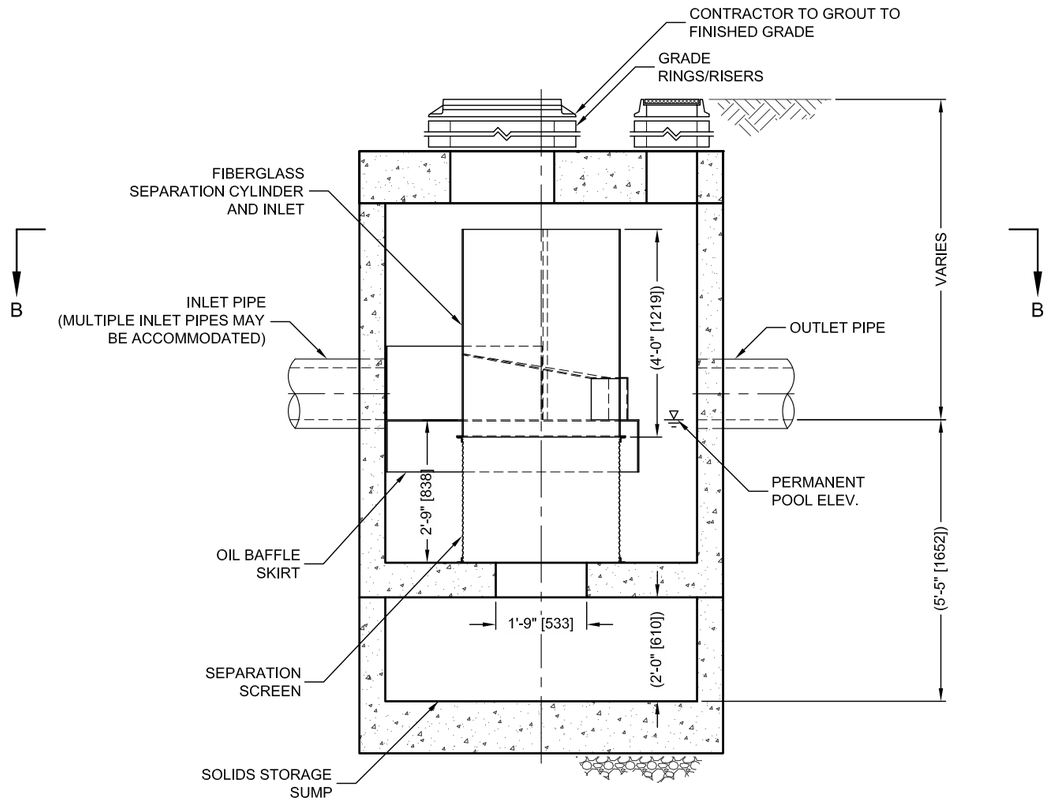
TABLE 1
Storm Water Treatment Device
Storage Capacities

CDS Model	Minimum Sump Storage Capacity $(yd^3)/(m^3)$	Minimum Oil Storage Capacity (gal)/(L)
CDS2015-4	0.9(0.7)	61(232)
CDS2015-5	1.5(1.1)	83(313)
CDS2020-5	1.5(1.1)	99(376)
CDS2025-5	1.5(1.1)	116(439)
CDS3020-6	2.1 (1.6)	184(696)
CDS3025-6	2.1(1.6)	210(795)
CDS3030-6	2.1 (1.6)	236(895)
CDS3035-6	2.1 (1.6)	263(994)
CDS3535-7	2.9(2.2)	377(1426)
CDS4030-8	5.6(4.3)	426(1612)
CDS4040-8	5.6 (4.3)	520(1970)
CDS4045-8	5.6 (4.3)	568(2149)
CDS5640-10	8.7(6.7)	758(2869)
CDS5653-10	8.7(6.7)	965(3652)
CDS5668-10	8.7(6.7)	1172(4435)
CDS5678-10	8.7(6.7)	1309(4956)
CDS7070-DV	3.6(2.8)	914 (3459)
CDS10060-DV	5.0 (3.8)	792 (2997)
CDS10080-DV	5.0 (3.8)	1057 (4000)
CDS100100-DV	5.0 (3.8)	1320 (4996)

END OF SECTION



PLAN VIEW B-B
N.T.S.

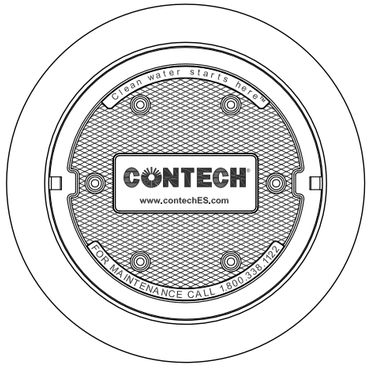


ELEVATION A-A
N.T.S.

CDS3020-6-C DESIGN NOTES

THE STANDARD CDS3020-6-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	
WATER QUALITY FLOW RATE (CFS OR L/s)	*
PEAK FLOW RATE (CFS OR L/s)	*
RETURN PERIOD OF PEAK FLOW (YRS)	*
SCREEN APERTURE (2400 OR 4700)	*

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*

RIM ELEVATION	*

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

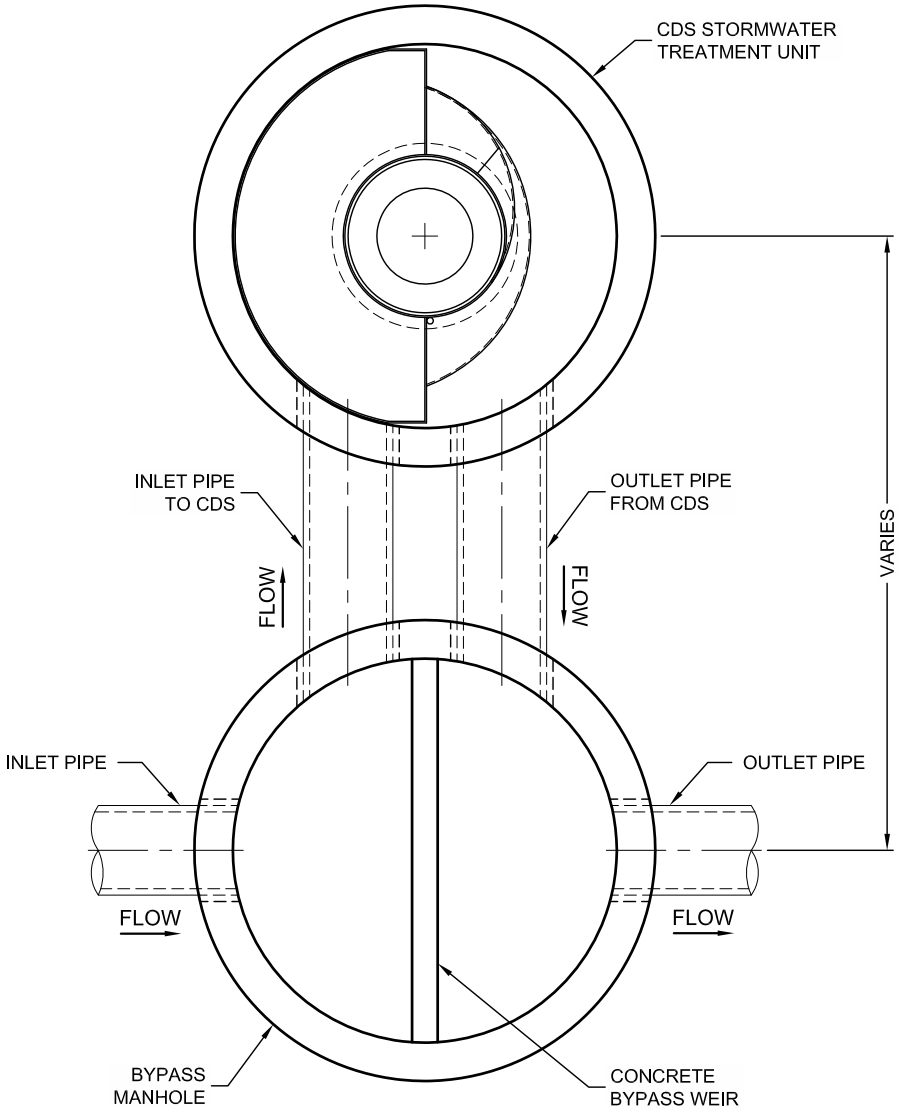
* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CDS3020-6-C
INLINE CDS
STANDARD DETAIL



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800-338-1122 513-645-7000 513-645-7993 FAX

CDS STORMWATER TREATMENT SYSTEM
TYPICAL OFFLINE LAYOUT
WITH BYPASS MANHOLE STRUCTURE

DATE:03/12/13	SCALE: NONE	PROJECT No.: N/A	SEQ. No.: N/A	DRAWN: N/A	CHECKED: N/A

CONTECH®
ENGINEERED SOLUTIONS

EXHIBIT MG-CDS

CDS Guide
Operation, Design, Performance and Maintenance

CDS®

Using patented continuous deflective separation technology, the CDS system screens, separates and traps debris, sediment, and oil and grease from stormwater runoff. The indirect screening capability of the system allows for 100% removal of floatables and neutrally buoyant material without blinding. Flow and screening controls physically separate captured solids, and minimize the re-suspension and release of previously trapped pollutants. Inline units can treat up to 6 cfs, and internally bypass flows in excess of 50 cfs (1416 L/s). Available precast or cast-in-place, offline units can treat flows from 1 to 300 cfs (28.3 to 8495 L/s). The pollutant removal capacity of the CDS system has been proven in lab and field testing.

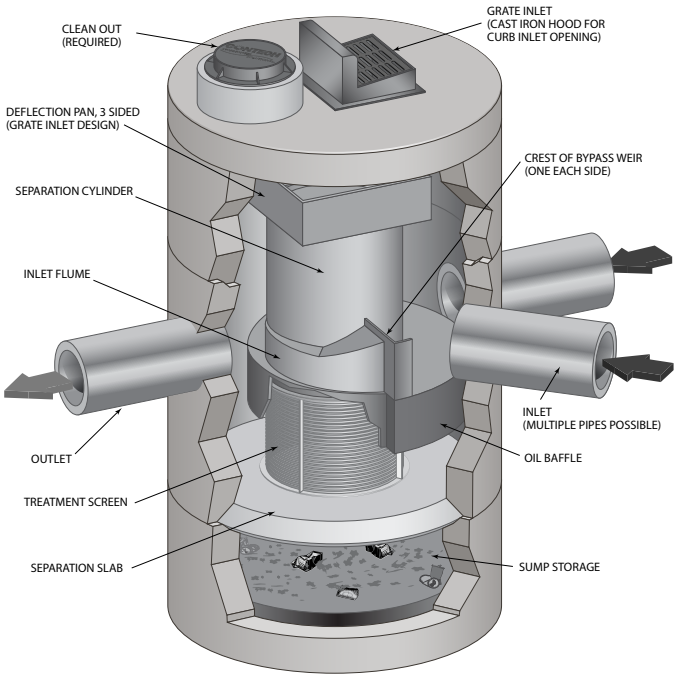
Operation Overview

Stormwater enters the diversion chamber where the diversion weir guides the flow into the unit's separation chamber and pollutants are removed from the flow. All flows up to the system's treatment design capacity enter the separation chamber and are treated.

Swirl concentration and screen deflection force floatables and solids to the center of the separation chamber where 100% of floatables and neutrally buoyant debris larger than the screen apertures are trapped.

Stormwater then moves through the separation screen, under the oil baffle and exits the system. The separation screen remains clog free due to continuous deflection.

During the flow events exceeding the treatment design capacity, the diversion weir bypasses excessive flows around the separation chamber, so captured pollutants are retained in the separation cylinder.



Design Basics

There are three primary methods of sizing a CDS system. The Water Quality Flow Rate Method determines which model size provides the desired removal efficiency at a given flow rate for a defined particle size. The Rational Rainfall Method™ or the and Probabilistic Method is used when a specific removal efficiency of the net annual sediment load is required.

Typically in the Unites States, CDS systems are designed to achieve an 80% annual solids load reduction based on lab generated performance curves for a gradation with an average particle size (d50) of 125 microns (μm). For some regulatory environments, CDS systems can also be designed to achieve an 80% annual solids load reduction based on an average particle size (d50) of 75 microns (μm) or 50 microns (μm).

Water Quality Flow Rate Method

In some cases, regulations require that a specific treatment rate, often referred to as the water quality design flow (WQQ), be treated. This WQQ represents the peak flow rate from either an event with a specific recurrence interval, e.g. the six-month storm, or a water quality depth, e.g. 1/2-inch (13 mm) of rainfall.

The CDS is designed to treat all flows up to the WQQ. At influent rates higher than the WQQ, the diversion weir will direct most flow exceeding the WQQ around the separation chamber. This allows removal efficiency to remain relatively constant in the separation chamber and eliminates the risk of washout during bypass flows regardless of influent flow rates.

Treatment flow rates are defined as the rate at which the CDS will remove a specific gradation of sediment at a specific removal efficiency. Therefore the treatment flow rate is variable, based on the gradation and removal efficiency specified by the design engineer.

Rational Rainfall Method™

Differences in local climate, topography and scale make every site hydraulically unique. It is important to take these factors into consideration when estimating the long-term performance of any stormwater treatment system. The Rational Rainfall Method combines site-specific information with laboratory generated performance data, and local historical precipitation records to estimate removal efficiencies as accurately as possible.

Short duration rain gauge records from across the United States and Canada were analyzed to determine the percent of the total annual rainfall that fell at a range of intensities. US stations' depths were totaled every 15 minutes, or hourly, and recorded in 0.01-inch increments. Depths were recorded hourly with 1-mm resolution at Canadian stations. One trend was consistent at all sites; the vast majority of precipitation fell at low intensities and high intensity storms contributed relatively little to the total annual depth.

These intensities, along with the total drainage area and runoff coefficient for each specific site, are translated into flow rates using the Rational Rainfall Method. Since most sites are relatively small and highly impervious, the Rational Rainfall Method is appropriate. Based on the runoff flow rates calculated for each intensity, operating rates within a proposed CDS system are

determined. Performance efficiency curve determined from full scale laboratory tests on defined sediment PSDs is applied to calculate solids removal efficiency. The relative removal efficiency at each operating rate is added to produce a net annual pollutant removal efficiency estimate.

Probabilistic Rational Method

The Probabilistic Rational Method is a sizing program Contech developed to estimate a net annual sediment load reduction for a particular CDS model based on site size, site runoff coefficient, regional rainfall intensity distribution, and anticipated pollutant characteristics.

The Probabilistic Method is an extension of the Rational Method used to estimate peak discharge rates generated by storm events of varying statistical return frequencies (e.g. 2-year storm event). Under the Rational Method, an adjustment factor is used to adjust the runoff coefficient estimated for the 10-year event, correlating a known hydrologic parameter with the target storm event. The rainfall intensities vary depending on the return frequency of the storm event under consideration. In general, these two frequency dependent parameters (rainfall intensity and runoff coefficient) increase as the return frequency increases while the drainage area remains constant.

These intensities, along with the total drainage area and runoff coefficient for each specific site, are translated into flow rates using the Rational Method. Since most sites are relatively small and highly impervious, the Rational Method is appropriate. Based on the runoff flow rates calculated for each intensity, operating rates within a proposed CDS are determined. Performance efficiency curve on defined sediment PSDs is applied to calculate solids removal efficiency. The relative removal efficiency at each operating rate is added to produce a net annual pollutant removal efficiency estimate.

Treatment Flow Rate

The inlet throat area is sized to ensure that the WQQ passes through the separation chamber at a water surface elevation equal to the crest of the diversion weir. The diversion weir bypasses excessive flows around the separation chamber, thus preventing re-suspension or re-entrainment of previously captured particles.

Hydraulic Capacity

The hydraulic capacity of a CDS system is determined by the length and height of the diversion weir and by the maximum allowable head in the system. Typical configurations allow hydraulic capacities of up to ten times the treatment flow rate. The crest of the diversion weir may be lowered and the inlet throat may be widened to increase the capacity of the system at a given water surface elevation. The unit is designed to meet project specific hydraulic requirements.

Performance

Full-Scale Laboratory Test Results

A full-scale CDS system (Model CDS2020-5B) was tested at the facility of University of Florida, Gainesville, FL. This CDS unit was evaluated under controlled laboratory conditions of influent flow rate and addition of sediment.

Two different gradations of silica sand material (UF Sediment & OK-110) were used in the CDS performance evaluation. The particle size distributions (PSDs) of the test materials were analyzed using standard method "Gradation ASTM D-422 "Standard Test Method for Particle-Size Analysis of Soils" by a certified laboratory.

UF Sediment is a mixture of three different products produced by the U.S. Silica Company: "Sil-Co-Sil 106", "#1 DRY" and "20/40 Oil Frac". Particle size distribution analysis shows that the UF Sediment has a very fine gradation (d50 = 20 to 30 μm) covering a wide size range (Coefficient of Uniformity, C averaged at 10.6). In comparison with the hypothetical TSS gradation specified in the NJDEP (New Jersey Department of Environmental Protection) and NJCAT (New Jersey Corporation for Advanced Technology) protocol for lab testing, the UF Sediment covers a similar range of particle size but with a finer d50 (d50 for NJDEP is approximately 50 μm) (NJDEP, 2003).

The OK-110 silica sand is a commercial product of U.S. Silica Sand. The particle size distribution analysis of this material, also included in Figure 1, shows that 99.9% of the OK-110 sand is finer than 250 microns, with a mean particle size (d50) of 106 microns. The PSDs for the test material are shown in Figure 1.

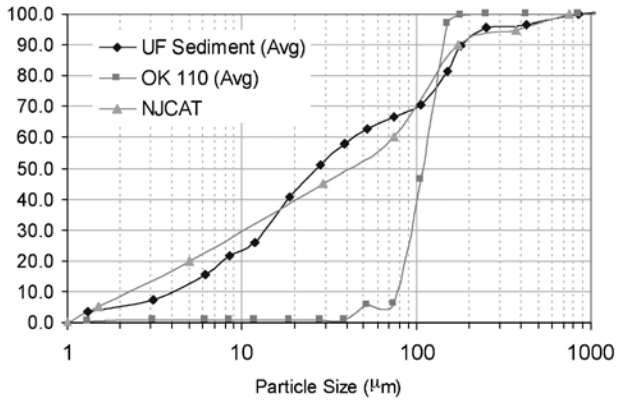


Figure 1. Particle size distributions

Tests were conducted to quantify the performance of a specific CDS unit (1.1 cfs (31.3-L/s) design capacity) at various flow rates, ranging from 1% up to 125% of the treatment design capacity of the unit, using the 2400 micron screen. All tests were conducted with controlled influent concentrations of approximately 200 mg/L. Effluent samples were taken at equal time intervals across the entire duration of each test run. These samples were then processed with a Dekaport Cone sample splitter to obtain representative sub-samples for Suspended Sediment Concentration (SSC) testing using ASTM D3977-97 "Standard Test Methods for Determining Sediment Concentration in Water Samples", and particle size distribution analysis.

Results and Modeling

Based on the data from the University of Florida, a performance model was developed for the CDS system. A regression analysis was used to develop a fitting curve representative of the scattered data points at various design flow rates. This model, which demonstrated good agreement with the laboratory data, can then be used to predict CDS system performance with respect

to SSC removal for any particle size gradation, assuming the particles are inorganic sandy-silt. Figure 2 shows CDS predictive performance for two typical particle size gradations (NJCAT gradation and OK-110 sand) as a function of operating rate.

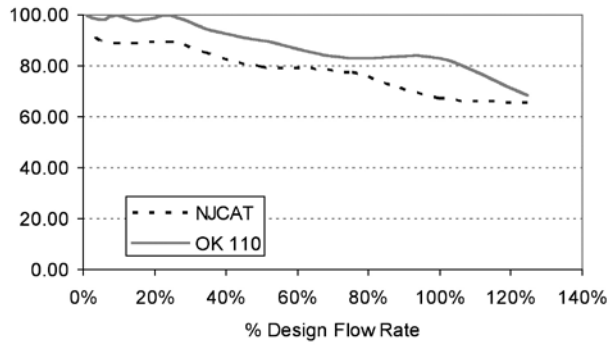


Figure 2. CDS stormwater treatment predictive performance for various particle gradations as a function of operating rate.

Many regulatory jurisdictions set a performance standard for hydrodynamic devices by stating that the devices shall be capable of achieving an 80% removal efficiency for particles having a mean particle size (d50) of 125 microns (e.g. Washington State Department of Ecology — WASDOE - 2008). The model can be used to calculate the expected performance of such a PSD (shown in Figure 3). The model indicates (Figure 4) that the CDS system with 2400 micron screen achieves approximately 80% removal at the design (100%) flow rate, for this particle size distribution (d50 = 125 μm).

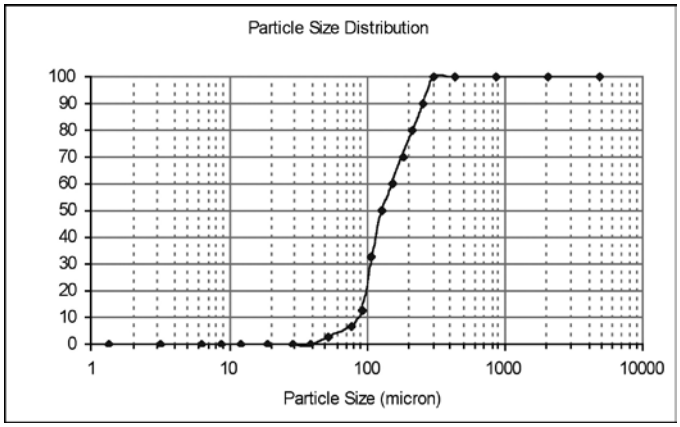


Figure 3. WASDOE PSD

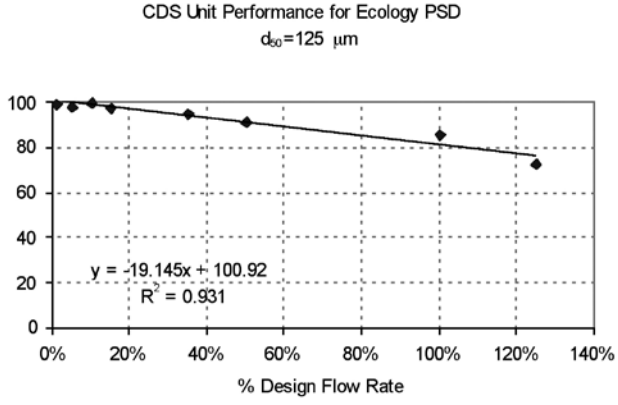


Figure 4. Modeled performance for WASDOE PSD.

Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified

during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allows both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine weather the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

Cleaning of a CDS systems should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

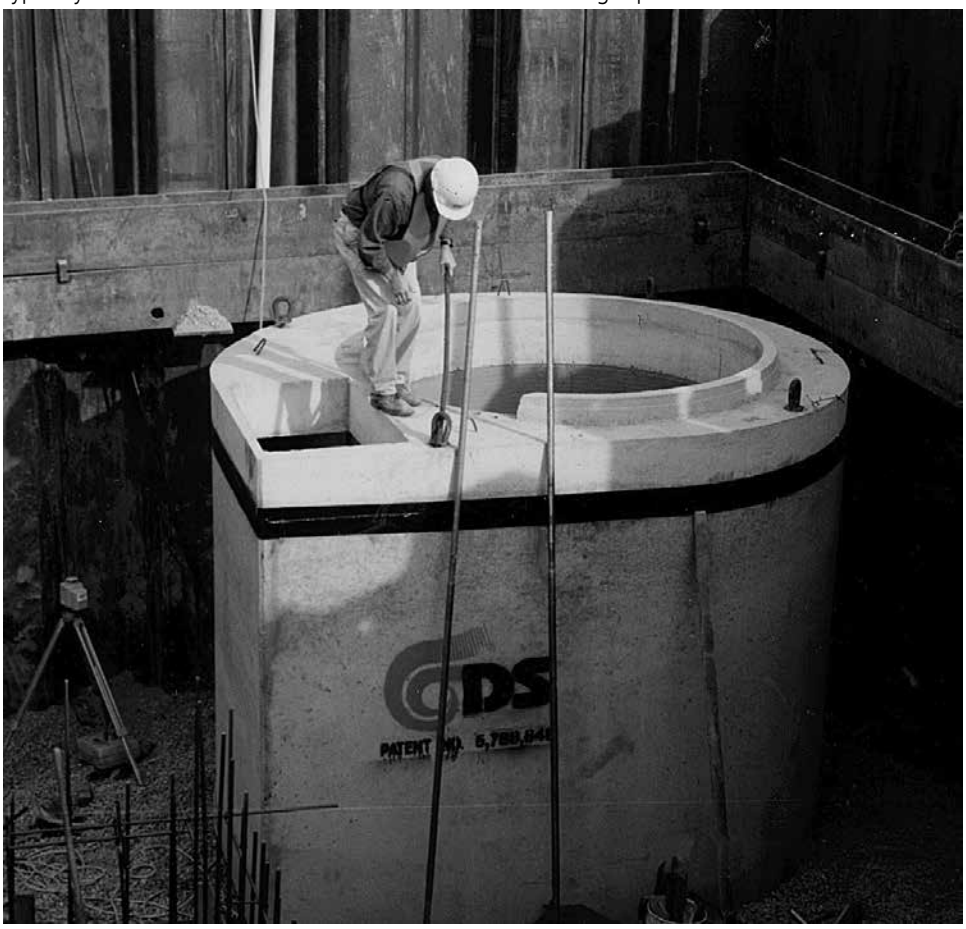
In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be cleaned to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal.

CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y^3	m^3
CDS1515	3	0.9	3.0	0.9	0.5	0.4
CDS2015	4	1.2	3.0	0.9	0.9	0.7
CDS2015	5	1.5	3.0	0.9	1.3	1.0
CDS2020	5	1.5	3.5	1.1	1.3	1.0
CDS2025	5	1.5	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3025	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3
CDS5640	10	3.0	6.3	1.9	8.7	6.7
CDS5653	10	3.0	7.7	2.3	8.7	6.7
CDS5668	10	3.0	9.3	2.8	8.7	6.7
CDS5678	10	3.0	10.3	3.1	8.7	6.7

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities

Note: To avoid underestimating the volume of sediment in the chamber, carefully lower the measuring device to the top of the sediment pile. Finer silty particles at the top of the pile may be more difficult to feel with a measuring stick. These finer particles typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile.



CDS Inspection & Maintenance Log

CDS Model: _____ Location: _____

Date	Water depth to sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface. If the difference between these measurements is less than the values listed in table 1 the system should be cleaned out. **Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile**.

2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

SUPPORT

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from our engineers.

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The product(s) described may be protected by one or more of the following US patents: 5,322,629; 5,624,576; 5,707,527; 5,759,415; 5,788,848; 5,985,157; 6,027,639; 6,350,374; 6,406,218; 6,641,720; 6,511,595; 6,649,048; 6,991,114; 6,998,038; 7,186,058; 7,296,692; 7,297,266; related foreign patents or other patents pending.

CONTECH®
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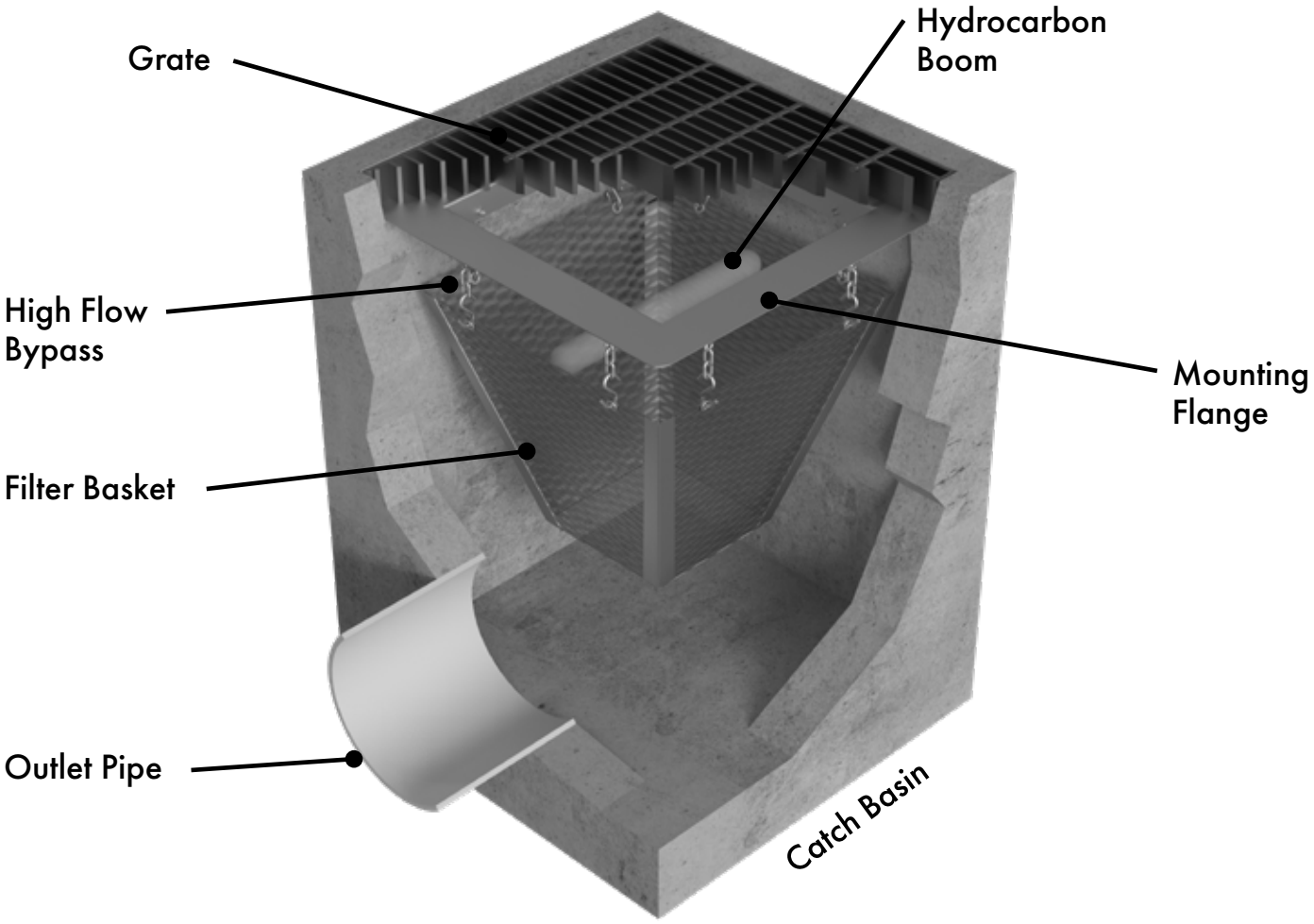
Bio Clean® Grate Inlet Filter
Operation & Maintenance Manual

Bio Clean®

Operation & Maintenance

Contech's Bio Clean® Grate Inlet Filter is a stormwater device designed to remove high levels of trash, debris, sediments and hydrocarbons. The filter is available in several configurations including trash full capture, Kraken® membrane filter, and fabric filter variations. This manual covers maintenance procedures of the trash full capture and fabric filter configurations. A supplemental manual is available for the Kraken variation. The trash full capture filter is made of 100% stainless steel, while the fabric filter is made of a woven monofilament geotextile fabric. Both filters are available at various sizes and depths allowing them to fit in any grated catch basin inlet. The filters heavy duty construction allows for cleaning with any vacuum truck. The filter can also easily be cleaned by hand.

As with all stormwater BMPs, inspection and maintenance on the Grate Inlet Filter is necessary. Stormwater regulations require BMPs be inspected and maintained to ensure they are operating as designed to allow for effective pollutant removal and provide protection to receiving water bodies. It is recommended that inspections be performed multiple times during the first year to assess site-specific loading conditions. This is recommended because pollutant loading can vary greatly from site to site. Variables such as nearby soil erosion or construction sites, winter sanding of roads, amount of daily traffic and land use can increase pollutant loading on the system. The first year of inspections can be used to set inspection and maintenance intervals for subsequent years. Without appropriate maintenance, a BMP can exceed its storage capacity which can negatively affect its continued performance in removing and retaining captured pollutants.



System Diagram

Inspection Equipment

Following is a list of equipment to allow for simple and effective inspection of the Grate Inlet Filter:

- Contech Inspection Form (contained within this manual).
- Manhole hook or appropriate tools to remove access hatches and covers.
- Appropriate traffic control signage and procedures.
- Protective clothing and eye protection.
- Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine inspections or maintenance of the system.

Inspection Steps

The core to any successful stormwater BMP maintenance program is routine inspections. The inspection steps required on the Grate Inlet Filter are quick and easy. As mentioned above, the first year should be seen as the maintenance interval establishment phase. During the first year, more frequent inspections should occur in order to gather loading data and maintenance requirements for that specific site. This information can be used to establish a base for long-term inspection and maintenance interval requirements.

The Grate Inlet Filter can be inspected though visual observation. All necessary pre-inspection steps must be carried out before inspection occurs, such as safety measures to protect the inspector and nearby pedestrians from any dangers associated with an open grated inlet. Once the grate has been safely removed, the inspection process can proceed:

- Prepare the inspection form by writing in the necessary information including project name, location, date & time, unit number and other info (see inspection form).
- Observe the filter with the grate removed.
- Look for any out of the ordinary obstructions on the grate or in the filter and its bypass. Write down any observations on the inspection form.
- Through observation and/or digital photographs estimate the amount of trash, foliage and sediment accumulated inside the filter basket. Record this information on the inspection form.
- Observe the condition and color of the hydrocarbon boom. Record this information on the inspection form.
- Finalize inspection report for analysis by the maintenance manager to determine if maintenance is required.

Maintenance Indicators

Based upon observations made during inspection, maintenance of the system may be required based on the following indicators:

- Missing or damaged internal components.
- Obstructions in the filter basket and its bypass.
- Excessive accumulation of trash, foliage and sediment in the filter basket. Maintenance is required when the basket is greater than half-full.
- The following chart shows the 50% and 100% storage capacity of each filter height:

Basket Model	Height[1] (inches)	Top Width (inches)	Top Length (inches)	Bottom Width (inches)	Bottom Length (inches)	50% Storage Capacity (CF)	100% Storage Capacity (CF)
BIO-GRATE-FULL/ FABRIC-12-12-12	6.00	10.00	10.00	8.31	8.31	0.15	0.30
BIO-GRATE-FULL/ FABRIC-18-18-12	6.00	15.00	15.00	12.50	12.50	0.33	0.66
BIO-GRATE-FULL/ FABRIC-24-24-12	6.00	20.00	20.00	16.69	16.69	0.59	1.18
BIO-GRATE-FULL/ FABRIC-24-24-24	18.00	20.00	20.00	10.00	10.00	1.22	2.44
BIO-GRATE-FULL/ FABRIC-24-40-12	6.00	20.00	30.00	16.69	25.00	0.88	1.76
BIO-GRATE-FULL/ FABRIC-24-40-24	18.00	20.00	30.00	10.00	15.00	1.82	3.64
BIO-GRATE-FULL/ FABRIC-36-36-24	18.00	30.00	30.00	15.00	15.00	2.73	5.46
BIO-GRATE-FULL/ FABRIC-24-40-24	18.00	20.00	30.00	10.00	15.00	1.82	3.64
BIO-GRATE-FULL/ FABRIC-36-36-24	18.00	30.00	30.00	15.00	15.00	2.73	5.46

[1] Refers to basket height, total system height is equal to basket height plus 6 inches for bypass.

Maintenance Equipment

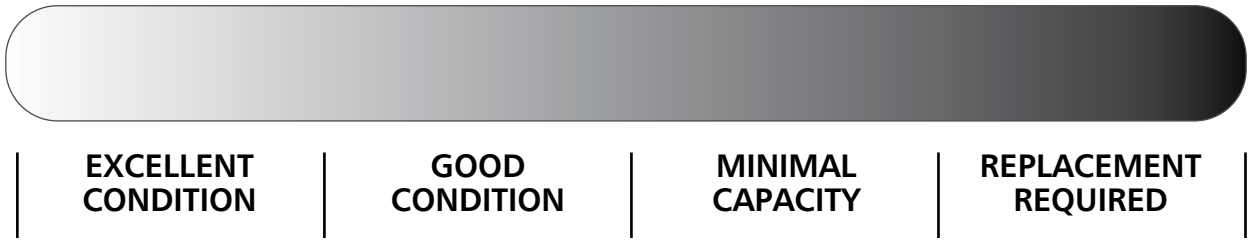
It is recommended that a vacuum truck be utilized to minimize the time required to maintain the Curb Inlet Filter, though it can easily be cleaned by hand:

- Contech Maintenance Form (contained in O&M Manual).
- Manhole hook or appropriate tools to remove the grate.
- Appropriate safety signage and procedures.
- Protective clothing and eye protection.
- Note: entering a confined space requires appropriate safety and certification. It is generally not required for routine maintenance of the system. Small or large vacuum truck (with pressure washer attachment preferred).

Maintenance Procedures

It is recommended that maintenance occurs at least two days after the most recent rain event to allow debris and sediments to dry out. Maintaining the system while flows are still entering it will increase the time and complexity required for maintenance. Cleaning of the Grate Inlet Filter can be performed utilizing a vacuum truck. Once all safety measures have been set up, cleaning of the Grate Inlet Filter can proceed as followed:

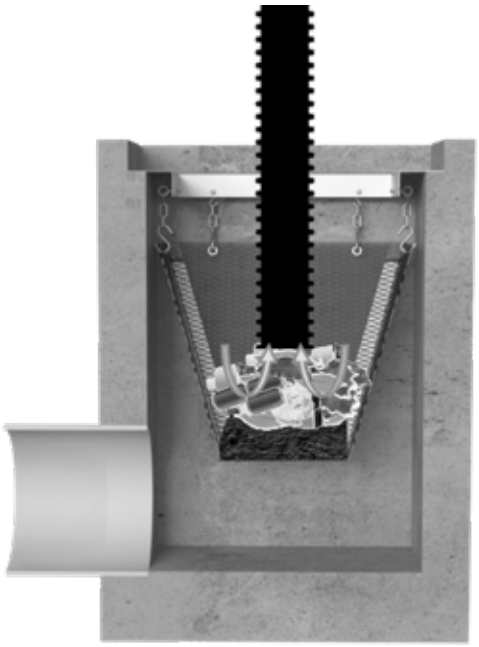
- Remove grate (traffic control and safety measures to be completed prior)
- Using an extension on a vacuum truck, position the hose over the opened catch basin. Insert the vacuum hose down into the filter basket and suck out trash, foliage and sediment. A pressure wash is recommended and will assist in spraying off any debris stuck on the side or bottom of the filter basket. Power wash off the filter basket sides and bottom.
- Next, remove the hydrocarbon boom that is attached to the inside of the filter basket. The hydrocarbon boom is fastened to rails on two opposite sides of the basket (vertical rails). Assess the color and condition of the boom using the following information in the next bullet point. If replacement is required, install and fasten on a new hydrocarbon boom. Booms can be ordered directly from the manufacturer.
- The following is a replacement indication color chart for the hydrocarbon booms:



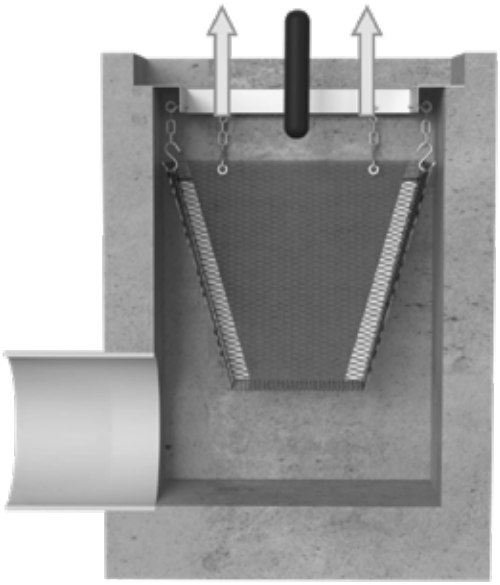
- The last step is to replace the grate and remove all traffic control.
- All removed debris and pollutants shall be disposed of following local and state requirements.
- Disposal requirements for recovered pollutants may vary depending on local guidelines. In most areas the sediment, once dewatered, can be disposed of in a sanitary landfill. It is not anticipated that the sediment would be classified as hazardous waste.
- In the case of damaged components, replacement parts can be ordered from the manufacturer. Hydrocarbon booms can also be ordered directly from the manufacturer as previously noted.

Maintenance Sequence

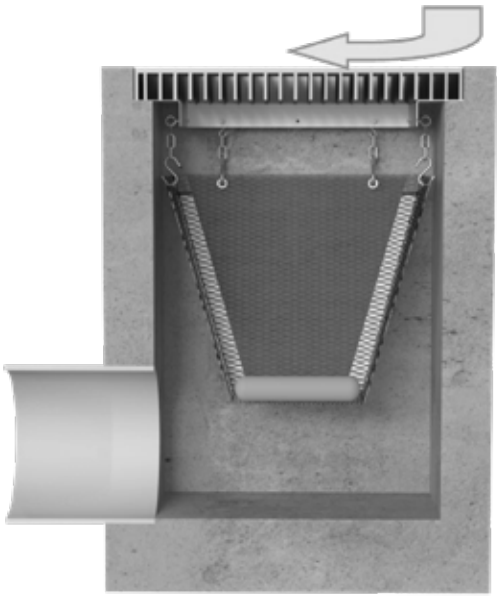
1. Remove grate and set up vacuum truck to clean the filter basket.



2. Insert the vacuum hose down into the filter basket and suck out debris. Use a pressure washer to assist in vacuum removal. Pressure wash off screens.



3. Remove the hydrocarbon boom that is attached to the inside of the filter basket. The hydrocarbon boom is fastened to rails on two opposite sides of the basket (vertical rails). Assess the color and condition of the boom using the information in the chart above. If replacement is required, install and fasten on a new hydrocarbon boom.



4. Close up and replace the grate and remove all traffic control. All removed debris and pollutants shall be disposed of following local and state requirements.

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Inspection and Maintenance Report
Catch Basin Only

Project Name _____

Project Address _____ (city) (Zip Code)

Owner / Management Company _____

Contact _____ Phone ( ) –

For Office Use Only
(Reviewed By)
(Date)
Office personnel to complete section to the left.

Inspector Name _____ Date ____ / ____ / _____ Time _____ AM / PM

Type of Inspection ☐ Routine ☐ Follow Up ☐ Complaint ☐ Storm Storm Event in Last 72-hours? ☐ No ☐ Yes

Weather Condition _____ Additional Notes _____

Site Map #	GPS Coordinates of Insert	Catch Basin Size	Evidence of Illicit Discharge?	Trash Accumulation	Foliage Accumulation	Sediment Accumulation	Signs of Structural Damage?	Functioning Properly or Maintenance Needed?
1	Lat: Long:							
2	Lat: Long:							
3	Lat: Long:							
4	Lat: Long:							
5	Lat: Long:							
6	Lat: Long:							
7	Lat: Long:							
8	Lat: Long:							
10	Lat: Long:							
11	Lat: Long:							
12	Lat: Long:							
Comments:								

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SUPPORT

DRAWINGS AND SPECIFICATIONS ARE AVAILABLE AT WWW.CONTECHES.COM

Appendix G

AGREEMENTS – CC&RS, COVENANT AND AGREEMENTS, BMP MAINTENANCE AGREEMENTS AND/OR OTHER MECHANISMS FOR ENSURING ONGOING OPERATION, MAINTENANCE, FUNDING AND TRANSFER OF REQUIREMENTS FOR THIS PROJECT-SPECIFIC WQMP

This is a Preliminary Report:

A sample agreement is attached.
Final Report to include additional documentation.

Agreement shall be completed and signed by the project owner and a photocopy provided in the Final WQMP.

RECORDING REQUESTED BY
AND WHEN RECORDED RETURN TO:

City of Banning
City Clerk
P.O. Box 998
99 E. Ramsey Street
Banning, CA 92220

EXEMPT FROM RECORDER'S FEES PURSUANT TO GOVERNMENT CODE SECTIONS 6103 AND 27383.

Note: Highlighted fields below are to be completed as part of the Final WQMP

TPM: 38256
APN: 532-110-001, 002, 003, 008, 009, and 010

SPACE ABOVE THIS LINE FOR RECORDER'S USE

STORM WATER MANAGEMENT WQMP/BMP FACILITIES AGREEMENT NO. 2020-0X

City of Banning, Riverside County, California

THIS AGREEMENT, made and entered into this 6th day of February, 2023, by and between **FR Hathaway LLC** hereinafter called the "Landowner", and the City of Banning, California, hereinafter called the "City".

RECITALS

WHEREAS, the Landowner is the owner of certain real property described as (Riverside County Tract Map/Parcel Map Identification Number/Address) **PM 38256** as recorded by deed in the land records of Riverside County, California, Map Book XX, Page XX, hereinafter called the "Property" more particularly described in Exhibit "A" legal description attached and made a part by this reference; and

WHEREAS, the Landowner is currently the property owner and has built on and developed the property; and

WHEREAS, the Water Quality Management Plan (WQMP) prepared for First Hathaway Logistics hereinafter called the "WQMP", which is expressly made a part hereof and is on file in the City Engineer's Office, as approved by the City, provides for storm water quality treatment within the confines of the property; and

WHEREAS, the City and the Landowner, its successors and assigns, including any homeowners association, agree that the health, safety, and welfare of the residents of the City of Banning, require that on-site storm water management/Best Management Practices (BMP) facilities (retention basins, underground infiltration chambers, storm drain inlets, catch basins, filter units and appurtenances)

mentioned in the project's approved WQMP be constructed and maintained (to minimize pollutants in urban runoff) by the Landowner, its successors and assigns, including, but not limited to, any new property owner.

NOW THEREFORE, in consideration of the foregoing recitals, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site storm water management/BMP facilities mentioned above shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the WQMP.

2. The Landowner, its successors and assigns, shall adequately maintain the storm water management/BMP facilities, including source control BMPs. This includes all pipes and channels built to convey storm water on the property, including catch basin inserts, underground detention ponds, swales and vegetation provided to control the quantity and quality of the storm water. Adequate maintenance is herein defined as good working condition so that these facilities are performing in their design functions.

3. The Landowner, its successors and assigns, shall annually inspect the storm water management/BMP facility mentioned above by March and submit an inspection report annually to the Public Works Department by April 1st of each year. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the storm water management BMPs listed in the WQMP such as bioretention basins, underground storage systems, bioswales, catch basins and its filter units, storm drains, etc. Deficiencies shall be noted in the inspection report.

4. The Landowner, its successors and assigns, hereby grant permission to the City, its authorized agents and employees, to enter upon the Property and to inspect the storm water management/BMP facilities whenever the City deems necessary and as required by the City's most current National Pollutant Discharge Elimination System (NPDES) Permit. The purpose of inspection is to follow up on reported deficiencies and/or to respond to citizen complaints, and meet the City's NPDES Permit issued by the State Water Resources Control Board – Colorado River Region No. 7. The City shall provide the Landowner, its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.

5. In the event the Landowner, its successors and assigns, fails to maintain the storm water management/BMP facilities in good working condition acceptable to the City, the City may enter upon the Property and take whatever steps necessary to correct deficiencies identified in any inspection report and to charge the costs of such repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the City to erect any structure of permanent nature on the land of the Landowner outside of the easement for the storm water management/BMP facilities. It is expressly understood and agreed that the City is under no obligation to routinely maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the City.

6. The Landowner, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. The maintenance schedule for the storm water management/BMP facilities (including sediment removal) is outlined in the approved WQMP and the schedule will be followed. In the future, the City of Banning may adopt an annual Stormwater/NPDES Inspection Fee that would be assessed to the property owner.

7. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner, its successors and assigns, shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City hereunder.

8. This Agreement imposes no liability of any kind whatsoever on the City and the Landowner agrees to hold the City harmless, defend and indemnify from any liability whatsoever in the event the storm water management/BMP facilities fail to operate properly.

9. This Agreement shall be recorded through the County of Riverside, retained by the City of Banning, shall constitute a covenant running with the land, and shall be binding on the Landowner, its administrators, executors, assigns, heirs, and any other successors in interests, including any homeowners association.

WITNESS the following signatures and seals:

OWNER:

By:_____

Name: Micheal Goodwin

Title: Director of Development

ATTEST:

By:_____ (S e a l)

Name:_____

Please Print

Title:_____

Notary must attach an “All-Purpose Acknowledgement”

SEE NEXT PAGE FOR CITY OF BANNING SIGNATURES

CITY OF BANNING:

By:_____

Art Vela, P.E.
Director of Public Works, City of Banning

ATTEST:

By:_____

Sonia De La Fuente
Deputy City Clerk, City of Banning

All signatures on this Agreement on behalf of the Owner must be acknowledged before a Notary Public. In the event that the Owner is a corporation, the President/Vice President and the corporate secretary of the corporation must sign and the corporate seal must be affixed thereto.

Appendix H

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT – SUMMARY OF SITE REMEDIATION CONDUCTED AND USE RESTRICTIONS

Phase 1 ESA is included.

Phase I Environmental Site Assessment

First Hathaway
Banning, California 92220

March 26, 2021

First Industrial Realty Trust, Inc., First Industrial, L.P.
and First Industrial Acquisitions II, LLC

One North Wacker Drive, Suite 4200
Chicago, IL 60606

Project Number 21-02-033-001

Prepared by:

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March 26, 2021

Mike Reese
First Industrial Realty Trust, Inc.
One North Wacker Drive, Suite 4200
Chicago, IL 60606

Subject: Phase I Environmental Site Assessment
First Hathaway
Banning, California 92220
Project Number 21-02-033-001

Dear Mr. Reese:

Weis Environmental, LLC has completed the contracted environmental consulting services for the above-referenced project. The services were performed in accordance with our proposal and agreement fully executed by all parties. The Phase I Environmental Site Assessment has been performed in accordance with ASTM International (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation E1527-13 and Title 40 of the Code of Federal Regulations (40 CFR) Part 312. We appreciate the opportunity to be of service to you on this project. Please contact us if you have any questions or comments regarding this report or if we can be of further assistance.

Sincerely,

Weis Environmental, LLC

Daniel Weis, R.E.H.S.
Environmental Manager

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FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the methods and findings of a Phase I Environmental Site Assessment (ESA) of the subject property identified as First Hathaway in Banning, Riverside County, California (Site) performed in conformance with the contract/agreement for this assignment and the scope and limitations of ASTM Standard Practice E1527-13 and United States Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries (AAI) as published in 40 Code of Federal Regulations (CFR) Part 312. EPA promulgated the AAI rule that became effective in November 2006 and has indicated that the ASTM E1527 practice is consistent with the requirements of AAI and may be used to comply with the provisions of the AAI rule. This assessment was also completed in accordance with the First Industrial Realty Trust Scope of Work for Phase I ESAs.

1.1 Purpose

The purpose of the ASTM E1527-13 practice (framework for this Phase I ESA) is to define good commercial and customary practice in the United States of America for conducting an ESA of a parcel of real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (Title 42 United States Code (U.S.C.) Section 9601)) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 U.S.C. Section 9601(35)(B).

In defining a standard of good commercial and customary practice for conducting this Phase I ESA of the Site, the goal of the processes established by the ASTM E1527-13 practice is to identify, to the extent feasible, recognized environmental conditions. The term recognized environmental conditions is defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. In addition, controlled recognized environmental conditions, historical recognized environmental conditions and/or de minimis conditions, if identified during the completion of the assessment, are discussed herein. Definitions of these terms and other key terminology relevant to the practice are included in Section 14.0 of this report.

1.2 Scope of the Assessment

In general terms, this Phase I ESA included the acquisition of readily available/accessible and practically reviewable regulatory records and historical information, a site reconnaissance, interviews, and preparation of this written report of findings. A more detailed description of the four primary components of the Phase I ESA is presented below.

Records Review - A review of Federal, State, Tribal, and local standard ASTM and non-ASTM regulatory databases for a myriad of environmental identifiers including but not limited to properties with underground storage tanks (USTs), properties with leaking USTs, properties that have reported spills/releases that did not occur from a leaking UST, businesses that utilize hazardous materials and/or generate hazardous waste and hazardous waste disposal locations. The regulatory review may also

include public records requests with one or more Federal, State, Tribal and/or local agencies. A review of historical sources is also completed to help ascertain previous land uses of the property in question and in the surrounding area.

Site Reconnaissance - A property inspection and viewing of adjacent and surrounding properties for conditions that could be recognized environmental conditions.

Interviews - Interviews with present and past owners, operators and/or occupants of a property and local government officials.

Reporting - Evaluation of the information gathered during the completion of the Phase I ESA and the subsequent preparation of a written report.

1.3 Limitations and Exceptions

Concerns regarding liability under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq. (CERCLA) and analogous State laws, have been a primary driver for Phase I ESA assignments in commercial real estate transactions. While the ASTM E1527-13 practice can be used in many contexts, a familiarity with CERCLA and its potential LLPs is critical in understanding and applying the ASTM E1527-13 practice. We advise consultation with legal counsel if further inquiry or information is desired.

AAI represents the minimum level of inquiry necessary to support the LLPs. However, it is important to understand that additional inquiry ultimately may be necessary or desirable for legal as well as business reasons depending upon the outcome of this inquiry and the particular risk tolerances of a given user. For example, additional inquiry may assist a user of a Phase I ESA in determining whether he or she would have continuing obligations in the event he or she acquires a given property and may also assist the user in defining the scope of future steps to be taken to satisfy such obligations. In addition, a user may be concerned about business environmental risks or non-scope ASTM considerations that do not fall within the definition of a recognized environmental condition. In addition, this assessment did not include subsurface or other invasive exploration unless specifically documented herein. Users are also cautioned that Federal, State, Tribal and local laws may impose environmental assessment obligations that are beyond the scope of the ASTM E1527-13 practice.

The evaluation, opinion and conclusions presented herein are based solely on visual observations and regulatory, historical, and personal knowledge related information that existed at the time our assessment was completed. The use of the gathered information is exclusively for the purposes outlined in this report and only for the Site. Our firm can make no warranty, either express or implied, except that the services conducted were performed in accordance with generally accepted environmental assessment practices applicable at the time and location of the assessment and that the conclusions of the assessment have been based in part on professional judgment/experience, an interpretation of readily available data and the standard of care normally followed by similar professionals practicing in a similar locale and under similar circumstances. Any opinions presented cannot apply to Site changes of which our firm is unaware and has not had the opportunity to evaluate. In addition, this report cannot feasibly include any evaluation of undocumented activities at the Site or on adjacent or nearby properties. Lastly, a Phase I ESA meeting or exceeding this practice and completed less than 180 days prior to the date of acquisition of a given property or (for transactions not involving an acquisition) the date of the intended transaction is presumed to be valid.

1.4 Special Terms and Conditions

This Phase I ESA was prepared in accordance with the terms and conditions of the contract/agreement for the work as executed between our firm and the client. There are no other special terms and conditions established between our firm and the client pertinent to the findings of this ESA or methodology used to complete this assessment. In addition, our firm has no final or other vested interest in the Site or adjacent/surrounding properties, or in any entity that owns or occupies the Site or adjacent/surrounding properties.

1.5 Limiting Conditions and Deviations

There were no significant limiting conditions that would inhibit our ability to identify recognized environmental conditions noted during the completion of this assessment. In addition, there were no deviations from the ASTM E1527-13 standard noted during the completion of this assessment. Any limiting conditions that are not considered to be ones that would inhibit our ability to identify recognized environmental conditions at the Site are referenced in applicable sections of this report.

1.6 Data Failure and Data Gaps

No instances of data failure were encountered during the completion of this assessment. In addition, no data gaps of significance (i.e. those that would inhibit our ability to identify recognized environmental conditions) were identified during the completion of this assessment. Any data gaps that are not considered to be ones that would inhibit our ability to identify recognized environmental conditions at the Site are referenced in applicable sections of this report.

1.7 Reliance

This report has been prepared for the exclusive use of First Industrial Realty Trust, Inc., First Industrial, L.P. and First Industrial Acquisitions II, LLC (User). This report may not be relied upon by any other person or entity without the written consent of both our firm and our client. The scope of services performed for this assessment may not be appropriate to satisfy the specific needs of other users, and any use or reuse of this document would be at the sole risk of said users. Any other party seeking liability protection under CERCLA must take independent action to accomplish its objective.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Site is a reported 95.04 acres and is further identified by the physical address of 600 N Hathaway Street and Riverside County Assessor's Parcel Numbers 532-110-001, -002, -003, -008, -009 and -010. The Site is situated generally north of East Ramsey Street and Intestate 10, east of North Hathaway Street and south and southeast of Morongo Road. A Vicinity Map is included as Figure 1. A Site Plan is included as Figure 2.

2.2 Site and Vicinity Characteristics

The Site and the surrounding vicinity are situated in the City of Banning that consists primarily of residential properties, commercial properties, vacant land and public roadways. The Morongo Indian Reservation is present to the north. Additional details pertaining to the Site and its adjoining properties are provided in the sections below.

2.3 Current Use of the Site

The Site is predominantly vacant and undeveloped land. Remnant improvements of the Orco facility (i.e. building, paving, former building slabs, etc.) are present in the northwestern portion of the Site. The 532-110-003, -008, -009 and -010 parcels appear to have undergone extensive former grading activities.

2.4 Description of Site Improvements

There are two primary structures at the Site. An approximately 4,400 square foot commercial building formerly utilized by Orco, a manufacturer of concrete block/pavers, is present in the northwest portion of the Site. The building is constructed of concrete masonry unit on a concrete slab on grade foundation. Other improvements in this portion of the Site include concrete and asphalt paving, former concrete building slabs, block walls and indicators/infrastructure associated with several utility systems (i.e. high pressure natural gas, fiber optic, electrical and others). An approximately 100 square foot shack is present in the southeast portion of the Site. The structure appears to be wood framed and constructed on a concrete slab. The previously graded areas of the Site also contain significant drainage related infrastructure including basins with associated piping and other improvements. Storm drain inlets, hydrants, concrete drainage swales, fencing, various piping and other features are also present in these areas.

2.5 Utilities

Utilities that are reported to be present at the Site or provide service in the surrounding area are noted below along with their municipal provider where applicable. If certain utility systems are not provided by public agencies or entities, they are noted as privately maintained.

Utility	Provider (Where Applicable)
Potable Water	City of Banning
Sewage Maintenance	City of Banning
Electrical	City of Banning

Utility	Provider (Where Applicable)
Natural Gas	SoCal Gas Company
Solid Waste Disposal	City of Banning

2.6 Description of Adjoining Properties

Adjoining properties are defined as any real property or properties, the border of which is contiguous or partially contiguous with that of the subject property of a Phase I ESA, or that would be contiguous or partially contiguous with that of a subject property but for a street, road, or other public thoroughfare separating them. To the extent feasible, our firm performed a visual inspection of adjoining properties from the Site boundaries and along public right of ways. We did not encroach on to adjoining private property during the completion of this assessment. The following table identifies the adjoining property uses:

Direction	Adjoining Property Use
North	Vacant land, then Morongo Road, both part of the Morongo Indian Reservation.
South	Vacant land, then East Ramsey Street and Interstate 10. A Caltrans yard adjoins portions of the Site to the south.
East	Vacant land. A Caltrans yard adjoins portions of the Site to the east.
West	North Hathaway Street, residential properties and vacant land. A Caltrans yard adjoins portions of the Site to the west.

2.7 Summary Relative to Environmental Concerns

No recognized environmental conditions were noted in connection with the land use of the Site and improvements at the Site. In addition, the land uses of adjoining properties and properties in the vicinity of the Site do not represent recognized environmental conditions to the Site.

3.0 PHYSICAL SETTING

3.1 Topography

The Site is depicted on the United States Geological Survey (USGS) topographic map for the Cabazon, California 7.5-minute quadrangle. The Site is shown on the map as being situated at elevations ranging from approximately 2,220 to 2,325 feet above mean sea level. The Site and surrounding area appear to trend slightly to moderately downward toward the south and southeast. There are no improvements, structures or surface waters depicted on-Site on the map. Adjoining and surrounding roadways are depicted on the map. The Site as depicted on a topographic map is included as Figure 3.

3.2 Hydrology

The Site is situated within the San Gorgonio Hydrologic Area of the Whitewater Hydrologic Unit. There are substantial drainage related improvements present in previously graded areas of the Site. Infiltration of precipitation can be expected over much of the Site due to its predominantly unimproved nature. Any excess water would appear to flow as surface runoff to streets/roadways and surrounding areas of lower elevation. The Site does not appear to receive significant drainage from off-Site properties.

3.3 Geology

General geologic information pertaining to the Site is presented in the table below.

Geologic Consideration	Details
California Geomorphic Province	Peninsular Ranges.
Mapped Soils or Formation	Early Pleistocene, old alluvial fan deposits.
Description of Soils or Formation	Unconsolidated silts, sands, and clays.
Distance/Direction to Mapped Faults	No known faults are mapped on the Site.

3.4 Hydrogeology

General hydrogeologic information pertaining to the Site is presented in the table below.

Hydrogeologic Consideration	Details
Groundwater Basin or Unit	San Gorgonio Hydrologic Area
Beneficial Uses	Municipal, agricultural, and industrial.
Estimated Depth to Groundwater	Anticipated to be greater than 100 feet below the surface.
Estimated Flow of Groundwater	South to southeast.

Hydrogeologic Consideration	Details
Known Site or Regional Groundwater Contamination Issues	None.

3.5 Oil and Gas Exploration

According to online resources provided by the California Department of Conservation, Geologic Energy Management Division (CalGEM), there are no oil, gas or geothermal wells located on the Site or its adjacent properties.

3.6 Summary Relative to Environmental Concerns

No recognized environmental conditions were noted in connection with Site physical setting considerations. In addition, physical setting considerations related to the adjoining properties and properties in the vicinity of the Site do not represent recognized environmental conditions to the Site.

4.0 USER PROVIDED INFORMATION

A representative of the User of this report was interviewed during the completion of this assessment. The questions posed during the interview are defined by the ASTM E1527-13 practice. The User also provided our firm with any land title records and judicial records that may be available for the Site as part of the required evaluation for environmental liens and activity and use limitations (AULs) in connection with the subject property of a Phase I ESA. As stated in the ASTM E1527-13 practice, it is the responsibility of the User of the report to provide any available records pertaining to environmental liens and AULs that may exist in connection with a given property. Any land title and judicial records provided to our firm are discussed below. If such information is not discussed in the sections below, it was not provided by the User of the report.

In addition to the contact information obtained, the user of the report was also asked if they are aware of other useful documents that may exist and if so whether copies can be provided to the environmental professional within reasonable time and cost constraints. A list of typical useful documents is included in Section 10.8.1 of the ASTM E1527-13 practice and include but are not limited to environmental assessment reports, compliance audits and permits, registrations for tank and other aboveground or underground systems, safety plans, spill prevention and other facility related plans and geological/geotechnical studies and environmental governmental agency notices and/or correspondence.

4.1 Title Records

Our firm was not provided with title reports pertaining to the Site. The User is unaware of environmentally related liens, deed restrictions or AULs pertaining to the Site.

4.2 Environmental Liens

The User is unaware of environmental liens in connection with the Site.

4.3 Activity and Use Limitations

The User is unaware of AULs in connection with the Site.

4.4 Specialized or Actual Knowledge or Experience

The User is unaware of specialized knowledge, actual knowledge or experience that is material to recognized environmental conditions in connection with the Site.

4.5 Commonly Known or Reasonably Ascertainable Information

The User is unaware of commonly known or reasonably ascertainable information within the local community that is material to recognized environmental conditions in connection with the Site.

4.6 Valuation Reduction for Environmental Issues

The User is unaware of information pertaining to an undervalued purchase price of the Site relative to the estimated fair market value of the Site due to the presence of contamination.

4.7 Owner, Property Manager, and Occupant Information

The Site is currently owned and managed by Muth Holdings (600 N Hathaway Street/APNs 532-110-001 and -002) and Osi Partnership (APNs 532-110-003, -008, -009 and -010). The Site is currently vacant with no known occupants.

4.8 Reason for Performing Phase I ESA

The User has commissioned this Phase I ESA as part of a proposed real estate transaction (acquisition and development). The Phase I ESA is also being completed to assist the client in complying with 40 CFR Part 312.

4.9 Proceedings Involving the Site

The User is unaware of pending, threatened, or past litigation and administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Site. The client is also unaware of notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products in connection with the Site.

4.10 Other Provided Documents

We were provided with a Phase I ESA of an approximately 64 acre portion of the Site (APNs) 532-110-003-1, 532-110-009-7, 532-110-010-7 and 532-110-008-6) dated February 25, 2008. The parcels were undeveloped land at the time of the assessment and no environmental concerns were noted by the consultant. Environmental concerns in connection with the Site were also not noted during completion of regulatory and historical research. Regulatory research did reveal two database listings adjoining the Site. The first was a Caltrans maintenance facility at 2033 E Ramsey Street which has a closed leaking underground storage tank (LUST) case. The second was the Orco Block Company facility to the north at 600 North Hathaway Street which is also a subject property of our current Phase I ESA. No releases of hazardous substances or petroleum products were reported for the Orco facility. A review of the Orco Block Company files with the Riverside County Department of Environmental Health (DEH) indicated that in 1994, two USTs (8,000 gallon capacity each) were removed. One UST was used to store gasoline and one UST was used to store diesel. The USTs were not reported to have leaked and UST closure was granted on March 17, 1994. At the time of the 2008 Phase I ESA, the Orco facility was noted as generating waste oil and also using a 1,000 gallon AST to store diesel for use by its fork lifts. No recognized environmental conditions in connection with the subject property of the Phase I ESA were noted and no additional assessment was recommended.

4.11 Summary Relative to Environmental Concerns

No recognized environmental conditions were noted in connection with the User provided information.

5.0 REGULATORY RECORDS REVIEW

Our firm commissioned the preparation of a regulatory database report from Environmental Risk Information Services (ERIS) as part of the regulatory records review. ERIS searches a myriad of Federal, State, and local government environmental databases during the preparation of their deliverables. Certain databases are specifically required by the ASTM E1527-13 practice and are referenced as "standard ASTM regulatory databases." Such databases are searched to at least the minimum search distance around a given property as defined in the practice. Other regulatory databases are also searched that are not specifically referenced in ASTM E1527-13. Such databases are referenced as "non-ASTM regulatory databases" and are searched as varying radii around a given property as selected by ERIS.

Descriptions of each database searched and the dates that the regulatory databases were last updated by the applicable agencies are included in the ERIS report. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of an updates. ERIS updates databases in accordance with ASTM E1527-13 which states that government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public.

Our firm also reviewed unplottable sites listed in the database report by cross-referencing reasonably ascertainable information pertaining to such properties that may include facility names, street names, zip codes or other information. Unplottable sites are ones that cannot be formally mapped or geocoded due to various reasons, including limited geographic information. Any unplottable sites that we identify within the specified search radii have been evaluated as part of the preparation of this report. A copy of the regulatory database report is included in Appendix A.

5.1 Standard ASTM Regulatory Database Search

The tables below present the standard Federal, State, Tribal and local ASTM databases that were searched by ERIS including the search distances from the Site. Below the tables are descriptions of any listings for the Site that may appear in the databases. In addition, a discussion of adjoining properties or properties in the Site vicinity that are listed in one or more regulatory databases that in our professional judgment and opinion have the potential to adversely impact the Site due to current or former releases of hazardous substances and/or petroleum products that occurred at said properties is presented. This practice of discussing only properties of potential environmental concern to the Site is noted in ASTM E1527-13 which states that the environmental professional may make statements applicable to multiple properties listed in regulatory databases that are not likely to have current or former releases of hazardous substances and/or petroleum products with the potential to migrate to the a given subject property. Our professional judgment and opinions discussed herein are based on several factors including the nature of the regulatory database listings, distance of the off-Site listed properties from the Site, orientation of the listed properties relative to the Site, interpreted direction of groundwater flow and/or regulatory case status information for the various properties as described in the databases.

The following Federal standard ASTM databases were searched:

Standard Environmental Record Source Name	ERIS Regulatory Database Identification	Search Distance From Site (Miles)
National Priorities List (NPL) Site List	NPL – Proposed NPL – Superfund Record of Decision (ROD)	1.0
Delisted NPL Site List	Deleted NPL	0.5
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List	CERCLIS - SEMS – SEMS Archive – ODI – IODI – CERCLIS LIENS – SEMS LIENS	0.5
CERCLIS List	CERCLIS LIENS – SEMS LIENS	Site
CERCLIS No Further Remedial Action Planned (NFRAP) Site List	CERCLIS NFRAP	0.5
Resource Conservation and Recovery Act (RCRA) Corrective Action Sites (CORRACTS) Facilities List	RCRA CORRACTS	1.0
RCRA Non-CORRACTS Treatment, Storage and Disposal (TSD) Facilities List	RCRA TSD	0.5
RCRA Generators List	RCRA LQG – RCRA SQG – RCRA CESQG – RCRA NON-GEN – BULK TERMINAL – REFN – FEMA Underground Storage Tank (UST)	0.25
Institutional Control/Engineering Control Registries	FED ENG – FED INST – FED Brownfields	0.5
Emergency Response Notification System (ERNS) List	ERNS – ERNS 1982 to 1986 – ERNS 1987 to 1989	Site

Site – The Site is not listed on any of the standard Federal ASTM regulatory databases.

Adjoining Properties – One adjoining property is listed on the standard Federal ASTM RCRA TSD and RCRA Non-Gen regulatory databases. This south, east and west adjoining property is identified as Caltrans D8 Maintenance Banning MS at 2033 E Ramsey Street. No violations are reported for this property.

Other Properties – There are five listings on the standard Federal ASTM regulatory databases pertaining to multiple properties in the surrounding area that are identified on various databases including SEMS ARCHIVE (one listing), CERCLIS (one listing), CERCLIS NFRAP (one listing), RCRA TSD (one listing), and RCRA Non-Gen (one listing).

None of the above referenced properties are considered a recognized environmental condition to the Site. This opinion is based on the distance of the off-Site listed properties from the Site, orientation of the listed properties relative to the Site, interpreted direction of groundwater flow and/or regulatory case status information for the various properties as described in the databases.

The following State, Tribal and local standard ASTM databases were searched:

Standard Environmental Record Sources Name	ERIS Regulatory Database Identification	Search Distance From Site (Miles)
Equivalent NPL	RESPONSE	1.0
Equivalent CERCLIS	ENVIROSTOR – DELISTED ENVS – HWP - HHSS	0.5
Landfill and/or Solid Waste Disposal Site Lists	SWF/LF – LDS – SWAT – SWRCB SWF	0.5
Leaking Storage Tank Lists	LUST – DELISTED LST – UST CLOSURE – CLEANUP SITES – INDIAN LUST – DELISTED ILST – RIVERSIDE LOP	0.5
Registered Storage Tank Lists	UST – AST – DELISTED TNK – CERS TANK – DELISTED CTNK – HIST TANK – INDIAN UST – DELISTED IUST – DELISTED COUNTY – UST RIVERSIDE	Site and Adjoining Properties
Institutional Control/Engineering Control Registries	LUR – HLUR - DEED	Site
Voluntary Cleanup Sites	VCP	0.5
Brownfield Sites	Not Applicable – No Database Exists	0.5

Site – The Site is listed on the HHSS, HIST TANK, and UST SWEEPS databases as Fred Lite Blocks and Orco Block Company at 600 N Hathaway Street. The Site is referenced with two 8,000-gallon USTs. The USTs at the Site have been documented as being removed. Please refer to Section 5.3 below for additional information.

Adjoining Properties – One adjoining property is listed on the State, Tribal and local standard ASTM regulatory databases including SWF/LF, LUST, HHSS, UST SWEEPS, CERS TANK, HIST TANK, and RIVERSIDE LOP. This south, east and west adjoining property is identified as Caltrans D8 Maintenance Banning MS at 2033 E Ramsey Street. An unauthorized release of waste oil reportedly occurred at this property that impacted soils only. The release case was closed by the Riverside County DEH in August 1995.

Other Properties – There are 12 listings on the State, Tribal and local standard ASTM regulatory databases pertaining to multiple properties in the surrounding area that are identified on various databases including ENVIROSTOR (seven listings), SWF/LF (one listing), HHSS (one listing), UST SWEEPS (one listing), CERS TANK (one listing), and HIST TANK (one listing).

None of the above referenced properties are considered a recognized environmental condition to the Site. This opinion is based on the distance of the off-Site listed properties from the Site, orientation of the listed properties relative to the Site, interpreted direction of groundwater flow and/or regulatory case status information for the various properties as described in the databases.

5.2 Non-ASTM Regulatory Database Search

A myriad of non-ASTM regulatory databases was searched by ERIS as noted in the regulatory database report.

Site – The Site is listed on the FINDS/FRS, HAZNET, and EMMISSIONS databases as Orco Block Company at 600 N Hathaway Street. The listings pertain to the general storage of hazardous materials and generation of hazardous waste (waste/mixed oil and liquids with organic residues).

Adjoining Properties – One adjoining property is listed on the non-ASTM regulatory databases including RIVERSIDE HWG and RIVERSIDE HZH. This south, east and west adjoining property is identified as Caltrans D8 Maintenance Banning MS at 2033 E Ramsey Street.

Other Properties – There are four listings on the non-ASTM regulatory databases pertaining to properties in the surrounding area that are identified on the FUDS (two listings) and EMISSIONS (two listing) databases.

None of the above referenced properties are considered a recognized environmental condition to the Site. This opinion is based on the distance of the off-Site listed properties from the Site, orientation of the listed properties relative to the Site, interpreted direction of groundwater flow and/or regulatory case status information for the various properties as described in the databases.

5.3 Regulatory Agency File Reviews

If a property being assessed under a Phase I ESA or any of the adjoining properties are identified on one or more of the above referenced standard environmental record sources, pertinent regulatory files and/or records associated with such listings should be reviewed to assist the environmental professional in evaluating if recognized environmental conditions existing at a given subject property in connection with any listings. However, if in the environmental professional's opinion, such a review is not warranted, file reviews need not be conducted if the environmental professional provides justification for not doing so.

Agency file reviews for the Site completed during this assessment are noted below. No file reviews for adjoining properties or properties in the surrounding area were deemed warranted with the exception of research completed on the State Water Resources Control Board Geotracker database regarding properties in the surrounding area of the Site. The agency inquiries were performed by way of on-line searches/queries of published databases and/or direct inquiries with public records clerks at one or more agencies. Copies of regulatory agency records are included in Appendix B.

Regulatory Agency	Jurisdiction	Date of Inquiry or Request	Contact	Response or Information From Agency
United States EPA Envirofacts/ECHO/ TRIS	Federal	2/23/2021	Online https://enviro.epa.gov/ https://echo.epa.gov/facilities/facility-search https://www.epa.gov/toxics-release-inventory-tri-program	No Records Identified

Regulatory Agency	Jurisdiction	Date of Inquiry or Request	Contact	Response or Information From Agency
California Department of Toxic Substances Control	State	2/23/2021	Online https://www.envirostor.dtsc.ca.gov/public https://hwts.dtsc.ca.gov/ Public Records Clerk	No Records Identified
State Water Resources Control Board/Regional Water Quality Control Board	State	2/23/2021	Online https://geotracker.waterboards.ca.gov/ https://geotracker.waterboards.ca.gov/historical_ust_facilities Public Records Clerk	Records Identified
Riverside County	Local	2/23/2021	Public Records Clerks	Records Identified
City of Banning	Local	2/23/2021	Public Records Clerk	Records Identified

California State Water Resources Control Board – Records are limited to documentation of two 8,000-gallon USTs, one for the storage of gasoline and the other for the storage of diesel fuel. The referenced facility is Fred-Lite Blocks at 600 North Hathaway Street. The USTs at the Site have been documented as being removed. Please refer to Section 5.3 below for additional information.

Riverside County – The Riverside County DEH files for the Site pertain to the former Orco Block Company. The file contains several hazardous waste management permits, compliance inspection reports, tank tightness/testing reports and other typical documents. Closure documentation pertaining to the two former USTs previously referenced in this report is included in the file. In addition, the facility is referenced as previously storing waste oil in ASTs and other containers. The facility received several administrative related violations during compliance inspections pertaining to container labeling, contingency/management plans, training and other primarily administrative related considerations.

The USTs were removed on February 8, 1994 and documented in a report dated February 17, 1994. It was estimated that the two 8,000-gallon USTs were installed in the 1960s. As directed by the DEH, two soil samples were collected from each end of the former UST locations, for a total of eight samples. The samples were analyzed for petroleum hydrocarbons and/or select volatile organic compounds (VOCs). The four samples that were analyzed for gasoline range hydrocarbons and select VOCs did not contain such constituents above the laboratory reporting limits. Of the four samples that were analyzed for diesel range hydrocarbons, one contained diesel at 31 milligrams per kilogram (mg/kg). The sample depth was 14 feet below the surface. The diesel screening level at the time was noted as ranging from 100 mg/kg to 10,000 mg/kg depending on property conditions. The current conservative screening levels for diesel in a residential and commercial/industrial setting are 260 mg/kg and 1,200 mg/kg, respectively. Also of note is the sample one foot below the 31 mg/kg detection did not contain diesel range hydrocarbons. The DEH issued a no further action letter for the USTs on March 17, 1994. Depth and screening level

City of Banning – A demolition permit for the removal of two metal buildings and "all kilns" issued on April 2, 2013 is present in the City file for the Site. An electrical permit for a gas valve station is also in the City file (issued to Southern California Gas Company).

5.4 Summary Relative to Environmental Concerns

No current recognized environmental conditions were noted in connection with the regulatory records searches. In addition, regulatory resources related to the adjoining properties and properties in the vicinity of the Site do not represent recognized environmental conditions to the Site. The former presence of two USTs at the Site is considered to be a historical recognized environmental condition based on the NFA letter and lack of required controls. No additional evaluation is warranted. This opinion is in part based on the results of a Phase II ESA conducted concurrently with our Phase I ESA effort during which no petroleum impacts were identified in the subsurface in the area of the former USTs. During the completion of the Phase II study, 15 soil borings were advanced at the Site using a truck-mounted direct-push sampling rig equipped with approximate two-inch diameter stainless steel rods and soil sampling tools. The borings were drilled to depths varying from 10 to 20 feet. Boring B10 was drilled in the area of the former USTs. Remaining borings were drilled within former structure or operations areas of the former Orco facility or along the periphery of the former facility in areas of possible fill material and/or materials storage. A total of 52 soil samples were obtained during the drilling activities. Choice of samples to be analyzed was based on visual/olfactory conditions, Site history in each sampling location and professional judgment. The analytical testing program is noted below.

- Thirty-three (33) soil samples were analyzed for total petroleum hydrocarbons (TPH) by United States Environmental Protection Agency (EPA) test Method 8015B
- Twenty-seven (27) soil samples were analyzed for volatile organic compounds (VOCs) by United States EPA test Method 8260B
- Sixteen (16) soil samples were analyzed for Title 22 Metals by United States EPA test Methods 6010B/7471A

With the exception of a slight hydrocarbon odor at the one-foot depth of boring B9, no suspect soil conditions (i.e. staining, odors, deleterious materials, etc.) were noted during the soil sampling activities. Photoionization detector (PID) screening was conducted on all of the soil samples and no detections of undifferentiated VOCs were detected by way of the instrument.

Results of the analytical testing were as follows:

- TPH in the gasoline range was not detected in any of the samples.
- TPH as diesel was detected at 72.5 mg/kg and 330 mg/kg at the one foot depths of two of the borings. TPH as oil was also detected at these sample depths at the two locations at concentrations of 1,880 mg/kg and 241 mg/kg in addition to the one foot depth of a third boring (17.8 mg/kg). TPH was not detected in underlying soils (i.e. greater depths) at each of the three sampling locations. The detected diesel and oil concentrations were below their respective residential and commercial human health risk based screening levels of 260 mg/kg/1,200 mg/kg (diesel) and 12,000 mg/kg/180,000 mg/kg (oil), with the exception of TPH as diesel detected at one location at a concentration of 330 mg/kg, which is slightly above the residential screening level of 260 mg/kg. However, commercial screening levels apply to the Site, and the

detected concentration is well below the commercial screening level of 1,200 mg/kg. Moreover, no further action is required.

- VOCs were not detected at or above the laboratory reporting limits in any of the soil samples analyzed for such constituents.
- Eight (8) of the Title 22 Metals were detected at or above analytical laboratory reporting limits. The detected metals (and maximum concentrations) included barium (433 mg/kg), chromium (26.4 mg/kg), cobalt (11.9 mg/kg), copper (79.4 mg/kg), lead (7.77 mg/kg), nickel (17.8 mg/kg), vanadium (51.2 mg/kg) and zinc (58.0 mg/kg). None of the detected metals concentrations exceed their respective residential and commercial human health risk based screening levels (see Table 2).

Conclusions of the Phase II ESA were follows:

- Insignificant detections of diesel and oil range hydrocarbons were identified in three of the soil samples at one foot depths. No further petroleum impacts were detected in underlying soils at each of these three sampling locations. Furthermore, the impacts are surficial in nature and do not require additional action.
- VOCs and metals are not considered to be contaminants of concern at the Site. VOCs were not detected at or above analytical laboratory reporting limits, and none of the detected metal concentration exceed their respective residential and commercial human health risk based screening levels.
- No petroleum impacts were identified in the area of the former USTs.
- No additional assessment is considered to be warranted.

A copy of the assessment report is included in Appendix E.

6.0 HISTORICAL RESOURCE REVIEW

The objective of consulting historical sources is to develop a history of the previous uses of a property and surrounding area, in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with a given property. The goal of the historical research is to identify all obvious uses of a subject property from the present, back to the property's first developed use, or back to 1940, whichever is earlier. The environmental professional exercises professional judgment in reviewing only as many of the standard historical sources referenced in ASTM E1527-13 that are deemed necessary, are reasonably ascertainable and are likely to be useful. Historical resources reviewed during the completion of this assessment are referenced below. Copies of the historical resources are included in Appendix C.

6.1 Aerial Photographs

We reviewed historical aerial photographs from the years 1936, 1955, 1962, 1967, 1972, 1975, 1985, 1996, 2002, 2005, 2009, 2012 and 2016 provided by HIG. The table below presents the results of the photograph review.

Photograph Year	Site Observations	Adjoining Property Observations
1936-1975	The Site is vacant and undeveloped land.	With the exception of some residential and commercial development starting in the 1962 photograph, adjoining properties are generally vacant and undeveloped.
1985-2016	Several structures are present in the northwest portion of the Site along N Hathaway Street. The remainder of the Site is vacant and undeveloped with evidence of grading beginning with the 2012 photograph.	Increased residential and commercial development is evident over the years.

6.2 Topographic Maps

Our firm reviewed topographic maps from the years 1901, 1943, 1956, 1972, 1978, 1988, 1996, 2012 and 2015 provided by HIG. The Site is depicted as being vacant and undeveloped on the topographic maps from 1901, 1943, 1956, 1972, 1978, 2012 and 2015. On the topographic maps of 1988 and 1996, the northwest portion of the Site is depicted with three (3) structures. Adjoining properties are depicted as predominately vacant and undeveloped on the topographic maps from 1901, 2012 and 2015. On the topographic maps of 1943 to 1996, adjoining properties are depicted to be developed for residential and commercial purposes with various streets depicted nearby. Banning Airport is depicted to the south of the Site beginning on the 1956 topographic map.

6.3 City Directories

Our firm reviewed city directories dated ranging in date from 1971 to 2018 provided by HIG. The following listings for the Site were noted in the directories:

600 N Hathaway Street

- 1981-1986 – Fred Lite Blocks

- 1991-2011 – Orco Block Company

Adjoining and nearby properties in the surrounding area are primarily referenced in several of the directories as being used for residential (i.e. personal names) and general commercial and retail purposes. None of the listings are considered a recognized environmental concern to the Site.

6.4 Other Historical Sources

Other historical sources are referenced in the ASTM E1527-13 practice as any source or sources other than the standard historical sources referenced in the practice that are credible to a reasonable person and that identify past uses of a subject property. This category includes, but is not limited to miscellaneous maps and directories, newspaper archives, internet sites, community organizations, local libraries, historical societies, current owners or occupants of neighboring properties, or records in the files and/or personal knowledge of the property owner and/or occupants. No historical sources other than the standard sources described above were deemed necessary and useful to assist in identifying recognized environmental conditions.

6.5 Summary Relative to Environmental Concerns

No recognized environmental conditions were noted in connection with the historical resources reviewed. In addition, historical resources related to the adjoining properties and properties in the vicinity of the Site did not reveal recognized environmental conditions to the Site.

7.0 SITE RECONAISSANCE

The objective of the Site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with a subject property. The Site visit for our assessment was completed on March 1, 2021 by Daniel Weis. We were unaccompanied during the reconnaissance.

7.1 Methodology and Limiting Conditions

The Site reconnaissance consisted of observing the Site on foot via various transects and walking publicly accessible areas surrounding the Site. The Site building interiors were also accessed. No significant limiting conditions of the Site inspection were noted. Select photographs of the Site obtained during the Site reconnaissance are included in Appendix D.

7.2 Current General Site and Vicinity Characteristics

The Site and the surrounding vicinity are situated in the City of Banning that consists primarily of residential properties, commercial properties, vacant land and public roadways. The Morongo Indian Reservation is present to the north. The Site is predominantly vacant and undeveloped land. Remnant improvements of the Orco facility (i.e. building, paving, former building slabs, etc.) are present in the northwest portion of the Site. The 532-110-003, -008, -009 and -010 parcels appear to have undergone extensive former grading activities. The current use of the Site and adjoining properties are not ones that are indicative of the use, treatment, storage disposal or generation of hazardous substances or petroleum products that may have significantly impacted the Site.

7.3 Indications of Past Site and Vicinity Uses

There are no material differences between the current and past uses of the Site, adjoining properties and the surrounding area that were visually and/or physically observed during the Site reconnaissance that pertain to recognized environmental conditions.

7.4 Site-Specific Observations

We examined the Site for the features and conditions noted in the table below.

Feature or Condition	Details
General Description of Structures	There are two primary structures at the Site. An approximately 4,400 square foot commercial building formerly utilized by Orco is present in the northwest portion of the Site. The building is constructed of concrete masonry unit on a concrete slab on grade foundation. Other improvements in this portion of the Site include concrete and asphalt paving, former concrete building slabs, block walls and indicators/infrastructure associated with several utility systems (i.e. high pressure natural gas, fiber optic, electrical and others). An approximately 100 square foot shack is present in the southeast portion of the Site. The structure appears to be wood framed and constructed on a concrete slab. The previously graded areas of the Site also contain significant drainage related infrastructure including basins with associated piping and other improvements. Storm drain inlets, hydrants, concrete drainage swales, various piping and other features are also present in these areas. Power poles and line are also present in select areas of the Site.
Drains and Sumps	Significant drainage related infrastructure including basins with associated piping and other improvements is present at the Site, which is associated with a former planned retail development that was never completed. In addition, an underground, concrete lined pit is present at the northeast corner of the primary Site building. In addition a concrete lined pit (top elevated above the floor) and trench are present within the primary Site building. Visible portions of the pits did not contain drains. The use of the pits is assumed to be part of the general former block production operations. No staining, odors or other suspect conditions were noted in these areas.
Heating/Cooling Systems	None observed.
Potable Water Supply	Municipal (City of Banning)
Roads	Access to the Site is from North Hathaway and East Ramsey Street.
Septic Systems / Sewage Disposal System	Municipal (City of Banning)
Wastewater and Stormwater Discharges	None observed.
Wells	None observed.
Drums	An empty plastic 55-gallon drum was observed within the primary Site building. The drum was not labeled. The drum appears to have been most recently used as a trash can. No staining, odors or other suspect conditions were noted in these areas.
Electrical or Hydraulic Equipment Known to Contain PCBs or Likely to Contain PCBs	None observed.
Hazardous Substances and Petroleum Products in Connection with Identified Uses	None observed.
Hazardous Substance and Petroleum Products Not Necessarily in Connection With Identified Uses	None observed.
Odors	None noted.

Feature or Condition	Details
Pits, Ponds or Lagoons	Please refer to the "Drains and Sumps" section above.
Pools of Liquid	None observed.
Solid Waste (Including Fill Material)	Trash and debris are present in some areas of the Site, primarily along the western boundary and in the eastern area adjacent to the shack structure. Such materials include but are not limited to wood fragments, automobile tires, abandoned appliances, retail-sized propane containers, empty five-gallon buckets, furniture, scrap metal, pipe fragments and other miscellaneous materials. An abandoned automobile is also present adjacent to the shack structure. No staining, odors or other suspect conditions were noted in these areas.
Stained Soil or Pavement	None observed.
Stains or Corrosion	None observed.
Chemical Storage Tanks	None observed.
Stressed Vegetation	None observed.
Unidentified Substance Containers	None observed.

7.5 Summary Relative to Environmental Concerns

No recognized environmental conditions were noted in connection with the current use of the Site during the Site reconnaissance. In addition, no current uses of the adjoining properties or properties in the surrounding area that were visually and/or physically observed during the Site reconnaissance were noted as recognized environmental conditions to the Site.

8.0 INTERVIEWS

8.1 Site Owner

The designated Site owners are The Muth Family and O'Donnell and Star Insurance. They reportedly are unaware of environmental concerns in connection with the Site. The owners have been associated with the Site since 1997 (Muth Family) and 2006 (O'Donnell and Star Insurance).

8.2 Key Site Manager

The Site owners are also the Key Site Managers. Please refer to Section 8.1 above.

8.3 Current Occupants

The Site is vacant with no known occupants.

8.4 Local Government Official

During the preparation of this assessment, public records clerks from the State of California, Riverside County and City of Banning were contacted by our firm regarding the Site. Agency representatives indicated that public records requests should be conducted in order to obtain information known by the agencies regarding the Site. Public records requests were completed by our firm as described in Section 5.3.

8.5 Other Parties

Interviews with other persons were not conducted during the preparation of this assessment. As stated in the ASTM E1527-13 practice, interviews with past owners, operators, and occupants of a subject property who are likely to have material information regarding the potential for contamination at a given property shall be conducted to the extent that they have been identified and that the information likely to be obtained is not duplicative of information already obtained from other sources. Interviews with persons with past association with the Site were not deemed warranted during the completion of this assessment.

8.6 Summary Relative to Environmental Concerns

No recognized environmental conditions were noted in connection with the interviews completed during the assessment.

9.0 ADDITIONAL SERVICES – NON-SCOPE ASTM CONSIDERATIONS

Several non-scope ASTM considerations are referenced in the ASTM E1527-13 practice that a user of a report may wish to evaluate. Listed considerations in the practice include asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, health and safety, indoor air quality (unrelated to releases of hazardous substances or petroleum products into the environment), industrial hygiene, lead-based paint, lead in drinking water, mold, radon, regulatory compliance and wetlands. No implication is intended by the practice as to the relative importance of inquiry into such non-scope considerations, and the list of considerations is not intended to be all-inclusive.

The following items/additional services were evaluated during the preparation of this assessment.

Asbestos and Lead-Based Paint – An asbestos and lead-based paint survey has been completed concurrently with this Phase I ESA. The results of the survey have been provided to the client under separate cover and included in Appendix E. No such materials were identified.

Landmark/Historical/Cultural Significance Review - Archeological/cultural and paleontological assessments of the Site have been completed concurrently with this Phase I ESA. The results of the studies have been provided to the client under separate cover. No significant findings were reported.

Lead in Drinking Water - According to the most recent water quality report prepared by the City of Banning, the drinking water supplied to the area is in compliance with all Federal and State regulations.

National Pollution Discharge Elimination System (NPDES) – We are unaware of current NPDES related requirements that pertain to the Site.

Phase II ESA - A Phase II ESA consisting of soil sampling and analysis was conducted concurrent with our Phase I ESA effort. The report has been provided to the client under separate cover and included in Appendix E. As noted in Section 5.4 above and the Phase II report, insignificant detections of diesel and oil range hydrocarbons were identified in three of the soil samples collected from the Site at one foot depths. No further petroleum impacts were detected in underlying soils at each of these three sampling locations. Furthermore, the impacts are surficial in nature and do not require additional action and no petroleum impacts were identified in the area of the former USTs. VOCs and metals were also not considered to be contaminants of concern at the Site. No additional assessment is warranted.

Radon Potential - The Site is located within United States EPA Radon Zone 2 which has predicted average indoor levels of radon between 2 and 4 picocuries per liter. Radon is not considered to be a concern at the Site.

Wetlands and Threatened/Endangered Species - A biological assessment of the Site has been completed concurrently with this Phase I ESA. The results of the study have been provided to the client under separate cover. No wetlands were noted at the Site and no significant biological findings were reported.

No other additional services were completed by our firm during the preparation of this assessment.

10.0 FINDINGS AND OPINIONS

No features and/or conditions indicating the presence or likely presence of hazardous substances and/or petroleum products at the Site that are considered to have adversely impacted the Site were identified during the completion of this assessment. The former presence of two USTs at the Site is considered to be a historical recognized environmental condition based on the NFA letter and lack of required controls. No additional evaluation is warranted. This opinion is in part based on the results of a Phase II ESA conducted concurrently with our Phase I ESA effort during which no petroleum impacts were identified in the subsurface in the area of the former USTs. The Phase II ESA is included in Appendix E.

11.0 CONCLUSIONS AND RECOMMENDATIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM International Practice E1527-13 of the Site identified as First Hathaway (600 N Hathaway Street and Riverside County APNs 532-110-001, -002, -003, -008, -009 and -010) in the City of Banning, Riverside County, California. Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report. This assessment has revealed no evidence of recognized environmental conditions or controlled recognized environmental conditions in connection with the Site. As stated previously, the former presence of two USTs at the Site with an unrestricted NFA letter is considered to be a historical recognized environmental condition that does not warrant additional evaluation.

12.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in Section 312.10 of 40 CFR. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Site. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Qualifications of personnel involved with the completion of this report are included in Appendix F.

_____

Daniel Weis, R.E.H.S.
Environmental Manager

13.0 ASSUMPTIONS

No Phase I ESA effort can eliminate uncertainty regarding the potential for recognized environmental conditions to exist in connection with a given property. Performance of the ASTM E1527-13 practice may reduce such uncertainty but in no way should the findings and report be misconstrued as insurance or a guarantee regarding the potential for recognized environmental conditions in connection with a given property. The ASTM E1527-13 practice recognizes reasonable limits of time and cost relative to the completion of a Phase I ESA.

During the completion of this ESA, our firm relied on certain information obtained from secondary sources, including but not limited to the user of the report, government agencies, historical research business entities, environmental databases, and interviews with one or more persons. The sources obtained and/or consulted are assumed to be reliable. However, our firm cannot warranty or guarantee that the information provided by these other sources is wholly accurate or complete. Our firm is not responsible for any misrepresentations or false statements that may be provided by others or the lack of pertinent/relevant information that should have been provided/disclosed by others and we assume no responsibility for any consequence as a result of such omissions or withheld information.

Accuracy and completeness of records varies among information sources, including from governmental agencies. As a result, there is a possibility that even with the proper application of the methodologies presented in ASTM E1527-13, conditions may exist that could not be identified within the scope of this assessment or which were not reasonably identifiable from the available information. In addition, any responses received from Federal, State, Tribal, and local regulatory agency secondary sources of information after the issuance of this report may change certain findings and conclusions of this report.

Estimations and opinions regarding the potential for off-Site properties to adversely impact a given subject property is one of the key components of a Phase I ESA. In most cases, recent property-specific or adjacent-property specific measured groundwater data or other hydrogeological information is not reasonably ascertainable. In the absence of such data, reasonable assumptions regarding the depth and flow of groundwater are made based on various sources including comparisons to surface elevations, land topography and available hydrogeological on the State of California Geotracker database. In addition, estimations and opinions regarding potential impacts from off-Site locations may be based on certain assumptions that a hazardous substance or petroleum product may not migrate laterally within unsaturated soil for a substantial distance and that contaminants that have reached saturated soil and groundwater may attenuate over time and/or may decrease in concentration relative to distance from its source. While any interpretations presented herein may be effective in reducing uncertainty regarding potential impacts to a subject property from off-Site locations, in no way should the findings and report be misconstrued as insurance or a guarantee regarding the potential for such impacts to occur. Greater certainty regarding subsurface conditions at a given property can only be achieved by way of a subsurface sampling effort of one or more media.

14.0 DEFINITIONS

Definitions of key terminology relevant to the ASTM E1527-13 practice are presented below.

Recognized Environmental Condition - The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

Controlled Recognized Environmental Condition - A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Data Failure - A failure to achieve the historical research objectives as outlined in the ASTM E1527-13 practice even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

Data Gap - A lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by the ASTM E1527-13 practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.). Data gaps are only considered to be significant if they affect the ability of the environmental professional to identify recognized environmental conditions.

De Minimis Condition - A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

Environment - (A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Magnuson-Stevens Fishery Conservation and Management Act [16 U.S.C. §§ 1801 et seq.], and (B) any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

Good Faith - The absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one's obligations in the conduct or transaction concerned.

Hazardous Substance - Includes hazardous substances designated under section 311 of the Clean Water Act (CWA) or Section 102 of CERCLA, any toxic pollutant listed under Section 307(a) of the CWA, any waste that has been listed as a RCRA hazardous waste or possesses a RCRA hazardous waste characteristic, any substance that is identified as a hazardous pollutant under Section 112 of the Clean Air Act (CAA), and any imminently hazardous chemical that EPA has taken action pursuant to Section 7 of the Toxic Substances Control Act (TSCA).

Historical Recognized Environmental Condition - A past release of any hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority or

meeting unrestricted use criteria established by a regulatory authority, without subjecting the property in question to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Petroleum Exclusion – While the definition of a CERCLA hazardous substance specifically excludes petroleum products and crude oil, the EPA has determined that the petroleum exclusion applies to petroleum products such as gasoline and other fuels containing lead, benzene or other hazardous substances that are normally added during the refining process. Notwithstanding the existence of the petroleum exclusion, petroleum products are included within the scope of the ASTM E1527-13 practice for multiple reasons. Petroleum products have historically been widely used at commercial properties. In addition, other federal and state laws may impose liability for releases or spills of petroleum products.

Reasonably Ascertainable Information - Information that is (1) publicly available, (2) obtainable from its source within reasonable time and cost constraints and (3) practically reviewable.

Release or Threatened Release - Spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment (including the abandonment or discarding of barrels, containers and other closed receptacles containing any hazardous substance, or pollutant or contaminant).

15.0 REFERENCES

Sources of information consulted during the completion of our Phase I ESA are noted in the sections below.

15.1 Documents, Plans and Reports

- All Appropriate Inquiry" as necessary to satisfy the defenses available under 42 U.S.C. §§ 9607(b)(3), 9607(r)(1), and 9607(q), relying on definitions provided at 42 U.S.C. §§ 9601(35)(B); and as further explained in 40 CFR §§ 312.1 – 312.31.
- ASTM International, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-13, Published November 2013.
- California Geological Survey, 2002, California Geomorphic Provinces Note 36, Electronic Copy, Revised December.
- California State Water Resources Control Board, Water Quality Control Plan for the Colorado River Basin (7), California, Published 2008.
- ERIS Database Report dated February 25, 2021.
- HIG Aerial Photographs Report dated February 25, 2021.
- HIG Topographic Maps dated February 25, 2021.
- USGS topographic map, Cabazon, California Quadrangle (2018).

15.2 Personal Communications

- Public Records Clerks – State of California, County of Riverside and City of Banning

15.3 Agencies Consulted

- California Department of Conservation, Geologic Energy Management Division (CalGEM)
- California Department of Toxic Substances Control
- California State Water Resources Control Board
- City of Banning
- County of Riverside
- United States EPA

FIGURES

FIGURE 1
VICINITY MAP

Figure 1 - Vicinity Map

First Hathaway
Banning, California

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

FIGURE 2
SITE PLAN

Figure 2 - Site Plan

First Hathaway
Banning, California

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

FIGURE 3
TOPOGRAPHIC MAP

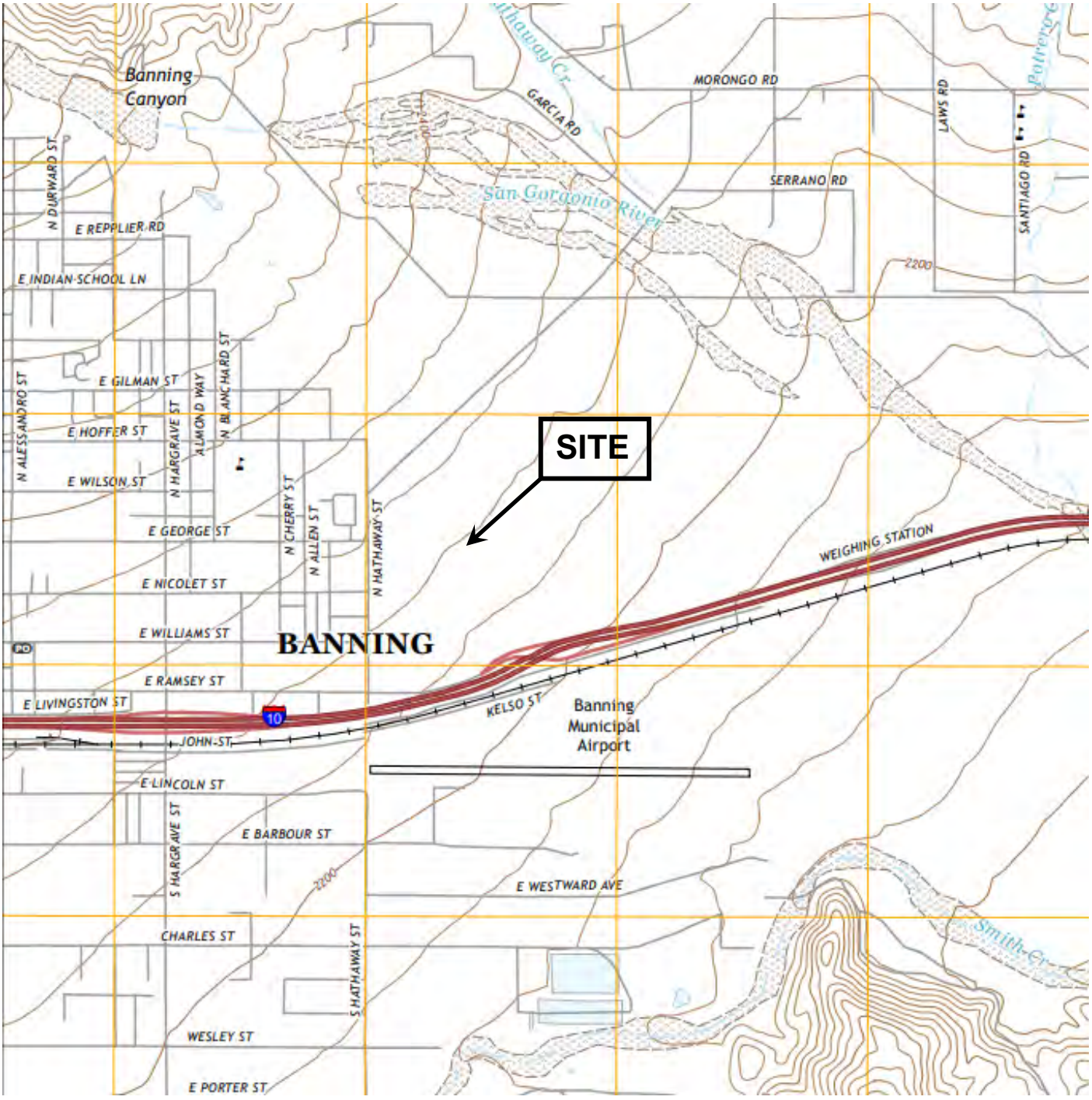

Figure 3 - Topographic Map

First Hathaway
Banning, California

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

APPENDICES

APPENDIX A
REGULATORY DATABASE REPORT

ENVIRONMENTAL RISK INFORMATION SERVICES

DATABASE REPORT

Project Property:	*600 N Hathaway St* *600 N Hathaway St* *Banning CA*
Project No:	
Report Type:	*Database Report*
Order No:	*21022300353*
Requested by:	*Historical Information Gatherers*
Date Completed:	*February 25, 2021*

Environmental Risk Information Services
A division of Glacier Media Inc.
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Executive Summary

Property Information:

Project Property: *600 N Hathaway St*
600 N Hathaway St Banning CA

Project No:

Coordinates:

Latitude:	*0*
Longitude:	*0*
UTM Northing:	*3,754,457.91*
UTM Easting:	*513,410.42*
UTM Zone:	*11S*

Elevation: *2,274 FT*

Order Information:

Order No:	*21022300353*
Date Requested:	*February 23, 2021*
Requested by:	*Historical Information Gatherers*
Report Type:	*Database Report*

Historicals/Products:

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
Standard Environmental Records								
Federal								
FRP	Y	0.25	0	0	0	-	-	0
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	**1**	-	**1**
ODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	**1**	-	**1**
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	**1**	-	**1**
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	**1**	0	**1**	-	**2**
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	**1**	**1**	-	-	**2**
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
RESPONSE	Y	1	0	0	0	0	0	0
ENVIROSTOR	Y	1	0	0	**1**	**2**	**4**	**7**
DELISTED ENVS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	**1**	0	**1**	-	**2**
SWRCB SWF	Y	0.5	0	0	0	0	-	0
HWP	Y	1	0	0	0	0	0	0
SWAT	Y	0.5	0	0	0	0	-	0
LDS	Y	0.5	0	0	0	0	-	0
LUST	Y	0.5	0	**1**	0	0	-	**1**
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
UST CLOSURE	Y	0.5	0	0	0	0	-	0
HHSS	Y	0.25	**1**	**2**	**1**	-	-	**4**
UST SWEEPS	Y	0.25	**1**	**1**	**1**	-	-	**3**
AST	Y	0.25	0	0	0	-	-	0
AST SWRCB	Y	0.25	0	0	0	-	-	0
TANK OIL GAS	Y	0.25	0	0	0	-	-	0
DELISTED TNK	Y	0.25	0	0	0	-	-	0
CERS TANK	Y	0.25	0	**1**	**1**	-	-	**2**
LUR	Y	0.5	0	0	0	0	-	0
HLUR	Y	0.5	0	0	0	0	-	0
DEED	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
CLEANUP SITES	Y	0.5	0	0	0	0	-	0
DELISTED COUNTY	Y	0.25	0	0	0	-	-	0
DELISTED CTNK	Y	0.25	0	0	0	-	-	0
HIST TANK	Y	0.25	**1**	**2**	**1**	-	-	**4**
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED ILST	Y	0.5	0	0	0	0	-	0
DELISTED IUST	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
County								
RIVERSIDE LOP	Y	0.5	0	**1**	0	0	-	**1**
UST RIVERSIDE	Y	0.25	0	0	0	-	-	0
Additional Environmental Records								
Federal								
PFAS NPL	Y	0.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	**1**	-	-	-	-	**1**
TRIS	Y	PO	0	-	-	-	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	**1**	0	**1**	**2**
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCB	Y	0.5	0	0	0	0	-	0
State								
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DRYC GRANT	Y	0.25	0	0	0	-	-	0
PFAS	Y	0.5	0	0	0	0	-	0
PFAS GW	Y	0.5	0	0	0	0	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
HWSS CLEANUP	Y	0.5	0	0	0	0	-	0
DTSC HWF	Y	0.5	0	0	0	0	-	0
INSP COMP ENF	Y	1	0	0	0	0	0	0
SCH	Y	1	0	0	0	0	0	0
CHMIRS	Y	PO	0	-	-	-	-	0
HAZNET	Y	PO	**3**	-	-	-	-	**3**
HIST CHMIRS	Y	PO	0	-	-	-	-	0
HIST MANIFEST	Y	PO	0	-	-	-	-	0
HIST CORTESE	Y	0.5	0	0	0	0	-	0
CDO/CAO	Y	0.5	0	0	0	0	-	0
CERS HAZ	Y	0.125	0	0	-	-	-	0
DELISTED HAZ	Y	0.5	0	0	0	0	-	0
GEOTRACKER	Y	0.125	0	0	-	-	-	0
WASTE DISCHG	Y	0.25	0	0	0	-	-	0
EMISSIONS	Y	0.25	**2**	0	**2**	-	-	**4**
CDL	Y	0.125	0	0	-	-	-	0
Tribal	***No Tribal additional environmental record sources available for this State.***							
County								
RIVERSIDE HWG	Y	0.125	0	**1**	-	-	-	**1**
RIVERSIDE HZH	Y	0.125	0	**1**	-	-	-	**1**
	Total:		**9**	**13**	**9**	**7**	**5**	**43**

**** PO – Property Only***
**** 'Property and adjoining properties' database search radii are set at 0.25 miles.***

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	FINDS/FRS	ORCO BLOCK CO INC	600 N HATHAWAY ST BANNING CA 92220-5754	WNW	0.00 / 0.00	36	24
1	HHSS	FRED-LITE BLOCKS	600 NO HATHAWAY BANNING CA 92220	WNW	0.00 / 0.00	36	24
1	HAZNET	ORCO BLOCK COMPANY-BANNING	600 N HATHAWAY ST BANNING CA 922200000	WNW	0.00 / 0.00	36	24
1	HAZNET	ORCO BLOCK CO INC	600 N HATHAWAY ST BANNING CA 922200000	WNW	0.00 / 0.00	36	25
1	EMISSIONS	ORCO BLOCK CO INC	600 N HATHAWAY BANNING CA 92220	WNW	0.00 / 0.00	36	26
1	EMISSIONS	ORCO BLOCK CO INC	600 N HATHAWAY ST BANNING CA 92220	WNW	0.00 / 0.00	36	26
1	HIST TANK	FRED-LITE BLOCKS	600 NO. HATHAWAY BANNING CA	WNW	0.00 / 0.00	36	27
1	UST SWEEPS	ORCO BLOCK COMPANY	600 N HATHAWAY BANNING CA ***C C | Status:*** *A33-000-6084 | ACTIVE* ***Tank ID:*** *000002, 000001*	WNW	0.00 / 0.00	36	28
2	HAZNET	SOUTHERN CALIFORNIA GAS COMPANY	MORONGO RD. AND HATHAWAY BANNING CA 92220	WNW	0.00 / 0.00	59	28

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
3	RIVERSIDE LOP	Cal Trans Banning Yard	2033 E Ramsey St Banning CA	SSE	0.04 / 188.87	-35	29
			Site ID* | *Status Desc: 89155 | CLOSED/ACTION COMPLETED				
3	RIVERSIDE HZH	Caltrans/Banning Maint St	2033 E Ramsey St Banning CA 92220	SSE	0.04 / 188.87	-35	29
3	RIVERSIDE HWG	Caltrans/Banning Maint St	2033 E Ramsey St Banning CA 92220	SSE	0.04 / 188.87	-35	29
3	LUST	CAL TRANS BANNING YARD	2033 EAST RAMSEY STREET BANNING CA 92220	SSE	0.04 / 188.87	-35	29
			Global ID* | *Status* | *Status Date: T0606500715 | COMPLETED - CASE CLOSED | 8/30/1995				
3	SWF/LF	Caltrans Banning Maintenance Station	2033 East Ramsey Sreet Banning CA 92220	SSE	0.04 / 188.87	-35	32
			Act Opl Status* | *Activity: Active | Limited Volume Transfer Operation				
3	HHSS	BANNING	2033 E RAMSEY ST BANNING CA 92220	SSE	0.04 / 188.87	-35	34
3	HHSS	BANNING MAINTENANCE STATION	2033 E RAMSEY BANNING CA 92220	SSE	0.04 / 188.87	-35	34
3	CERS TANK	Caltrans-Banning	2033 E RAMSEY ST BANNING CA 92220	SSE	0.04 / 188.87	-35	34
			Site ID: 389101				
3	HIST TANK	BANNING MAINTENANCE STATION	2033 E. RAMSEY BANNING CA	SSE	0.04 / 188.87	-35	40
3	HIST TANK	BANNING	2033 E RAMSEY ST BANNING CA	SSE	0.04 / 188.87	-35	40
3	RCRA TSD	CALTRANS D8 MAINTENANCE BANNING MS	2033 E RAMSEY ST BANNING CA 92220-0000	SSE	0.04 / 188.87	-35	40
			EPA Handler ID: CAD981458417				
3	RCRA NON GEN	CALTRANS D8 MAINTENANCE BANNING MS	2033 E RAMSEY ST BANNING CA 92220-0000	SSE	0.04 / 188.87	-35	41

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
			EPA Handler ID: CAD981458417				
3	UST SWEEPS	CAL TRANS-BANNING MAINTENANCE	2033 E RAMSEY BANNING CA	SSE	0.04 / 188.87	-35	42
			C C | Status: A33-000-44828 | ACTIVE ***Tank ID:*** 000002, 000003				
4	ENVIROSTOR	BANNING AIRPORT	BANNING CA	SE	0.17 / 905.14	-82	43
			Estor/EPA ID | Cleanup Status: 80000972 | INACTIVE - NEEDS EVALUATION AS OF 7/1/2005				
4	FUDS	BANNING AIRPORT	BANNING CA	SE	0.17 / 905.14	-82	43
5	EMISSIONS	SOUTHWEST EQUITY	1679 RAMSEY AVE BANNING CA 92220	SW	0.20 / 1,065.81	-21	44
6	EMISSIONS	ALS BODY SHOP	1675 E RAMSEY AV BANNING CA 92220	SW	0.21 / 1,134.90	-23	44
7	RCRA NON GEN	BANNING DRIVELINE	1550 E. RAMSEY BANNING CA 92220	SW	0.22 / 1,157.97	-13	45
			EPA Handler ID: CAC002968344				
8	HHSS	BANNING MUNICIPAL AIRPORT	200 S HATHAWAY STREET BANNING CA 92220	S	0.25 / 1,312.04	-60	46
8	CERS TANK	Banning Municipal Airport	200 S HATHAWAY ST BANNING CA 92220	S	0.25 / 1,312.04	-60	46
			Site ID: 10901				
8	HIST TANK	BANNING MUNICIPAL AIRPORT	200 S. HATHAWAY STREET BANNING CA	S	0.25 / 1,312.04	-60	51
8	UST SWEEPS	BANNING MUNICIPAL AIRPORT	200 S HATHAWAY ST BANNING CA	S	0.25 / 1,312.04	-60	51
			C C | Status: A33-000-22702 | ACTIVE ***Tank ID:*** 000002, 000001				
9	CERCLIS	BANNING DRUMS	1326 E. RAMSEY ST. BANNING CA 92220	SW	0.27 / 1,437.03	3	52
			Site EPA ID: CAD983646498				
9	CERCLIS NFRAP	BANNING DRUMS	1326 E. RAMSEY ST. BANNING CA 92220	SW	0.27 / 1,437.03	3	54
			Site EPA ID: CAD983646498				
10	SEMS ARCHIVE	BANNING DRUMS	1326 E. RAMSEY ST. BANNING CA 92220	SW	0.27 / 1,444.79	3	55
			EPA ID: CAD983646498				

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
11	ENVIROSTOR	INLAND BEHAVIORAL & HEALTH SVCS-BANNING	1070 E. RAMSEY STREET BANNING CA 92220	WSW	0.37 / 1,973.25	13	56
			***Estor/EPA ID	Cleanup Status:*** 33800004 | NO ACTION REQUIRED AS OF 6/1/2002			
12	ENVIROSTOR	INLAND BEHAVIORAL & HEALTH SVCS. - SAN B	665 & 671 NORTH D STREET SAN BERNARDINO CA 92401	WSW	0.38 / 2,026.62	19	56
			***Estor/EPA ID	Cleanup Status:*** 33800003 | NO ACTION REQUIRED AS OF 6/4/2002			
13	RCRA TSD	LORENA FIGUEROA	957 E GEORGE ST BANNING CA 92220	W	0.40 / 2,095.69	84	57
			EPA Handler ID: CAC003013426				
14	SWF/LF	Twin Pines Ranch Disposal Site	Twin Pines Rd, Southeast Of Banning Banning CA 92220	WNW	0.41 / 2,190.80	118	58
15	ENVIROSTOR	PERFECTION PLATING, INC.	1284 E. LINCOLN STREET BANNING CA 92220	SW	0.56 / 2,960.48	-43	59
			***Estor/EPA ID	Cleanup Status:*** 71003018 | NO FURTHER ACTION AS OF 9/9/2010			
16	ENVIROSTOR	PERFECTION PLATING	1284 E. LINCOLN ST. BANNING CA 92220	SW	0.56 / 2,960.55	-43	62
			***Estor/EPA ID	Cleanup Status:*** 60000748 | REFER: 1248 LOCAL AGENCY AS OF 6/25/2004			
17	ENVIROSTOR	TYCO ELECTRONICS CORPORATION BANNING	700 SOUTH HATHAWAY STREET BANNING CA 92220	SSW	0.62 / 3,279.18	-80	62
			***Estor/EPA ID	Cleanup Status:*** 60002152 | CERTIFIED O&M - LAND USE RESTRICTIONS ONLY AS OF 3/15/2017			
18	ENVIROSTOR	BANNING RIFLE RANGE	SECTIONS 13 AND 14 OF TOWNSHIP SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN BANNING CA 92220	SE	0.94 / 4,952.88	-226	66
			***Estor/EPA ID	Cleanup Status:*** 80000140 | INACTIVE - NEEDS EVALUATION AS OF 10/4/2018			
18	FUDS	BANNING RIFLE RANGE	BANNING CA	SE	0.94 / 4,952.88	-226	67

Executive Summary: Summary by Data Source

Standard

Federal

SEMS ARCHIVE - SEMS List 8R Archive Sites

A search of the SEMS ARCHIVE database, dated Jan 28, 2021 has found that there are 1 SEMS ARCHIVE site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING DRUMS	1326 E. RAMSEY ST. BANNING CA 92220 ***EPA ID**: CAD983646498*	SW	0.27 / 1,444.79	10

CERCLIS - Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS

A search of the CERCLIS database, dated Oct 25, 2013 has found that there are 1 CERCLIS site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING DRUMS	1326 E. RAMSEY ST. BANNING CA 92220 ***Site EPA ID**: CAD983646498*	SW	0.27 / 1,437.03	9

CERCLIS NFRAP - CERCLIS - No Further Remedial Action Planned

A search of the CERCLIS NFRAP database, dated Oct 25, 2013 has found that there are 1 CERCLIS NFRAP site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING DRUMS	1326 E. RAMSEY ST. BANNING CA 92220 ***Site EPA ID**: CAD983646498*	SW	0.27 / 1,437.03	9

RCRA TSD - RCRA non-CORRACTS TSD Facilities

A search of the RCRA TSD database, dated Oct 19, 2020 has found that there are 2 RCRA TSD site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
LORENA FIGUEROA	957 E GEORGE ST BANNING CA 92220 ***EPA Handler ID**: CAC003013426*	W	0.40 / 2,095.69	13

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CALTRANS D8 MAINTENANCE BANNING MS	2033 E RAMSEY ST BANNING CA 92220-0000	SSE	0.04 / 188.87	3
	***EPA Handler ID**: CAD981458417*			

RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Oct 19, 2020 has found that there are 2 RCRA NON GEN site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CALTRANS D8 MAINTENANCE BANNING MS	2033 E RAMSEY ST BANNING CA 92220-0000	SSE	0.04 / 188.87	3
	***EPA Handler ID**: CAD981458417*			
BANNING DRIVELINE	1550 E. RAMSEY BANNING CA 92220	SW	0.22 / 1,157.97	7
	***EPA Handler ID**: CAC002968344*			

State

ENVIROSTOR - EnviroStor Database

A search of the ENVIROSTOR database, dated Jan 13, 2021 has found that there are 7 ENVIROSTOR site(s) within approximately 1.00 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
INLAND BEHAVIORAL & HEALTH SVCS-BANNING	1070 E. RAMSEY STREET BANNING CA 92220	WSW	0.37 / 1,973.25	11
	***Estor/EPA ID	Cleanup Status**: 33800004	NO ACTION REQUIRED AS OF 6/1/2002*		
INLAND BEHAVIORAL & HEALTH SVCS. - SAN B	665 & 671 NORTH D STREET SAN BERNARDINO CA 92401	WSW	0.38 / 2,026.62	12
	***Estor/EPA ID	Cleanup Status**: 33800003	NO ACTION REQUIRED AS OF 6/4/2002*		

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING AIRPORT	BANNING CA	SE	0.17 / 905.14	4
	***Estor/EPA ID	Cleanup Status**: 80000972	INACTIVE - NEEDS EVALUATION AS OF 7/1/2005*		
PERFECTION PLATING, INC.	1284 E. LINCOLN STREET BANNING CA 92220	SW	0.56 / 2,960.48	15
	***Estor/EPA ID	Cleanup Status**: 71003018	NO FURTHER ACTION AS OF 9/9/2010*		
PERFECTION PLATING	1284 E. LINCOLN ST. BANNING CA 92220	SW	0.56 / 2,960.55	16
	***Estor/EPA ID	Cleanup Status**: 60000748	REFER: 1248 LOCAL AGENCY AS OF 6/25/2004*		
TYCO ELECTRONICS CORPORATION BANNING	700 SOUTH HATHAWAY STREET BANNING CA 92220	SSW	0.62 / 3,279.18	17

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
	***Estor/EPA ID** | **Cleanup Status**: 60002152 | CERTIFIED O&M - LAND USE RESTRICTIONS ONLY AS OF 3/15/2017*			
BANNING RIFLE RANGE	SECTIONS 13 AND 14 OF TOWNSHIP SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN BANNING CA 92220	SE	0.94 / 4,952.88	18
	***Estor/EPA ID** | **Cleanup Status**: 80000140 | INACTIVE - NEEDS EVALUATION AS OF 10/4/2018*			

SWF/LF - Solid Waste Information System (SWIS)

A search of the SWF/LF database, dated Feb 8, 2021 has found that there are 2 SWF/LF site(s) within approximately 0.50 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
Twin Pines Ranch Disposal Site	Twin Pines Rd, Southeast Of Banning Banning CA 92220	WNW	0.41 / 2,190.80	14

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Caltrans Banning Maintenance Station	2033 East Ramsey Sreet Banning CA 92220	SSE	0.04 / 188.87	3
	***Act Opl Status** | **Activity**: Active | Limited Volume Transfer Operation*			

LUST - Leaking Underground Fuel Tank Reports

A search of the LUST database, dated Nov 16, 2020 has found that there are 1 LUST site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CAL TRANS BANNING YARD	2033 EAST RAMSEY STREET BANNING CA 92220	SSE	0.04 / 188.87	3
	***Global ID** | **Status** | **Status Date**: T0606500715 | COMPLETED - CASE CLOSED | 8/30/1995*			

HHSS - Historical Hazardous Substance Storage Information Database

A search of the HHSS database, dated Aug 27, 2015 has found that there are 4 HHSS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
FRED-LITE BLOCKS	600 NO HATHAWAY BANNING CA 92220	WNW	0.00 / 0.00	1

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING MAINTENANCE STATION	2033 E RAMSEY BANNING CA 92220	SSE	0.04 / 188.87	3
BANNING	2033 E RAMSEY ST BANNING CA 92220	SSE	0.04 / 188.87	3

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING MUNICIPAL AIRPORT	200 S HATHAWAY STREET BANNING CA 92220	S	0.25 / 1,312.04	8

UST SWEEPS - Statewide Environmental Evaluation and Planning System

A search of the UST SWEEPS database, dated Oct 1, 1994 has found that there are 3 UST SWEEPS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ORCO BLOCK COMPANY	600 N HATHAWAY BANNING CA ***C C	Status**: *A33-000-6084	ACTIVE* ***Tank ID**: *000002, 000001*	WNW	0.00 / 0.00	1

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
CAL TRANS-BANNING MAINTENANCE	2033 E RAMSEY BANNING CA ***C C	Status**: *A33-000-44828	ACTIVE* ***Tank ID**: *000002, 000003*	SSE	0.04 / 188.87	3
BANNING MUNICIPAL AIRPORT	200 S HATHAWAY ST BANNING CA ***C C	Status**: *A33-000-22702	ACTIVE* ***Tank ID**: *000002, 000001*	S	0.25 / 1,312.04	8

CERS TANK - California Environmental Reporting System (CERS) Tanks

A search of the CERS TANK database, dated Feb 9, 2021 has found that there are 2 CERS TANK site(s) within approximately 0.25 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Caltrans-Banning	2033 E RAMSEY ST BANNING CA 92220 ***Site ID**: *389101*	SSE	0.04 / 188.87	3
Banning Municipal Airport	200 S HATHAWAY ST BANNING CA 92220 ***Site ID**: *10901*	S	0.25 / 1,312.04	8

HIST TANK - Historical Hazardous Substance Storage Container Information - Facility Summary

A search of the HIST TANK database, dated May 27, 1988 has found that there are 4 HIST TANK site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
FRED-LITE BLOCKS	600 NO. HATHAWAY BANNING CA	WNW	0.00 / 0.00	1

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING MAINTENANCE STATION	2033 E. RAMSEY BANNING CA	SSE	0.04 / 188.87	3
BANNING	2033 E RAMSEY ST BANNING CA	SSE	0.04 / 188.87	3
BANNING MUNICIPAL AIRPORT	200 S. HATHAWAY STREET BANNING CA	S	0.25 / 1,312.04	8

County

RIVERSIDE LOP - Riverside County - Local Oversight Program List

A search of the RIVERSIDE LOP database, dated Nov 24, 2020 has found that there are 1 RIVERSIDE LOP site(s) within approximately 0.50 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Cal Trans Banning Yard	2033 E Ramsey St Banning CA	SSE	0.04 / 188.87	3
	Site ID* | *Status Desc: *89155* | *CLOSED/ACTION COMPLETED*			

Non Standard

Federal

FINDS/FRS - Facility Registry Service/Facility Index

A search of the FINDS/FRS database, dated Nov 2, 2020 has found that there are 1 FINDS/FRS site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ORCO BLOCK CO INC	600 N HATHAWAY ST BANNING CA 92220-5754	WNW	0.00 / 0.00	1

FUDS - Formerly Used Defense Sites

A search of the FUDS database, dated Jan 28, 2020 has found that there are 2 FUDS site(s) within approximately 1.00 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
BANNING AIRPORT	BANNING CA	SE	0.17 / 905.14	4
BANNING RIFLE RANGE	BANNING CA	SE	0.94 / 4,952.88	18

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key

State

HAZNET - Hazardous Waste Manifest Data

A search of the HAZNET database, dated Oct 24, 2016 has found that there are 3 HAZNET site(s) within approximately 0.02 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ORCO BLOCK CO INC	600 N HATHAWAY ST BANNING CA 922200000	WNW	0.00 / 0.00	1
ORCO BLOCK COMPANY-BANNING	600 N HATHAWAY ST BANNING CA 922200000	WNW	0.00 / 0.00	1
SOUTHERN CALIFORNIA GAS COMPANY	MORONGO RD. AND HATHAWAY BANNING CA 92220	WNW	0.00 / 0.00	2

EMISSIONS - Toxic Pollutant Emissions Facilities

A search of the EMISSIONS database, dated Dec 31, 2018 has found that there are 4 EMISSIONS site(s) within approximately 0.25 miles of the project property.

Equal/Higher Elevation	Address	Direction	Distance (mi/ft)	Map Key
ORCO BLOCK CO INC	600 N HATHAWAY BANNING CA 92220	WNW	0.00 / 0.00	1
ORCO BLOCK CO INC	600 N HATHAWAY ST BANNING CA 92220	WNW	0.00 / 0.00	1

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
SOUTHWEST EQUITY	1679 RAMSEY AVE BANNING CA 92220	SW	0.20 / 1,065.81	5
ALS BODY SHOP	1675 E RAMSEY AV BANNING CA 92220	SW	0.21 / 1,134.90	6

County

RIVERSIDE HWG - Riverside County - Hazardous Waste Generator Sites List

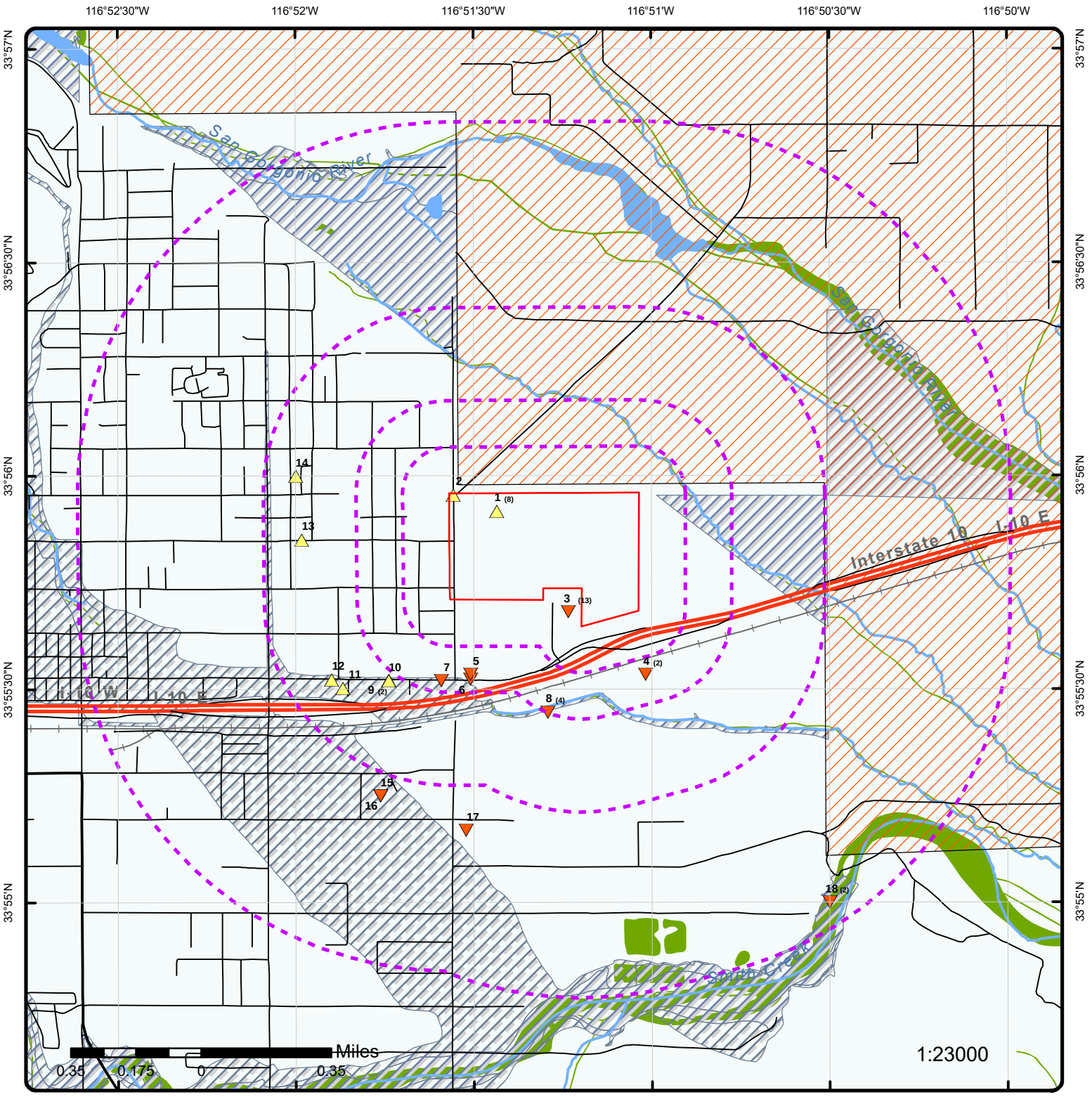
A search of the RIVERSIDE HWG database, dated Nov 24, 2020 has found that there are 1 RIVERSIDE HWG site(s) within approximately 0.12 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Caltrans/Banning Maint St	2033 E Ramsey St Banning CA 92220	SSE	0.04 / 188.87	3

RIVERSIDE HZH - Riverside County - Disclosure Facility List

A search of the RIVERSIDE HZH database, dated Nov 24, 2020 has found that there are 1 RIVERSIDE HZH site(s) within approximately 0.12 miles of the project property.

Lower Elevation	Address	Direction	Distance (mi/ft)	Map Key
Caltrans/Banning Maint St	2033 E Ramsey St Banning CA 92220	SSE	0.04 / 188.87	3



Map: 1.0 Mile Radius

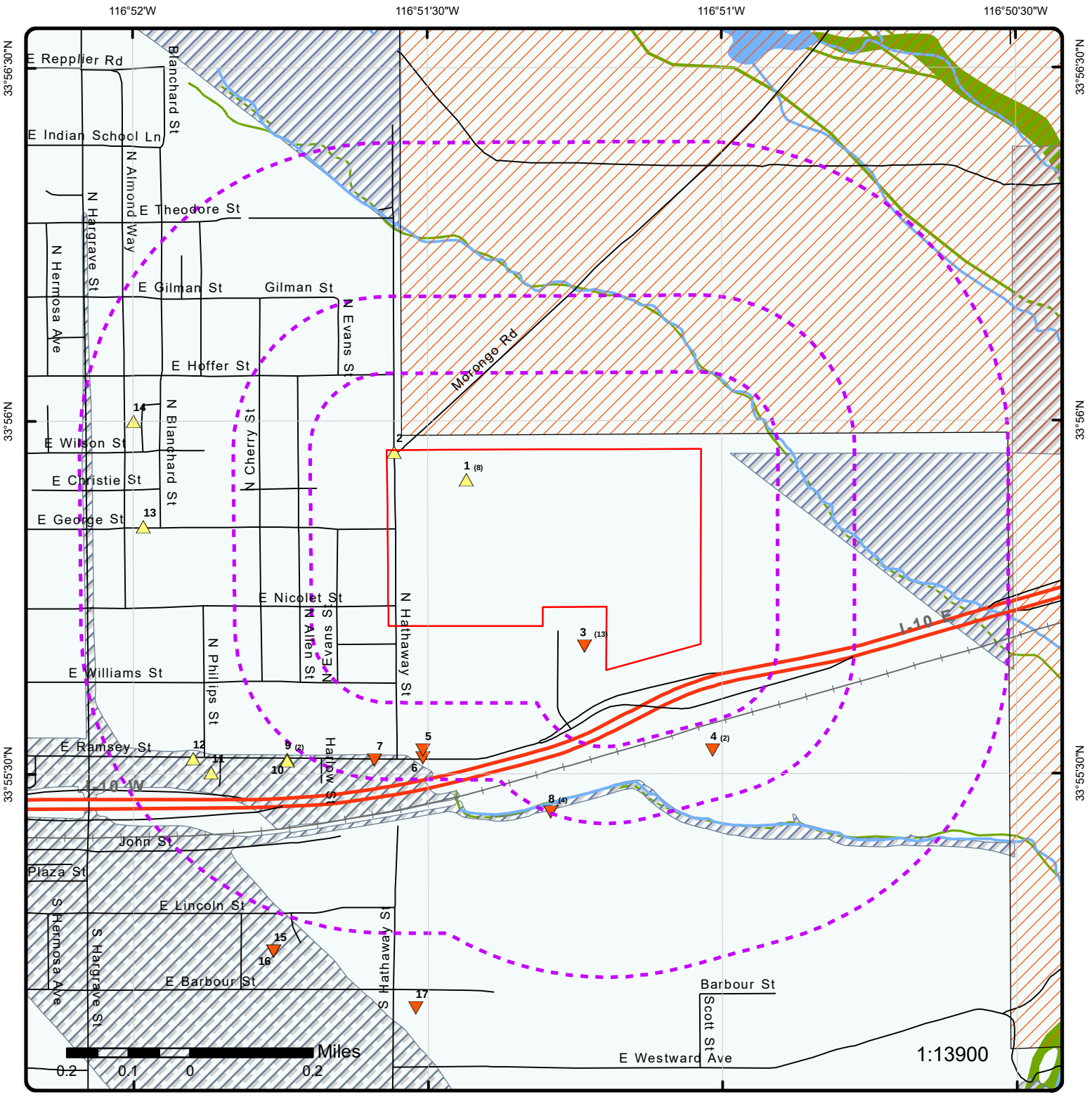
Order Number: 21022300353

Address: 600 N Hathaway St, Banning, CA

ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)

Source: © 2016 ESRI



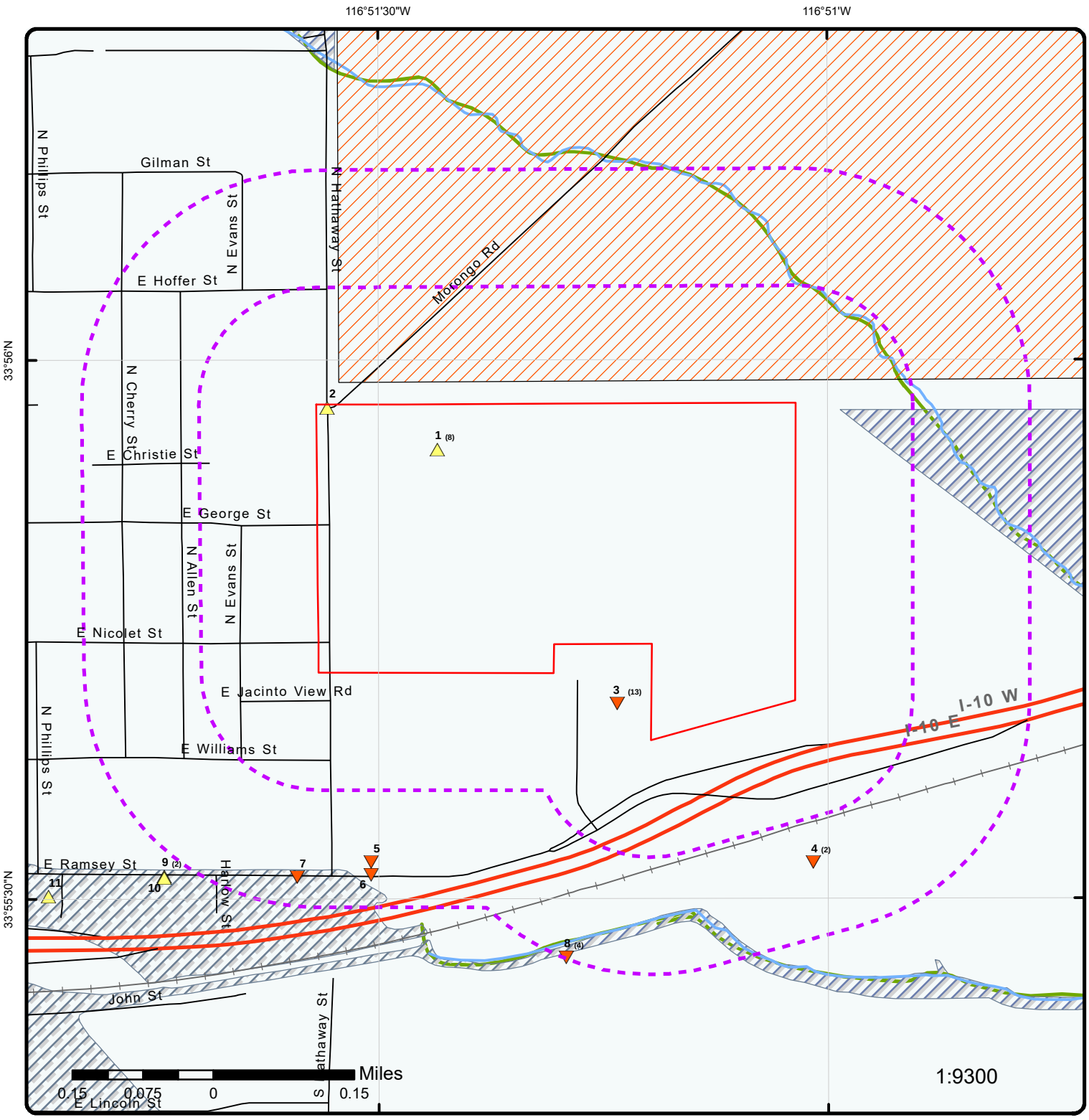
Map: 0.5 Mile Radius

Order Number: 21022300353

Address: 600 N Hathaway St, Banning, CA

ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)



Map: 0.25 Mile Radius

Order Number: 21022300353

Address: 600 N Hathaway St, Banning, CA

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- County Boundary
- Rails
- Major Highways
- Major Highways Ramps
- Major Roads
- Major Roads Ramps
- Secondary Roads
- Secondary Roads Ramps
- Local Roads and Ramps
- State Boundary
- National Priority List Sites
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- State Brownfield Sites
- State Brownfield Areas
- State Superfund Areas:Dept. of Defense
- State Superfund Areas:NPL
- WQARF Areas
- Federal Lands: Dept. of Defense (owned/administered areas)

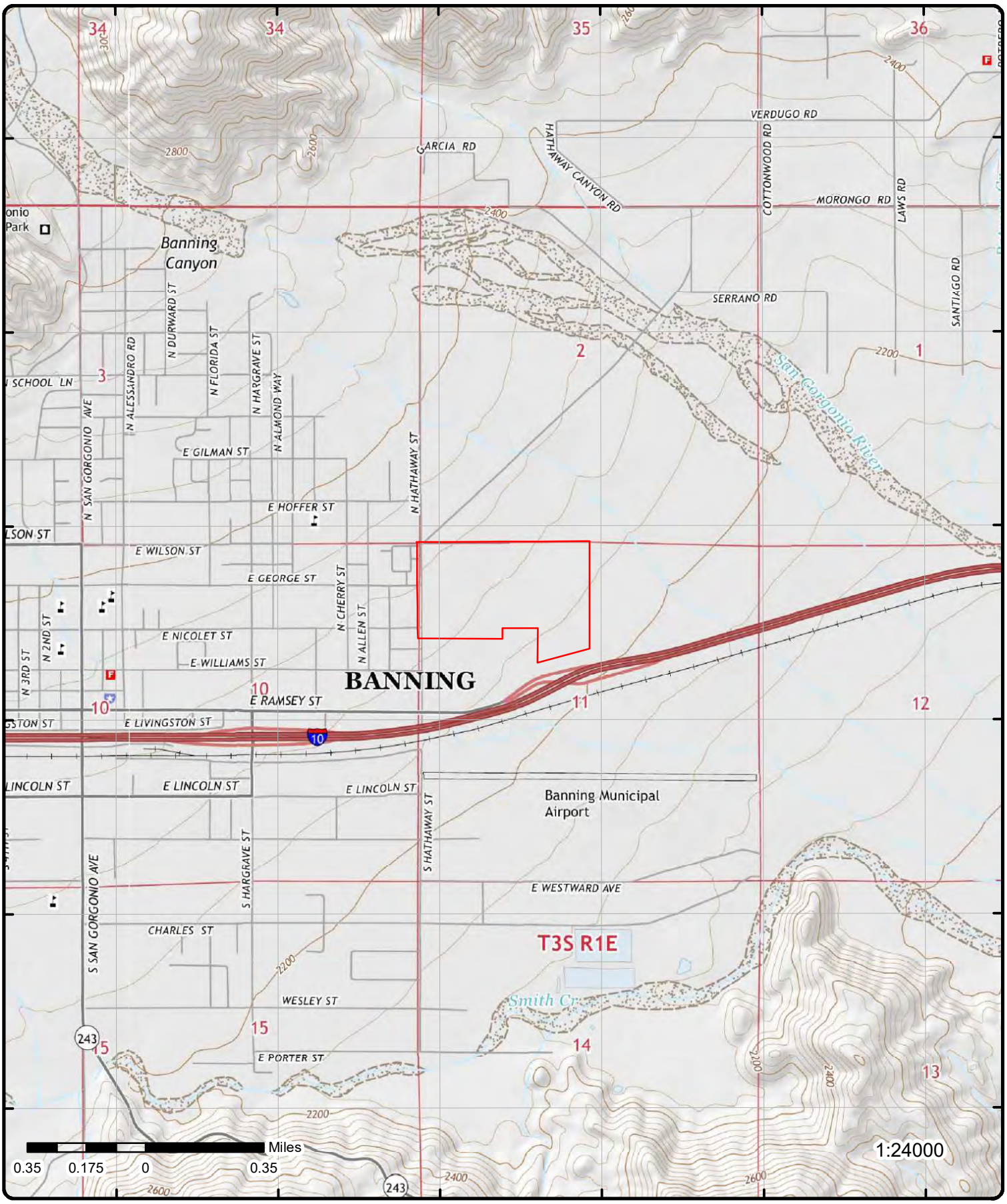
Aerial **Year: 2019**

Address: 600 N Hathaway St, Banning, CA

Source: ESRI World Imagery

Order Number: 21022300353

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES



Topographic Map

Year: 2015

Address: 600 N Hathaway St, CA

Quadrangle(s): Cabazon, CA; Beaumont, CA

Source: USGS Topographic Map

Order Number: 21022300353

ERIS ENVIRONMENTAL RISK INFORMATION SERVICES

Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 8	WNW	0.00 / 0.00	2,310.61 / 36	ORCO BLOCK CO INC 600 N HATHAWAY ST BANNING CA 92220-5754	FINDS/FRS

Registry ID: 110038091392
FIPS Code: 06065
HUC Code: 18100200
Site Type Name: STATIONARY
Location Description:
Supplemental Location:
Create Date: 18-FEB-09
Update Date: 01-JUN-17
Interest Types: AIR EMISSIONS CLASSIFICATION UNKNOWN
SIC Codes:
SIC Code Descriptions:
NAICS Codes: 327331
NAICS Code Descriptions: CONCRETE BLOCK AND BRICK MANUFACTURING.
Conveyor: FRS-GEOCODE
Federal Facility Code:
Federal Agency Name:
Tribal Land Code:
Tribal Land Name:
Congressional Dist No: 41
Census Block Code: 060650438133070
EPA Region Code: 09
County Name: RIVERSIDE
US/Mexico Border Ind:
Latitude: 33.93189
Longitude: -116.85926
Reference Point: CENTER OF A FACILITY OR STATION
Coord Collection Method: ADDRESS MATCHING-HOUSE NUMBER
Accuracy Value: 30
Datum: NAD83
Source:
Facility Detail Rprt URL: https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110038091392
Program Acronyms:

EIS:10171011

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	2 of 8	WNW	0.00 / 0.00	2,310.61 / 36	FRED-LITE BLOCKS 600 NO HATHAWAY BANNING CA 92220	HHSS

County: Riverside
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001f6a9.pdf

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	3 of 8	WNW	0.00 / 0.00	2,310.61 / 36	ORCO BLOCK COMPANY-BANNING 600 N HATHAWAY ST BANNING CA 922200000	HAZNET

SIC Code: 3271
NAICS Code: 327331
EPA ID: CAL000092547
Mailing City: STANTON
Mailing State: CA
Mailing Zip: 906800000

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Create Date:	12/16/1993	**Region Code:**	4
Fac Act Ind:	No	**Owner Name:**	PETE MUTH
Inact Date:	5/24/2012	**Owner Addr 1:**	PO BOX E
County Code:	33	**Owner Addr 2:**	
County Name:	Riverside	**Owner City:**	STANTON
Mail Name:		**Owner State:**	CA
Mailing Addr 1:	11100 BEACH BLVD	**Owner Zip:**	906800000
Mailing Addr 2:		**Owner Phone:**	7145272239
Owner Fax:	0000000000		

Contact Information

--	--
Contact Name:	TIM O'CONNOR
Street Address 1:	PO BOX E
Street Address 2:	
City:	STANTON
State:	CA
Zip:	906800000
Phone:	7145272239
--	--
--	--

Tanner Information

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Generator EPA ID:	CAL000092547
Generator County Code:	33
Generator County:	Riverside
TSD EPA ID:	CAD981696420
TSD County Code:	19
TSD County:	Los Angeles
State Waste Code:	134
State Waste Code Desc.:	Aqueous solution with total organic residues less than 10 percent
Method Code:	H01
Method Description:	Transfer station
Tons:	0.168
Year:	1997
--	--
Generator EPA ID:	CAL000092547
Generator County Code:	33
Generator County:	Riverside
TSD EPA ID:	CAT080013352
TSD County Code:	19
TSD County:	Los Angeles
State Waste Code:	221
State Waste Code Desc.:	Waste oil and mixed oil
Method Code:	R01
Method Description:	Recycler
Tons:	0.19
Year:	1994
--	--
Generator EPA ID:	CAL000092547
Generator County Code:	33
Generator County:	Riverside
TSD EPA ID:	CAD982484933
TSD County Code:	36
TSD County:	San Bernardino
State Waste Code:	512
State Waste Code Desc.:	Other empty containers 30 gallons or more
Method Code:	R01
Method Description:	Recycler
Tons:	8
Year:	1994
--	--

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	*4 of 8*	*WNW*	*0.00 / 0.00*	*2,310.61 / 36*	***ORCO BLOCK CO INC*** ***600 N HATHAWAY ST*** ***BANNING CA 922200000***	*HAZNET*

SIC Code:		***Mailing City:***	BANNING

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

NAICS Code:		**Mailing State:**	CA
EPA ID:	CAL000025747	**Mailing Zip:**	922205754
Create Date:	5/10/1990	**Region Code:**	4
Fac Act Ind:	No	**Owner Name:**	ORCO BLOCK INC
Inact Date:	6/30/1997	**Owner Addr 1:**	600 N HATHAWAY ST
County Code:	33	**Owner Addr 2:**	
County Name:	Riverside	**Owner City:**	BANNING
Mail Name:		**Owner State:**	CA
Mailing Addr 1:	600 N HATHAWAY ST	**Owner Zip:**	922205754
Mailing Addr 2:		**Owner Phone:**	7148497891
Owner Fax:			

Contact Information

--	--	
Contact Name:	UNDELIVERABLE PER VF97	AH
Street Address 1:	600 N HATHAWAY ST	
Street Address 2:		
City:	BANNING	
State:	CA	
Zip:	922205754	
Phone:	7148497891	
--	--	

1	***5 of 8***	***WNW***	***0.00 / 0.00***	***2,310.61 / 36***	***ORCO BLOCK CO INC 600 N HATHAWAY BANNING CA 92220***	***EMISSIONS***

1990 Criteria Data

Facility ID:	61390	**CERR Code:**	
Facility SIC Code:	2221	**TOGT:**	1.4
CO:	33	**ROGT:**	1.2443
Air Basin:	SC	**COT:**	24.1
District:	SC	**NOXT:**	2.9
COID:	RIV	**SOXT:**	.2
DISN:	SOUTH COAST AQMD	**PMT:**	.2
CHAPIS:		**PM10T:**	.1952

1990 Toxic Data

Facility ID:	61390	**COID:**	RIV
Facility SIC Code:	2221	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1	***6 of 8***	***WNW***	***0.00 / 0.00***	***2,310.61 / 36***	***ORCO BLOCK CO INC 600 N HATHAWAY ST BANNING CA 92220***	***EMISSIONS***

1993 Criteria Data

Facility ID:	61390	**CERR Code:**	
Facility SIC Code:	2221	**TOGT:**	.1
CO:	33	**ROGT:**	.08905
Air Basin:	SC	**COT:**	2.4
District:	SC	**NOXT:**	.2
COID:	RIV	**SOXT:**	0

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

DISN:	SOUTH COAST AQMD	**PMT:**	0
CHAPIS:		**PM10T:**	0

1993 Toxic Data

Facility ID:	61390	**COID:**	RIV
Facility SIC Code:	2221	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1995 Criteria Data

Facility ID:	61390	**CERR Code:**	
Facility SIC Code:	2221	**TOGT:**	.1
CO:	33	**ROGT:**	.08905
Air Basin:	SC	**COT:**	2.4
District:	SC	**NOXT:**	.2
COID:	RIV	**SOXT:**	0
DISN:	SOUTH COAST AQMD	**PMT:**	0
CHAPIS:		**PM10T:**	0

1995 Toxic Data

Facility ID:	61390	**COID:**	RIV
Facility SIC Code:	2221	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

2004 Criteria Data

Facility ID:	61390	**CERR Code:**	
Facility SIC Code:	3271	**TOGT:**	.05778
CO:	33	**ROGT:**	.043396516
Air Basin:	SC	**COT:**	1.04
District:	SC	**NOXT:**	.0801
COID:	RIV	**SOXT:**	.00172
DISN:	SOUTH COAST AQMD	**PMT:**	.18366
CHAPIS:		**PM10T:**	.10562846

2004 Toxic Data

Facility ID:	61390	**COID:**	RIV
Facility SIC Code:	3271	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1	***7 of 8***	***WNW***	***0.00 /***	***2,310.61 /***	***FRED-LITE BLOCKS***	***HIST TANK***

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
			0.00	36	600 NO. HATHAWAY BANNING CA	

Owner Name: FRED-LITE BLOCKS
Owner Street: 600 NO. HATHAWAY
Owner City: BANNING
Owner State: CA
Owner Zip: 92220
No of Containers: 2
County: RIVERSIDE
Facility State: CA
Facility Zip: 92220

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	8 of 8	WNW	0.00 / 0.00	2,310.61 / 36	ORCO BLOCK COMPANY 600 N HATHAWAY BANNING CA	UST SWEEPS

C C: A33-000-6084
BOE: 44-017906
Comp: 6084
Status: ACTIVE
No of Tanks: 2
Jurisdict: RIVERSIDE COUNTY
Agency: ENVIRONMENTAL HEALTH - U.S.T.
Phone:
D Filename: SITE16A
Page No: 3
County: RIVERSIDE
State : CA
Zip: 92220
Latitude: 33.930501
Longitude: -116.859268
Georesult: S5HPN-SCZA

Tank Details

Tank ID: 000002
O Tank ID: 000120
SWRCB No: 33-000-006084-000002
Removed:
Installed:
A Date: 11-17-92
Capac: 8000
Tank Use: M.V. FUEL
S Contain:
Stg: P
Storage :
Storag Type: PRODUCT
P Contain:
Content: DIESEL
ONA:
D File Name: TANK16A

Tank Details

Tank ID: 000001
O Tank ID: 000120
SWRCB No: 33-000-006084-000001
Removed:
Installed:
A Date: 11-17-92
Capac: 8000
Tank Use: M.V. FUEL
S Contain:
Stg: P
Storage :
Storag Type: PRODUCT
P Contain:
Content: REG UNLEADED
ONA:
D File Name: TANK16A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
2	1 of 1	WNW	0.00 / 0.00	2,333.31 / 59	SOUTHERN CALIFORNIA GAS COMPANY MORONGO RD. AND HATHAWAY BANNING CA 92220	HAZNET

SIC Code: 4939
NAICS Code: 22121
EPA ID: CAC002797065
Create Date: 12/16/2014
Fac Act Ind: No
Inact Date: 3/17/2015
County Code: 33
County Name: Riverside
Mail Name:
Mailing Addr 1: 8101 ROSEMEAD BLVD
Mailing Addr 2:
Owner Fax:
Mailing City: PICO RIVERA
Mailing State: CA
Mailing Zip: 906605100
Region Code: 4
Owner Name: NANCY LEE
Owner Addr 1: 8101 ROSEMEAD BLVD
Owner Addr 2:
Owner City: PICO RIVERA
Owner State: CA
Owner Zip: 906605100
Owner Phone: 5628064419

Contact Information
-- --

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Contact Name: NANCY LEE
Street Address 1: 8101 ROSEMEAD BLVD
Street Address 2:
City: PICO RIVERA
State: CA
Zip: 906605100
Phone: 5628064419
-- --

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	1 of 13	SSE	0.04 / 188.87	2,238.82 / -35	Cal Trans Banning Yard 2033 E Ramsey St Banning CA	RIVERSIDE LOP

Site ID: 89155
Status Code: 9
Status Desc: CLOSED/ACTION COMPLETED
Case Type Code: S
Case Type Desc: SOIL ONLY IS IMPACTED
Closed Code: Y
Closed Desc: CLOSED SITE
Employee: Brown

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	2 of 13	SSE	0.04 / 188.87	2,238.82 / -35	Caltrans/Banning Maint St 2033 E Ramsey St Banning CA 92220	RIVERSIDE HZH

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	3 of 13	SSE	0.04 / 188.87	2,238.82 / -35	Caltrans/Banning Maint St 2033 E Ramsey St Banning CA 92220	RIVERSIDE HWG

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	4 of 13	SSE	0.04 / 188.87	2,238.82 / -35	CAL TRANS BANNING YARD 2033 EAST RAMSEY STREET BANNING CA 92220	LUST

Global ID: T0606500715
Status: COMPLETED - CASE CLOSED
Status Date: 8/30/1995
Case Type: LUST CLEANUP SITE
Date Source: LUST Cleanup Sites from GeoTracker Search; LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download
County: RIVERSIDE
Latitude: 33.9280050193936
Longitude: -116.853906294968

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Facilities Detail(as Nov 16 2020)

RB Case No: 7T2220001
Local Case No: 89155
Begin Date: 9/11/1987
Lead Agency: RIVERSIDE COUNTY LOP
Local Agency: RIVERSIDE COUNTY LOP
CUF Case: NO
Potential Media of Concern: Soil
How Discovered Description:
Calwater Watershed Name: Whitewater - San Gorgonio - Cabazon (719.32)
DWR GW Subbasin Name: Coachella Valley - San Gorgonio Pass (7-021.04)
Disadvantaged Community:
Site History:
Potential COC: Waste Oil / Motor / Hydraulic / Lubricating
How Discovered: Other Means
Stop Method: Remove Contents
Stop Description: Close Tank
Case Worker: RIV
File Location: Local Agency Warehouse

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Regulatory Activity(as Nov 16 2020)

Action Type: ENFORCEMENT
Date : 3/6/2009

Action: Closure/No Further Action Letter - #Site Closure

Action Type: ENFORCEMENT
Date : 3/5/2009
Action: File review - #RCDEH Upload Site File 8/7/2015

Action Type: Other
Date : 5/13/1988
Action: Leak Reported

Action Type: Other
Date : 9/21/1987
Action: Leak Discovery

Action Type: Other
Date : 9/11/1987
Action: Leak Stopped

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Regulatory Contacts(as Nov 16 2020)

Contact Type: Local Agency Caseworker
Contact Name: Riverside County LOP
City: RIVERSIDE
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
Email:
Phone No: 9519558980

Contact Type: Regional Board Caseworker
Contact Name: Phan Le
City: PALM DESERT
Organization Name: COLORADO RIVER BASIN RWQCB (REGION 7)
Address: 73720 FRED WARING DRIVE SUITE #100
Email: phan.le@waterboards.ca.gov
Phone No: 7607768974

LUST Cleanup Sites from GeoTracker Cleanup Sites Data Download - Status History(as Nov 16 2020)

Status: Completed - Case Closed
Status Date: 8/30/1995

Status: Open - Site Assessment
Status Date: 12/19/1991

Status: Open - Site Assessment
Status Date: 8/22/1991

Status: Open - Site Assessment
Status Date: 8/12/1991

Status: Open - Site Assessment
Status Date: 9/21/1987

Status: Open - Case Begin Date
Status Date: 9/11/1987

LUST Sites from GeoTracker Search - Regulatory Profile (as of Oct 06, 2020)

Site Facility Name: CAL TRANS BANNING YARD
Site Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Project Status:
WDR Place Type:
WDR File:
WDR Order:
CUF Priority Assig:
CUF Amount Paid:
File Location: LOCAL AGENCY WAREHOUSE
Designated Beneficial Use: MUN, AGR, IND
Project Oversight Agencies:
Report Link: https://geotracker.waterboards.ca.gov/profile_report?global_id=T0606500715
Potential COC: WASTE OIL / MOTOR / HYDRAULIC / LUBRICATING
Facility Type:
Composting Method:
Address: 2033 EAST RAMSEY STREET
City: BANNING
Zip: 92220
County: RIVERSIDE
CUF Claim:

Cleanup Status Detail: COMPLETED - CASE CLOSED AS OF 8/30/1995
Cleanup History Link: https://geotracker.waterboards.ca.gov/profile_report_include?global_id=T0606500715&tabname=regulatoryhistory
Potential Media of Concern: SOIL
User Defined Beneficial Use:
DWR GW Sub Basin: Coachella Valley - San Gorgonio Pass (7-021.04)
Calwater Watershed Name: Whitewater - San Gorgonio - Cabazon (719.32)
Post Closure Site Management: NOTIFY PRIOR TO CHANGE IN LAND USE
Future Land Use:
Cleanup Oversight Agencies: RIVERSIDE COUNTY LOP (LEAD) - CASE #: 89155
CASEWORKER: Riverside County LOP
COLORADO RIVER BASIN RWQCB (REGION 7) - CASE #: 7T2220001
CASEWORKER: Phan Le
Gndwater Monitoring Freque:
Designated Beneficial Use Desc: Municipal and Domestic Supply, Agricultural Supply, Industrial Service Supply
Site History:

No site history available

LUST Sites from GeoTracker Search - Cleanup Status History (as of Oct 06, 2020)

Status: Completed - Case Closed
Date : 8/30/1995

Status: Open - Site Assessment
Date : 12/19/1991

Status: Open - Site Assessment
Date : 8/22/1991

Status: Open - Site Assessment
Date : 8/12/1991

Status: Open - Site Assessment
Date : 9/21/1987

Status: Open - Case Begin Date
Date : 9/11/1987

LUST Sites from GeoTracker Search - Regulatory Activities (as of Oct 06, 2020)

Action Type: Other Regulatory Actions
Action Date: 3/6/2009
Received Issue Date: 3/6/2009
Action: Closure/No Further Action Letter - #Site Closure
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500715&enforcement_id=6005888&temptable=ENFORCEMENT
Title Description Comments:

RivCo Site Closure

Action Type: Other Regulatory Actions
Action Date: 3/5/2009
Received Issue Date: 3/5/2009
Action: File review - #RCDEH Upload Site File 8/7/2015
Doc Link: http://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500715&enforcement_id=6048570&temptable=ENFORCEMENT
Title Description Comments:

RCDEH Upload Site File 8/7/2015

Action Type: Leak Action
Action Date: 5/13/1988
Received Issue Date:
Action: Leak Reported

Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 9/21/1987
Received Issue Date:
Action: Leak Discovery
Doc Link:
Title Description Comments:

Action Type: Leak Action
Action Date: 9/11/1987
Received Issue Date:
Action: Leak Stopped
Doc Link:
Title Description Comments:

LUST Sites from GeoTracker Search - Documents (as of Oct 06, 2020)

Document Type: Site Documents
Document Date: 3/6/2009
Type: CLOSURE/NO FURTHER ACTION LETTER
Title: RIVCO SITE CLOSURE
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500715&enforcement_id=6005888
Size :
Submitted By: RIVERSIDE COUNTY LOP (REGULATOR)
Submitted:

Document Type: Site Documents
Document Date: 3/5/2009
Type: FILE REVIEW
Title: RCDEH UPLOAD SITE FILE 8/7/2015
Title Link: https://geotracker.waterboards.ca.gov/view_documents?global_id=T0606500715&enforcement_id=6048570
Size :
Submitted By: LINDA SHURLOW (REGULATOR)
Submitted:

3	5 of 13	SSE	0.04 / 188.87	2,238.82 / -35	Caltrans Banning Maintenance Station 2033 East Ramsey Sreet Banning CA 92220	SWF/LF

SWIS No: 33-AA-0328
EPA Fed Registry ID:
Operational Status: Active
Regulatory Status: Notification
Site is Archived: No
Absorbed on:
Absorbed by:
Site Inert Debris Eng Fill: No
Closed Illegal Aband: No
Closed Illegal Aband Cat:
Finance Assuran Responsible: No
Incorporated City: Banning
Local Government: Banning
Reporting Agency Legal Name: County of Riverside
Reporting Agency Department: Department of Environmental Health
Enforcing Agency Legal Name: County of Riverside
Enforcing Agency Department: Department of Environmental Health
Latitude: 33.92741
Longitude: -116.85394
County: Riverside
Site ZIP: 92220
ARB District: South Coast
SWRCB Region: Colorado River
Site Point of Contact: Theodore Tasiopoulos

Site Owners

Site Type: Non-Disposal Only
Owner Name: Caltrans South Region District 8
Owner Address: Jim A. Rogers 1091 Everton Place
Owner City: Riverside
Owner State: CA
Owner ZIP Code: 92516
Owner Phone: (951) 787-4807
Contact Name:
Contact First Name:
Contact Last Name:
Contact Title:
Contact Email:
Started On: 9/6/2011

Site Activities (Search Result)

Waste Disch Req No:		***Throughput UOM:***	Cubic Yards per Day
Site Regulatory Stat:	Notification	***Remaining Capacity:***	
Act Opl Status:	Active	***Remaining Cap Date:***	
Act Regulatory Stat:	Notification	***Max Permit Capacity:***	15600
Activity Category:	Transfer/Processing	***Capacity UOM:***	Cubic Yards per year
Act Classification:	Solid Waste Operation	***Total Acreage:***	12
Activity is Archived:	No	***Disposal Acreage:***	
WDR Landfill Class:		***Permitted Elevation:***	
Cease Operation:		***Permitted Elev Type:***	
Cease Oper Type:		***Permitted Depth:***	
Inspection Frequency:	Quarterly	***Permitted Depth Type:***	

Site Name: Caltrans Banning Maintenance Station
Activity: Limited Volume Transfer Operation
Max Permitted Throughput: 60
Inert Debris Engineered Fill: No

Site Operators

Site Type:	Non-Disposal Only	***Is Archived:***	No
Operator Name:	Banning Maintenance Crew 08-711	***Contact Name:***	Cindy Gano
Operator Address:	2033 East Ramsey St.	***Contact First Name:***	Cindy
Operator City:	Banning	***Contact Last Name:***	Gano
Operator State:	CA	***Contact Title:***	
Operator ZIP Code:	92220	***Contact Email:***	PJOYCE_BRENNER@DOT.CA.GOV AND GREG_BERRY@DOT
Operator Phone:	(951) 849-7924	***Started on:***	9/6/2011

Site Waste

Site Type:	Non-Disposal Only	***Activity Category:***	Transfer/Processing
Waste Type:	Tires, Shreds	***Act Classification:***	Solid Waste Operation
Activity Oper Status:	Active	***Activity Is Archived:***	No
Act Regulatory Stat:	Notification		
Activity:	Limited Volume Transfer Operation		

Site Type:	Non-Disposal Only	***Activity Category:***	Transfer/Processing
Waste Type:	Mixed municipal	***Act Classification:***	Solid Waste Operation
Activity Oper Status:	Active	***Activity Is Archived:***	No
Act Regulatory Stat:	Notification		
Activity:	Limited Volume Transfer Operation		

Site Type:	Non-Disposal Only	***Activity Category:***	Transfer/Processing
Waste Type:	Tires	***Act Classification:***	Solid Waste Operation
Activity Oper Status:	Active	***Activity Is Archived:***	No
Act Regulatory Stat:	Notification		
Activity:	Limited Volume Transfer Operation		

Site Type:	Non-Disposal Only	***Activity Category:***	Transfer/Processing
Waste Type:	Metals	***Act Classification:***	Solid Waste Operation
Activity Oper Status:	Active	***Activity Is Archived:***	No
Act Regulatory Stat:	Notification		
Activity:	Limited Volume Transfer Operation		

Site Type:	Non-Disposal Only	***Activity Category:***	Transfer/Processing
Waste Type:	Inert	***Act Classification:***	Solid Waste Operation
Activity Oper Status:	Active	***Activity Is Archived:***	No
Act Regulatory Stat:	Notification		
Activity:	Limited Volume Transfer Operation		

Site Type:	Non-Disposal Only	***Activity Category:***	Transfer/Processing
Waste Type:	Dead Animals	***Act Classification:***	Solid Waste Operation
Activity Oper Status:	Active	***Activity Is Archived:***	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Act Regulatory Stat: Notification
Activity: Limited Volume Transfer Operation

Site Type: Non-Disposal Only
Waste Type: Green Materials
Activity Oper Status: Active
Act Regulatory Stat: Notification
Activity: Limited Volume Transfer Operation
Activity Category: Transfer/Processing
Act Classification: Solid Waste Operation
Activity Is Archived: No

Extra Details

Enforcement Agency (LEA/EA): Riverside County

Site Activities (Export)

WDR No:
WDR Landfill Class:
Act is Archived: No
Act Opl Status: Active
Act Regulatory Stat: Notification
Activity Category: Transfer/Processing
Act Classification: Solid Waste Operation
Cease Operation:
Cease Operation Tp:
Insp Frequency: Quarterly
Site Name: Caltrans Banning Maintenance Station
Site Point of Contact: Theodore Tasiopoulos
Activity: Limited Volume Transfer Operation
Max Permitted Throughput: 60
Throughput UOM: Cubic Yards per Day
Remaining Capacity:
Remaining Cap Dt:
Max Permit Cap: 15600
Capacity UOM: Cubic Yards per year
Total Acreage: 12.00
Disposal Acreage:
Permitted Elev :
Permitted Elev Tp:
Permitted Depth:
Permitted Depth Tp:

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County: Riverside
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001f46b.pdf

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3	7 of 13	SSE	0.04 / 188.87	2,238.82 / -35	BANNING MAINTENANCE STATION 2033 E RAMSEY BANNING CA 92220	HHSS

County: Riverside
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001f485.pdf

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3	8 of 13	SSE	0.04 / 188.87	2,238.82 / -35	Caltrans-Banning 2033 E RAMSEY ST BANNING CA 92220	CERS TANK

Site ID: 389101
Longitude: -116.855268
Latitude: 33.925755

Regulated Programs

EI ID: 10159871
EI Description: Chemical Storage Facilities

EI ID: 10159871
EI Description: Aboveground Petroleum Storage

EI ID: 10159871
EI Description: Hazardous Waste Generator

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Notes:

Returned to compliance on 02/27/2014.

Violation Description:

APSA Program - Administration/Documentation - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 05/22/2018. [LOCAL ORDINANCE VIOLATION 104A] NFPA 704 sign(s) have been posted appropriately.

Violation Description:

Business Plan Program - Administration/Documentation - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Business Plan Program - Training - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Haz Waste Generator Program - Administration/Documentation - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 12 66262.34(a) - California Code of Regulations, Title 22, Chapter 12, Section(s) 66262.34(a)
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Failure to obtain a permit or grant of interim status to accumulate hazardous waste longer than 90 days.

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: 22 CCR 15 66265.31 - California Code of Regulations, Title 22, Chapter 15, Section(s) 66265.31
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Failure to maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human health or the environment.

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

APSA Program - Administration/Documentation - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HW ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 Multiple - California Health and Safety Code, Chapter 6.67, Section(s) Multiple
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Haz Waste Generator Program - Operations/Maintenance - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 06/11/2018. [LOCAL ORDINANCE VIOLATION 105D] Hazardous materials containers have been labeled properly.

Violation Description:

Business Plan Program - Operations/Maintenance - General

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: 19 CCR 4 2729.5 - California Code of Regulations, Title 19, Chapter 4, Section(s) 2729.5
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Failure to submit inventory reports (Activities, Owner/Operator, Hazardous Materials Descriptions and Map pages, if required. Documentation must be resubmitted (for facilities which exceed EPCRA thresholds) or re-certified (for facilities which do not exceed EPCRA thresholds) by March 1.

Violations

Violation Date: 02/21/2014 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 Multiple - California Health and Safety Code, Chapter 6.95, Section(s) Multiple
Violation Notes:

Returned to compliance on 06/11/2018.

Violation Description:

Business Plan Program - Administration/Documentation - General

Enforcements

Enf Action Date: 02/21/2014 ***Enf Action Program:*** APSA
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Enf Action Date: 02/21/2014 ***Enf Action Program:*** HW
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Enf Action Date: 02/21/2014 ***Enf Action Program:*** HMRRP
Enf Action Type: Notice of Violation (Unified Program) ***Enf Action Source:*** CERS
Enf Action Division: Riverside County Department of Env Health
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes:

Evaluations

Eval Date: 05/23/2018
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 02/21/2014
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection

Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Eval Date: 02/21/2014
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

new program - 2033 E Ramsey, Banning; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 02/21/2014
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 05/22/2018
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 05/23/2018
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HW
Eval Source: CERS
Eval Notes:

Affiliations

Affil Type Desc: Parent Corporation
Entity Name: CalTrans District 8
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Operator
Entity Name: CALTRANS - BANNING
Entity Title:
Address:
City:
State:
Country:
Zip Code:

Phone:	(951) 849-6360
Affil Type Desc:	CUPA District
Entity Name:	Riverside Cnty Env Health
Entity Title:	
Address:	4065 County Circle Drive, Room 104
City:	Riverside
State:	CA
Country:	
Zip Code:	92503
Phone:	(951) 358-5055
Affil Type Desc:	Identification Signer
Entity Name:	FRED MCSKIMMING FOR CALTRANS
Entity Title:	CMAS-HAZARDOUS MATERIALS MANAGER
Address:	
City:	
State:	
Country:	
Zip Code:	
Phone:	
Affil Type Desc:	Property Owner
Entity Name:	State of California
Entity Title:	
Address:	464 W 4TH ST. 6TH FLOOR MS 9
City:	SAN BERNARDINO
State:	CA
Country:	United States
Zip Code:	92401
Phone:	(951) 849-6360
Affil Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	
Address:	464 W 4TH ST. 6TH FLOOR MS 9
City:	SAN BERNARDINO
State:	CA
Country:	
Zip Code:	92401
Phone:	
Affil Type Desc:	Document Preparer
Entity Name:	FREDERICK MCSKIMMING
Entity Title:	
Address:	
City:	
State:	
Country:	
Zip Code:	
Phone:	
Affil Type Desc:	Legal Owner
Entity Name:	Caltrans
Entity Title:	
Address:	464 W. 4TH ST. 6TH FLOOR MS 9
City:	SAN BERNARDINO
State:	CA
Country:	United States
Zip Code:	92401
Phone:	(951) 849-6360
Affil Type Desc:	Environmental Contact
Entity Name:	Fred McSlkimming
Entity Title:	
Address:	464 W 4TH ST. 6TH FLOOR MS 9
City:	SAN BERNARDINO
State:	CA
Country:	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Zip Code: 92401
Phone:

Coordinates

Env Int Type Code: APSA
Program ID: 10159871
Latitude: 33.925760
Longitude: -116.855270
Coord Name:
Ref Point Type Desc: Center of a facility or station.

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3 | **9 of 13** | **SSE** | **0.04 / 188.87** | **2,238.82 / -35** | **BANNING MAINTENANCE STATION**
2033 E. RAMSEY
BANNING CA | **HIST TANK**

Owner Name: CALIFORNIA DEPARTMENT OF TRANS
Owner Street: 247 W. THIRD STREET
Owner City: SAN BERNARDINO
Owner State: CA
Owner Zip: 92403
No of Containers: 3
County: RIVERSIDE
Facility State: CA
Facility Zip: 92220

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3 | **10 of 13** | **SSE** | **0.04 / 188.87** | **2,238.82 / -35** | **BANNING**
2033 E RAMSEY ST
BANNING CA | **HIST TANK**

Owner Name: CALIF DEPT OF TRANSPORTATION
Owner Street: 1120 N STREET
Owner City: SACRAMENTO
Owner State: CA
Owner Zip: 95814
No of Containers: 3
County: RIVERSIDE
Facility State: CA
Facility Zip: 92220

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3 | **11 of 13** | **SSE** | **0.04 / 188.87** | **2,238.82 / -35** | **CALTRANS D8 MAINTENANCE**
BANNING MS
2033 E RAMSEY ST
BANNING CA 92220-0000 | **RCRA TSD**

EPA Handler ID: CAD981458417
Gen Status Universe: No Report
Contact Name: BILL KERR
Contact Address: 464 W. FOURTH ST. MS 9, , SAN BERNARDINO, CA, 92401,
Contact Phone No and Ext: 951-314-1817
Contact Email: BILL.KERR@DOT.CA.GOV
Contact Country:
Land Type:
County Name: RIVERSIDE
EPA Region: 09
Receive Date: 19870410

Violation/Evaluation Summary

Note: NO RECORDS: As of May 2020, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No
Smelting, Melting and Refining: No
Underground Injection Control: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Commercial TSD: No
Used Oil Transporter: No
Used Oil Transfer Facility: No
Used Oil Processor: No
Used Oil Refiner: No
Used Oil Burner: No
Used Oil Market Burner: No
Used Oil Spec Marketer: No

Hazardous Waste Handler Details

Sequence No: 1
Receive Date: 19870410
Handler Name: CALTRANS D8 MAINTENANCE BANNING MS
Federal Waste Generator Code: N
Generator Code Description: Not a Generator, Verified
Source Type: Implementer

Owner/Operator Details

Owner/Operator Ind: Current Owner
Type: Other
Name: CALTRANS AND CRAIG OFFICE SYSTEMS
Date Became Current:
Date Ended Current:
Phone: 000-000-0000
Source Type: Implementer
Street No:
Street 1: 1120 N ST STE 31
Street 2:
City: SACRAMENTO
State: CA
Country:
Zip Code: 95814-5680

Owner/Operator Ind: Current Operator
Type: Other
Name: BILL KERR
Date Became Current:
Date Ended Current:
Phone: 951-314-1817
Source Type: Implementer
Street No:
Street 1: 464 W. FOURTH ST. MS 9
Street 2:
City: SAN BERNARDINO
State: CA
Country:
Zip Code: 92401

3	12 of 13	SSE	0.04 / 188.87	2,238.82 / -35	CALTRANS D8 MAINTENANCE BANNING MS 2033 E RAMSEY ST BANNING CA 92220-0000	RCRA NON GEN

EPA Handler ID: CAD981458417
Gen Status Universe: No Report
Contact Name: BILL KERR
Contact Address: 464 W. FOURTH ST. MS 9, , SAN BERNARDINO, CA, 92401,
Contact Phone No and Ext: 951-314-1817
Contact Email: BILL.KERR@DOT.CA.GOV
Contact Country:
County Name: RIVERSIDE
EPA Region: 09
Land Type:
Receive Date: 19870410

Violation/Evaluation Summary

Note: NO RECORDS: As of Oct 2020, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	19870410
Handler Name:	CALTRANS D8 MAINTENANCE BANNING MS
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	1120 N ST STE 31
Name:	CALTRANS AND CRAIG OFFICE SYSTEMS	**Street 2:**	
Date Became Current:		**City:**	SACRAMENTO
Date Ended Current:		**State:**	CA
Phone:	000-000-0000	**Country:**	
Source Type:	Implementer	**Zip Code:**	95814-5680
Owner/Operator Ind:	Current Operator	**Street No:**	
Type:	Other	**Street 1:**	464 W. FOURTH ST. MS 9
Name:	BILL KERR	**Street 2:**	
Date Became Current:		**City:**	SAN BERNARDINO
Date Ended Current:		**State:**	CA
Phone:	951-314-1817	**Country:**	
Source Type:	Implementer	**Zip Code:**	92401

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
3	13 of 13	SSE	0.04 / 188.87	2,238.82 / -35	CAL TRANS-BANNING MAINTENANCE 2033 E RAMSEY BANNING CA	UST SWEEPS

C C:	A33-000-44828	**D Filename:**	SITE16A
BOE:	44-018272	**Page No:**	5
Comp:	44828	**County:**	RIVERSIDE
Status:	ACTIVE	**State :**	CA
No of Tanks:	2	**Zip:**	92220
Jurisdict:	RIVERSIDE COUNTY	**Latitude:**	0
Agency:	ENVIRONMENTAL HEALTH - U.S.T.	**Longitude:**	0
Phone:		**Georesult:**	N

Tank Details

Tank ID:	000002	**S Contain:**	
O Tank ID:	1239	**Stg:**	P
SWRCB No:	33-000-044828-000002	**Storage :**	
Removed:		**Storag Type:**	PRODUCT
Installed:		**P Contain:**	
A Date:	10-27-92	**Content:**	DIESEL
Capac:	1500	**ONA:**	
Tank Use:	M.V. FUEL	**D File Name:**	TANK16A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Tank Details

Tank ID:	000003	***S Contain:***	
O Tank ID:	1239	***Stg:***	P
SWRCB No:	33-000-044828-000003	***Storage :***	
Removed:		***Storag Type:***	PRODUCT
Installed:		***P Contain:***	
A Date:	10-27-92	***Content:***	REG UNLEADED
Capac:	5000	***ONA:***	
Tank Use:	M.V. FUEL	***D File Name:***	TANK16A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	1 of 2	SE	0.17 / 905.14	2,191.80 / -82	BANNING AIRPORT BANNING CA	ENVIROSTOR

Estor/EPA ID:	80000972	***Assembly District:***	42
Site Code:		***Senate District:***	23
Nat Priority List:	NO	***Permit Renewal Lead:***	
APN:	NONE SPECIFIED	***Public Partici Spclst:***	
Census Tract:	6065043813	***Project Manager:***	
Site Type:	FUDS	***County:***	RIVERSIDE
Address Description:		***Latitude:***	33.9255555555556
Office:	CLEANUP CYPRESS	***Longitude:***	-116.850277777778
Special Program:		***Acres:***	NONE SPECIFIED
Funding:	DERA	***Supervisor:***	DOUGLAS BAUTISTA

Cleanup Status: INACTIVE - NEEDS EVALUATION AS OF 7/1/2005
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District:
Past Use that Caused Contam: NONE SPECIFIED
Potential Media Affected: NONE SPECIFIED
Potential Contamin of Concern:

NONE SPECIFIED

Site History:

Status: INACTIVE - NEEDS EVALUATION
A2 Program Type: MILITARY EVALUATION
CalEnviroScreen Score: 71-75%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80000972

Completed Activities

Title: USACE INPR Summary J0CA732600 21 Sep 1999
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80000972&doc_id=5011275
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Inventory Project Report (INPR)
Date Completed: 9/21/1999
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
4	2 of 2	SE	0.17 / 905.14	2,191.80 / -82	BANNING AIRPORT BANNING CA	FUDS

FUDS No:	J09CA7326	***EPA Region:***	09
INST ID:	CA99799FA35500	***CONG DIST:***	36
Object ID:	601	***County:***	RIVERSIDE
NPL Status:	Not Listed	***County Code:***	Los Angeles District (SPL)
Status:	Properties without projects	***Latitude:***	33.92555556
FY:	2018	***Longitude:***	-116.85027778
Eligibility:	Eligible	***Has Projects:***	No

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Current Owner: Local Government
EMS Map Link: https://fudsportal.usace.army.mil/ems/ems/inventory/map/map?id=62919

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5 | **1 of 1** | **SW** | **0.20 / 1,065.81** | **2,253.38 / -21** | **SOUTHWEST EQUITY**
1679 RAMSEY AVE
BANNING CA 92220 | **EMISSIONS**

2016 Toxic Data

Facility ID:	59042	**TS:**	
Facility SIC Code:	5032	**HRA:**	
CERR CODE:		**CH Index:**	
COID:	RIV	**AH Index:**	
CO:	33	**Air Basin:**	SC
DISN:	SOUTH COAST AQMD	**District:**	SC
CHAPIS:			

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6 | **1 of 1** | **SW** | **0.21 / 1,134.90** | **2,251.09 / -23** | **ALS BODY SHOP**
1675 E RAMSEY AV
BANNING CA 92220 | **EMISSIONS**

1987 Criteria Data

Facility ID:	5777	**CERR Code:**	
Facility SIC Code:	3479	**TOGT:**	2
CO:	33	**ROGT:**	1.936
Air Basin:	SC	**COT:**	
District:	SC	**NOXT:**	
COID:	RIV	**SOXT:**	
DISN:	SOUTH COAST AQMD	**PMT:**	
CHAPIS:		**PM10T:**	

1987 Toxic Data

Facility ID:	5777	**COID:**	RIV
Facility SIC Code:	3479	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

1990 Criteria Data

Facility ID:	5777	**CERR Code:**	
Facility SIC Code:	3479	**TOGT:**	2
CO:	33	**ROGT:**	1.936
Air Basin:	SC	**COT:**	
District:	SC	**NOXT:**	
COID:	RIV	**SOXT:**	
DISN:	SOUTH COAST AQMD	**PMT:**	
CHAPIS:		**PM10T:**	

1990 Toxic Data

Facility ID:	5777	**COID:**	RIV

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Facility SIC Code:	3479	**DISN:**	SOUTH COAST AQMD
CO:	33	**CHAPIS:**	
Air Basin:	SC	**CERR Code:**	
District:	SC		
TS:			
Health Risk Asmt:			
Non-Cancer Chronic Haz Ind:			
Non-Cancer Acute Haz Ind:			

7	1 of 1	SW	0.22 / 1,157.97	2,261.07 / -13	BANNING DRIVELINE 1550 E. RAMSEY BANNING CA 92220	RCRA NON GEN

EPA Handler ID:	CAC002968344
Gen Status Universe:	No Report
Contact Name:	BRANDON HOPKINS
Contact Address:	1550 E RAMSEY ST, , BANNING, CA, 92220,
Contact Phone No and Ext:	951-849-3854
Contact Email:	BANNINGDRIVELINE@OUTLOOK.COM
Contact Country:	
County Name:	RIVERSIDE
EPA Region:	09
Land Type:	
Receive Date:	20180627

Violation/Evaluation Summary

Note:	NO RECORDS: As of Oct 2020, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility:	No
Onsite Burner Exemption:	No
Furnace Exemption:	No
Underground Injection Activity:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20180627
Handler Name:	BANNING DRIVELINE
Source Type:	Implementer
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified

Owner/Operator Details

Owner/Operator Ind:	Current Owner	**Street No:**	
Type:	Other	**Street 1:**	1550 E RAMSEY ST
Name:	BRANDON HOPKINS	**Street 2:**	
Date Became Current:		**City:**	BANNING

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Date Ended Current: | **State:** CA
Phone: 951-849-3854 | **Country:**
Source Type: Implementer | **Zip Code:** 92220

Owner/Operator Ind: Current Operator | **Street No:**
Type: Other | **Street 1:** 1550 E RAMSEY ST
Name: BRANDON HOPKINS | **Street 2:**
Date Became Current: | **City:** BANNING
Date Ended Current: | **State:** CA
Phone: 951-849-3854 | **Country:**
Source Type: Implementer | **Zip Code:** 92220

8	1 of 4	S	0.25 / 1,312.04	2,213.80 / -60	BANNING MUNICIPAL AIRPORT 200 S HATHAWAY STREET BANNING CA 92220	HHSS

County: Riverside
Pdf File Url: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001f519.pdf

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8	2 of 4	S	0.25 / 1,312.04	2,213.80 / -60	Banning Municipal Airport 200 S HATHAWAY ST BANNING CA 92220	CERS TANK

Site ID: 10901 | **Latitude:** 33.551700
Longitude: -116.512590

Regulated Programs

EI ID: 10316797
EI Description: Chemical Storage Facilities

EI ID: 208667
EI Description: Industrial Facility Storm Water

EI ID: 10316797
EI Description: Aboveground Petroleum Storage

Violations

Violation Date: 06/23/2016 | **Violation Source:** CERS
Violation Program: APSA | **Violation Division:** Riverside County Department of Env Health
Citation: HSC 6.67 25270.6(b) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.6(b)
Violation Notes:

Returned to compliance on 10/04/2016.

Violation Description:

Failure to pay the APSA Program fee.

Violations

Violation Date: 06/23/2016 | **Violation Source:** CERS
Violation Program: HMRRP | **Violation Division:** Riverside County Department of Env Health
Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1)
Violation Notes:

Returned to compliance on 07/07/2016.

Violation Description:

Failure to complete and electronically submit a site map with all required content.

Violations

Violation Date: 06/23/2016 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Notes:

Returned to compliance on 10/04/2016.

Violation Description:

Failure to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan.

Violations

Violation Date: 08/01/2019 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 25270.6(a)(1), 25270.6(a)(2) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.6(a)(1), 25270.6(a)(2)
Violation Notes:

Returned to compliance on 09/11/2019.

Violation Description:

Failure to submit a tank facility statement on or before January 1 annually unless a current Business Plan has been submitted.

Violations

Violation Date: 06/23/2016 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Notes:

Returned to compliance on 10/04/2016.

Violation Description:

Failure to maintain a complete copy of the SPCC Plan at the facility if the facility is normally attended at least four hours per day, or at the nearest field office if the facility is not so attended.

Violations

Violation Date: 08/01/2019 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 25270.4.5(a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5(a)
Violation Notes:

Returned to compliance on 09/17/2019.

Violation Description:

Failure to provide the following training to all oil-handling personnel:

1. Operation and maintenance of equipment to prevent discharges.

2. Discharge procedure protocols.

3. Applicable pollution control laws, rules, and regulations.

4. General facility operations.

5. Contents of the SPCC Plan.

Violations

Violation Date: 06/23/2016 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.11 25404.1 - California Health and Safety Code, Chapter 6.11, Section(s) 25404.1
Violation Notes:

Returned to compliance on 10/04/2016.

Violation Description:

Failure to maintain a valid permit.

Violations

Violation Date: 08/01/2019 ***Violation Source:*** CERS
Violation Program: HMRRP ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Notes:

Returned to compliance on 09/17/2019. OBSERVATION: No training records observed for 2017-2019 CORRECTIVE ACTION: Owner/operator shall provide training to all employees. Documentation shall be retained and be made available for inspection for a minimum period of 3 years from the date of the training. Copies of training documentation/records can be sent to: rsgarcia@rivco.org or faxed to: 951-791-1778.

Violation Description:

Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.

Violations

Violation Date: 08/01/2019 ***Violation Source:*** CERS
Violation Program: APSA ***Violation Division:*** Riverside County Department of Env Health
Citation: HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5 (a)
Violation Notes:

Returned to compliance on 09/17/2019.

Violation Description:

Failure to complete a review and evaluation of the SPCC Plan at least once every five years, document the completion of the review, and sign a statement as to whether the SPCC Plan will be amended.

Enforcements

Enf Action Date: 11/29/2005 ***Enf Action Program:*** INDSTW
Enf Action Type: Notice of Violation ***Enf Action Source:*** SMARTS
Enf Action Division: Water Boards
Enf Action Description: Notice of Violation
Enf Action Notes:

11/29/2005 Notice of Violation issued for failure to submit 2004-2005 Annual Report by July 1, 2005 due date.

Evaluations

Eval Date: 10/04/2016
Violations Found: No
Eval General Type: Other/Unknown

Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 08/01/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 09/17/2019
Violations Found: No
Eval General Type: Other/Unknown
Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 06/23/2016
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 08/01/2019
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: APSA
Eval Source: CERS
Eval Notes:

Eval Date: 01/31/2019
Violations Found: No
Eval General Type: Compliance Evaluation Inspection
Eval Type: Industrial Storm Water Compliance Evaluation
Eval Division: Water Boards
Eval Program: INDSTW
Eval Source: SMARTS
Eval Notes:

In compliance; Note: data in [EVAL Notes] field for some records is truncated from the source.

Eval Date: 10/04/2016
Violations Found: No
Eval General Type: Other/Unknown
Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 09/17/2019

Violations Found: No
Eval General Type: Other/Unknown
Eval Type: Other, not routine, done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Eval Date: 06/23/2016
Violations Found: Yes
Eval General Type: Compliance Evaluation Inspection
Eval Type: Routine done by local agency
Eval Division: Riverside County Department of Env Health
Eval Program: HMRRP
Eval Source: CERS
Eval Notes:

Affiliations

Affil Type Desc: CUPA District
Entity Name: Riverside Cnty Env Health
Entity Title:
Address: 4065 County Circle Drive, Room 104
City: Riverside
State: CA
Country:
Zip Code: 92503
Phone: (951) 358-5055

Affil Type Desc: Owner/Operator
Entity Name: City of Banning
Entity Title: Operator
Address: PO Box 998
City: Banning
State: CA
Country:
Zip Code: 92220
Phone:

Affil Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title:
Address: PO Box 998
City: Banning
State: CA
Country:
Zip Code: 92220
Phone:

Affil Type Desc: Operator
Entity Name: City of Banning
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone: (951) 922-3286

Affil Type Desc: Legal Owner
Entity Name: City of Banning
Entity Title:
Address: PO Box 998
City: Banning
State: CA
Country: United States

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Zip Code: 92220
Phone: (951) 922-3291

Affil Type Desc: Document Preparer
Entity Name: John Packham
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Parent Corporation
Entity Name: Banning Municipal Airport
Entity Title:
Address:
City:
State:
Country:
Zip Code:
Phone:

Affil Type Desc: Environmental Contact
Entity Name: Carl Szoyka
Entity Title:
Address: PO Box 998
City: Banning
State: CA
Country:
Zip Code: 92220
Phone:

Affil Type Desc: Identification Signer
Entity Name: Carl Szoyka
Entity Title: Manager
Address:
City:
State:
Country:
Zip Code:
Phone:

Coordinates

Env Int Type Code: HMBP
Program ID: 10316797
Latitude: 33.922660
Longitude: -116.851740
Coord Name:
Ref Point Type Desc: Center of a facility or station.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	3 of 4	S	0.25 / 1,312.04	2,213.80 / -60	BANNING MUNICIPAL AIRPORT 200 S. HATHAWAY STREET BANNING CA	HIST TANK

Owner Name: CITY OF BANNING
Owner Street: 169 W. RAMSEY STREET
Owner City: BANNING
Owner State: CA
Owner Zip: 92220
No of Containers: 2
County: RIVERSIDE
Facility State: CA
Facility Zip: 92220

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
8	4 of 4	S	0.25 / 1,312.04	2,213.80 / -60	BANNING MUNICIPAL AIRPORT 200 S HATHAWAY ST BANNING CA	UST SWEEPS

C C: A33-000-22702
BOE: 44-018100
D Filename: SITE16A
Page No: 3

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Comp:	22702	**County:**	RIVERSIDE
Status:	ACTIVE	**State :**	CA
No of Tanks:	2	**Zip:**	92220
Jurisdict:	RIVERSIDE COUNTY	**Latitude:**	33.923022
Agency:	ENVIRONMENTAL HEALTH - U.S.T.	**Longitude:**	-116.859357
Phone:		**Georesult:**	S5HPNTSCZA

Tank Details

Tank ID:	000002	**S Contain:**	
O Tank ID:	000172	**Stg:**	P
SWRCB No:	33-000-022702-000002	**Storage :**	
Removed:		**Storag Type:**	PRODUCT
Installed:		**P Contain:**	
A Date:	10-21-92	**Content:**	AVIA. GAS
Capac:	6000	**ONA:**	
Tank Use:	M.V. FUEL	**D File Name:**	TANK16A

Tank Details

Tank ID:	000001	**S Contain:**	
O Tank ID:	000172	**Stg:**	P
SWRCB No:	33-000-022702-000001	**Storage :**	
Removed:		**Storag Type:**	PRODUCT
Installed:		**P Contain:**	
A Date:	10-21-92	**Content:**	AVIA. GAS
Capac:	10000	**ONA:**	
Tank Use:	M.V. FUEL	**D File Name:**	TANK16A

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
9	1 of 2	SW	0.27 / 1,437.03	2,276.83 / 3	BANNING DRUMS 1326 E. RAMSEY ST. BANNING CA 92220	CERCLIS

Site ID:	0904561	**RNPL Status Code:**	N
Site EPA ID:	CAD983646498	**NPL Status:**	Not on the NPL
Site Street Address 2:		**RFED Facility Code:**	N
Site County Name:	RIVERSIDE	**RFED Facility Desc:**	Not a Federal Facility
Site FIPS Code:	06065	**USGS Hydro Unit No.:**	18100200
Region Code:	09	**Site Cong. Dist. Code:**	37
Site SMSA No.:	6780	**ROT Desc:**	Unknown
Site Prim. Latitude:	33D55M54S	**FR NPL Update No.:**	
Site Prim. Longitude:	116D52M48S	**RFRA Code:**	
Lat Long Source:			
RNON NPL Status Desc:	Removal Only Site (No Site Assessment Work Needed)		

CERCLIS Assess History

OU ID:	00	**RALT Short Name:**	
Act Code ID:		**Act Start Date:**	
RAT Code:		**Act Complete Date:**	
RAT Short Name:		**AGT Order No.:**	0
RAT Name:		**SH OU:**	
RAT Hist. Only Flag:		**SH Code:**	
RAT NSI Indicator:		**SH Seq:**	
RAT Level:		**SH Start Date:**	
RAT DEF OU:		**SH Complete Date:**	
RFBS Code:		**SH Lead:**	
SPA Code:			
RAT Def:			
Site Desc:	ABANDONED DRUM SITE IN RIVERSIDE COUNTY, CALIFORNIA.		
Site Alias:	. No alias data available		

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	EPA In-House
Act Code ID:	001	***Act Start Date:***	
RAT Code:	VS	***Act Complete Date:***	2/6/1997 00:00:00
RAT Short Name:	ARCH SITE	***AGT Order No.:***	1500
RAT Name:	ARCHIVE SITE	***SH OU:***	
RAT Hist. Only Flag:		***SH Code:***	
RAT NSI Indicator:	B	***SH Seq:***	
RAT Level:	1	***SH Start Date:***	
RAT DEF OU:	00	***SH Complete Date:***	
RFBS Code:		***SH Lead:***	
SPA Code:	13		

RAT Def: The decision is made that no further activity is planned at the site.

Site Desc:

Site Alias:

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	EPA Fund
Act Code ID:	001	***Act Start Date:***	9/14/1992 00:00:00
RAT Code:	RC	***Act Complete Date:***	
RAT Short Name:	RVL CRP	***AGT Order No.:***	120
RAT Name:	REMOVAL COMMUNITY RELATIONS	***SH OU:***	
RAT Hist. Only Flag:	T	***SH Code:***	
RAT NSI Indicator:	B	***SH Seq:***	
RAT Level:	1	***SH Start Date:***	
RAT DEF OU:	00	***SH Complete Date:***	
RFBS Code:	V	***SH Lead:***	
SPA Code:	08		

RAT Def: Community relations activities must take place for all responses lasting longer than 45 days, addressing the concerns of local citizens and officials about a hazardous waste release.

Site Desc:

Site Alias:

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	EPA Fund
Act Code ID:	001	***Act Start Date:***	10/28/1992 00:00:00
RAT Code:	AR	***Act Complete Date:***	10/28/1992 00:00:00
RAT Short Name:	ADMM REC	***AGT Order No.:***	580
RAT Name:	ADMINISTRATIVE RECORDS	***SH OU:***	
RAT Hist. Only Flag:		***SH Code:***	
RAT NSI Indicator:	B	***SH Seq:***	
RAT Level:	1	***SH Start Date:***	
RAT DEF OU:	00	***SH Complete Date:***	
RFBS Code:	P	***SH Lead:***	
SPA Code:	13		

RAT Def: SARA specifies that administrative records be compiled at Superfund sites where remedial or removal responses are planned, or are occurring, or where EPA is issuing a unilateral order or initiating litigation to track enforcement case budget funds used for any RP lead activity.

Site Desc:

Site Alias:

CERCLIS Assess History

OU ID:	00	***RALT Short Name:***	EPA Fund
Act Code ID:	001	***Act Start Date:***	9/14/1992 00:00:00
RAT Code:	RV	***Act Complete Date:***	1/8/1993 00:00:00
RAT Short Name:	RMVL	***AGT Order No.:***	70
RAT Name:	REMOVAL	***SH OU:***	
RAT Hist. Only Flag:		***SH Code:***	
RAT NSI Indicator:	B	***SH Seq:***	
RAT Level:	1	***SH Start Date:***	
RAT DEF OU:	00	***SH Complete Date:***	

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

RFBS Code: V
SH Lead:
SPA Code: 08
RAT Def: Response action that requires expeditious attention to reduce imminent and substantial dangers to human health, welfare, or the environment or an emergency response required within hours or days to address acute situations involving actual or potential threat to human health, the environment, or real or personal property due to the release of a hazardous substance. Characterization of a removal action as removal, not immediate removal or planned removal, started at the beginning of FY 1987. This code now takes the place of immediate removal (IR) and planned removal (PR).
Site Desc:
Site Alias:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
9	2 of 2	SW	0.27 / 1,437.03	2,276.83 / 3	BANNING DRUMS 1326 E. RAMSEY ST. BANNING CA 92220	CERCLIS NFRAP

Site ID: 904561
Site EPA ID: CAD983646498
Site Parent ID:
Site County Name: RIVERSIDE
Parent Site Name:
Site FIPS Code: 6065
Region Code: 9
Site Cong. Dist. Code: 37
Federal Facility:

CERCLIS-NFRAP Assess History

OU ID: 0
Act Code ID: 1
RAT Code: RV
RAT Short Name: RMVL
RAT Name: REMOVAL
RAT Hist. Only Flag:
RAT NSI Indicator: B
RAT Level: 1
RAT DEF OU: 00
RFBS Code: V
SPA Code: 08
RALT Short Name: EPA Fund
Act Start Date: 9/14/1992
Act Complete Date: 1/8/1993
AGT Order No.: 70
SH OU:
SH Code:
SH Seq:
SH Start Date:
SH Complete Date:
SH Lead:
SH Qual:
RAQ Act. Qual Short: Cleaned Up
RNPL Status Code: N
RAT Def: Response action that requires expeditious attention to reduce imminent and substantial dangers to human health, welfare, or the environment or an emergency response required within hours or days to address acute situations involving actual or potential threat to human health, the environment, or real or personal property due to the release of a hazardous substance. Characterization of a removal action as removal, not immediate removal or planned removal, started at the beginning of FY 1987. This code now takes the place of immediate removal (IR) and planned removal (PR).
RNON NPL Status Desc: Removal Only Site (No Site Assessment Work Needed)

CERCLIS-NFRAP Assess History

OU ID: 0
Act Code ID: 1
RAT Code: RC
RAT Short Name: RVL CRP
RAT Name: REMOVAL COMMUNITY RELATIONS
RAT Hist. Only Flag: T
RAT NSI Indicator: B
RAT Level: 1
RAT DEF OU: 00
RFBS Code: V
SPA Code: 08
RALT Short Name: EPA Fund
Act Start Date: 9/14/1992
Act Complete Date:
AGT Order No.: 120
SH OU:
SH Code:
SH Seq:
SH Start Date:
SH Complete Date:
SH Lead:
SH Qual:
RAQ Act. Qual Short:
RNPL Status Code: N
RAT Def: Community relations activities must take place for all responses lasting longer than 45 days, addressing the concerns of local citizens and officials about a hazardous waste release.
RNON NPL Status Desc: Removal Only Site (No Site Assessment Work Needed)

CERCLIS-NFRAP Assess History

OU ID: 0
Act Code ID: 1
Act Start Date: 10/28/1992
Act Complete Date: 10/28/1992

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

RAT Code:	AR	**AGT Order No.:**	580
RAT Short Name:	ADMM REC	**SH OU:**	
RAT Name:	ADMINISTRATIVE RECORDS	**SH Code:**	
RAT Hist. Only Flag:		**SH Seq:**	
RAT NSI Indicator:	B	**SH Start Date:**	
RAT Level:	1	**SH Complete Date:**	
RAT DEF OU:	00	**SH Lead:**	
RFBS Code:	P	**SH Qual:**	
SPA Code:	13	**RAQ Act. Qual Short:**	Removal AR
RALT Short Name:	EPA Fund	**RNPL Status Code:**	N

RAT Def: SARA specifies that administrative records be compiled at Superfund sites where remedial or removal responses are planned, or are occurring, or where EPA is issuing a unilateral order or initiating litigation to track enforcement case budget funds used for any RP lead activity.

RNON NPL Status Desc: Removal Only Site (No Site Assessment Work Needed)

CERCLIS-NFRAP Assess History

OU ID:	0	**Act Start Date:**	
Act Code ID:	1	**Act Complete Date:**	2/6/1997
RAT Code:	VS	**AGT Order No.:**	1500
RAT Short Name:	ARCH SITE	**SH OU:**	
RAT Name:	ARCHIVE SITE	**SH Code:**	
RAT Hist. Only Flag:		**SH Seq:**	
RAT NSI Indicator:	B	**SH Start Date:**	
RAT Level:	1	**SH Complete Date:**	
RAT DEF OU:	00	**SH Lead:**	
RFBS Code:		**SH Qual:**	
SPA Code:	13	**RAQ Act. Qual Short:**	
RALT Short Name:	EPA In-House	**RNPL Status Code:**	N

RAT Def: The decision is made that no further activity is planned at the site.

RNON NPL Status Desc: Removal Only Site (No Site Assessment Work Needed)

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
10	1 of 1	SW	0.27 / 1,444.79	2,276.83 / 3	BANNING DRUMS 1326 E. RAMSEY ST. BANNING CA 92220	SEMS ARCHIVE

Site ID:	0904561	**FIPS Code:**	06065
EPA ID:	CAD983646498	**Cong District:**	37
Superfund Alt Agmt:	No	**Region:**	09
Federal Facility:	No	**County:**	RIVERSIDE
FF Docket:	No		

NPL: Not on the NPL

Non NPL Status: Removal Only Site (No Site Assessment Work Needed)

Action Information

Operable Units:	00	**Start Actual:**	09/13/1992
Action Code:	RC	**Finish Actual:**	
Action Name:	RVL CRP	**Qual:**	
SEQ:	1	**Curr Action Lead:**	EPA Perf
Operable Units:	00	**Start Actual:**	10/27/1992
Action Code:	AR	**Finish Actual:**	10/27/1992
Action Name:	ADMIN REC	**Qual:**	V
SEQ:	1	**Curr Action Lead:**	EPA Perf
Operable Units:	00	**Start Actual:**	09/13/1992
Action Code:	RV	**Finish Actual:**	01/07/1993
Action Name:	RMVL	**Qual:**	C
SEQ:	1	**Curr Action Lead:**	EPA Perf
Operable Units:	00	**Start Actual:**	
Action Code:	VS	**Finish Actual:**	02/05/1997
Action Name:	ARCH SITE	**Qual:**	
SEQ:	1	**Curr Action Lead:**	EPA Perf In-Hse

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
11	1 of 1	WSW	0.37 / 1,973.25	2,287.17 / 13	INLAND BEHAVIORAL & HEALTH SVCS-BANNING 1070 E. RAMSEY STREET BANNING CA 92220	ENVIROSTOR

Estor/EPA ID: 33800004
Site Code: 401042
Nat Priority List: NO
APN: NONE SPECIFIED
Census Tract: 6065044200
Site Type: CALMORTGAGE
Address Description: 1070 E. RAMSEY STREET
Office: CLEANUP SACRAMENTO
Special Program:
Funding: CALMORTGAGE
Assembly District: 42
Senate District: 23
Permit Renewal Lead:
Public Partici Spclst:
Project Manager:
County: RIVERSIDE
Latitude: 33.9250398
Longitude: -116.8644688
Acres: 0.25 ACRES
Supervisor: WILLIAM BECKMAN
Cleanup Status: NO ACTION REQUIRED AS OF 6/1/2002
Cleanup Oversight Agencies: DTSC - LEAD AGENCY
School District:
Past Use that Caused Contam: NONE
Potential Media Affected: NO MEDIA AFFECTED
Potential Contamin of Concern:

NO CONTAMINANTS FOUND

Site History:

DTSC performed an environmental assessment for the Office of Statewide Planning and Development, Cal-Mortgage Loan Insurance Division a sister agency as a part of the real estate due diligence process under a Memorandum of Understanding (MOU) for the guaranteed loan insurance program for the construction, improvement, and expansion of various health care facilities.

Status: NO ACTION REQUIRED
A2 Program Type: CALMORTGAGE
CalEnviroScreen Score: 66-70%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=33800004

Completed Activities

Title: Phase 1
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Phase 1
Date Completed: 6/4/2002
Comments: Pursuant to the MOU, DTSC has reviewed a Phase I Environmental Site Assessment Report and other documents for Inland Behavioral and Health Services, Inc. (IBHS). The subject property is currently vacant. IBHS is proposing to construct a new health center on the subject property. A Supplemental Phase I Environmental Assessment Report was prepared by DTSC and concluded that no action was needed for this property; there is no contamination on the property.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
12	1 of 1	WSW	0.38 / 2,026.62	2,292.65 / 19	INLAND BEHAVIORAL & HEALTH SVCS. - SAN B 665 & 671 NORTH D STREET SAN BERNARDINO CA 92401	ENVIROSTOR

Estor/EPA ID: 33800003
Site Code: 401041
Nat Priority List: NO
APN: NONE SPECIFIED
Census Tract: 6065044200
Site Type: CALMORTGAGE
Address Description: 665 & 671 NORTH D STREET
Office: CLEANUP SACRAMENTO
Special Program:
Funding: CALMORTGAGE
Assembly District: 42
Senate District: 23
Permit Renewal Lead:
Public Partici Spclst:
Project Manager:
County: RIVERSIDE
Latitude: 33.925372
Longitude: -116.864987
Acres: 0.25 ACRES
Supervisor: WILLIAM BECKMAN

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Cleanup Status: NO ACTION REQUIRED AS OF 6/4/2002
Cleanup Oversight Agencies: DTSC - LEAD AGENCY
School District:
Past Use that Caused Contam: NONE
Potential Media Affected: NO MEDIA AFFECTED
Potential Contamin of Concern:

NO CONTAMINANTS FOUND

Site History:

DTSC performed an environmental assessment for the Office of Statewide Planning and Development, Cal-Mortgage Loan Insurance Division a sister agency as a part of the real estate due diligence process under a Memorandum of Understanding (MOU) for the guaranteed loan insurance program for the construction, improvement, and expansion of various health care facilities.

Status: NO ACTION REQUIRED
A2 Program Type: CALMORTGAGE
CalEnviroScreen Score: 66-70%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=33800003

Completed Activities

Title: Phase 1
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Phase 1
Date Completed: 6/4/2002
Comments: Pursuant to the MOU, DTSC has reviewed a Phase I Environmental Site Assessment Report and other documents for Inland Behavioral and Health Services, Inc. (IBHS). The subject property is currently vacant. IBHS is proposing to construct a new health center on the subject property. A Supplemental Phase I Environmental Assessment Report was prepared by DTSC and concluded that no action was needed for this property; there is no contamination on the property.

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
13	1 of 1	W	0.40 / 2,095.69	2,358.05 / 84	LORENA FIGUEROA 957 E GEORGE ST BANNING CA 92220	RCRA TSD

EPA Handler ID: CAC003013426
Gen Status Universe: No Report
Contact Name: LORENA FIGUEROA
Contact Address: 957 E GEORGE ST, , BANNING, CA, 92220,
Contact Phone No and Ext: 951-849-4312
Contact Email: TAMY@PEASOLUTIONS.COM
Contact Country:
Land Type:
County Name: RIVERSIDE
EPA Region: 09
Receive Date: 20190503

Violation/Evaluation Summary

Note: NO RECORDS: As of May 2020, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

Handler Summary

Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility: No
Onsite Burner Exemption: No

Smelting, Melting and Refining:	No
Underground Injection Control:	No
Commercial TSD:	No
Used Oil Transporter:	No
Used Oil Transfer Facility:	No
Used Oil Processor:	No
Used Oil Refiner:	No
Used Oil Burner:	No
Used Oil Market Burner:	No
Used Oil Spec Marketer:	No

Hazardous Waste Handler Details

Sequence No:	1
Receive Date:	20190503
Handler Name:	LORENA FIGUEROA
Federal Waste Generator Code:	N
Generator Code Description:	Not a Generator, Verified
Source Type:	Implementer

Owner/Operator Details

Owner/Operator Ind:	Current Owner	***Street No:***	
Type:	Other	***Street 1:***	957 E GEORGE ST
Name:	LORENA FIGUEROA	***Street 2:***	
Date Became Current:		***City:***	BANNING
Date Ended Current:		***State:***	CA
Phone:	951-849-4312	***Country:***	
Source Type:	Implementer	***Zip Code:***	92220

Owner/Operator Ind:	Current Operator	***Street No:***	
Type:	Other	***Street 1:***	957 E GEORGE ST
Name:	LORENA FIGUEROA	***Street 2:***	
Date Became Current:		***City:***	BANNING
Date Ended Current:		***State:***	CA
Phone:	951-849-4312	***Country:***	
Source Type:	Implementer	***Zip Code:***	92220

14	***1 of 1***	***WNW***	***0.41 / 2,190.80***	***2,392.18 / 118***	***Twin Pines Ranch Disposal Site Twin Pines Rd, Southeast Of Banning Banning CA 92220***	***SWF/LF***

SWIS No:	33-AA-0067	***Latitude:***	33.93333
EPA Fed Registry ID:		***Longitude:***	-116.86667
Operational Status:	Clean Closed	***County:***	Riverside
Regulatory Status:	Exempt	***Site ZIP:***	92220
Site is Archived:	Yes	***ARB District:***	South Coast
Absorbed on:		***SWRCB Region:***	Colorado River
Absorbed by:		***Site Point of Contact:***	Angela Gomez
Site Inert Debris Eng Fill:	No		
Closed Illegal Aband:	Yes		
Closed Illegal Aband Cat:	D		
Finance Assuran Responsible:	No		
Incorporated City:	Banning		
Local Government:	Banning		
Reporting Agency Legal Name:	County of Riverside		
Reporting Agency Department:	Department of Environmental Health		
Enforcing Agency Legal Name:	County of Riverside		
Enforcing Agency Department:	Department of Environmental Health		

Site Operators

Site Type:	Disposal Only	***Is Archived:***	Yes
Operator Name:	County Of Riverside Probation Dept	***Contact Name:***	Roland Belkapp

Operator Address:	PO Box 833	**Contact First Name:**	Roland
Operator City:	Riverside	**Contact Last Name:**	Belkapp
Operator State:	CA	**Contact Title:**	Assistant Chief Deputy Probation
Operator ZIP Code:	92502	**Contact Email:**	
Operator Phone:	(714) 787-2804	**Started on:**	8/16/1994

Site Waste

Site Type:	Disposal Only	**Activity Category:**	Disposal
Waste Type:	Construction/demolition	**Act Classification:**	Solid Waste Disposal Site
Activity Oper Status:	Clean Closed	**Activity Is Archived:**	Yes
Act Regulatory Stat:	Exempt		
Activity:	Solid Waste Disposal Site		

Site Type:	Disposal Only	**Activity Category:**	Disposal
Waste Type:	Mixed municipal	**Act Classification:**	Solid Waste Disposal Site
Activity Oper Status:	Clean Closed	**Activity Is Archived:**	Yes
Act Regulatory Stat:	Exempt		
Activity:	Solid Waste Disposal Site		

Site Type:	Disposal Only	**Activity Category:**	Disposal
Waste Type:	Tires	**Act Classification:**	Solid Waste Disposal Site
Activity Oper Status:	Clean Closed	**Activity Is Archived:**	Yes
Act Regulatory Stat:	Exempt		
Activity:	Solid Waste Disposal Site		

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15 | ***1 of 1*** | ***SW*** | ***0.56 / 2,960.48*** | ***2,231.11 / -43*** | ***PERFECTION PLATING, INC.***
1284 E. LINCOLN STREET
BANNING CA 92220 | ***ENVIROSTOR***

Estor/EPA ID:	71003018	**Assembly District:**	42
Site Code:	550003	**Senate District:**	23
Nat Priority List:	NO	**Permit Renewal Lead:**	
APN:	NONE SPECIFIED	**Public Partici Spclst:**	
Census Tract:	6065044300	**Project Manager:**	
Site Type:	TIERED PERMIT	**County:**	RIVERSIDE
Address Description:	1284 E. LINCOLN STREET	**Latitude:**	33.920822
Office:	CLEANUP CYPRESS	**Longitude:**	-116.862705
Special Program:		**Acres:**	5 ACRES
Funding:		**Supervisor:**	* JOHN GEROCH
Cleanup Status:	NO FURTHER ACTION AS OF 9/9/2010		
Cleanup Oversight Agencies:	DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY		
School District:			
Past Use that Caused Contam:	METAL PLATING - CHROME		
Potential Media Affected:	SOIL		
Potential Contamin of Concern:			

CHROMIUM VI, TETRACHLOROETHYLENE (PCE), TRICHLOROETHYLENE (TCE)

Site History:

Site History: The property is currently owned by the Arthur Hale Trust, which has owned the property since April 3, 1996. The site was undeveloped land until approximately 1980, when an aerial photograph shows the presence of a building on the property. A 1984 city directory indicates that Pantsmaker West Limited had begun operating at the site. Little information is available concerning the company, however it is known that Pantsmaker West was a clothing manufacturer. The layout of the facility during their operations and the types of chemicals used or stored at the site by Pantsmaker is unknown. By 1990, Pantsmaker West was no longer operating at the site. The 1995 city directory indicates that Airway Scale Manufacturing was operating at the site. The precise nature of Airway Scale's operations and chemical use or storage at the site is also unknown.

Perfection Plating was in operation from February 1997 and January 2003. Prior to 1980, the site was undeveloped land. The primary source of business was the plating of after market aluminum automobile wheels. They had copper, nickel and chrome plating lines.

Currently the site is the location of A Perfect Storage. A Perfect Storage stores recreational vehicles, recreational trailers, and boats in the parking lot and inside the main building. Storage began in June 2004.

Plating operations
The main building housed the two plating lines, storage tanks, the waste water treatment system, chemical storage and use areas. Aboveground tanks contained housed spent plating solutions. Also several above ground tanks for acid storage and a chemical treatment system were located in a covered patio at the exterior southeast end of the main building. In the western exterior portion, tanks associated with chemical evaporation process system were

located.

PBR units were the waste water treatment system and the evaporator system.

WWTS
WWTS is the bulk storage area in the tank house, the piping trenches, and the primary waste water treatment area in the main building. Tanks 16-24 (9 tanks) in the tank house each were 4000 to 8000 gallons.

The piping trenches linked the production pits, tank house and the pwwta.

The pwwta consisted of a de-ionizing water system, 5 cone bottomed process tanks (T1-T5), two free standing batch holding tanks (T6-T7), one oopen top rectangular tank for equipment decontamination (T13), and two operational sludge presses

Evaporator System
Located in the western exterior of the main building. Consists of a water evaporation unit and three free standing aboveground liquid storage tanks (T8-T10).
The waste water treatment system consisted of a bulk storage area in the tank house, the piping trenches, and the primary waste water treatment area

There were several releases at the facility which resulted in releases of metal containing solutions, fugitive bugging wastes, and acidic exhaust fumes into the environment

Spill and Discharge History
1999 – Tank House release. The release was contained within the tank house, but neither the volume or type of fluid released was known.

2002 – Nitric acid release. Release was from the acid tanks located at the eastern exterior of the main building.

? Nov 2003 and Feb 2004 – Possible process water release, however there is no documentation indicating what chemicals were contained within the process water. Not clear if release was continuous, intermittent, or from multiple sources within the building.

December 17, 2000 – Plating line release. City of Banning police patrol. Observed employees digging dirt into drums. When asked, he was informed that a filter within the plant had broken and released nickel solution onto the ground behind the main building. About 50 gallons impacted surface soils. CRDEH did not grant closure to the remedial activities.

January 21, 2001 – Plating line release. Tank in the plating line release an unknown quantity of solution.

Groundwater Contamination: No groundwater data has been obtained

Project Description: Corrective Action Oversight Under a Consent Agreement

Status: NO FURTHER ACTION
A2 Program Type: TIERED PERMIT
CalEnviroScreen Score: 51-55%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=71003018

Completed Activities

Title: Consent Agreement Executed
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Consent Agreement
Date Completed: 1/31/2005
Comments:

Title: FI Workplan Approved
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Supplemental Site Investigation Workplan
Date Completed: 3/23/2006
Comments:

Title: Corrective Action Consent Agreement

Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Consent Agreement
Date Completed: 1/31/2005
Comments:

Title: Compliance
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Inspections/Visit (Non LUR)
Date Completed: 4/1/1999
Comments:

Title: PEA Workplan Oversight Completed
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Inspections/Visit (Non LUR)
Date Completed: 6/30/2006
Comments:

Title: Phase I verification inspection completed
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Phase 1
Date Completed: 8/26/2004
Comments:

Title: Inspection - Phase I Verification
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Phase I Verification
Date Completed: 8/26/2004
Comments:

Title: Corrective Action Completed
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Corrective Action Completion Determination
Date Completed: 9/30/2006
Comments:

Title: Further Investigation Completed
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Supplemental Site Investigation Report
Date Completed: 9/30/2006
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
16	1 of 1	SW	0.56 / 2,960.55	2,231.11 / -43	PERFECTION PLATING 1284 E. LINCOLN ST. BANNING CA 92220	ENVIROSTOR

Estor/EPA ID: 60000748
Site Code:
Nat Priority List: NO
APN: NONE SPECIFIED
Census Tract: 6065044300
Site Type: EVALUATION
Address Description: 1284 E. LINCOLN ST.
Office: CLEANUP CYPRESS
Special Program:
Funding: NOT APPLICABLE
Assembly District: 42
Senate District: 23
Permit Renewal Lead:
Public Partici Spclst:
Project Manager:
County: RIVERSIDE
Latitude: 33.9208218129527
Longitude: -116.862705126007
Acres: NONE SPECIFIED
Supervisor:
Cleanup Status: REFER: 1248 LOCAL AGENCY AS OF 6/25/2004
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District:
Past Use that Caused Contam: NONE SPECIFIED
Potential Media Affected: NONE SPECIFIED
Potential Contamin of Concern:

NONE SPECIFIED

Site History:

Status: REFER: 1248 LOCAL AGENCY
A2 Program Type: EVALUATION
CalEnviroScreen Score: 51-55%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60000748

Completed Activities

Title: SB 1248 Notification
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60000748&doc_id=6017481
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: SB 1248 Notification
Date Completed: 6/25/2004
Comments: DTSC is not involved with this project

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
17	1 of 1	SSW	0.62 / 3,279.18	2,193.72 / -80	TYCO ELECTRONICS CORPORATION BANNING 700 SOUTH HATHAWAY STREET BANNING CA 92220	ENVIROSTOR

Estor/EPA ID: 60002152
Site Code: 401652
Nat Priority List: NO
APN: 532130004, 532130006, 532130014, 532130015
Census Tract: 6065043813
Site Type: VOLUNTARY CLEANUP
Address Description: 700 SOUTH HATHAWAY STREET
Office: CLEANUP CYPRESS
Special Program: VOLUNTARY CLEANUP PROGRAM
Funding: SITE PROPONENT
Assembly District: 42
Senate District: 23
Permit Renewal Lead:
Public Partici Spclst:
Project Manager: IRENA EDWARDS
County: RIVERSIDE
Latitude: 33.9194793103669
Longitude: -116.858696081861
Acres: 18 ACRES
Supervisor: EILEEN MANANIAN
Cleanup Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY AS OF 3/15/2017
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District:
Past Use that Caused Contam: ABOVE GROUND STORAGE TANKS, FUEL - AIRCRAFT STORAGE/ REFUELING, MANUFACTURING - ELECTRONIC, METAL FINISHING, METAL PLATING - OTHER
Potential Media Affected: SOIL, SOIL VAPOR
Potential Contamin of Concern:

CADMIUM AND COMPOUNDS, TETRACHLOROETHYLENE (PCE), TRICHLOROETHYLENE (TCE)

Site History:

1. Site Description - The 18-acre site houses four primary buildings and several smaller outbuildings. Deutsch Electronics conducted various electronics connectors manufacturing operations at the subject site from approximately 1958 to 2010. Electronic connectors manufacturing, including machining, plastics injection molding, and plating operations, were primarily conducted in three buildings with the remainder used for office, storage and support activity. Additionally, two underground storage tanks (USTS) housed gasoline and jet fuel for site activity and air transportation due to the site's close proximity to Beaumont Airport. Contamination - Metals, petroleum hydrocarbons and volatile organic compounds in shallow soil.
2. Work Done to Date - Various site evaluation, investigation and remediation activities conducted between 2005 and 2013 identified the presence of metals, petroleum hydrocarbons and volatile organic compounds in shallow soil below the site. The investigation and remediation activities were conducted under oversight of Riverside County Department of Environmental Health jurisdiction prior to transfer to DTSC oversight. The results of (Human Health Risk Assessment) HHRA Report indicated that the potential exposure of industrial/ commercial workers to observed volatile organic compounds in indoor air or modeled indoor air intrusion of soil gas do not pose a significant health risk. DTSC concurred with the HHRA Report recommendation to deed restrict the property use for commercial/industrial use only and to implement administrative controls such as maintenance of surface cover and a soil management plan to prevent or minimize exposure of industrial/commercial workers to cadmium impacted soils. Public Comment Period: DTSC circulated draft RAW and CEQA/NOE for public comment between December 18, 2015 and January 19, 2016. Property owner filed LUC with the Riverside County in October 2016. The property returned to commercial/industrial use.
4. Current Status - Annual LUC compliance monitoring is ongoing.

Status: CERTIFIED O&M - LAND USE RESTRICTIONS ONLY - LAND USE RESTRICTIONS
A2 Program Type: VOLUNTARY CLEANUP
CalEnviroScreen Score: 71-75%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=60002152

Land Use Restrictions

Site Management Requirements: NONE SPECIFIED
Title: LUC
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?cmd=radocuments&global_id=60002152&enforcement_id=60399214
Date Recorded: 10/20/2016

Completed Activities

Title: LUC Report by Owner
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60448003
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Land Use Restriction Monitoring Report
Date Completed: 1/13/2020
Comments:

Title: LUC Monitoring Report by Owner
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60430074
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Land Use Restriction Monitoring Report
Date Completed: 1/16/2018
Comments:

Title: Current Conditions Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60389975
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Report
Date Completed: 3/4/2015
Comments:

Title: Final HHRA Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60389981
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Risk Assessment Report
Date Completed: 3/4/2015
Comments:

Title: VCA
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60389974
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Standard Voluntary Agreement
Date Completed: 11/10/2013
Comments: Completed

Title: Certification
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60399584
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Certification
Date Completed: 3/29/2017
Comments: Completed

Title: LUC Monitoring Report by Owner
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60412083
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Land Use Restriction Monitoring Report
Date Completed: 1/19/2017
Comments:

Title: 2017/2018 Cost Estimate
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Annual Oversight Cost Estimate
Date Completed: 12/6/2017
Comments:

Title: LUC
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60399214
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Land Use Restriction
Date Completed: 10/20/2016
Comments:

Title: Community Profile
Title Link:
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Community Profile
Date Completed: 10/16/2015
Comments: Completed

Title: Estimation Letter
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60448134
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Annual Oversight Cost Estimate
Date Completed: 12/12/2019
Comments:

Title: RAW
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60389983
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Remedial Action Plan
Date Completed: 2/10/2016
Comments:

Title: NOE
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60399581
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: CEQA - Notice of Exemption
Date Completed: 2/2/2016
Comments:

Title: Public Notice & Fact Sheet
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60399579
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Public Notice
Date Completed: 12/8/2015
Comments:

Title: 2020/2021 Annual Cost Estimate
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60487217
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Annual Oversight Cost Estimate
Date Completed: 10/22/2020
Comments:

Title: Financial Assurance Document
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60412380
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Financial Assurance Documentation
Date Completed: 1/19/2017
Comments:

Title: LUC Report by Owner
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&doc_id=60448002
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Land Use Restriction Monitoring Report
Date Completed: 1/14/2019

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Comments:

Title: Estimation Letter
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=60002152&enforcement_id=60448133
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Annual Oversight Cost Estimate
Date Completed: 1/10/2019
Comments: complete

18	1 of 2	SE	0.94 / 4,952.88	2,048.18 / -226	BANNING RIFLE RANGE SECTIONS 13 AND 14 OF TOWNSHIP SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN BANNING CA 92220	ENVIROSTOR

Estor/EPA ID: 80000140
Site Code: 401502
Nat Priority List: NO
APN: NONE SPECIFIED
Census Tract: 6065043813
Site Type: FUDS
Address Description: SECTIONS 13 AND 14 OF TOWNSHIP SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN
Office: CLEANUP CYPRESS
Special Program:
Funding: DERA
Assembly District: 42
Senate District: 23
Permit Renewal Lead:
Public Partici Spclst:
Project Manager: OMORUYI PATRICK
County: RIVERSIDE
Latitude: 33.9166666666667
Longitude: -116.841666666667
Acres: 93.77 ACRES
Supervisor: PATRICK HSIEH
Cleanup Status: INACTIVE - NEEDS EVALUATION AS OF 10/4/2018
Cleanup Oversight Agencies: DTSC - SITE CLEANUP PROGRAM - LEAD AGENCY
School District:
Past Use that Caused Contam: FIRING RANGE - SMALL ARMS ETC...
Potential Media Affected: SOIL
Potential Contamin of Concern:

EXPLOSIVES (UXO, MEC), LEAD, MUNITIONS DEBRIS (MD), PERCHLORATE

Site History:

The Banning Rifle Range (RR) Formerly Used Defense Site (FUDS) is located in the city of Banning approximately 20 miles west of Palm Springs along the Interstate 10 (I-10) corridor in Riverside County, California. It is located within Sections 13 and 14 of Township 3 South, Range 1 East, San Bernardino Meridian. The intersection of Westward Avenue and Scott Street is approximately 650 feet west of the northwest corner of the site. The site can be accessed by driving east on Charles Street. According to the 1994 INPR, the War Department acquired a total of 93.77 acres of land through three lease agreements and one permit in 1942 and 1943. The Banning RR was used by the Army for a small arms firing range (rifle range) during World War II. The exact location of the rifle range and the orientation of fire could not be confirmed from available documents or maps. According to the Real Property Management and Disposal Report, dated June 15, 1949, the "Last Using Service" at Banning RR was identified as "California-Arizona Maneuver Area (C-AMA)" and was used between 1942 and 1944. By 1944, the three leases covering 88.77 acres were terminated, and the remaining 5 acres were returned to the owners between June and August of 1944. According to the 1994 INPR, as of the date of the INPR, 30.33 acres of the site were undeveloped land owned by private individuals. The remaining 63.44 acres were owned by the City of Banning and used for the Banning Waste Water Treatment Plant (WWTP) operations. One historical aerial photo pertinent to the identification of features that may be associated with the rifle range at Banning RR was obtained from NARA facilities.
The image depicts the northern portion of Banning RR in July 1943 during Department of Defense (DoD) occupation. The land obtained for Banning RR appears as undeveloped.

Status: INACTIVE - NEEDS EVALUATION
A2 Program Type: MILITARY EVALUATION
CalEnviroScreen Score: 71-75%
Summary Link: http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=80000140

Completed Activities

Title: Technical Project Planning Document
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80000140&doc_id=60270322
Area Name:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB

Area Link:
Sub Area:
Sub Area Link:
Document Type: Preliminary Endangerment Assessment Tech Memo
Date Completed: 7/7/2011
Comments: The final technical project planning document approved.

Title: Site Specific Work Plan
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80000140&doc_id=60270323
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Workplan
Date Completed: 7/7/2011
Comments: The final site specific workplan approved.

Title: Site Inspection Report
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80000140&doc_id=60273432
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Site Characterization Report
Date Completed: 11/7/2011
Comments:

Title: USACE INPR Summary
Title Link: http://www.envirostor.dtsc.ca.gov/public/final_documents2?global_id=80000140&doc_id=60459312
Area Name:
Area Link:
Sub Area:
Sub Area Link:
Document Type: Inventory Project Report (INPR)
Date Completed: 10/30/1994
Comments:

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
18	2 of 2	SE	0.94 / 4,952.88	2,048.18 / -226	BANNING RIFLE RANGE BANNING CA	FUDS

FUDS No: J09CA0234
INST ID: CA99799F536200
Object ID: 604
NPL Status: Not Listed
Status: Properties with projects
FY: 2018
Eligibility: Eligible
Current Owner: Other
EMS Map Link: https://fudsportal.usace.army.mil/ems/ems/inventory/map/map?id=55928

EPA Region: 09
CONG DIST: 36
County: RIVERSIDE
County Code: Los Angeles District (SPL)
Latitude: 33.91666667
Longitude: -116.84166667
Has Projects: Yes

Unplottable Summary

Total: 3 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
CDL		WEST BOUND I-10 AT RAMSEY OFF RAMP	BANNING CA	92220	820125299
CHMIRS	ERTS	Ramsey Street Exit on Interstate 10 Eastbound ***Control No*	*Notified Date:*** 08-6723 |	Banning CA		821854924
HAZNET	ROY-L-T-TRUCKING INC	14511 HATHAWAY	BANNING CA	92220	826273860

Unplottable Report

Site:
WEST BOUND I-10 AT RAMSEY OFF RAMP BANNING CA 92220

CDL

Clue: 1998-08-095
Date: 8/23/1998
County: RIVERSIDE
Lab Type: L
Lab Type Description: Illegal Drug Lab - location where an illegal drug lab was operated or drug lab equipment and/or materials were stored.

Site: ***ERTS***
Ramsey Street Exit on Interstate 10 Eastbound Banning CA

CHMIRS

Control No: 08-6723
Notified Date:
Notified Date Time:
Year: 2008
County: Riverside County
URL: https://w3.calema.ca.gov/operational/malhaz.nsf/f1841a103c102734882563e200760c4a/07caa3cb81e4206b882574c50017cb64?OpenDocument

California Hazardous Material Incident Report System (as of 2006 to 2015)

Contained: No
1 Substance: Diesel Fuel
1 Measure: Gal(s)
1 Other:
1 Quantity: 40
1 Type: PETROLEUM
1 Pipeline:
1 Vessel >= 300 Tons:
2 Substance:
2 Quantity:
2 Measure:
2 Type:
2 Other:
2 Pipeline:
2 Vessel >= 300 Tons:
3 Substance:
3 Quantity:
3 Measure:
3 Type:
3 Other:
3 Pipeline:
3 Ves >= 300 Tons:
Incident Date: 9/14/2008
Incident Time: 2023
Spill Site: Road
Injuries?:
No of Injuries: 0
Fatals?:
No of Fatals: 0
Evacs?:
No of Evacs: 0
Cleanup: Contractor
Site:
Cause:
Cause Other:
Dog No:
Water: No
Water Way:
City: Banning
County: Riverside County
Zip:
Admin Agency: Banning Fire Department
Notification Area: AA/CUPA,DFG-OSPR,DTSC,RWQCB,US EPA,USFWS,Co/WP
Location: Ramsey Street Exit on Interstate 10 Eastbound
Description: A truck hit road debris which cut a fuel line causing the spill. No remediation has taken place at this time, they have a contractor en route with an eta of about an hour.

Spill Report View

Amount 1:
Amount 2:
Amount 3:
Type: PETROLEUM
Water:
On Scene:
Other on Scene:
Other Notified:
Creation Date: 09/14/2008 09:19 PM
Received By:
Admin Agency:
Admin Agency 2:
Additional County:
Phone No:
Ext:
Pag Cell:

Document Title: SPILL Report
Spill Site: Road
Cause Desc for Other:
Person Notifying Cal OES:

Hazardous Materials Spill Report

Control Cal OES:	08-6723	***Type 3:***	
Control NRC:		***Other 3:***	
Date :	09/14/2008	***Pipeline 3:***	No
Incident Date:	09/14/2008	***Ves >= 300 Tons 3:***	No
Time:	2119	***Name:***	
Incident Time:	2023	***Phone:***	
Water Involved:	No	***Ext:***	
Drink Wtr Impact:		***Pag Cell:***	
Qty 1:	=	***PRS Name:***	
Measure 1:	Gal(s)	***PRS Phone:***	
Type 1:	PETROLEUM	***PRS Ext:***	
Pipeline 1:	No	***PRS Pag Cell:***	
Ves >= 300 Tons 1:	No	***Received By:***	
Qty 2:	=	***Header Unknown:***	SOUTH COAST AQMD
Amount 2:		***Incident Desc:***	
Measure 2:		***R R Crssing < 50 Ft:***	
Type 2:		***Uprr Rim :***	
Other 2:		***Notification Info:***	
Pipeline 2:	No	***Notification List:***	
Vessel >= 300 Tns 2:	No	***DOG Unit:***	
Qty 3:	=	***RWQCB Unit:***	7
Amount 3:		***Injuries:***	No
Measure 3:		***Fatality:***	No

Incident Location: Ramsey Street Exit on Interstate 10 Eastbound
Reported Cause:
Amount 1: 40
Substance 1: Diesel Fuel
Substance 2:
Substance 3:
Waterway:
Contained: No
Known Impact:
Other 1:
Detail for Other:
Site: Road
On Scene:
Other on Scene:
Other Notified:
Evacuation: No
Cleanup By: Contractor
Agency: ERTS
PRS Agency:
Admin Agency: Banning Fire Department
Sec Agency: Riverside County Environmental Health
Additional County:
Admin Agency 2:
Description: A truck hit road debris which cut a fuel line causing the spill. No remediation has taken place at this time, they have a contractor en route with an eta of about an hour.

Site: ***ROY-L-T-TRUCKING INC***
14511 HATHAWAY BANNING CA 92220

HAZNET

SIC Code:		***Mailing City:***	BANNING
NAICS Code:		***Mailing State:***	CA
EPA ID:	CAC002558604	***Mailing Zip:***	92220
Create Date:	11/8/2002	***Region Code:***	4
Fac Act Ind:	No	***Owner Name:***	ROY-L-T-TRUCKING INC
Inact Date:	8/19/2003	***Owner Addr 1:***	14511 HATHAWAY
County Code:	33	***Owner Addr 2:***	
County Name:	Riverside	***Owner City:***	BANNING
Mail Name:		***Owner State:***	CA
Mailing Addr 1:	14511 HATHAWAY	***Owner Zip:***	92220

Mailing Addr 2:		***Owner Phone:***	9093508681
Owner Fax:			

Contact Information	
--	--
Contact Name:	JIM MORRIS
Street Address 1:	14511 HATHAWAY
Street Address 2:	
City:	BANNING
State:	CA
Zip:	92220
Phone:	9093508681
--	--
--	--
Tanner Information	
--	--
Generator EPA ID:	CAC002558604
Generator County Code:	33
Generator County:	Riverside
TSD EPA ID:	CAD009007626
TSD County Code:	19
TSD County:	Los Angeles
State Waste Code:	151
State Waste Code Desc.:	Asbestos containing waste
Method Code:	D80
Method Description:	Disposal, landfill
Tons:	3.3712
Year:	2002
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Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

Facility Response Plan: FRP

List of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Mar 26, 2020

National Priority List: NPL

National Priorities List (Superfund)-NPL: EPA's (United States Environmental Protection Agency) list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action.

Government Publication Date: Dec 30, 2020

National Priority List - Proposed: PROPOSED NPL

Includes sites proposed (by the EPA, the state, or concerned citizens) for addition to the NPL due to contamination by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

Government Publication Date: Dec 30, 2020

Deleted NPL: DELETED NPL

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Government Publication Date: Dec 30, 2020

SEMS List 8R Active Site Inventory: SEMS

The Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted.

Government Publication Date: Jan 28, 2021

SEMS List 8R Archive Sites: SEMS ARCHIVE

The Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Government Publication Date: Jan 28, 2021

Inventory of Open Dumps, June 1985: ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

Comprehensive Environmental Response, Compensation and Liability Information System - CERCLIS: CERCLIS

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

EPA Report on the Status of Open Dumps on Indian Lands: IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

CERCLIS - No Further Remedial Action Planned: CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens: CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action: RCRA CORRACTS

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: Oct 19, 2020

RCRA non-CORRACTS TSD Facilities: RCRA TSD

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites listed as treatment, storage and/or disposal facilities of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Government Publication Date: Oct 19, 2020

RCRA Generator List: RCRA LQG

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.

Government Publication Date: Oct 19, 2020

RCRA Small Quantity Generators List: RCRA SQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Government Publication Date: Oct 19, 2020

RCRA Very Small Quantity Generators List: RCRA VSQG

RCRA Info is the EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: Oct 19, 2020

RCRA Non-Generators: RCRA NON GEN

RCRA Info is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: Oct 19, 2020

Federal Engineering Controls-ECs: FED ENG

Engineering controls (ECs) encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Aug 26, 2020

Federal Institutional Controls- ICs: FED INST

Institutional controls are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's (United States Environmental Protection Agency) expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site.

Government Publication Date: Aug 26, 2020

Emergency Response Notification System: ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System: ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System: ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Nov 9, 2020

The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database: FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This database is made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: Jan 6, 2021

FEMA Underground Storage Tank Listing: FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Petroleum Refineries: REFN

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

Government Publication Date: Jul 10, 2020

Petroleum Product and Crude Oil Rail Terminals: BULK TERMINAL

List of petroleum product and crude oil rail terminals made available by the U.S. Energy Information Administration (EIA). Includes operable bulk petroleum product terminals located in the 50 States and the District of Columbia with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil that were active between 2017 and 2018. Petroleum product terminals comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings. Survey locations adjusted using public data.

Government Publication Date: Apr 28, 2020

LIEN on Property: SEMS LIEN

The EPA Superfund Enterprise Management System (SEMS) provides LIEN information on properties under the EPA Superfund Program.

Government Publication Date: Jan 28, 2021

Superfund Decision Documents: SUPERFUND ROD

This database contains a listing of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD), along with other associated memos and files. This information is maintained and made available by the US EPA (Environmental Protection Agency).

Government Publication Date: Sep 22, 2020

State

State Response Sites: RESPONSE

A list of identified confirmed release sites where the Department of Toxic Substances Control (DTSC) is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk. This database is state equivalent NPL.

Government Publication Date: Jan 13, 2021

EnviroStor Database: ENVIROSTOR

The EnviroStor Data Management System is made available by the Department of Toxic Substances Control (DTSC). Includes Corrective Action sites, Tiered Permit sites, Historical Sites and Evaluation/Investigation sites. This database is state equivalent CERCLIS.

Government Publication Date: Jan 13, 2021

Delisted State Response Sites: DELISTED ENVS

Sites removed from the list of State Response Sites made available by the EnviroStor Data Management System, Department of Toxic Substances Control (DTSC).

Government Publication Date: Jan 13, 2021

Solid Waste Information System (SWIS): SWF/LF

The Solid Waste Information System (SWIS) database made available by the Department of Resources Recycling and Recovery (CalRecycle) contains information on solid waste facilities, operations, and disposal sites throughout the State of California. The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites.
Government Publication Date: Feb 8, 2021

Solid Waste Disposal Sites with Waste Constituents Above Hazardous Waste Levels: SWRCB SWF
This is a list of solid waste disposal sites identified by California State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit.
Government Publication Date: Sep 20, 2006

EnviroStor Hazardous Waste Facilities: HWP
A list of hazardous waste facilities including permitted, post-closure and historical facilities found in the Department of Toxic Substances Control (DTSC) EnviroStor database.
Government Publication Date: Jan 13, 2021

Sites Listed in the Solid Waste Assessment Test (SWAT) Program Report: SWAT
In a 1993 Memorandum of Understanding, the State Water Resources Control Board (SWRCB) agreed to submit a comprehensive report on the Solid Waste Assessment Test (SWAT) Program to the California Integrated Waste Management Board (CIWMB). This report summarizes the work completed to date on the SWAT Program, and addresses both the impacts that leakage from solid waste disposal sites (SWDS) may have upon waters of the State and the actions taken to address such leakage.
Government Publication Date: Dec 31, 1995

Land Disposal Sites: LDS
Land Disposal Sites in GeoTracker, the State Water Resources Control Board (SWRCB)'s data management system. The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units. Waste management units include waste piles, surface impoundments, and landfills.
Government Publication Date: Nov 16, 2020

Leaking Underground Fuel Tank Reports: LUST
List of Leaking Underground Storage Tanks within the Cleanup Sites data in GeoTracker database. GeoTracker is the State Water Resources Control Board's (SWRCB) data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (Underground Storage Tanks, Department of Defense and Site Cleanup Program) as well as permitted facilities such as operating Underground Storage Tanks. The Leak Prevention Program that overlooks LUST sites is the SWRCB in California's Environmental Protection Agency.
Government Publication Date: Nov 16, 2020

Delisted Leaking Storage Tanks: DELISTED LST
List of Leaking Underground Storage Tanks (LUST) cleanup sites removed from GeoTracker, the State Water Resources Control Board (SWRCB)'s database system, as well as sites removed from the SWRCB's list of UST Case closures.
Government Publication Date: Feb 2, 2021

Permitted Underground Storage Tank (UST) in GeoTracker: UST
List of Permitted Underground Storage Tank (UST) sites made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA).
Government Publication Date: Nov 16, 2020

Proposed Closure of Underground Storage Tank Cases: UST CLOSURE
List of UST cases that are being considered for closure by either the California Environmental Protection Agency, State Water Resources Control Board or the Executive Director that have been posted for a 60-day public comment period.
Government Publication Date: Feb 2, 2021

Historical Hazardous Substance Storage Information Database: HHSS
The Historical Hazardous Substance Storage database contains information collected in the 1980s from facilities that stored hazardous substances. The information was originally collected on paper forms, was later transferred to microfiche, and recently indexed as a searchable database. When using this database, please be aware that it is based upon self-reported information submitted by facilities which has not been independently verified. It is unlikely that every facility responded to the survey and the database should not be expected to be a complete inventory of all facilities that were operating at that time. This database is maintained by the California State Water Resources Control Board's (SWRCB) Geotracker.
Government Publication Date: Aug 27, 2015

Statewide Environmental Evaluation and Planning System: UST SWEEPS

The Statewide Environmental Evaluation and Planning System (SWEEPS) is a historical listing of active and inactive underground storage tanks made available by the California State Water Resources Control Board (SWRCB).

Government Publication Date: Oct 1, 1994

Aboveground Storage Tanks: AST

A statewide list from 2009 of aboveground storage tanks (ASTs) made available by the Cal FIRE Office of the State Fire Marshal (OSFM). This list is no longer maintained or updated by the Cal FIRE OSFM.

Government Publication Date: Aug 31, 2009

SWRCB Historical Aboveground Storage Tanks: AST SWRCB

A list of aboveground storage tanks made available by the California State Water Resources Control Board (SWRCB). Effective January 1, 2008, the Certified Unified Program Agencies (CUPAs) are vested with the responsibility and authority to implement the Aboveground Petroleum Storage Act (APSA).

Government Publication Date: Dec 1, 2007

Oil and Gas Facility Tanks: TANK OIL GAS

Locations of oil and gas tanks that fall under the jurisdiction of the Geologic Energy Management Division of the California Department of Conservation (CalGEM) (CCR 1760). CalGEM was formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR).

Government Publication Date: Dec 3, 2020

Delisted Storage Tanks: DELISTED TNK

This database contains a list of storage tank sites that were removed by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency (EPA) and the Cal FIRE Office of State Fire Marshal (OSFM).

Government Publication Date: Jan 28, 2021

California Environmental Reporting System (CERS) Tanks: CERS TANK

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Feb 9, 2021

Site Mitigation and Brownfields Reuse Program Facility Sites with Land Use Restrictions: LUR

The Department of Toxic Substances Control (DTSC) Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents land use restrictions that are active. Some sites have multiple land use restrictions.

Government Publication Date: Jan 13, 2021

Hazardous Waste Management Program Facility Sites with Deed / Land Use Restrictions: HLUR

The Department of Toxic Substances Control (DTSC) Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Government Publication Date: Feb 18, 2021

Deed Restrictions and Land Use Restrictions: DEED

List of Deed Restrictions, Land Use Restrictions and Covenants in GeoTracker made available by the State Water Resources Control Board (SWRCB) in California's Environmental Protection Agency. A deed restriction (land use covenant) may be required to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to residual hazardous materials.

Government Publication Date: Nov 16, 2020

Voluntary Cleanup Program: VCP

List of sites in the Voluntary Cleanup Program made available by the Department of Toxic Substances and Control (DTSC). The Voluntary Cleanup Program was designed to respond to lower priority sites. Under the Voluntary Cleanup Program, DTSC enters site-specific agreements with project proponents for DTSC oversight of site assessment, investigation, and/or removal or remediation activities, and the project proponents agree to pay DTSC's reasonable costs for those services.

Government Publication Date: Jan 13, 2021

GeoTracker Cleanup Program Sites: CLEANUP SITES

A list of Cleanup Program sites in the state of California made available by The State Water Resources Control Board (SWRCB) of the California Environmental Protection Agency (EPA). SWRCB tracks leaking underground storage tank cleanups as well as other water board cleanups.

Government Publication Date: Nov 16, 2020

Delisted County Records: DELISTED COUNTY

Records removed from county or CUPA databases. Records may be removed from the county lists made available by the respective county departments because they are inactive, or because they have been deemed to be below reportable thresholds.

Government Publication Date: Jan 29, 2021

Delisted California Environmental Reporting System (CERS) Tanks: DELISTED CTNK

This database contains a list of Aboveground Petroleum Storage and Underground Storage Tank sites that were removed from in the California Environmental Protection Agency (CalEPA) Regulated Site Portal.

Government Publication Date: Feb 9, 2021

Historical Hazardous Substance Storage Container Information - Facility Summary: HIST TANK

The State Water Resources Control Board maintained the Hazardous Substance Storage Containers listing and inventory in th 1980s. This facility summary lists historic tank sites where the following container types were present: farm motor vehicle fuel tanks; waste tanks; sumps; pits, ponds, lagoons, and others; and all other product tanks. This set, published in May 1988, lists facility and owner information, as well as the number of containers. This data is historic and will not be updated.

Government Publication Date: May 27, 1988

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands: INDIAN LUST

LUSTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Apr 8, 2020

Underground Storage Tanks (USTs) on Indian Lands: INDIAN UST

USTs on Tribal/Indian Lands in Region 9, which includes California.

Government Publication Date: Apr 8, 2020

Delisted Tribal Leaking Storage Tanks: DELISTED ILST

Leaking Underground Storage Tank facilities which have been removed from the Regional Tribal LUST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

Delisted Tribal Underground Storage Tanks: DELISTED IUST

Underground Storage Tank facilities which have been removed from the Regional Tribal UST lists made available by the EPA.

Government Publication Date: Apr 14, 2020

County

Riverside County - Local Oversight Program List: RIVERSIDE LOP

A list of Leaking Underground Storage Tank (LUST) facilities in Riverside County. This list is made available by Riverside County Department of Environmental Health. Environmental Cleanup Program provides oversight of assessments and cleanups at properties that have been, or may have been, contaminated with hazardous substances from LUSTs or releases associated with other commercial/industrial use.

Government Publication Date: Nov 24, 2020

Riverside County - Underground Storage Tanks List: UST RIVERSIDE

A list of registered Underground Storage Tank (UST) sites in Riverside County. This list is made available by Riverside County Department of Environmental Health. The Hazardous Materials Management Branch (HMMB) regulates and oversees the inspections of constructions, repairs, upgrades, system operation and removal of UST systems.

Government Publication Date: Nov 24, 2020

Additional Environmental Record Sources

Federal

PFOA/PFOS Contaminated Sites: PFAS NPL

List of sites where PFOA or PFOS contaminants have been found in drinking water or soil. Made available by the Federal Environmental Protection Agency (EPA).

Government Publication Date: Nov 18, 2020

Facility Registry Service/Facility Index: FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 2, 2020

Toxics Release Inventory (TRI) Program: TRIS

The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U. S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment.

Government Publication Date: Feb 19, 2020

Perfluorinated Alkyl Substances (PFAS) Releases: PFAS TRI

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a Per- or polyfluorinated alkyl substance (PFAS) included in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances. The EPA's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of over 650 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment.

Government Publication Date: Feb 19, 2020

Perfluorinated Alkyl Substances (PFAS) Water Quality: PFAS WATER

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated PFAS Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

Hazardous Materials Information Reporting System: HMIRS

US DOT - Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) Incidents Reports Database taken from Hazmat Intelligence Portal, U.S. Department of Transportation.

Government Publication Date: Sep 1, 2020

National Clandestine Drug Labs: NCDL

The U.S. Department of Justice ("the Department") provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Oct 5, 2020

Toxic Substances Control Act: TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI).

Government Publication Date: Apr 11, 2019

Hist TSCA: HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.
The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing: FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing: FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List: PRP

Early in the cleanup process, the Environmental Protection Agency (EPA) conducts a search to find the potentially responsible parties (PRPs). EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site.

Government Publication Date: Dec 30, 2020

State Coalition for Remediation of Drycleaners Listing: SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS): ICIS

The Integrated Compliance Information System (ICIS) is a system that provides information for the Federal Enforcement and Compliance (FE&C) and the National Pollutant Discharge Elimination System (NPDES) programs. The FE&C component supports the Environmental Protection Agency's (EPA) Civil Enforcement and Compliance program activities. These activities include Compliance Assistance, Compliance Monitoring and Enforcement. The NPDES program supports tracking of NPDES permits, limits, discharge monitoring data and other program reports.

Government Publication Date: Jan 6, 2021

Drycleaner Facilities: FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) online search. The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Jan 20, 2020

Delisted Drycleaner Facilities: DELISTED FED DRY

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

Government Publication Date: Jan 20, 2020

Formerly Used Defense Sites: FUDS

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DoD) is responsible for an environmental restoration. This list is published by the U.S. Army Corps of Engineers.

Government Publication Date: Jan 28, 2020

PHMSA Pipeline Safety Flagged Incidents: PIPELINE INCIDENT

A list of flagged pipeline incidents made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types.

Government Publication Date: Jul 7, 2020

Material Licensing Tracking System (MLTS): MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: Aug 5, 2020

Historic Material Licensing Tracking System (MLTS) sites: HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File: MINES

The Master Index File (MIF) contains mine identification numbers issued by the Department of Labor Mine Safety and Health Administration (MSHA) for mines active or opened since 1971. Note that addresses may or may not correspond with the physical location of the mine itself.

Government Publication Date: Nov 3, 2020

Alternative Fueling Stations: ALT FUELS

List of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE). The National Renewable Energy Laboratory (NREL) obtains information about new stations from trade media, Clean Cities coordinators, a Submit New Station form on the Station Locator website, and through collaborating with infrastructure equipment and fuel providers, original equipment manufacturers (OEMs), and industry groups.

Government Publication Date: Jan 18, 2021

Registered Pesticide Establishments: SSTS

List of active EPA-registered foreign and domestic pesticide-producing and device-producing establishments based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that facilities producing pesticides, active ingredients, or devices be registered. The list of establishments is made available by the EPA.

Government Publication Date: Mar 31, 2020

Polychlorinated Biphenyl (PCB) Notifiers: PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Nov 19, 2020

State

Dry Cleaning Facilities: DRYCLEANERS

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial, linen supply, commercial laundry, dry cleaning and pressing machines - Coin Operated Laundry and Dry Cleaning. This is provided by the Department of Toxic Substance Control.

Government Publication Date: Nov 10, 2020

Delisted Drycleaners: DELISTED DRYCLEANERS

Sites removed from the list of drycleaner related facilities that have EPA ID numbers, made available by the California Department of Toxic Substance Control.

Government Publication Date: Nov 10, 2020

Non-Toxic Dry Cleaning Incentive Program: DRYC GRANT

A list of grant recipients of the Non-Toxic Dry Cleaning Incentive Program made available by the California Air Resources Board (CARB). The program provides grants to eligible dry cleaning businesses to assist them in transitioning away from PERC machines to alternative non-toxic and non-smog forming technologies.

Government Publication Date: Feb 28, 2018

Per- and Polyfluoroalkyl Substances (PFAS): PFAS

List of sites from the State Water Resources Control Board (SWRCB)'s GeoTracker at which one or more of the potential contaminants of concern are in the PFAS Master List of PFAS Substances made available by the Environmental Protection Agency (US EPA).

Government Publication Date: Nov 16, 2020

PFOA/PFOS Groundwater: PFAS GW

A list of water wells from the Groundwater Ambient Monitoring and Assessment Program (GAMA) Groundwater Information System with the groundwater chemical perfluorooctanoic acid (PFOA) (NL = 0.014 UG/L) or perfluorooctanoic sulfonate (PFOS) (NL = 0.013 UG/L). The GAMA Groundwater Information System search is made available by California Water Boards.

Government Publication Date: Oct 22, 2020

Hazardous Waste and Substances Site List - Site Cleanup: HWSS CLEANUP

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements in providing information about the location of hazardous materials release sites. This list is published by California Department of Toxic Substance Control.

Government Publication Date: Nov 10, 2020

List of Hazardous Waste Facilities Subject to Corrective Action: DTSC HWF

This is a list of hazardous waste facilities identified in Health and Safety Code (HSC) § 25187.5. These facilities are those where Department of Toxic Substances Control (DTSC) has taken or contracted for corrective action because a facility owner/operator has failed to comply with a date for taking corrective action in an order issued under HSC § 25187, or because DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.

Government Publication Date: Jul 18, 2016

EnviroStor Inspection, Compliance, and Enforcement: INSP COMP ENF

A list of permitted facilities with inspections and enforcements tracked in the Department of Toxic Substance Control (DTSC) EnviroStor.

Government Publication Date: Oct 7, 2020

School Property Evaluation Program Sites: SCH

A list of sites registered with The Department of Toxic Substances Control (DTSC) School Property Evaluation and Cleanup (SPEC) Division. SPEC is responsible for assessing, investigating and cleaning up proposed school sites. The Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy the new school.

Government Publication Date: Jan 13, 2021

California Hazardous Material Incident Report System (CHMIRS): CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS). This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Oct 12, 2020

Hazardous Waste Manifest Data: HAZNET

A list of hazardous waste manifests received each year by Department of Toxic Substances Control (DTSC). The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Oct 24, 2016

Historical California Hazardous Material Incident Report System (CHMIRS): HIST CHMIRS

A list of reported hazardous material incidents, spills, and releases from the California Hazardous Material Incident Report System (CHMIRS) prior to 1993. This list has been made available by the California Office of Emergency Services (OES).

Government Publication Date: Jan 1, 1993

Historical Hazardous Waste Manifest Data: HIST MANIFEST

A list of historic hazardous waste manifests received by the Department of Toxic Substances Control (DTSC) from year the 1980 to 1992. The volume of manifests is typically 900,000 - 1,000,000 annually, representing approximately 450,000 - 500,000 shipments.

Government Publication Date: Dec 31, 1992

Historical Cortese List: HIST CORTESE

List of sites which were once included on the Cortese list. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies and developers to comply with the California Environmental Quality Act requirements for providing information about the location of hazardous sites.

Government Publication Date: Nov 13, 2008

Cease and Desist Orders and Cleanup and Abatement Orders: CDO/CAO

The California Environment Protection Agency "Cortese List" of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO). This list contains many CDOs and CAOs that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, as examples, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards' database does not distinguish between these types of orders.

Government Publication Date: Feb 16, 2012

California Environmental Reporting System (CERS) Hazardous Waste Sites: CERS HAZ

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator. The CalEPA oversees the statewide implementation of the Unified Program which applies regulatory standards to protect Californians from hazardous waste and materials.

Government Publication Date: Feb 9, 2021

Delisted Environmental Reporting System (CERS) Hazardous Waste Sites: DELISTED HAZ

This database contains a list of sites that were removed from the California Environmental Protection Agency (CalEPA) in the following regulatory programs: Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, RCRA LQ HW Generator.

Government Publication Date: Nov 29, 2018

Sites in GeoTracker: GEOTRACKER

GeoTracker is the State Water Resource Control Boards' data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. This is a list of sites in GeoTracker that aren't otherwise categorized as LUST, Land Disposal Sites (LDS), Cleanup Sites, or sites having Waste Discharge Requirements (WDR). This listing includes program types such as Underground Injection Control (UIC), Confined Animal Facilities (CAF), Irrigated Lands Regulatory Program, plans, and non-case information.

Government Publication Date: Nov 16, 2020

Waste Discharge Requirements: WASTE DISCHG

List of sites in California State Water Resources Control Board (SWRCB) Waste Discharge Requirements (WDRs) Program in California, made available by the SWRCB via GeoTracker. The WDR program regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Government Publication Date: Nov 16, 2020

Toxic Pollutant Emissions Facilities: EMISSIONS

A list of criteria and toxic pollutant emissions data for facilities in California made available by the California Environmental Protection Agency - Air Resources Board (ARB). Risk data may be based on previous inventory submittals. The toxics data are submitted to the ARB by the local air districts as requirement of the Air Toxics "Hot Spots" Program. This program requires emission inventory updates every four years.

Government Publication Date: Dec 31, 2018

Clandestine Drug Lab Sites: CDL

The Department of Toxic Substances Control (DTSC) maintains a listing of drug lab sites. DTSC is responsible for removal and disposal of hazardous substances discovered by law enforcement officials while investigating illegal/clandestine drug laboratories.

Government Publication Date: Jun 30, 2018

Tribal

No Tribal additional environmental record sources available for this State.

County

Riverside County - Hazardous Waste Generator Sites List: RIVERSIDE HWG

A list of Hazardous Waste Generator Sites in the County of Riverside. This list is made available by Riverside County Department of Environmental Health which has been designated as the CUPA for the County.

Government Publication Date: Nov 24, 2020

Riverside County - Disclosure Facility List: RIVERSIDE HZH

A list of facilities disclosed to Riverside County Department of Environmental Health (DEH). This list is made available by Riverside County DEH which has been designated as the CUPA for the County. A business is required to establish and submit a Business Plan if the facility handles hazardous material equal to or greater than 55 gallons, 500 pounds or 200 cubic feet at any time during the year.

Government Publication Date: Nov 24, 2020

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX B
REGULATORY AGENCY RECORDS

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
5796 Corporate Avenue
Cypress, California 90630

Gavin Newsom
Governor

February 25, 2021

Samantha Weis
WEIS ENVIRONMENTAL
sw@weisenviro.com

PR4-022321-06
600 N HATHAWAY STREET, BANNING, CA

We have received your Public Records Act Request from the Department of Toxic Substances Control (DTSC). After a thorough review of our files, no site records were found pertaining to the sites/facilities referenced above.

A large number of our records are available on EnviroStor, an online database that provides non-confidential, public access to DTSCs Data Management System. It tracks our cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues. EnviroStor is available 24/7, 365 days a year. The data reflects the latest updates as they are entered in the system. Access it from your computer or smartphone, the local library – anywhere Internet access is available. Just go to www.envirostor.dtsc.ca.gov. You'll find a step-by-step tour of EnviroStor under the "How to Use EnviroStor" menu on the website.

If you have any questions or would like further information regarding your request, please contact me at 714-4845337 or via email at CypressFileRoom@dtsc.ca.gov.

Sincerely,

Julie Johnson
Julie Johnson
Regional Records Coordinator

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
5796 Corporate Avenue
Cypress, California 90630

Gavin Newsom
Governor

February 25, 2021

Samantha Weis
WEIS ENVIRONMENTAL
sw@weisenviro.com

PR4-022321-09
532-110-001, 002, 531-110-003, 008, 009, 010 BANNING, CA

We have received your Public Records Act Request from the Department of Toxic Substances Control (DTSC). After a thorough review of our files, no site records were found pertaining to the sites/facilities referenced above.

A large number of our records are available on EnviroStor, an online database that provides non-confidential, public access to DTSCs Data Management System. It tracks our cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues. EnviroStor is available 24/7, 365 days a year. The data reflects the latest updates as they are entered in the system. Access it from your computer or smartphone, the local library – anywhere Internet access is available. Just go to www.envirostor.dtsc.ca.gov. You'll find a step-by-step tour of EnviroStor under the "How to Use EnviroStor" menu on the website.

If you have any questions or would like further information regarding your request, please contact me at 714-4845337 or via email at CypressFileRoom@dtsc.ca.gov.

Sincerely,

Julie Johnson
Julie Johnson
Regional Records Coordinator

Gmail Samantha Weis <sw@weisenviro.com>

Public Records Request/Waterboard/Banning, CA

WB-RB7-PRA <RB7-PRA@waterboards.ca.gov> Tue, Mar 2, 2021 at 8:37 AM
To: Samantha Weis <sw@weisenviro.com>

The Colorado River Basin Regional Water Quality Control Board has received your request for records pertaining to 600 N Hathaway Street, Banning, CA; APN 532-110-001, 531-110-002, 531-110-003, 531-110-008, 531-110-009, 531-110-010. At this time the Water Board does not keep records based on APN. Based on a search of the address provided we have determined we do not have records pertaining the to the site in question.

Thank you,

Sara Simpson

Office Technician, Typing

Colorado River Basin Water Quality Control Board

760-346-7492

From: Samantha Weis <sw@weisenviro.com>
Sent: Tuesday, February 23, 2021 2:15 PM
To: WB-RB7-PRA <RB7-PRA@Waterboards.ca.gov>
Subject: Re: Public Records Request/Waterboard/Banning, CA

EXTERNAL:

[Quoted text hidden]

PAGE 1590 STATE WATER RESOURCES CONTROL BOARD 06/01/88

HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR RIVERSIDE COUNTY

CONTAINER TYPES: 1,2,3,4,5

(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

I OWNER
FRED-LITE BLOCKS
600 NO. HATHAWAY BANNING CA 92220

II FACILITY

	MAILING ADDRESS	DEALER/FOREMAN/SUPERVISOR	TYPE OF BUSINESS
FRED-LITE BLOCKS	TOWNSHIP/RANGE/SECTION	TELEPHONE	NO. OF CONTAINERS
600 NO. HATHAWAY			
BANNING CA 92220	P.O. BOX 1298		MANUFACTURER
	BANNING CA 92220		
CROSS STREET :		(714) 849-7891	2

III 24-HR. CONTACT PERSON / TELEPHONE
DAY: FREDERICK, RUSSELL M. (714) 849-1890 NIGHT: SAME ( ) -

********** OWNER ASSIGNED CONTAINER NUMBER: 3 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000006084001 **********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : 1977
D. CAPACITY (GALLONS) : 8,000
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL : YES CONTAINS: PREMIUM

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: 1/4 INCHES B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : UNKNOWN

VI PIPING
A. ABOVEGROUND PIPING : B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
12033 PREMIUM MOTOR VEHICLE FUEL

PAGE 1591 STATE WATER RESOURCES CONTROL BOARD 06/01/88
HAZARDOUS SUBSTANCE STORAGE CONTAINER INFORMATION FOR RIVERSIDE COUNTY
CONTAINER TYPES: 1,2,3,4,5
(1=FARM MOTOR VEHICLE FUEL TANKS, 2=ALL OTHER PRODUCT TANKS, 3=WASTE TANKS, 4=SUMPS, 5=PITS, PONDS, LAGOONS & OTHERS)

********** OWNER ASSIGNED CONTAINER NUMBER: 4 ********** STATE BOARD ASSIGNED CONTAINER ID NUMBER: 00000006084002 **********

IV DESCRIPTION
A. CONTAINER TYPE : TANK
B. MANUFACTURER/YR OF MFG: /
C. YEAR INSTALLED : 1977
D. CAPACITY (GALLONS) : 8,000
E. REPAIRS : NONE IF YES WHEN :
F. CURRENTLY USED : YES IF NO, YEAR OF LAST USE:
G. STORES : PRODUCT
H. MOTOR VEHICLE FUEL/WASTE OIL ; YES CONTAINS: DIESEL

IS CONTAINER LOCATED ON A FARM : NO

V CONTAINER CONSTRUCTION
A. THICKNESS: 1/4 INCHES B. VAULTING: NON-VAULTED C. WALLING: SINGLE
D. MATERIAL : CARBON STEEL
E. LINING : UNLINED
F. WRAPPING : UNKNOWN

VI PIPING
A. ABOVEGROUND PIPING : B. UNDERGROUND PIPING : SUCTION
C. REPAIRS : NONE IF YES, YEAR OF MOST RECENT REPAIR:

VII LEAK DETECTION
VISUAL

VIII CHEMICAL COMPOSITION OF SUBSTANCES CURRENTLY STORED IN CONTAINER
12034 DIESEL MOTOR VEHICLE FUEL

COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc

DBA: Orco Block Company Inc

Mailing Address: 11100 Beach Blvd
Stanton, CA 90680

EPA ID: CAL000092547

Facility #: FA0016196

Permit Expiration Date: 03/31/2012
Area Number: H02
District Number: H001

Site Address: 600 N Hathaway St
Banning, CA 92220

Regulated Activity: PR0020081 5201 - 0-10 Generator

Regulated Activity: PR0026392 5173 - Level Ib

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances and regulations that are now or may hereafter be in force by the United States Government, the State of California, and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above listed programs. **This permit must be renewed on or before the expiration date shown above.** This permit may be suspended or revoked by the enforcement officer for cause. **Inspection of this business may be conducted by a duly authorized representative of the Director of Environmental Health. THIS PERMIT IS NOT TRANSFERABLE OR REFUNDABLE.**

Western County Office
4065 County Circle Dr.
Riverside, CA 92503
(951) 358-5055

Corona Office
2275 S. Main Street #204
Corona, CA 92882
(951) 273-9143

Desert County Office
47950 Arabia Street, Suite A
Indio, CA 92201
(760) 863-8976

South County Office
800 S. Sanderson
Hemet, CA 92545
(951) 766-6524

POST IN A CONSPICUOUS PLACE

COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: 11100 Beach Blvd
Stanton, CA 90680

EPA ID: CAL000092547
Facility #: FA0016196
Permit Expiration Date: 03/31/2010
Area Number: H02
District Number: H001

Site Address: 600 N Hathaway St
Banning, CA 92220

Regulated Activity: PR0020081 5201 - 0-10 Generator
Regulated Activity: PR0028392 5173 - Level Ib

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances and regulations that are now or may hereafter be in force by the United States Government, the State of California, and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above listed programs. **This permit must be renewed on or before the expiration date shown above.** This permit may be suspended or revoked by the enforcement officer for cause. **Inspection of this business may be conducted by a duly authorized representative of the Director of Environmental Health. THIS PERMIT IS NOT TRANSFERABLE OR REFUNDABLE.**

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DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: 11100 Beach Blvd
Stanton, CA 90680

EPA ID: CAL000092547
Facility #: FA0016196
Permit Expiration Date: 03/31/2011
Area Number: H02
District Number: H001

Site Address: 600 N Hathaway St
Banning, CA 92220

Regulated Activity: PR0020081 5201 - 0-10 Generator
Regulated Activity: PR0028392 5173 - Level Ib

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances and regulations that are now or may hereafter be in force by the United States Government, the State of California, and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above listed programs. **This permit must be renewed on or before the expiration date shown above.** This permit may be suspended or revoked by the enforcement officer for cause. **Inspection of this business may be conducted by a duly authorized representative of the Director of Environmental Health. THIS PERMIT IS NOT TRANSFERABLE OR REFUNDABLE.**

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COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: 11100 Beach Blvd
Stanton, CA 90680

EPA ID: CAL000092547
Facility #: FA0016196
Permit Expiration Date: 03/31/2009
Area Number: H02
District Number: H001

Site Address: 600 N Hathaway St
Banning, CA 92220

Regulated Activity: PR0020081 5201 - 0-10 Generator
Regulated Activity: PR0028392 5175 - Level IIIb

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances and regulations that are now or may hereafter be in force by the United States Government, the State of California, and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above listed programs. This permit must be renewed on or before the expiration date shown above. This permit may be suspended or revoked by the enforcement officer for cause. **Inspection of this business may be conducted by a duly authorized representative of the Director of Environmental Health. THIS PERMIT IS NOT TRANSFERABLE OR REFUNDABLE.**

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COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: PO Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2008

Area: 2 District: 1

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Tuesday, March 20, 2007
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on or before the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

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COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: PO Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2007

Area: 2 District: 1

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Tuesday, March 21, 2006
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

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COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: PO Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2006

Area: 2 District: 1

Type of Business: Hazardous Materials Facility
Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Friday, March 18, 2005
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

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COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: PO Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2005

Area: 2 District: 1

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator – County Ordinance No. 615
Hazardous Materials Disclosure – City of Banning Ordinance No. 893

Thursday, May 06, 2004
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

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Central County Office
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Hemet, CA 92545
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POST IN A CONSPICUOUS PLACE

COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Owner: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: P O Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2004

Area: 2 District: 1

Type of Business: Hazardous Materials Facility
Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator – County Ordinance No. 615
Hazardous Materials Disclosure – City of Banning Ordinance No. 893

Wednesday, April 23, 2003
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

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POST IN A CONSPICUOUS PLACE

COUNTY OF RIVERSIDE • COMMUNITY HEALTH AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Name: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: P O Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2003

Area: 2 District: 1

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Tuesday, May 14, 2002
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

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Riverside, CA 92503
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(909) 766-6524

POST IN A CONSPICUOUS PLACE

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Name: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: P O Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2002

Area: 2 District: 1

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Tuesday, April 24, 2001
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

Western County Office
4065 County Circle Dr.
Riverside, CA 92503
(909) 358-5055

Desert County Office
47-923 Oasis Street E4
Indio, CA 92201
(760) 863-8976

South County Office
1370 South State St
San Jacinto, CA 92583
(909) 791-2200

POST IN A CONSPICUOUS PLACE

B

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Name: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: P O Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/01

Area: 2 District: 1

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Wednesday, February 16, 2000
Date Issued

Gary L. Root, Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

Western County Office
4065 County Circle Dr.
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(909) 358-5055

Desert County Office
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Indio, CA 92201
(760) 863-8976

South County Office
1370 South State St
San Jacinto, CA 92583
(909) 791-2200

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Name: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: P O Box 1388
City and State: Banning, CA 92220

EPA ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/2000

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance No. 615
Hazardous Materials Disclosure -- City of Banning Ordinance No. 893

Tuesday, May 18, 1999
Date Issued

Gary L. Root, Interim Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

Western County Office
4065 County Circle Dr.
Riverside, CA 92503
(909) 358-5055

Desert County Office
47-923 Oasis Street E4
Indio, CA 92201
(760) 863-8976

South County Office
1370 South State St
San Jacinto, CA 92583
(909) 791-2200

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY

DEPARTMENT OF ENVIRONMENTAL HEALTH

Certified Unified Program Agency

HAZARDOUS MATERIALS MANAGEMENT PERMIT

NON-TRANSFERABLE

Name: Orco Block Company Inc
DBA: Orco Block Company Inc
Mailing Address: P O Box 1388
City and State: Banning, CA 92220

BOE ID#: CAL000092547
Facility Number: 82268
Expiration Date: 3/28/99

Type of Business: Hazardous Materials Facility

Facility Location: 600 N Hathaway St
City: Banning

Hazardous Waste Generator -- County Ordinance 615
Hazardous Materials Disclosure -- City of Banning Ordinance # 893

Tuesday, April 21, 1998
Date Issued

Gary L. Root, Interim Director
Department of Environmental Health

This permit is granted for the business indicated on the condition that the business will comply with the laws, ordinances, and regulations that are now or may hereafter be in force by the United States Government, the State of California and the County of Riverside pertaining to the above mentioned business. This permit serves as a receipt for payment of fees for the above-listed programs. **This permit must be renewed on the Expiration Date indicated above. This permit may be suspended or revoked for cause. Inspection of this business may be conducted by a duly authorized representative of the Department of Environmental Health.**

Western County Office
4065 County Circle Dr.
Riverside, CA 92503
(909) 358-5055

Desert County Office
47-923 Oasis Street E4
Indio, CA 92201
(760) 863-8976

South County Office
1370 South State St
San Jacinto, CA 92583
(909) 654-3878

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date 3/21/2012

Name ORCO Block FA0016196

Address 600 N. Hathaway

Re: Permit Investigation Facility # PR28392

Remarks:

This facility intends to close in the near future. All hazardous wastes have been removed. Hazardous materials are currently stored on-site exceeding limits established by County Ordinance 651. They are present to facilitate the closure of the facility.

You must remove hazardous materials prior to the end of March ~~1st~~ or pay permit fee's to avoid penalties or possible enforcement action.

If you choose to remove hazardous materials prior to March 31, please contact inspector Mike Walling (951) 766-6524 to schedule an inspection.

Specialist MWalling Received By Juan Hernandez

DEH-HEH-002 (rev 5/02) HMHC 2002 white-specialist; yellow-operator; pink-file

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date April 7TH 2012

Name Orco Block Company Inc

Address 600 N. Hathaway ST PA0006196

Re: Permit Investigation Facility # PR0002081 PR0028392

Remarks:

Facility inspection complete; all hazardous materials and wastes have been removed. Your permits; "Generator + Handler" will be cancelled.

Note: COS submitted 9/12/12.

Specialist M Wallet Received By Jose Hernandez

County of Riverside • Community Health Agency • Department of Environmental Health
Environmental Protection & Oversight Division • Hazardous Materials Management

Change of Status Form

MANDATORY: INFORMATION MUST BE COMPLETED FOR ALL CHANGE OF STATUS REQUESTS.

Date: 2/6/2012 **Facility I.D.** FA16196 ☐ New **Specialist:** J. Gates

ENTER INFORMATION TO BE CHANGED

Type	Former/OOB Information	Current Information
DBA/Facility Name		Orco Block Company
Facility Address		600 N Hathaway St
		Banning, CA 92220
Facility Phone Number		
Facility Contact Name		Juan Hernandez
Mailing Address		11100 Beach Blvd
		Stanton, CA 90680 ☐ Same
Owner Name		Orco Block Company, Inc
Owner Phone Number		
Jurisdiction: ☐ Banning ☐ Corona ☐ Riverside ☐ All Other/Unincorporated		

Type of Change Requested (Check all that apply.)

- ☐ New Facility
- ☐ New Permit
- ☐ New Owner
- ☐ Change of Address Only
- ☐ Facility Moved
- ☐ Billing Invoice Needed
- ☐ Bulk Liquid CO_2
- ☐ OOB (Out of Business)

- ☐ **Mail:**
  - ____ UST Application(s) ____
  - ____ UST New Owner Packet
  - ____ Generator Application
  - ____ Business Emergency Plan Packet
  - ____ Other ____
  - ☐ Completed by OA ____ *(Initials)*
- ☐ Cal-ARP
- ☐ Tiered Permitting

- ☐ Generator
  - Number of Employees ____
- ☑ Disclosure
  - Current Level lb PR 28392
  - ***Revised Level*** II
- ☐ Tanks
  - Number of tanks ____
  - Tank I.D.# ____
  - Tank Contents ____
  - Tank Size ____
  - ☐ Tank(s) Added ____
  - ☐ Tank(s) Removed ____
  - ☐ Plan Check # ____
  - ☐ SR # ____
- ☐ BOE # ____
  [Board of Equalization UST Storage Fee Acct. #]

Comments: This facility should be a level 2 handler per site inspection. All other programs/information is unchanged.

Forward COS form for review and initial & date by the following sequence after completion: ROSIE ALVARADO

1) Supervisor	Initial	Date	2) Accounting	Initial	Date	3) OA	Initial	Date
	B	2/6/12		AM	2-6-12			

2/7/12

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Division
Hazardous Waste Generator Inspection Report

Facility Name: Orco Block Company Date: 2/6/12
Address: 600 N Hathaway Inspection: Routine [✓] Reinspection [ ]
City: Banning Zip Code: 92220 Facility # FA0208081 Type of Generator: □ LQG ☒ SQG
Contact Person: Ivan Hernandez # of Employees: 0-10 Telephone: 951-849-7891

Riv. County Code, Title 8.60 (Ordinance 615.3) Calif. Code of Regulations Title 22 Health & Safety Code Chapter 6.5
Items marked "Y" (Yes) are in compliance. Items marked "N" (No) are violations and must be corrected as outlined in the inspection report N/A is not applicable or unable to verify.

Hazardous Waste Storage	Y	N	N/A
200. Access for Inspection HSC 25185, 25195	✓		
201. Maintained and Operated to Minimize the Possibility of Fire, Explosion, or Release CCR 66265.31, 66262.34(d), HSC 25123.3(h)(I)	✓		
202. Accumulation Time CCR 66262.34(a)(c), 66262.34(d), HSC 25123.3(h)(I)		✓	
203. Satellite Accumulation CCR 66262.34(e)			✓
204. Separation of Incompatible Materials CCR 66265.177, 66262.34(d), HSC 25123.3(h)(I)	✓		
Containers			
205. Compatibility of Waste with Container CCR 66265.172, 66262.34(d), HSC 25123.3(h)(I)	✓		
206. Container Marking and Labeling CCR 66262.34(a)(2), 66262.34(e)(3), 66262.34(f), 66261.7(f), HSC 25124(b)(3)		✓	
207. Weekly Inspections CCR 66265.174, 66262.34(d), HSC 25123.3(h)(I)	✓		
208. Container Condition CCR 66265.171, 66262.34(d), HSC 25123.3(h)(I)	✓		
209. Containers Not Leaking CCR 66265.173(b), 66262.34(d), HSC25123.3(h)(I)	✓		
210. Containers Closed CCR 66265.173(a), 66262.34(d), HSC 25123.3(h)(I)	✓		
211. Ignitable or Reactive Wastes Stored at Least 50 ft. from Property Line CCR 66265.176, 66262.34(d), HSC 25123.3(h)(I)	✓		
212. Aisle Space CCR 66265.35, 66262.34(d), HSC 25123.3(h)(I)	✓		
Aboveground Hazardous Waste Tank Systems			
213. Containment of and Detection of Leaks CCR 66265.193	✓		
214. Waste Tank Standards CCR 66265.194, 66262.34(d), HSC 25123.3(h)(I)	✓		
215. Inspection of Aboveground Hazardous Waste Tanks CCR 66265.195, 66262.34(d), HSC 25123.3(h)(I)	✓		
216. Leaks, Spills, or Unfit ASTs CCR 66265.196-197, 66262.34(d)	✓		
Preparedness, Prevention and Contingency Planning			
217. Required Fire, Spill & Decontamination Equipment CCR 66265.32(c), 66262.34(d), HSC 25123.3(h)(I)	✓		
218. Testing and Maintenance of Equipment CCR 66265.33,66262.34(d)	✓		
219. Access to Communications or Alarms CCR 66265.34, 66262.34(d)	✓		
220. Evacuation Plan CCR 66265.52		✓	
221. Emergency Coordinator Listed CCR 66265.55, 66262.34(d)		✓	
222. Emergency Response Procedures CCR 66265.51-53, 66262.34(d)		✓	

General Hazardous Waste Requirements	Y	N	N/A
223. Hazardous Waste Generator Permit Fees RCC Title 8.60	✓		
224. EPA ID Number CA CA0009547 CCR 66262.12(a)	✓		
225. Hazardous Waste Determination CCR 66262.11, 66260.200(c)	✓		
226. Disposed/Treated at an Authorized Location HSC 25189.5(a), 25189.5(d), 25250.5(a), 25217.1, CCR 66268.3(a)			✓
227. Treatment/Storage/Transfer/Disposal Permit HSC 25201(e), CCR 66270.1			✓
228. Recycling Plan Complete and Reported HSC 25143.10			✓
229. Excluded Recyclable materials HSC 25143.2			✓
Records Review			
230. Manifest Requirements/Consolidated Manifest CCR 66262.40, 66262.20-66262.23, 66268.7(a), HSC 25160.2, 25250.18		✓	
231. Manifest Exception Reports CCR 66262.42			✓
232. Personnel Training CCR 66265.16, 66262.34(d), HSC 25123.3(h)(I)	✓		
233. Waste Analysis CCR 66262.40(c)			✓
234. Hazardous Waste Source Reduction & Management Plan CCR 67100.1-67100.11			✓
235. Biennial Reports CCR 66262.41			✓
Transportation			
236. Use of a Registered Transporter of Hazardous Waste HSC 25163(a), CCR 66262.12(c)			✓
Miscellaneous			
237. Used Oil Not Contaminated with Hazardous Waste HSC 25250.7	✓		
238. Used Oil and/or Fuel Filters CCR 66266.130, HSC 25250.22			✓
239. Batteries Properly Managed CCR 66266.81			✓
240. Universal Waste CCR 66273 Conditionally Exempt Small Quantity Universal Waste Generator Requirements			✓
241. Small Quantity Universal Waste Handler(see attached report)			✓
242. Large Quantity Universal Waste Handler(see attached report)			✓
243. Contaminated Rags HSC 25144.6	✓		
244. Silver Only Waste HSC 25143.13			✓
245. Other:			

This facility is a cement block manufacturing plant. This plant is no longer in operation however some hazardous waste remains onsite. Waste streams include used oil.

201) Owner/operator failed to comply with proper accumulation time. Observed one AST containing waste oil that has not been emptied since 2005 according to facility manager, Bruce. Owner/operator shall comply with proper accumulation time of 180 days. Waste currently onsite shall be removed within 21 days by a licensed hazardous waste hauler. continued.

☒ ***Notice of Violation***
The above violations shall be corrected within 21 days.
Specialist: S. Gates
Received by: Bruce Kunkeary
Print Name: Bruce Kunkeary
Title: Foreman

Riverside Office (951) 358-5055, P.O. Box 7489, Riverside, CA 92513-7489
Indio Office (760) 863-8976, 47-950 Arabia St., Ste. A, Indio, CA 92201
Hemet Office (951) 766-6524, 800 S. Sanderson Ave. Ste. 102, Hemet, CA 92545
Corona Office (951) 273-9143, 2275 S. Main St. Ste. 204, Corona, CA 92882

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date 2/6/12

Name Orco Block Company

Address 600 N Hathaway St., Banning

Re: Generator inspection Facility # PR 20081

Remarks:

206) Owner/operator failed to properly label all hazardous waste containers. Observed one AST containing waste oil that was labeled as new oil. Owner/operator shall label all containers of hazardous waste with the words "hazardous waste", the facility name/address, the container contents, and the accumulation start date.

220-222) Owner/operator failed to have a written waste contingency plan. No contingency plan available. Owner/operator shall shall create a written plan which lists an emergency coordinator, evacuation procedures, and emergency response procedures.

230) Owner/operator failed to ~~have~~ comply with manifest requirements. No waste manifests available. Owner/operator shall locate all manifests for waste ~~pickups~~ pickups which occured in the last 36 months and retain onsite.

Note: unable to verify items 226 and 236 due to a lack of manifests.

All violations shall be corrected on/before 2/27/12. Reinspection will be on/after 2/27/12.

Specialist J. Gates Received By Bruce Kunzman

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division
Hazardous Waste Generator Report Form

7/29/04

Facility Name: Orco Block Co
Address: 600 N Hathaway
City: Banning
Contact Person: Robbie Peltier
Zip Code: 92220
Number of Employees: 15
Date: 7-14-04
Inspection Routine [ ] Re-inspection [X]
Facility #: 82268
Telephone: 909-849-7891

Health & Safety Code, Chapter 6.5					California Code of Regulations, Title 22 C=Compliance, Viol. Type=Violation Type, N/A= Non-Applicable					Riverside County Code, Title 8.60 (Ordinance 615.3)
Hazardous Waste Storage	C Yes	C No	Viol Type	N/A	**General Hazardous Waste Requirements**	C Yes	C No	Viol Type	N/A	
200. H&SC 225195 Access for Inspection					225. Riverside County Code Title 8.60 (Ord. 615.3) Hazardous Waste Generator Permit Fees					
201. 22 CCR 66265.31 Maintained and Operated to Minimize the Possibility of Fire, Explosion, or Release					226. 22CCR 66262.12 (a) EPA ID Number CA_____					
202. 22 CCR 66262.34 Accumulation Time					227. 22CCR 66262.11 Hazardous Waste Determination					
203. 22 CCR 66262.34 (e) Satellite Accumulation					228. H&SC 25189.5(a) Disposed Treated at an Authorized Location					
204. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.177 Separation of Incompatible Materials					229. H&SC 25201 (a), 22CCR 66270.1 Treatment/Storage/Transfer/Disposal Permit					
Containers					230. H&SC 25143.10 Recycling Plan Complete and Reported					
205. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.172 Compatibility of Waste with Container					231. H&SC 25143.2 Excluded Recyclable Materials					
206. 22CCR 66262.34 (d) (2), 66262.34 (a) (2), 66262.34 (f) Container Marking and Labeling					**Records Review**					
207. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.174 Weekly Inspections					232. H&SC 25160.2, 22CCR 66262.20-66262.23 General Manifesting Requirements					
208. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.171 Container Condition					233. 22CCR66262.42 Manifesting Exception Reports					
209. 22CCR 66262.173 (b) Containers Not Leaking					234. 22CCR 66262.16, 66262.34 (a) (3) Personnel Training & Training Documents Maintained & Available	✓				
210. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.173 (a) Management of Containers (Stored Closed)					235. 22CCR66268.7 Waste Analysis					
211. 22CCR 66265.176, 66262.34 (a) (1) Ignitable or Reactive Wastes Stored At Least 50 ft From Property line					236. 22CCR 67100.1-67100.11 Hazardous Waste Source Reduction & Management Review (Waste Minimization)					
212. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.35 Aisle Space					237. 22CCR 66262.41 Biennial Reports					
Aboveground Hazardous Waste Tank Systems					**Transportation**					
213. 22CCR 66265.193 Containment of and Detection of Leaks					238. H&SC 25163 (a), 22CCR 66262.10 Use of a Registered Transporter of Hazardous Waste					
214. 22CCR 66265.194 Aboveground Tanks Holding Hazardous Waste Operating Requirements					**Management of Used Oil, Oil Filters & Batteries**					
215. 22CCR 662265.195 Inspection of Aboveground Tanks Containing Hazardous Waste					239. H&SC 25250.4 Used Oil Managed Properly					
216. 22 CCR 66265.196 Leaks, Spills, or Unfit AST's					240. H&SC 25160.2 Used Oil Shipment Record Keeping					
217. H&SC 25270.5(c) Spill Prevention Control and Counter-measure Plan Complete [□ Referral to RWQCB If No Plan]					241. H&SC 25250.7 Used Oil Not Contaminated with Hazardous Waste					
Preparedness, Prevention and Contingency Planning					242. 22CCR 66266.130 Used Oil Filters					
218. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.32 Required Fire, Spill, & Decontamination Equipment					243. 22CCR 66266.81 Batteries Properly Managed					
219. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.33 Testing and Maintenance Fire, Spill, & Decontamination of Equipment					**Universal Waste**					
220. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.34 Access to Communications or Alarms					244. 40 CFR 273, 22 CCR 66273 Universal Waste Fluorescent tubes, batteries, and mercury switches					
221. 22CCR 66262.34 (d) Evacuation Plan					**Specific Materials**					
222. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.37, 66265.56, 66265.52 (f), 66265.55 Arrangements with Local Authorities					245. H&SC 25144.6 Contaminated Rags					
223. 22CCR 66262.34 (d) Emergency Coordinator Listed					246. H&SC 25143.13, 40 CFR 261 Silver Only Waste					
224. 66262.34 (a) (3), 66265.52 Emergency Response Procedures	✓				247. Other:					

The above mentioned violations shall be corrected within ____days

Specialist: Cindy Brown
Received By: R. Silva
Print Name: Rene Silva
Title: Regulatory Mgr

DEHHEH-022/Rev 7/2002
Distribution: White-Office, Canary-Owner/Operator, Pink-Specialist

Offices:
Indio (760) 863-8976 47-923 Oasis Rd Rm E4 Indio, CA 92201
Hemet (909) 766-6524 800 S. Sanderson Ave Hemet, CA 92545
Murrieta (909) 461-0634 38740 Sky Canyon Dr Murrieta, CA 92563
Riverside (909) 358-5055 4065 County Circle Dr Riverside, CA 92503

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date 7/14/04

Name Orco Block Co

Address 600 N Hathaway Banning

Re: Haz Waste Generator Report Facility # 82268

Remarks: Reinspection for April 22, 2004

Non-compliances of April 22 2004 have been corrected

Specialist C Brown Received By R Silva

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division
Hazardous Waste Generator Report Form

ENTERED 5-10-04

Facility Name: ORCO Block Co
Address: 600 N Hathaway
City: Banning Zip Code: 92220
Contact Person: Robbie Peltier Number of Employees: 15

Date: 4-22-04
Inspection Routine [X] Re-inspection [ ]
Facility #: 82268
Telephone: 909-849-7851

Health & Safety Code, Chapter 6.5 | California Code of Regulations, Title 22 | Riverside County Code, Title 8.60 (Ordinance 615.3)
C=Compliance, Viol. Type=Violation Type, N/A= Non-Applicable

Hazardous Waste Storage	C Yes	C No	Viol Type	N/A	General Hazardous Waste Requirements	C Yes	C No	Viol Type	N/A
200. H&SC 225195 Access for Inspection	✓				225. Riverside County Code Title 8.60 (Ord. 615.3) Hazardous Waste Generator Permit Fees	✓			
201. 22 CCR 66265.31 Maintained and Operated to Minimize the Possibility of Fire, Explosion, or Release	✓				226. 22CCR 66262.12 (a) EPA ID Number CA [illegible]	✓			
202. 22 CCR 66262.34 Accumulation Time NOTE	✓				227. 22CCR 66262.11 Hazardous Waste Determination	✓			
203. 22 CCR 66262.34 (e) Satellite Accumulation				✓	228. H&SC 25189.5(a) Disposed Treated at an Authorized Location	✓			
204. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.177 Separation of Incompatible Materials	✓				229. H&SC 25201 (a), 22CCR 66270.1 Treatment/Storage/Transfer/Disposal Permit	✓			
Containers					230. H&SC 25143.10 Recycling Plan Complete and Reported				✓
205. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.172 Compatibility of Waste with Container	✓				231. H&SC 25143.2 Excluded Recyclable Materials				✓
206. 22CCR 66262.34 (d) (2), 66262.34 (a) (2), 66262.34 (f) Container Marking and Labeling NOTE	✓				**Records Review**				
207. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.174 Weekly Inspections	✓				232. H&SC 25160.2, 22CCR 66262.20-66262.23 General Manifesting Requirements	✓			
208. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.171 Container Condition	✓				233. 22CCR66262.42 Manifesting Exception Reports				✓
209. 22CCR 66262.173 (b) Containers Not Leaking	✓				(234) 22CCR 66262.16, 66262.34 (a) (3) Personnel Training & Training Documents Maintained & Available		✓		
210. 22CCR 66262.34 (d) (2), 66262.34 (a) (1), 66265.173 (a) Management of Containers (Stored Closed)	✓				235. 22CCR66268.7 Waste Analysis	✓			
211. 22CCR 66265.176, 66262.34 (a) (1) Ignitable or Reactive Wastes Stored At Least 50 ft From Property line				✓	236. 22CCR 67100.1-67100.11 Hazardous Waste Source Reduction & Management Review (Waste Minimization)				✓
212. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.35 Aisle Space	✓				237. 22CCR 66262.41 Biennial Reports				✓
Aboveground Hazardous Waste Tank Systems					**Transportation**				
213. 22CCR 66265.193 Containment of and Detection of Leaks				✓	238. H&SC 25163 (a), 22CCR 66262.10 Use of a Registered Transporter of Hazardous Waste	✓			
214. 22CCR 66265.194 Aboveground Tanks Holding Hazardous Waste Operating Requirements				✓	**Management of Used Oil, Oil Filters & Batteries**				
215. 22CCR 662265.195 Inspection of Aboveground Tanks Containing Hazardous Waste				✓	239. H&SC 25250.4 Used Oil Managed Properly	✓			
216. 22 CCR 66265.196 Leaks, Spills, or Unfit AST's				✓	240. H&SC 25160.2 Used Oil Shipment Record Keeping	✓			
217. H&SC 25270.5(c) Spill Prevention Control and Counter-measure Plan Complete [□ Referral to RWQCB If No Plan]				✓	241. H&SC 25250.7 Used Oil Not Contaminated with Hazardous Waste	✓			
Preparedness, Prevention and Contingency Planning					242. 22CCR 66266.130 Used Oil Filters	✓			
218. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.32 Required Fire, Spill, & Decontamination Equipment	✓				243. 22CCR 66266.81 Batteries Properly Managed	✓			
219. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.33 Testing and Maintenance Fire, Spill, & Decontamination of Equipment	✓				**Universal Waste**				
220. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.34 Access to Communications or Alarms	✓				244. 40 CFR 273, 22 CCR 66273 Universal Waste Fluorescent tubes, batteries, and mercury switches	✓			
221. 22CCR 66262.34 (d) Evacuation Plan	✓				**Specific Materials**				
222. 22CCR 66262.34 (d) (2), 66262.34 (a) (3), 66265.37, 66265.56, 66265.52 (f), 66265.55 Arrangements with Local Authorities	✓				245. H&SC 25144.6 Contaminated Rags				✓
223. 22CCR 66262.34 (d) Emergency Coordinator Listed	✓				246. H&SC 25143.13, 40 CFR 261 Silver Only Waste				✓
(224.) 66262.34 (a) (3), 66265.52 Emergency Response Procedures		✓			247. Other:				

The above mentioned violations shall be corrected within 30 days

Specialist: Carly Brown
Received By: [signature]
Print Name: Robert Peltier
Title: Manager

DEH/HEH-022/Rev 7/2002
Distribution: White-Office, Canary-Owner/Operator, Pink-Specialist

Offices:
Indio (760) 863-8976 47-923 Oasis Rd Rm E4 Indio, CA 92201
Hemet (909) 766-6524 800 S. Sanderson Ave Hemet, CA 92545
Murrieta (909) 461-0634 38740 Sky Canyon Dr Murrieta, CA 92563
Riverside (909) 358-5055 4065 County Circle Dr Riverside, CA 92503

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date 4-22-04

Name ORCO Block Co

Address 600 N Hathaway Banning

Re: HAZ Waste Generator Report Facility # 82268

Remarks: Facility manufactures blocks.
Facility has a 1,000g Above ground diesel tank
Facility has waste oil - from fork lifts
Facility uses Golden West Oil Co Inc.

The following non-compliances were found at time of inspection. Facility operator shall correct them within 30 days:
#224 - Facility shall have written emergency response procedures - part of business emergency plan - prevention, mitigation, abatement procedures.
#224 Facility shall document employee training on emergency response procedures; emergency phone numbers; evacuation plan; & MSDS
NOTE: Facility to complete Business Emergency Plan and mail copy to CDF/City of Banning
Facility to label "Waste Oil" container
Facility to label Absorbent
Suggestions: Label Diesel Tank on east side with diamond sign ◇
label PAV-Air with NFPA 704 signs ◈
NOTE: Waste Oil shall be picked up every 90-DAYS.
Copy of Business Activities Page; Business Owner Page and HAZ Waste Gen Page mail to HMMD

Specialist Carolyn Brown Received By

CERTIFIED UNIFIED PROGRAM AGENCY (CUPA)
SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN
STATUS/REFERRAL FORM

Mail a *copy* of the completed form to:

California Regional Water Quality Control Board
Attn: _____

_____

_____, CA _____

CUPA Inspector: _____

Address: County of Riverside
Health Services Agency
Department of Environmental Health
Hazardous Materials Management Division
1370 S. State, Bldg. 101
San Jacinto, CA 92583

Phone: ( ) _____

Date: 5/8/00

The following facility is storing "petroleum" in a single storage tank greater than 660 gallons or in multiple storage tanks with a cumulative storage capacity greater than 1,320 gallons. "Petroleum" means crude oil, or any fraction thereof, which is liquid at 60 degrees Fahrenheit temperature and 14.7 pounds per square inch absolute pressure. This includes petroleum based substances comprised of a complex blend of hydrocarbons, such as gasoline, diesel, jet fuels, residual fuel oils, lubricants, some petroleum solvents, and used oils. An example of a substance that is not "petroleum" is liquid propane gas (LPG). *Note: The backside of this form identifies storage tanks and facilities exempt from the state Aboveground Petroleum Storage Act SPCC requirement.*

Facility Name: ORCO Block Co.

Facility Address: 6000 North Hathaway
Perris, Ca 92570

Contact: _____ **Phone:** ( ) _____

The Facility is in compliance with H&SC Section 25270.5(c), the preparation of an SPCC plan.

☐ A complete copy of the facility's SPCC plan, certified by a Registered Professional Engineer, is maintained at the facility, which is normally attended at least 8 hours per day. If the facility is not attended at least 8 hours per day, the SPCC plan is maintained at the nearest field office.

The facility is not in compliance with H&SC Section 25270.5(c).
This form constitutes a referral to the Regional Board for correction of the following violation.

☐ The facility does not have a certified SPCC plan in place.

☑ The owner or operator was unaware of the Aboveground Petroleum Storage Act. A copy of the State Water Resources Control Board, Aboveground Tank Program brochure was provided to the owner or operator.

cc: Carol Julian
State Water Resources Control Board
Division of Clean Water Programs
P.O. Box 944212
Sacramento, CA 94244-2120

SWRCB, CWP Form AGT-1 (06/28/99)

County of Riverside Health Services Agency
Department of Environmental Health
Hazardous Materials Management Division

Hazardous Waste Generator Inspection Report

Facility Name: Orco Block Co. Inc. Date: March 13, 2000
Street Address: 600 N. Hathaway Number of Employees: 0-10
City: Banning Zip Code: Inspection Type: Routine
Business Contact: Business Phone #: Reinspection Date:

Health & Safety Code Chapter 6.5 | California Code of Regulations, Title 22 | Riverside County Ordinance 615

Yes	No	N/A	Items marked "No" are violations of the above referenced codes and must be corrected as follows:
			I. Hazardous Waste Storage
✓			A. Accumulation Time
✓			B. Incompatibles Segregated
			C. Containers
✓			1. Compatible with Waste
✓			2. Labeled Properly
✓			3. Inspected Weekly
✓			4. Good Condition
✓			5. Stored Closed
✓			6. Ingnitables or Reactives 50 ft. from Property Line
		✓	D. Assessment of Tank Systems
			II. Preparedness & Prevention
	✓		A. Maintained & Operated to Minimize the Possibility of Fire, Explosion, or Release
✓			B. Communication or Alarm System
✓			C. Fire, Spill & Decontamination Equipment
	✓		D. Testing & Maintenance of Emergency Equipment due
✓			E. Aisle Space
			III. Records
✓			A. Permit # 82268
✓			B. EPA ID #
✓			C. Manifest Available for 3 Years
✓			D. Training Records Maintained
		✓	E. Waste Analysis Records
		✓	F. Copy of Biennial Report
			IV. Transportation & Disposal
✓			A. Registered Hauler Golden West
✓			B. Manifest Procedures
✓			C. Disposed/Treated at an Authorized Location
		✓	D. Extremely Hazardous Waste Permit
			V. Contingency Plan
	✓		A. Emergency Response Procedures
	✓		B. Arrangement with Local Authorities
			C. Emergency Equipment Inventoried
✓			D. Evacuation Plan
	✓		E. Emergency Coordinators Listed
			VI. Other
		✓	A. Above Ground Storage Tank Number of Tanks:
		✓	B. PBR \ TTU

IIA) Owner/Operator shall clean up the area around the waste oil containers
IID) Owner/Operator shall have the fire extinguishers serviced. Service due ~~date~~ and on extinguisher dead.
IV) Owner/Operator shall update the Contigency plan or business emergency plan.

Specialist: B. Mac Gregor

Received by:
Signature: Robert Pettis
Print Name:
Print Title:

Hazardous Materials Management Division
4065 County Circle Drive, P.O. Box 7600 (HEH)
Riverside, CA 92513-7600
(909) 358-5055 • FAX (909) 358-5017
Branch Office San Jacinto
Telephone # 791-2200

82268

County of Riverside Health Services Agency
Department of Environmental Health
Hazardous Materials Management Division

Hazardous Waste Generator Inspection Report

ENTERED 12/5/97

Facility Name: Orco Block Co Inc. Date: 11/18/97
Street Address: 600 N Hathaway Number of Employees: 0-10
City: Banning Zip Code: Inspection Type: Routine
Business Contact: Business Phone #: Reinspection Date:

Health & Safety Code Chapter 6.5 | California Code of Regulations, Title 22 | Riverside County Ordinance 615

Yes	No	N/A	Items marked "No" are violations of the above referenced codes and must be corrected as follows:
			I. Hazardous Waste Storage
✓			A. Accumulation Time 90 days
✓			B. Incompatibles Segregated
			C. Containers
✓			1. Compatible with Waste
✓			2. Labeled Properly
✓			3. Inspected Weekly
✓			4. Good Condition
✓			5. Stored Closed
		✓	6. Ingnitables or Reactives 50 ft. from Property Line
		✓	D. Assessment of Tank Systems
			II. Preparedness & Prevention
	✓		A. Maintained & Operated to Minimize the Possibility of Fire, Explosion, or Release
✓			B. Communication or Alarm System
✓			C. Fire, Spill & Decontamination Equipment
✓			D. Testing & Maintenance of Emergency Equipment
✓			E. Aisle Space
			III. Records
✓			A. Permit # 82268 3/98
✓			B. EPA ID #
✓			C. Manifest Available for 3 Years
✓			D. Training Records Maintained
		✓	E. Waste Analysis Records
		✓	F. Copy of Biennial Report
			IV. Transportation & Disposal
✓			A. Registered Hauler Golden West
✓			B. Manifest Procedures
✓			C. Disposed/Treated at an Authorized Location
		✓	D. Extremely Hazardous Waste Permit
			V. Contingency Plan
✓			A. Emergency Response Procedures
✓			B. Arrangement with Local Authorities
✓			C. Emergency Equipment Inventoried
✓			D. Evacuation Plan
✓			E. Emergency Coordinators Listed
			VI. Other
✓			A. Above Ground Storage Tank Number of Tanks: 1 Diesel
		✓	B. PBR \ TTU

IIA) Owner / Operator shall place all waste oil into the containers do not leave open containers of waste oil or other waste material.

Store all waste batteries out of the work way and in a single area.

Specialist: B. Mac Gregor

Received by:
Signature: x Russ Trulant
Print Name:
Print Title:

Hazardous Materials Management Division
4065 County Circle Drive, P.O. Box 7600 (HEH)
Riverside, CA 92513-7600
(909) 358-5055 • FAX (909) 358-5017
Branch Office San Jacinto
Telephone # 654-3878

Distribution: WHITE-Office Copy; CANARY-Owner/Operator; PINK-Specialist

County of Riverside Health Services Agency
Department of Environmental Health
Hazardous Materials Management Division

Hazardous Waste Generator Inspection Report

JUN 01 1995 EHA

Page 1 of 1

Facility Name: Orco Block Co. Inc. Date: May 24, 1995
Street Address: 600 N. Hathaway Number of Employees: 0-10
City: Banning Zip Code: Inspection Type: Routine
Business Contact: Robbie Business Phone #: Reinspection Date:

Health & Safety Code Chapter 6.5 | California Code of Regulations, Title 22 | Riverside County Ordinance 615

Yes	No	N/A	Items marked "No" are violations of the above referenced codes and must be corrected as follows:
			I. Hazardous Waste Storage
✓			A. Accumulation Time 90 days
✓			B. Incompatibles Segregated
			C. Containers
✓			1. Compatible with Waste
✓			2. Labeled Properly
✓			3. Inspected Weekly
✓			4. Good Condition
✓			5. Stored Closed
✓			6. Ingnitables or Reactives 50 ft. from Property Line
		✓	D. Assessment of Tank Systems
			II. Preparedness & Prevention
✓			A. Maintained & Operated to Minimize the Possibility of Fire, Explosion, or Release
✓			B. Communication or Alarm System
✓			C. Fire, Spill & Decontamination Equipment
✓			D. Testing & Maintenance of Emergency Equipment
✓			E. Aisle Space
			III. Records
✓			A. Permit #
✓			B. EPA ID # CAL0000 92543
✓			C. Manifest Available for 3 Years Note:
✓			D. Training Records Maintained
✓			E. Waste Analysis Records
		✓	F. Copy of Biennial Report
			IV. Transportation & Disposal
✓			A. Registered Hauler
✓			B. Manifest Procedures Mil Run.
✓			C. Disposed/Treated at an Authorized Location DeMenno
		✓	D. Extremely Hazardous Waste Permit
			V. Contingency Plan
✓			A. Emergency Response Procedures
✓			B. Arrangement with Local Authorities
✓			C. Emergency Equipment Inventoried
✓			D. Evacuation Plan
✓			E. Emergency Coordinators Listed
			VI. Other
✓			A. Above Ground Storage Tank Number of Tanks: 1
		✓	B. PBR \ TTU

No violations at the time of inspection.

Keep up the good work, the plant has improved since last year

Note: All manifest and receipts shall be kept on-site for a minimum of three years and available for review

Hazardous Materials Management Division
4065 County Circle Drive, P.O. Box 7600 (HEH)
Riverside, CA 92513-7600
(909) 358-5055 • FAX (909) 358-5017
Branch Office San Jacinto
Telephone # 654-3878

Specialist: Brenda Mac Gregor

Received by:
Signature: C. White
Print Name: Charles Whalen
Print Title: Plant Manager

Distribution: WHITE-Office Copy; CANARY-Owner/Operator; PINK-Specialist

County of Riverside Health Services Agency
Department of Environmental Health
Hazardous Materials Management Division

Hazardous Waste Generator Inspection Report

ENTERED 12/28/93

Facility Name: Orco Block Co. Inc. Date: Dec 13, 1993
Street Address: 600 N. Hathaway Number of Employees: 8
City: Banning Zip Code: Inspection Type: Routine
Business Contact: Charis Whalen Business Phone #: 849-7891 Reinspection Date: N/A

Health & Safety Code Chapter 6.5 | California Code of Regulations, Title 22 | Riverside County Ordinance 615

Yes	No	N/A	Items marked "No" are violations of the above referenced codes and must be corrected as follows:
			I. Hazardous Waste Storage
✓			A. Accumulation Time 90 day
			B. Incompatibles Segregated
			C. Containers
✓			1. Compatible with Waste
	✓		2. Labeled Properly
✓			3. Inspected Weekly
✓			4. Good Condition
✓			5. Stored Closed
		✓	6. Ingnitables or Reactives 50 ft. from Property Line
✓			D. Assessment of Tank Systems
			II. Preparedness & Prevention
✓			A. Maintained & Operated to Minimize the Possibility of Fire, Explosion, or Release
✓			B. Communication or Alarm System
✓			C. Fire, Spill & Decontamination Equipment
✓			D. Testing & Maintenance of Emergency Equipment
✓			E Aisle Space
			III. Records
✓			A. Permit # 10771
	✓		B. EPA ID #
✓			C. Manifest Available for 3 Years
✓			D. Training Records Maintained
✓			E. Waste Analysis Records
		✓	F. Copy of Biennial Report
			IV. Transportation & Disposal
✓			A. Registered Hauler
✓			B. Manifest Procedures
✓			C. Disposed/Treated at an Authorized Location
		✓	D. Extremely Hazardous Waste Permit
			V. Contingency Plan
✓			A. Emergency Response Procedures
✓			B. Arrangement with Local Authorities
✓			C. Emergency Equipment Inventoried
✓			D. Evacuation Plan
✓			E. Emergency Coordinators Listed
			VI. Other
✓		N/A	A. Above Ground Storage Tank Number of Tanks: 1
		✓	B. PBR \ TTU

IC2) Owner / Operator shall label the waste oil filter drums and waste hydraulic oil drums.
IIIB) Owner / Operator needs to obtain an EPA ID #.

Specialist: B. Mac Gregor

Hazardous Materials Management Division
4065 County Circle Drive, P.O. Box 7600 (HEH)
Riverside, CA 92513-7600
(714) 358-5055 • FAX (714) 358-5017
Branch Office San Jacinto
Telephone # 654-3878

Received by:
Signature:
Print Name: CHARLES WHALEN
Print Title: MANAGER

MB

County of Riverside Health Services Agency
Department of Public Health

Hazardous Materials Management Branch

Hazardous Waste Generator Inspection Report

ENTERED 3/31/92

Facility Name ORCO Block Company Inc
Street Address 600 W. Hathaway St
City Banning
Business Owner ORCO Block Company Inc.

Date March 24 92
Number of Employees
Inspection: Routine X Recheck
Time In: 1235 Time Out:

A check indicates a violation that must be corrected.

___ Permit *[County Ordinance Number 615]* 08790
___ EPA Identification Number *[22 CCR 66262.12b]* Applied for
___ Hazardous Waste Determination *[22 CCR 66262.11]*
___ Personnel Trained to Comply with Hazardous Waste Laws *[22 CCR 66265.16]*

I. Hazardous Waste Storage

___ A. Appropriate Time *[22 CCR 66262.34, H&SC 25123.3]*

___ B. Incompatibles Segregated *[22 CCR 66265.17]*

C. Containers
___ 1. Containers and Waste Compatible *[22 CCR 66265.172]*
___ 2. Proper Labeling *[22 CCR 66262-34f]*
___ 3. Inspected Weekly *[22 CCR 66265.174]*
___ 4. Good Condition *[22 CCR 66265.171]*
___ 5. Stored Closed *[22 CCR 66265.173]*
___ 6. Ignitable or Reactive Wastes, 50 Feet From Property Line *[22 CCR 66255.176]*

D. Hazardous Waste Tanks
___ 1. Assessment of Existing Tank System's Integrity *[22 CCR 66265.191]*
___ 2. Tank Compatible With Waste *[22 CCR 66265.194]*
___ 3. Freeboard or Containment for Unenclosed Tanks *[22 CCR 66265.194]*
___ 4. Cut Off for Continuous Feed *[22 CCR 66265.194]*
___ 5. Management and Inspection *[22 CCR 66265.195]*
___ 6. Labeling *[22 CCR 66262.34f]*
___ 7. Reactive or Ignitable Waste Protected from Reaction and Ignition *[22 CCR 66265.198]*

II. Transportation & Disposal

___ A. Packaging, Labeling & Placarding *[22CCR 66262.30, 66262.31, 66262.33]*
___ B. Registered Hauler *[H&SC 25163]*
___ C. Manifest Procedures *[22 CCR 66262.20]*
___ D. Extremely Hazardous Waste Permit *[22 CCR 67430.1]*
___ E. Disposal at Authorized Location *[H&SC 25189, 25189.5 & 25191]*

III. Records

___ A. Manifests, Receipts & Exception Reports Available for Three Years *[22 CCR 66262.40]*
___ B. Training Records Maintained *[22 CCR 66265.16]*
___ C. Waste Analysis & Determination Records *[22 CCR 66262.40]*
___ D. Copy of Biennial Report *[22 CCR 66262.40]*

IV. Preparedness & Prevention

___ A. Maintained & Operated to Minimize the Possibility of Fire, Explosion or Sudden or Non-Sudden Release *[22 CCR 66265.31]*
___ B. Communication or Alarm System *[22 CCR 66265.32a]*
___ C. Fire, Spill Control & Decontamination Equipment *[22 CCR 66265.32c]*
___ D. Testing & Maintenance of Emergency Equipment *[CCR 66265.33]*
___ E. Aisle Space *[22 CCR 66265.35]*

V. Contingency Plan *[22 CCR 66265.51, 66265.52]*

___ A. Emergency Response Procedures
___ B. Arrangements with Local Authorities
___ C. Emergency Equipment Inventory
___ D. Evacuation Plan
___ E. Names, Addresses & Phone Number of Emergency Coordinators

At time of this inspection no violation were discovered

Hazardous Materials Management Branch
4065 County Circle Drive
P.O. Box 7600
Riverside, CA 92513-7600
[714] 358-5055

Branch Office Hemet
Phone (714) 358-5055

Recipient:
Print Name: CHARLES WHALEN
Print Title: MANAGER
Signature:

Inspector: Paul Mitchell

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health Hazardous Materials Management Branch
Hazardous Materials Handler Inspection Report

Facility Name: Orco Block Company Date: 2/6/12

Address: 600 N Hathaway St Inspection: Routine [✓] Reinspection [ ]

City: Banning Zip Code: 92220 Level: II Facility #: FA0283972

Contact Person: Ivan Hernandez Number of Employees: 0-10 Telephone: 951-849-7891

Riverside County Ordinance 651 | California Code of Regulations Title 19 | Health & Safety Code Chapter 6.95 | California Fire Code

Y	N	N/A	Items marked "No" are violations of the above-referenced codes and must be corrected as follows:	
✓			100. Current Permit	This facility is a cement block manufacturing plant. The plant is no longer in operation however, some hazardous material remains onsite. Hazardous material onsite includes diesel fuel, Pave Air, and AdMix.
			101. Hazardous Materials Business Emergency Plan	
	✓		A. Approved Plan on Site and Available for Review	
	✓		B. Plan Updated within Past 3 Years	
			102. Chemical Inventory Disclosure	
	✓		A. Chemical Inventory Complete	
	✓		B. Inventory Updated Annually	101, 102, 103 A/C, 104B)
			103. Emergency Response Plans and Procedures	Owner/operator failed to have a business emergency plan available onsite. No bep available. Owner/operator shall create a business emergency plan, submit 2 copies to district inspector, and retain 1 copy onsite.
	✓		A. Prevention, Mitigation and Abatement Measures	
	✓		B. Documented Employee Training	
	✓		C. Evacuation Plan with Routes	
✓			D. Facility Map with Location of Chemicals	
	✓		E. MSDS Available	
			104. Posting	
	✓		A. NFPA 704 Sign(s) Posted	103B) Owner/operator failed to have documented employee training. Within 30 days of hire and annually thereafter all employees shall be trained regarding the safe handeling of hazardous materials onsite. BEP, MSDS, and emergency response procedures.
	✓		B. Emergency Phone Numbers Posted	
	✓		C Hazardous Materials Storage Area Posted	
	✓		D. Emergency Equipment Posted	
		✓	E. Pesticide Storage Area Posted	
			105. Storage	
	✓		A. Maintained to Minimize the Possibility of Release	
✓			B. Handling Areas Secured	
✓			C. Incompatibles Stored Separately	Continued
✓			D. Containers Properly Labeled	
✓			106. Aboveground Tank/SPCC	

NFPA 704 SIGNS

Specialist: J. Gates

The above noted violations shall be corrected within 21 days.

Received by: Bruce Kruger

Print Name: Bruce Krueger

Title: Foreman

Corona Office (951) 273-9143
2275 S. Main St. #204
Corona, CA 92882

Hemet Office (951) 766-6524
800 S. Sanderson Ave. #102
Hemet, CA 92545

Indio Office (760) 863-8976
47-950 Arabia St. #A
Indio, CA 92201

Riverside Office (951) 358-5055
4065 County Circle Dr. #104
Riverside, CA 92503

Certified Unified Program Agency
County of Riverside Community Health Agency
Department of Environmental Health
Hazardous Materials Management Division

SUPPLEMENTAL REPORT

Reference Date 2/6/12

Name Orco Block Company

Address 600 N Hathaway St., Banning

Re: Handler inspection Facility # PR228392

Remarks:

103E) Owner/operator failed to have MSDS available. No MSDS available. Owner/operator shall locate MSDS for each hazardous material onsite. Retain copies onsite.

104A/C) Owner/operator failed to post proper NFPA 704 signs. No signs observed at facility entrance, on shop exterior, or on diesel AST. Owner/operator shall research MSDS and post proper NFPA signs in the aforementioned locations. Signs shall be a minimum of 10 inches x 10 inches and installed as a diamond.

104D) Owner/operator failed to properly post emergency equipment. Observed several fire extinguishers without direction-indicating signs. Owner/operator shall properly post the location of all emergency equipment.

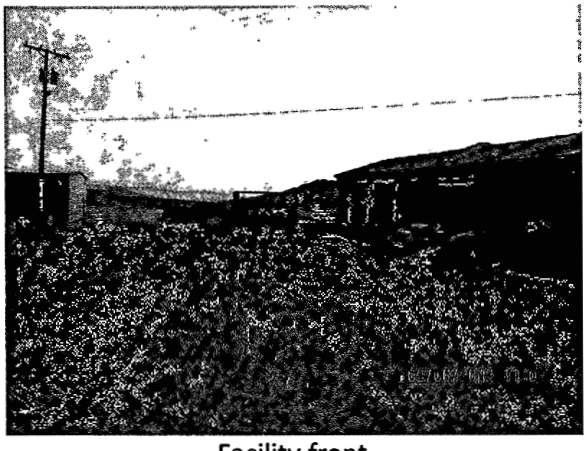
105A) Owner/operator failed to minimize the possibility of release. Observed free liquid (new oil) on the top of one 55 gallon drum; product was also observed inside secondary containment. Owner/operator shall minimize the possibility of release by ensuring all containers are stored clean/dry.

Note: This facility has petroleum storage capacity in excess of 1320 gallons and is therefore subject to APSA requirements. Owner/operator is directed to submit a facility statement to district inspector and complete a SPCC tier I ~~template~~ plan. Templates can be found online at www.rivcoeh.org.

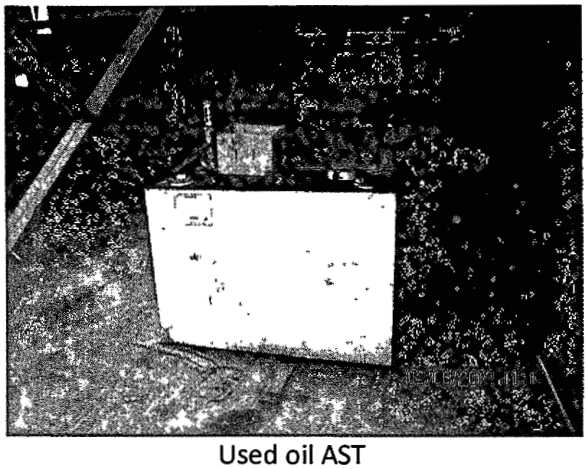
All violations shall be corrected on/before 2/27/12. Reinspection will be on/after 2/27/12.

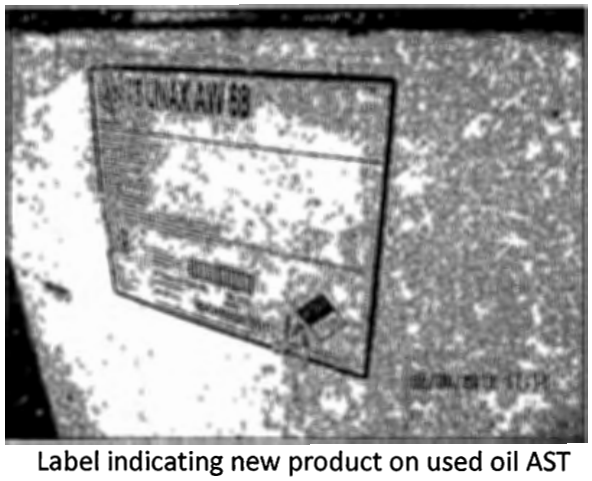
Specialist S. Gates Received By Bruce Hennessy

To File - Photo Supplemental
Orco Block Company
600 N Hathaway St
Banning, CA 92220

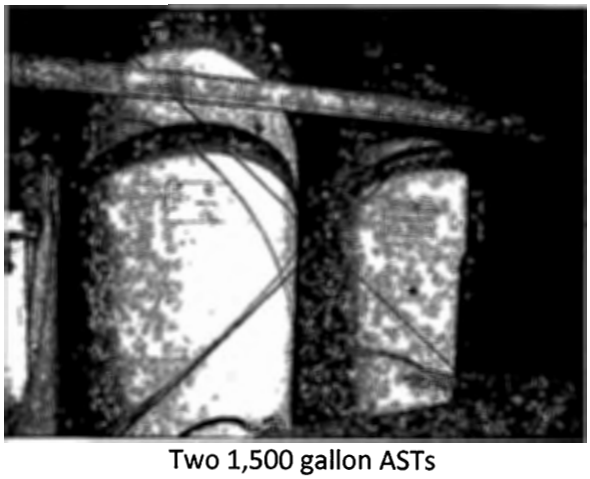

Facility front


Front of manufacturing plant


Used oil AST

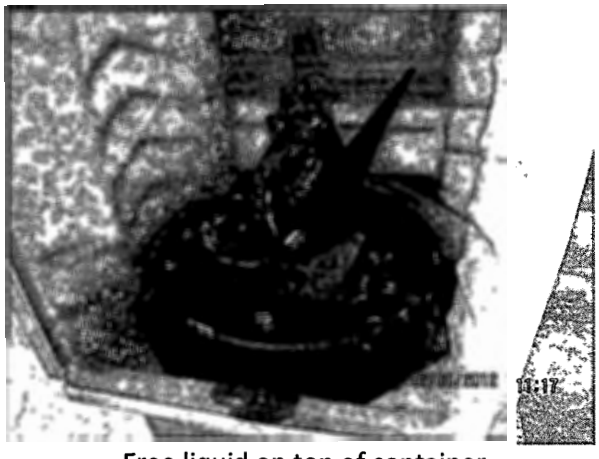


Label indicating new product on used oil AST

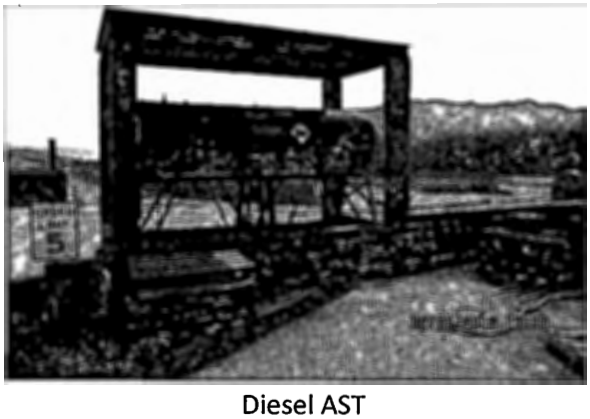

Two 1,500 gallon ASTs

Label on one 1,500 gallon AST

New oil containment



Free liquid on top of container



Diesel AST

HAZARDOUS WASTE REPORT

COUNTY OF RIVERSIDE, DEPARTMENT OF HEALTH
HAZARDOUS MATERIALS MANAGEMENT BRANCH
P.O. BOX 7600
Riverside, CA 92513-7600

SECTION A

A1. ESTABLISHMENT NAME

ORCO BLOCK COMPANY, INC.

A2. MAILING ADDRESS (Street number) | N.S.E.W. | STREET NAME OR P.O. BOX NUMBER

6900 | N | HATHAWAY STREET

CITY | STATE | ZIP | BLDG./PLANT NO.

BANNING | CA | 92220 |

A3. ESTABLISHMENT ADDRESS (If different from mailing address)
(Street number) | N.S.E.W. | (Street name)

CITY | STATE | ZIP | BLDG./PLANT NO.

A4. CONTACT PERSON

CHARLES WHALEN

A5. EMERGENCY PHONE

7142691293

A6. EPA IDENTIFICATION NUMBER — APPLIED FOR

A7. ESTABLISHMENT PHONE

7148491891

A8. NAME OF PREVIOUS OWNER

FRED-LITE BLOCKS, INC

A9. DATE YOU STARTED OR ASSUMED BUSINESS

MO. DAY YR

10 | 01 | 88

A10. TOTAL NUMBER OF EMPLOYEES

11

A11. DO YOU HAVE ANY OF THE FOLLOWING ON SITE?

	YES	NO
SEWAGE DISPOSAL SYSTEM	☐	☒
STORM DRAIN	☐	☒
SEWER CONNECTION	☐	☒

A12. DO YOU HAVE PERMITS FOR ANY OF THE FOLLOWING?

	YES	NO
AIR QUALITY MANAGEMENT DISTRICT	☒	☐
SEWER DISTRICT (FOR INDUSTRIAL WASTES)	☐	☒
HAZARDOUS WASTE FACILITY	☐	☒
HAZARDOUS WASTE HAULER REGISTRATION	☐	☒

OFFICE USE ONLY

SECTION	SUPER./DIST	LOCATION CODE	ANNUAL FEE	FEE TYPE	PERMIT NUMBER
4	3000	01	375.00	9	08799

SIC 1

SIC 1	SIC 2	TSD	LIQUID WASTE	STORAGE	STATUS
		4	OSD SD SC: 222	UT SL: 19	ENTERED 3/23/90

SECTION B

1. INSTRUCTIONS

INDICATE WHETHER OR NOT YOUR BUSINESS PRODUCES A WASTE WHICH MEETS THE CRITERIA OF A HAZARDOUS WASTE. SPECIFY THE QUANTITY GENERATED PER MONTH IN THE SPACE PROVIDED.

THE FOLLOWING IS A PARTIAL LIST OF COMMON HAZARDOUS WASTES. THE WASTE YOU PRODUCE MAY BE HAZARDOUS EVEN IF NOT LISTED. NAMES OF ADDITIONAL HAZARDOUS CHEMICALS AND SPECIFIC CRITERIA FOR HAZARDOUS WASTE ARE FOUND IN THE CALIFORNIA CODE OF REGULATIONS, TITLE 22, 66680 - 66723.

	YES	NO	APPROX. AMT./MONTH
1. Infectious Wastes (i.e. laboratory cultures, pathlogical and surgical specimens, human or animal parts, other materials contaminated with etiologic agents, infectious sharps)		X	
2. Solvents (i.e. acetone, methyl chloride, methyl ethyl ketone, benzene, stoddard, perchioroethylene, dry cleaning fluids, trichloroethylene, styrene, eylene, unspecified solvent mixtures).	X		9-gal./mo.
3. Sludges (i.e. paint, degreasing, caustic, paper, metal picking sludge, acetylene, lime, metal machine coolant, tanning).		X	
4. Waste Oil/Mixed Oil (i.e. motor oil, cutting oil, lube oil, bunker oil, sulfonation oil, oil and water, hydraulic fluid, transmission fluid)	X		10 gal/mo.
5. Pesticides (i.e. unusable portion of active pesticide, unrinsed empty containers, rinse water).		X	
6. Polychlorinated Biphenyls (i.e. PCB contaminated electric capacitors, ballasts, transformer fluids).		X	
7. Monomer Waste/Polymeric Resin (i.e. incompletely reacted resin, resin rinse water).		X	
8. Organic Liquids/Solids (i.e. fuel paint thinner, paint remover, paint, dry cleaning fluids and filters).		X	
9. Solids and Solutions (i.e. cyanide, azide, hypochlorite, sulfide, fluoride, anti-corrosion fluids, antifreeze, metal and equipment cleaning solutions, heavy metals powdered or in solution, eg. : antimony, arsenic, barium, beryllium, cadium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc).		X	
10. Acid Solutions with a pH less than or equal to 2 (i.e. battery acid, metal plating and cleaning waste, soda ash, sodium or calcium hydroxide).		X	
11. Alkaline Solutions with a pH greater than or equal to 12.5 (i.e. metal plating and cleaning waste, soda ash, sodium or calcium hydroxide).		X	
12. Asbestos (i.e. insulation products, old pipe lagging, asbestos pipe waste).		X	
13. Ashes (i.e. all ashes including oil ash, kiln and oven residue).		X	
14. Photo Processing Waste (i.e. developer, fixer, hypo solutions).		X	
15. Miscellaneous (i.e. drilling mud, explosives, chemical toilet waste, printing ink, bag house wastes, mine tailings, fly ash, waste chemicals, dyes, obsolete stock).		X	

SECTION C - FEE DETERMINATION

If you produce any of the wastes in **B1**, your business or service Does generate hazardous waste and a County of Riverside **HEALTH PERMIT FOR HAZARDOUS WASTE GENERATORS IS REQUIRED.** Determine the appropriate fee below.

Number of Employees	FEE
0- 10	$ 250.00
11- 25	$ 375.00
26- 50	$ 500.00
51-100	$ 670.00
101-200	$ 790.00
201-300	$1,225.00
301-500	$1,800.00
501->	$1,800.00+ $3.00 For each employee over 500

If you do not produce any of the wastes in **B1**, your business does not appear to generate hazardous waste and a **HEALTH PERMIT FOR HAZARDOUS WASTE GENERATORS IS NOT REQUIRED.** However, this form must be COMPLETED AND RETURNED

OWNER NAME [redacted]
OWNER ADDR
TYPE OF INDUSTRY Block Manuf.
PRODUCT(S) PRODUCED Block

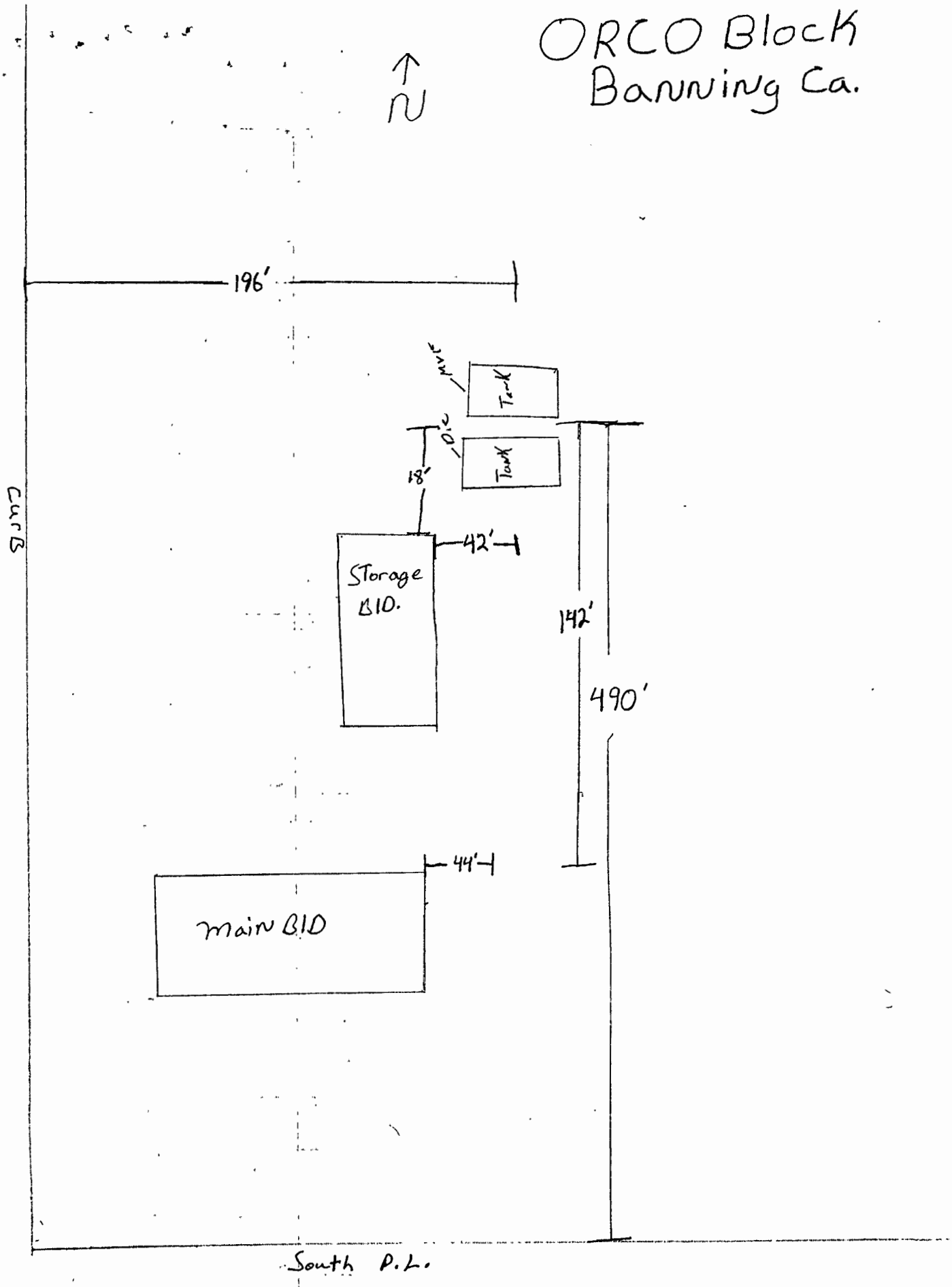
I have understood and completed SECTIONS A, B, C, AND D. I declare, under penalty of perjury, that to the best of my knowledge and belief the statements made herein are correct and true.

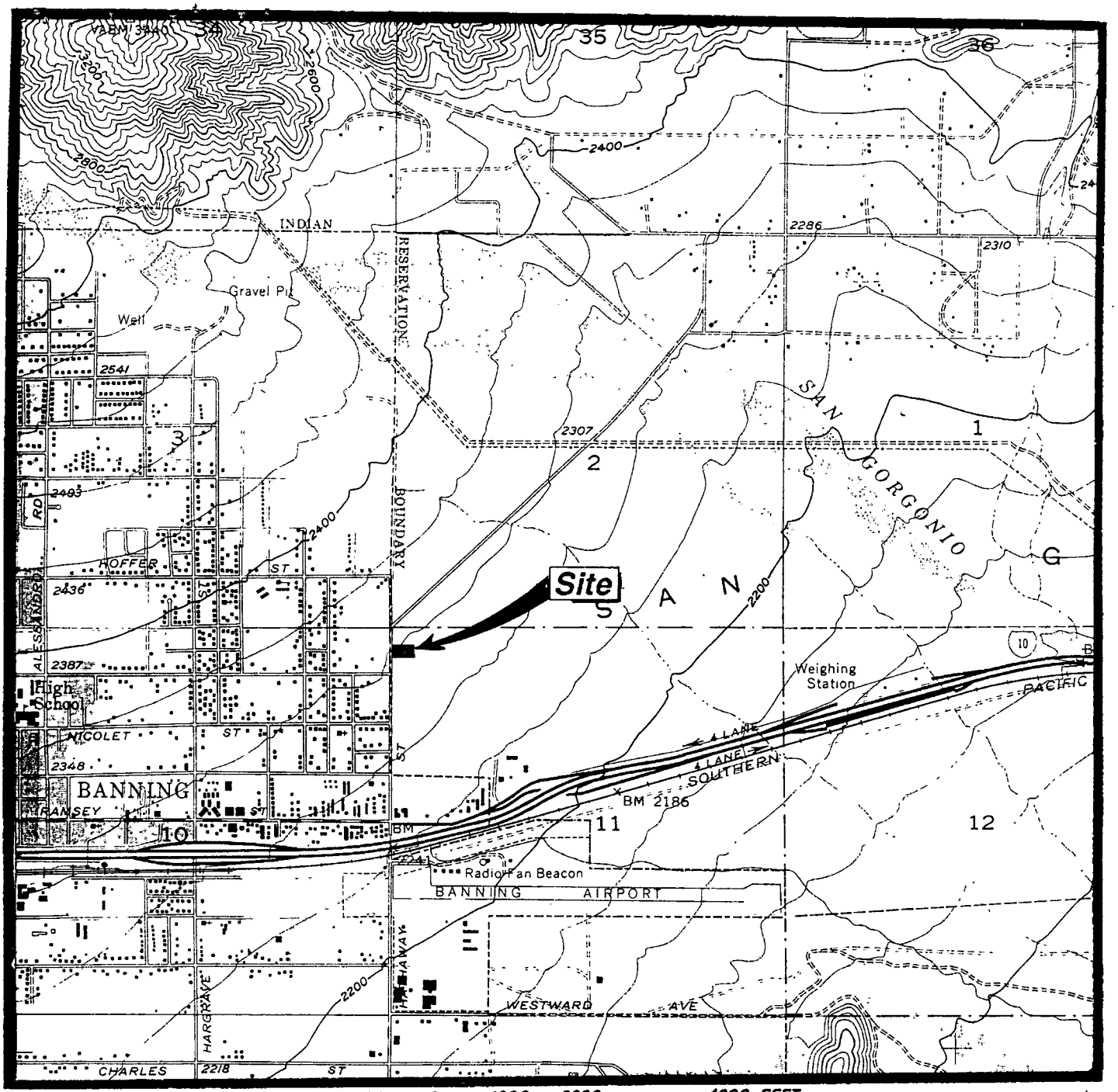
NAME CHARLES WHALEN (Print or type) _____ (Signature)
TITLE MANAGER
DATE 3/24/92 PHONE (714) 849-7891

RETURN THE COMPLETED FORMS AND PERMIT FEE, IF APPLICABLE, TO:

County of Riverside-Health Services Agency
Department of Environmental Health
Hazardous Materials Management Branch
P.O. Box 7600
Riverside, CA 92513-7600

RECEIVED
MAR 16 1992
RIVERSIDE CO.
HEALTH DEPT.
Environmental Health
HAZARDOUS MATERIALS


ORCO Block
Banning Ca.
N
196'
Curb
Tank
Tank
18'
42'
Storage
BIO.
142'
490'
44'
main BIO
South P.L.

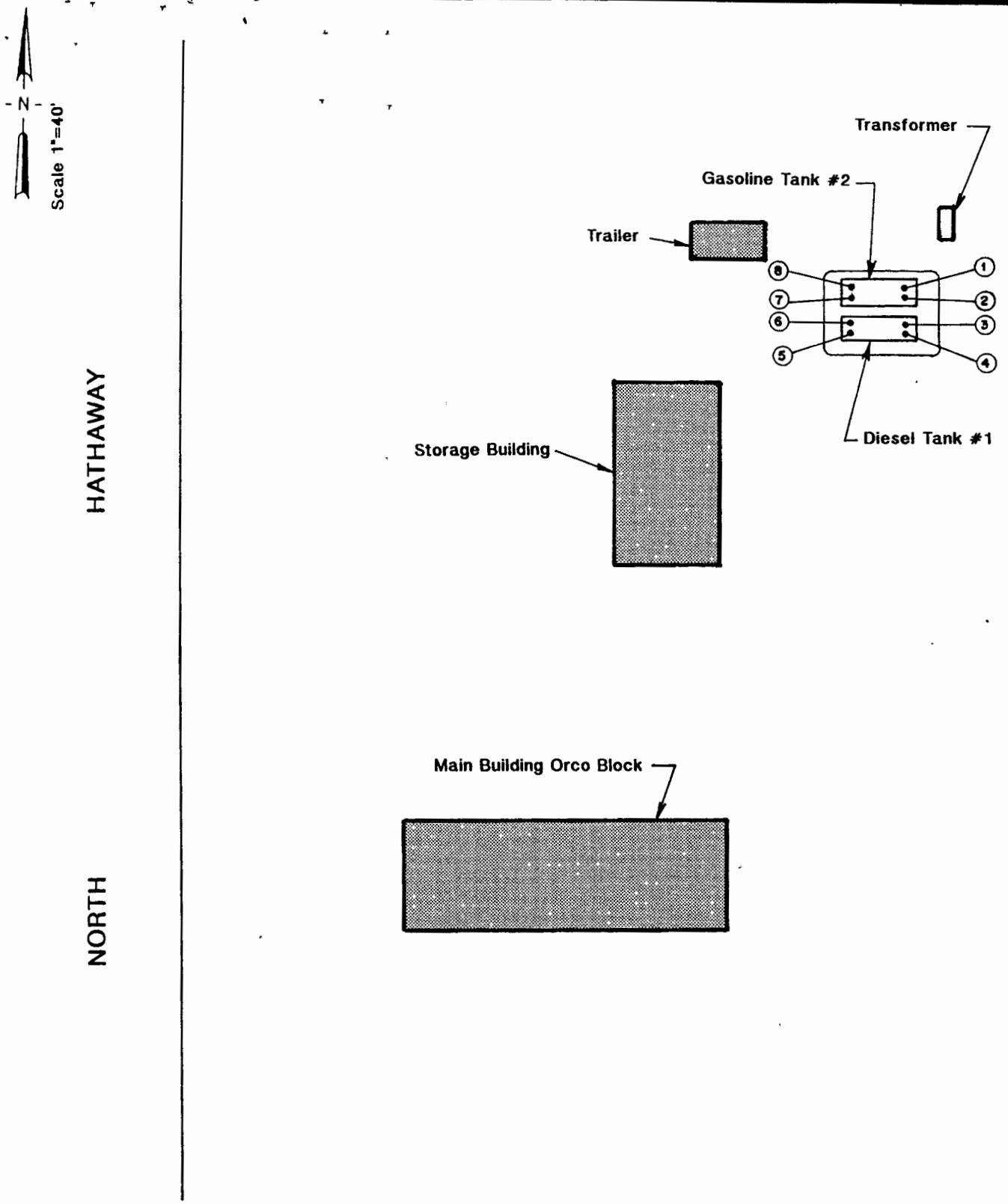


Index Map

OF
600 NORTH HATHAWAY STREET
BANNING, CALIFORNIA
PREPARED FOR
AON, INCORPORATED
BASE MAP: USGS
CABAZON QUAD

ENCLOSURE "A-1"
JOB NO. 94098-9

C·M·J· INCORPORATED

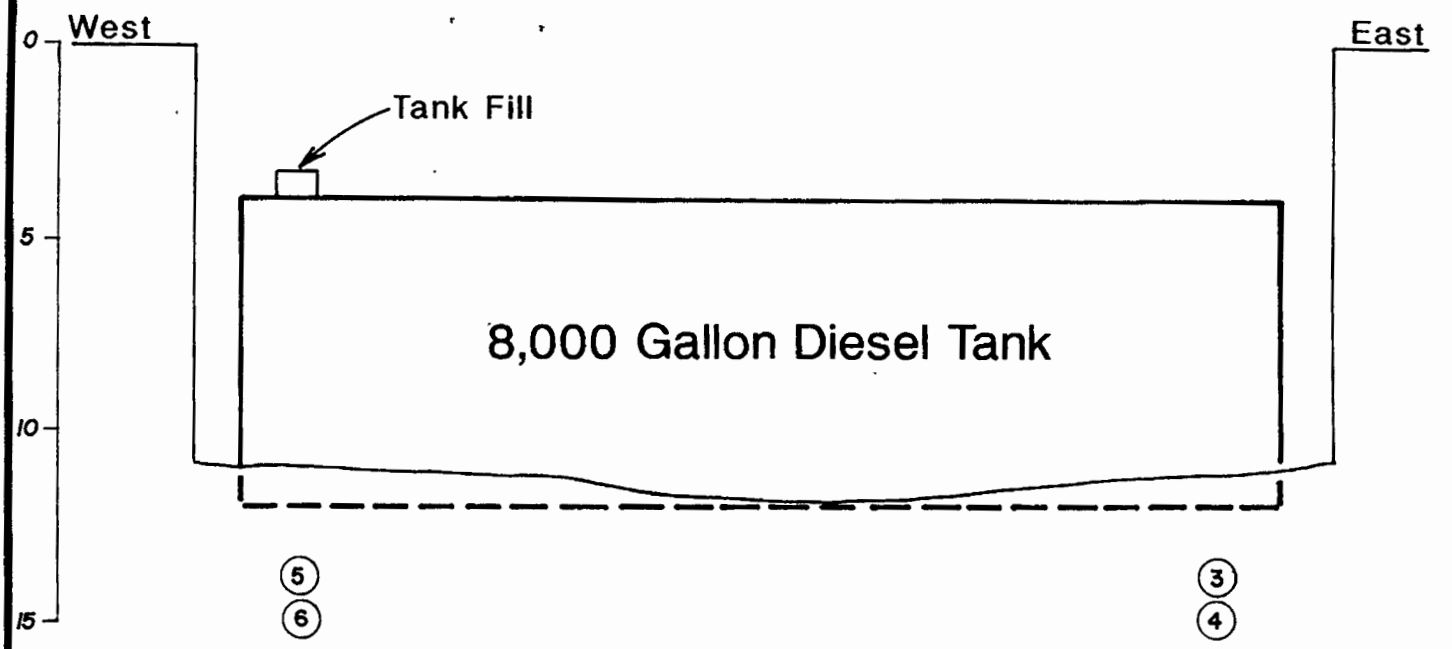


SITE MAP

FOR: AON, INC.	UNDERGROUND TANK REMOVAL 600 NORTH HATHAWAY STREET BANNING, CALIFORNIA	ENCLOSURE "A-2"
DATE: FEBRUARY 1994		JOB NUMBER 94098-9

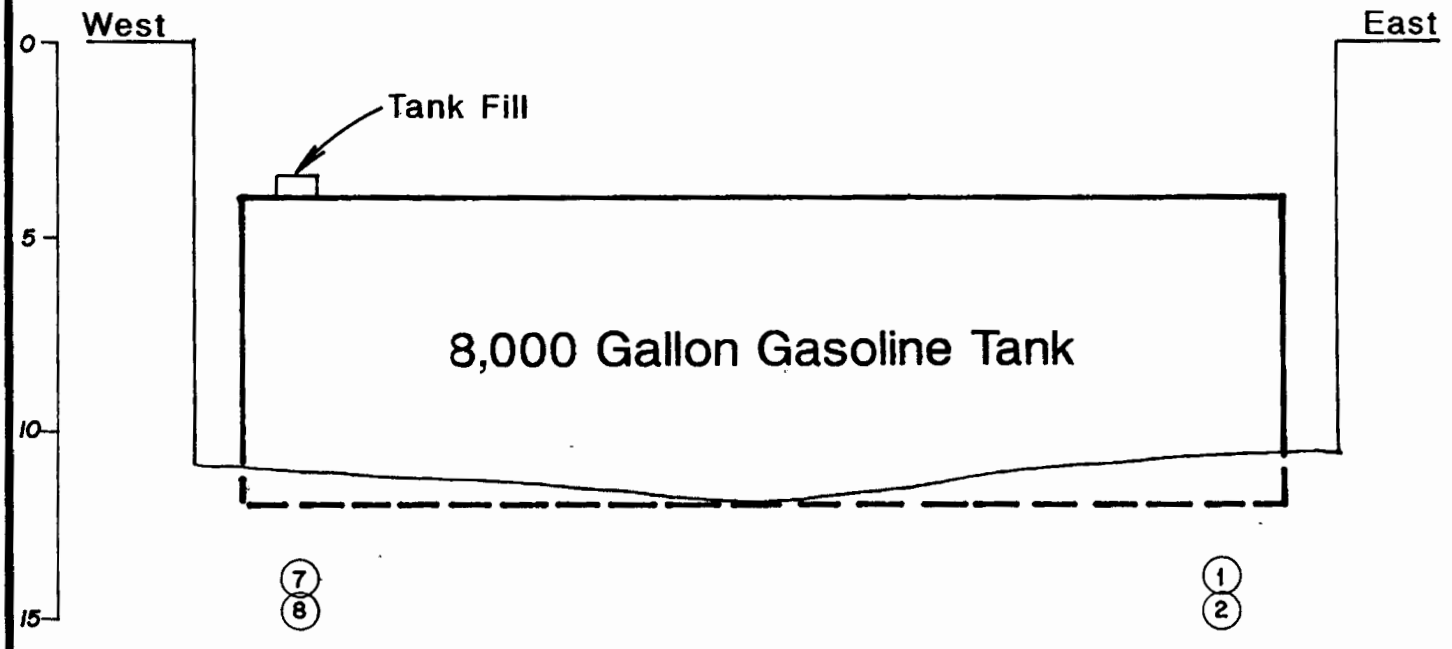
C·M·J· INCORPORATED

TANK NO. 1



Scale 1"=5'-0"

TANK NO. 2



Scale 1"=5'-0"

CROSS-SECTION

FOR: AON, INC.	UNDERGROUND TANK REMOVAL 600 NORTH HATHAWAY STREET BANNING, CALIFORNIA	ENCLOSURE "A-3"
DATE: FEBRUARY 1994		JOB NUMBER 94098-9

C·M·J· INCORPORATED

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

March 17, 1994

JIM MORRIS
P O BOX 302
BLOOMINGTON CA 92316

To Whom It May Concern,

Subject: Underground Storage Tank Closure Plan Check #94-027 for 2 tanks at 600 N Hathaway Street, Banning CA.

This letter confirms the completion of the underground storage tank closure of 2 tanks at the above site. Based on the assumption that the information provided to this agency was accurate and representative of existing conditions, it is the position of this office that no further action is required at this time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or Water Code for past, present, or future operations at the site. Nor does it relieve you of the responsibility to clean up existing, additional or previously unidentified conditions at the site, which cause or threaten to cause pollution or nuisance or otherwise pose a threat to water quality or public health.

Additionally, be advised that changes in the present or proposed use of the site may require further site characterization and mitigation activity. It is the property owner's responsibility to notify this agency of any changes in report content, future contamination findings, or site usage.

If you have any questions regarding this matter, contact this office at (909) 654-3878.

Sincerely,

Brenda Mac Gregor

Brenda Mac Gregor R.E.H.S.
Hazardous Materials
Management Specialist

BMG:klh

ENVIRONMENTAL HEALTH DIVISION
HAZARDOUS MATERIALS MANAGEMENT BRANCH
UNDERGROUND STORAGE TANK CLOSURE INSPECTION REPORT

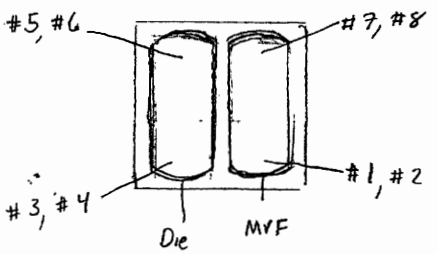
Date 2-8-94 Time Arrived — Time Departed — Temp. Closure ____
Facility Name Orco Block Co. Plan Check # 94-027 Removal X
Address 600 N Hathaway Contact Jim Morris Abandonment ____
Contractor ____ No. of Tanks Closed 2
Health Personnel B. Mac Gregor Fire Personnel ____ No. of Tanks Remaining Ø

I. Temporary Closure

	Yes	No	N/A	
1	( )	( )	( )	Valid Closure Permit
2	( )	( )	( )	Tank Contents Removed
3	( )	( )	( )	Witnessed Sticking of Tank(s)
4	( )	( )	( )	Flammable Vapors Purged
5	( )	( )	( )	Tank Filled with Non-Corrosive/ Non-Hazardous Liquid
6	( )	( )	( )	Locks on Fill Caps/ Fill Caps Sealed
7	( )	( )	( )	Product Piping Disconnected
8	( )	( )	( )	Power Disconnected
9	( )	( )	( )	Vent Pipe Open
10	( )	( )	( )	Other ____

Diagram (not to scale)

N →



II. Removal

	Yes	No	N/A	
11	(✓)	( )	( )	Valid Closure Permit
12	( )	(✓)	( )	Tank Triple Rinsed (single Rinse - # 3367303
13	( )	(✓)	( )	Manifest Available/Number 93367438 - Tanks
14	(✓)	(✓)	( )	Hazardous Waste Hauler Eriksons
15	( )	( )	( )	Destination of Rinsate De Menno Kerdoon
16	( )	(✓)	( )	Witnessed Dry-Icing of Tank(s) LEL-O, MVF O_2 - 4 / LEL O
17	(✓)	( )	( )	Tank Tags Removed U.L. Serial #('s) 1960's E005730
18	(✓)	( )	( )	Destination of Tank(s) Ericsons
19	(✓)	( )	( )	Condition of Tank(s) Good, rusty
20	(✓)	( )	( )	Condition of Excavation Fill Sand Conglomerate
21	(✓)	( )	( )	Soil Staining/Odor Normal for material
22	( )	(✓)	( )	Unauthorized Release form Issued
23	( )	( )	( )	Other ____

Purged

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS MANAGEMENT DIVISION

UNDERGROUND STORAGE TANK PERMIT FOR CLOSURE

Feb 8th at 10:00
Jim Morris
350-8699

TYPE OF PERMIT

[X] Removal

[ ] Abandonment in Place

[ ] Temporary Closure (12 Months Only)

This permit shall not be construed as to allow the violation of any law, nor does it prevent further corrections of errors found on the application, plans, or at the site. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this permit, all applicable permits required by the local fire department, building department, and the air quality management district must be obtained and should be available for review at the closure site.

All tank closures must, at a minimum, comply with the California Underground Storage Tank Regulations and the appropriate section of the California Health & Safety Code.

ORCO BLOCK COMPANY (Owner/Contractor/Applicant) has applied for and is granted a permit to

REMOVAL (Remove/Abandon/Temp. Close) 2 (No.) underground storage tank(s) at

ORCO BLOCK COMPANY INC (Facility Name) located at

600 N HATHAWAY (Street Address) in BANNING (City/Town), California.

Underground tank closure inspections **must be scheduled five (5) business days in advance.** Telephone (714) 358-5055.

Permit Approved By: [signature] Date: 1/31/94 Plan Check #: 94-027

*This Permit for Closure is VALID FOR 90 DAYS from the date of approval. If no reasonable action is taken within that period, the applicant will be required to reapply for a closure permit with all pertinent fees associated.

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY DEPARTMENT OF ENVIRONMENTAL HEALTH

UNDERGROUND STORAGE TANK CLOSURE/ABANDONMENT APPLICATION

Application for closure or abandonment of Underground Storage Tanks. Applicant may submit a copy of the removal plans. All fees are NON REFUNDABLE and payable when the plans are submitted with this application.

94-027
PLAN CHECK NUMBER

NAME OF FACILITY	ADDRESS OF FACILITY	(CITY)	PHONE NUMBER
ORCO BLOCK COMPANY, INC.	600 NORTH HATHAWAY	BANNING	909-849-7891
NAME OF OWNER	**ADDRESS OF OWNER**		**PHONE NUMBER**
PETE & RICK MUTH	600 NORTH HATHAWAY	BANNING	909-849-7891 *
NAME OF OPERATOR	**ADDRESS OF OPERATOR**		**PHONE NUMBER**
ORCO BLOCK COMPANY, INC.	600 NORTH HATHAWAY	BANNING	909-849-7891
NAME OF CONTRACTOR/CONTACT PERSON	**ADDRESS OF CONTRACTOR**		**PHONE NUMBER**
OWNER	SAME		
CONTRACTORS LICENSE TYPE & NUMBER (Including Hazardous Materials Certification)			
N/A	EPA# CAL 000092547		

ANSWER THE FOLLOWING QUESTIONS DESCRIBING THE TANKS TO BE CLOSED OR ABANDONED. IF YOU HAVE MORE THAN FOUR (4) TANKS, PROVIDE INFORMATION ON ADDITIONAL APPLICATION FORM.

	TANK 1	TANK 2	TANK 3	TANK 4
SINGLE/DOUBLE WALL TANK	S	S		
TANK IN USE (YES/NO)	Y	Y		
IS TANK SUSPECTED OF LEAKING (YES/NO)	NO	NO		
AGE OF TANK (YEARS)	UKN	UKN		
CONSTRUCTION MATERIAL OF TANK(S)	STEEL	STEEL		
HAZARDOUS SUBSTANCE STORAGE HISTORY	GASOLINE	DIESEL		

Check the method of closure to be performed:

REMOVAL (X)

ABANDONMENT ( )

TEMPORARY CLOSURE ( )

DATES FOR WHICH THE TANKS ARE TO BE TEMPORARILY CLOSED (IF APPLICABLE).

NAME OF PERSON TO CONTACT IN AN EMERGENCY	24 HOUR EMERGENCY PHONE NUMBER
JIM MORRIS	909-350-8681

APPLICANT NAME	APPLICANT SIGNATURE	DATE OF APPLICATION
CHARLIE WALLEN	Charlie Wallen	1/31/94

PLEASE MAKE YOUR CHECK PAYABLE TO THE COUNTY OF RIVERSIDE

CLOSURE/ABANDONMENT FEE #130341140

FIRST TANK $250.00
EACH ADDITIONAL TANK $100.00
REINSPECTION FEE ..... $ 50.00

AMOUNT ATTACHED $ 350.00

TRANSACTION NO. 1631905

DOH-HEH-008 (Rev 8/92)

C • M • J • INCORPORATED

P.O. Box 231 • 1355 E. Cooley Dr., Colton, CA 92324 • Phone (909) 824-7210 • Fax (909) 824-7209

February 17, 1994

AON, Incorporated

P. O. Box 302

Bloomington, California 92316

Attention: Mr. Jim Morris

Job No. 94098-9

Subject: Analytical Test Results
Underground Tank Removal
600 North Hathaway Street
Banning, California

Dear Mr. Morris:

Please find attached the analytical test results for eight soil samples taken in conjunction with the removal of two 8,000-gallon underground fuel tanks on February 8, 1994.

INTRODUCTION

The site was located at the Orco Block Company at 600 North Hathaway Street in Banning, California. Enclosures "A-1" and "A-2" provide an Index Map and Site Map, respectively. Enclosure "A-3" provides a cross-section view of the sample locations.

TANK DESCRIPTIONS

The two underground storage tanks were oriented side by side in an east-west direction. Tank No. 1 was used to store diesel fuel while Tank No. 2 was used to store gasoline. Both tanks had an 8,000-gallon capacity. The fill ends of the tanks were located on the west end of the excavation

and the depth to the bottom of the tanks was approximately 12 feet below grade. No samples were taken from the spoils pile. The dispenser had been situated directly above the tanks and, therefore, had been removed during the tank excavation.

TANK HISTORY

The installation date of the underground tanks was not known. It was estimated that the tanks were installed in the 1960's. Labels retrieved from the tanks by AON, Incorporated personnel and presented to Ms. Brenda MacGregor, a representative of the Riverside County Department of Environmental Health's (DEH), indicated the tanks had been manufactured in 1961. All tanks had been rinsed and had dry ice placed in them prior to removal in accordance with the specifications set forth by the Riverside County DEH. The tanks were transported off-site by Ericksen, Inc. to their yard at 13738 Slover Avenue in Fontana, California.

SAMPLING

As directed by Ms. Brenda MacGregor of the DEH, two soil samples were taken from under each end of the former tank locations. The samples were intended to be taken from depths of 2 feet and 6 feet below the tank inverts (total depths of 14 and 18 feet below grade, respectively). However, due to the severe caving of the soil type (gravelly sands) and the limitations of the excavation equipment, all samples were retrieved from depths of 2 to 3 feet below the tank inverts (total depths of 14 and 15 feet below grade). Samples No. 1 and 2 were obtained from under the east end of Tank No. 2, Samples No. 3 and 4 from under the east end of Tank No. 1, Samples No. 5 and 6 from under the west end of Tank No. 1, and Samples No. 7 and 8 from under the west end of Tank No. 2.

LABORATORY ANALYSES

As requested by the DEH representative, Samples No. 1, 2, 7, and 8 were analyzed for Total Volatile Fuel Hydrocarbons, including benzene, toluene, ethylbenzene, and total xylenes (BTEX)

by EPA Methods 8020 and 8015 modified for gasoline. Samples No. 3, 4, 5, and 6 were analyzed for extractable fuel hydrocarbons by EPA Method 8015 modified for diesel.

The analytical results for Total Volatile Fuel Hydrocarbons and BTEX by EPA Methods 8015 modified and 8020 indicated "None Detected" (ND) for Samples No. 1, 2, 7 and 8. Analyses of Samples No. 3, 4, 5, and 6 for Extractable Fuel Hydrocarbons by EPA Method 8015 modified for diesel indicated ND for all samples analyzed with the exception of Sample No. 5. Sample No. 5, obtained from approximately 2 feet below the invert of Tank No. 1 (used to store diesel fuel) at the west end (fill end) of the underground storage tank, was reported to have a concentration of 31 parts per million (ppm).

The laboratory data sheets are provided as Enclosure "C", and a data summary is provided below in Table 1. Sample results are in mg/kg (ppm).

LABORATORY DATA SUMMARY

Sample No.	Tank No.	Depth (ft.)	8015 For Diesel	8015 For Gasoline	8020/8015 B	T	E	X
1	2	14.0	---	ND	ND	ND	ND	ND
2	2	15.0	---	ND	ND	ND	ND	ND
3	1	14.0	ND	---	---	---	---	---
4	1	15.0	ND	---	---	---	---	---
5	1	14.0	31	---	---	---	---	---
6	1	15.0	ND	---	---	---	---	---
7	2	14.0	---	ND	ND	ND	ND	ND
8	2	15.0	---	ND	ND	ND	ND	ND

The California State Water Resources Control Board, Leaking Underground Fuel Tank (LUFT) Field Manual, May 1988 and Revision, February 1989, Table 1 (Enclosure "D") indicates the maximum allowable levels for diesel fuel would be 100 to 10,000 ppm depending on site conditions. The laboratory results for Sample No. 5 indicated concentrations of extractable fuel hydrocarbons were below the LUFT Manual stated maximum allowable limits.

CONCLUSIONS

The analytical results for soil samples obtained from under each end of the two tanks indicates that minor soil contamination due to petroleum hydrocarbons (diesel) exists near the west end (fill end) of Tank No. 1. The extractable fuel hydrocarbon concentration in Sample No. 5 was 31 ppm. This level is generally lower than action levels established in the LUFT manual. The results of the analyses of Sample No. 6, obtained from below Sample No. 5, indicated ND.

RECOMMENDATIONS

This report should be presented to the Riverside County Department of Environmental Health for their review. That agency will have jurisdiction over the site and future investigations of the soil contamination.

If discolored soils or soils with an unusual odor are encountered during future development of the site, this firm or similarly qualified professionals should be contacted and work discontinued in that particular area until an evaluation can be made.

CLOSURE

We appreciate this opportunity to provide environmental services for this site. Should questions arise, please do not hesitate to contact this firm at your convenience.

Respectfully submitted,

C.H.J., INCORPORATED

Kevin McCalley (RK)

Kevin McCalley, Staff Scientist

Robert R. Kunkle, R.E.A. 04458
Environmental Projects Manager

Robert J. Johnson, R.C.E. 27060
Senior Vice President

KM/RRK/RJJ:tlh

Enclosures:
- "A-1" - Index Map
- "A-2" - Site Map
- "A-3" - Cross-Section
- "B" - Chain-of-Custody
- "C" - Laboratory Data
- "D" - LUFT Manual

Distribution:
- AON, Incorporated (4)
- Brenda Macgregor, Riverside County DEH (1)

ENCLOSURE "B"

CHAIN-OF-CUSTODY

Del Mar Analytical

2852 Alton Avenue
Irvine, California 92714
(714) 261-1022
FAX (714) 261-1228

1014 E. Cooley Dr., Suite A
Colton, California 92324
(909) 370-4667
FAX (909) 370-1046

16525 Sherman Way, Suite C-11
Van Nuys, California 91406
(818) 779-1844
FAX (818) 779-1843

12509

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Client Name/Address	Project
CHJ	Orco Block 600 Hathaway Banning
Project Manager:	**Sampler:**
Robert Kunkle	Kevin M

Sample Description	Sample Matrix	Container Type	# of Cont	Sampling Date/Time	Preservatives	Analysis Required: 8015 mod. diesel	8015 gas	8020 gas						Special Instructions
1	soil	jar	1	2-8-94			X	X						
2							X	X						
3						X								
4						X								
5						X								
6						X								
7							X	X						
8							X	X						

Relinquished By	Date/Time	Received By:	Date/Time.
Kevin McCaig	2-8-94 12:42		
Relinquished By	Date/Time	Received By.	Date/Time
Relinquished By	Date/Time	Received in Lab By	Date/Time
			2/8/94 12:42 PM

Turnaround Time (check)

same day		72 hours	
24 hours		5 days	
48 hours		normal	X

Sample Integrity (check)

intact	X	on ice	X

Enclosure 1a
Job No: 94098-9

ENCLOSURE "C"

LABORATORY DATA

Enclosure "C" (1of5)
Job No. 94098-9

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843

CHJ Incorporated	Client Project ID: Orco Block	Sampled:	Feb 8, 1994
PO BOX 231	Banning	Received:	Feb 8, 1994
Colton, CA 92324	Analysis Method: EPA 5030/CA DHS Mod. 8015/8020	Analyzed:	Feb 11, 1994
Attention: Robert Kunkle	First Sample #: 4020105	Reported:	Feb 15, 1994

VOLATILE FUEL HYDROCARBONS/BTEX DISTINCTION (CA DHS Mod. EPA 8015/8020)

Laboratory Number	Sample Description Soil	Volatile Fuel Hydrocarbons mg/Kg (ppm)	Benzene mg/Kg (ppm)	Toluene mg/Kg (ppm)	Ethyl Benzene mg/Kg (ppm)	Total Xylenes mg/Kg (ppm)
4020105	#1	N.D.	N.D.	N.D.	N.D.	N.D.
4020106	#2	N.D.	N.D.	N.D.	N.D.	N.D.
4020111	#7	N.D.	N.D.	N.D.	N.D.	N.D.
4020112	#8	N.D.	N.D.	N.D.	N.D.	N.D.
Method Blank		N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limit:		**1.0**	**0.050**	**0.050**	**0.050**	**0.050**

Volatile Fuel Hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C15.

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL California ELAP # 1169 Arizona License # AZ0062

Alma S. Borcuk
Laboratory Manager-Colton

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843

CHJ Incorporated	Client Project ID: Orco Block Banning	Sampled: Feb 8, 1994
PO BOX 231		Received: Feb 8, 1994
Colton, CA 92324	Analysis Method: EPA 3550/CA DHS Mod. 8015	Analyzed: Feb 14-15, 1994
Attention: Robert Kunkle	First Sample #: 4020107	Reported: Feb 16, 1994

EXTRACTABLE FUEL HYDROCARBONS (CA DHS Mod. EPA 8015)

Laboratory Number	Sample Description Soil	Extractable Hydrocarbons mg/Kg (ppm)	Hydrocarbon Type
4020107	#3	N.D.	N.A.
4020108	#4	N.D.	N.A.
4020109	#5	31	C8 - C25
4020110	#6	N.D.	N.A.
Method Blank		N.D.	N.A.

ok BMB

Detection Limit:	**5.0**

Extractable Hydrocarbons are quantitated against a diesel fuel standard. Hydrocarbons detected by this method range from C8 to C40.

Analytes reported as N.D. were not present above the stated limit of detection.

DEL MAR ANALYTICAL California ELAP # 1169 Arizona License # AZ0062

Alma S. Borcuk
Laboratory Manager-Colton

Enclosure "C" (3075)
Job No. 94098-9

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843

QC DATA REPORT

EPA METHOD: 8015 Volatile
matrix: soil

DATE: 2/11/94

SAMPLE # 4020105

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Hydrocarbons	0	12.5	13	9.5	104%	76%	31.1%	90%

Definition of Terms:

R1. . . . . Result of Sample Analysis

Sp. . . . . Spike Concentration Added to Sample

MS. . . . . Matrix Spike Result

MSD. . . . . Matrix Spike Duplicate Result

PR1. . . . . Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2. . . . . Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD. . . . . Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92714 (714) 261-1022 FAX (714) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843

QC DATA REPORT

EPA METHOD 8020
matrix: soil

DATE: 2/11/94

SAMPLE # 4020105

Analyte	R1	Sp	MS	MSD	PR1	PR2	RPD	MEAN PR
	ppm	ppm	ppm	ppm	%	%	%	%
Benzene	0	0.16	0.2	0.18	125%	113%	10.5%	119%
Toluene	0	1.05	1.1	1.1	105%	105%	0.0%	105%
Ethylbenzene	0	0.19	0.2	0.18	105%	95%	10.5%	100%
Xylenes	0	1.4	1.4	1.2	100%	86%	15.4%	93%

Definition of Terms:

R1. . . . . Result of Sample Analysis

Sp. . . . . Spike Concentration Added to Sample

MS. . . . . Matrix Spike Result

MSD. . . . . Matrix Spike Duplicate Result

PR1. . . . . Percent Recovery of MS; ((MS-R1) / SP) X 100

PR2. . . . . Percent Recovery of MSD; ((MSD-R1) / SP) X 100

RPD. . . . . Relative Percent Difference; ((MS-MSD)/(MS+MSD)/2)) X 100

Del Mar Analytical

ENCLOSURE "D"

LUFT MANUAL

APPENDIX A - MAXIMUM ACCEPTABLE LEVELS

Table 2-1 (LUFT Manual, 1989)
Leaching Potential Analysis for Gasoline and Diesel
Using Total Petroleum Hydrocarbons (TPH)
and Benzene, Toluene, Xylene and Ethylbenzene (BTX&E)

The following table was designed to permit estimating the concentrations of TPH and BTX&E that can be left in place without threatening groundwater. Three levels of TPH and BTX&E concentrations were derived (from modeling) for sites which fall into categories of low, medium, or high leaching potential. To use the table, find the appropriate description for each of the features. Score each feature using the weighting system shown at the top of each column. Sum the points for each column and total them. Match the total points to the allowable BTX&E and TPH levels.

SITE FEATURE		SCORE 10 PTS IF CONDITION IS MET		SCORE 9 PTS IF CONDITION IS MET		SCORE 5 PTS IF CONDITION IS MET	
Minimum Depth to Groundwater from the Soil Sample (*feet*)		> 100		51-100		25-50[1]	
Fractures in subsurface (applies to foothills or mountain areas)		None		Unknown		Present	
Average Annual Precipitation (*inches*)		< 10		10-25		26-40[2]	
Man-made conduits which increase vertical migration of leachate		None		Unknown		Present	
Unique site features: recharge area, coarse soil, nearby wells, etc.		None		At least one		More than one	
COLUMN TOTALS → TOTAL POINTS		+		+		=	
RANGE OF TOTAL POINTS		49 pts or more		41 - 48 pts		40 pts or less	
MAXIMUM ALLOWABLE B/T/X/E LEVELS (*PPM*)		1/50/50/50		.3/.3/1/1		NA[3]	
MAXIMUM ALLOWABLE TPH LEVELS (*PPM*)	GASOLINE	1,000		100		10	
	DIESEL	10,000		1,000		100	

1 If depth is greater than 5 feet and less than 25 feet, score 0 points (If depth is 5 feet or less, this table should not be used)
2 If precipitation is over 40 inches, score 0 points
3 Levels for BTX&E are not applicable at a TPH concentration of 10 ppm (gasoline) or 100 ppm (diesel) (For explanation see step 6, page 27 [of the LUFT Manual])

NOTE: Minimum depth to groundwater must be historic high

COUNTY OF RIVERSIDE A631905

OFFICIAL RECEIPT

#820668

Department Health Date 1/31, 19 94 #1333

Received from Orco Block

Three Hundred fifty + 00/100 DOLLARS

Description Fees for 2 UST Removed at Orco Block 600 N Hathaway Banning

Plan # 94-027 #13034140 Division Haz Mat

$ 350 CASH CHECK AUDITOR COPY By [signature]

ENTERED PK

2-3-94

13034140

Chino Valley Bank

12808 CENTRAL AVENUE

CHINO, CALIFORNIA 91710

90-3414
1222

DATE 01-31-94

PAY TO THE ORDER OF ******County Of Riverside********** $ ****350.00******

THE SUM 350 DOLLARS 00 CTS

CASHIER'S CHECK

Remitter: Orco Block

[signature]
AUTHORIZED SIGNATURE

⑈13034140⑈ ⑆122234149⑆ 23172000⑈

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS MANAGEMENT DIVISION

*UNDERGROUND STORAGE TANK PERMIT FOR CLOSURE

Feb 8th 10:00

TYPE OF PERMIT

- [X] Removal
- [ ] Abandonment in Place
- [ ] Temporary Closure (12 Months Only)

GLR

This permit shall not be construed as to allow the violation of any law, nor does it prevent further corrections of errors found on the application, plans, or at the site. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this permit, all applicable permits required by the local fire department, building department, and the air quality management district must be obtained and should be available for review at the closure site.

All tank closures must, at a minimum, comply with the California Underground Storage Tank Regulations and the appropriate section of the California Health & Safety Code.

ORCO BLOCK COMPANY (Owner/Contractor/Applicant) has applied for and is granted a permit to

REMOVAL (Remove/Abandon/Temp. Close) 2 (No.) underground storage tank(s) at

ORCO BLOCK COMPANY INC (Facility Name) located at

600 N HATHAWAY (Street Address) in BANNING (City/Town), California.

Underground tank closure inspections **must be scheduled five (5) business days in advance.** Telephone (714) 358-5055.

Permit Approved By	Date	Plan Check #
[signature]	1/31/94	94-027

*This Permit for Closure is VALID FOR 90 DAYS from the date of approval. If no reasonable action is taken within that period, the applicant will be required to reapply for a closure permit with all pertinent fees associated.

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY DEPARTMENT OF ENVIRONMENTAL HEALTH

UNDERGROUND STORAGE TANK CLOSURE/ABANDONMENT APPLICATION

Application for closure or abandonment of Underground Storage Tanks. Applicant may submit a copy of the removal plans. All fees are NON REFUNDABLE and payable when the plans are submitted with this application.

94-027
PLAN CHECK NUMBER

NAME OF FACILITY	ADDRESS OF FACILITY	(CITY)	PHONE NUMBER
ORCO BLOCK COMPANY, INC.	600 NORTH HATHAWAY	BANNING	909-849-7891
NAME OF OWNER	**ADDRESS OF OWNER**		**PHONE NUMBER**
PETE & RICK MUTH	600 NORTH HATHAWAY	BANNING	909-849-7891
NAME OF OPERATOR	**ADDRESS OF OPERATOR**		**PHONE NUMBER**
ORCO BLOCK COMPANY, INC.	600 NORTH HATHAWAY	BANNING	909-849-7891
NAME OF CONTRACTOR/CONTACT PERSON	**ADDRESS OF CONTRACTOR**		**PHONE NUMBER**
OWNER	SAME		
CONTRACTORS LICENSE TYPE & NUMBER (Including Hazardous Materials Certification)			
N/A	EPA# CAL 000092547		

ANSWER THE FOLLOWING QUESTIONS DESCRIBING THE TANKS TO BE CLOSED OR ABANDONED. IF YOU HAVE MORE THAN FOUR (4) TANKS, PROVIDE INFORMATION ON ADDITIONAL APPLICATION FORM.

	TANK 1	TANK 2	TANK 3	TANK 4
SINGLE/DOUBLE WALL TANK	S	S		
TANK IN USE (YES/NO)	Y	Y		
IS TANK SUSPECTED OF LEAKING (YES/NO)	NO	NO		
AGE OF TANK (YEARS)	UKN	UKN		
CONSTRUCTION MATERIAL OF TANK(S)	STEEL	STEEL		
HAZARDOUS SUBSTANCE STORAGE HISTORY	GASOLINE	DIESEL		

Check the method of closure to be performed:

REMOVAL (X)

ABANDONMENT ( )

TEMPORARY CLOSURE ( )

DATES FOR WHICH THE TANKS ARE TO BE TEMPORARILY CLOSED (IF APPLICABLE).

NAME OF PERSON TO CONTACT IN AN EMERGENCY	24 HOUR EMERGENCY PHONE NUMBER
JIM MORRIS	909-350-8681

APPLICANT NAME	APPLICANT SIGNATURE	DATE OF APPLICATION
CHARLIE WALLEN	Charlie Wallen	1/31/94

PLEASE MAKE YOUR CHECK PAYABLE TO THE COUNTY OF RIVERSIDE

CLOSURE/ABANDONMENT FEE #130341140

FIRST TANK _____ $250.00
EACH ADDITIONAL TANK_ $100.00
REINSPECTION FEE ____ $ 50.00

AMOUNT ATTACHED $ 350 .00

TRANSACTION NO. A631905

EARTH SCIENCE TECHNOLOGY

PRECISION TANK TESTING

CA LICENSE NUMBER 92-1036
NV CERTIFICATION UTT-1007

2 Tanks OK
2 lines
6/14/93

6/93

County of Riverside
Department of Health
Environmental Health Services
Hazardous Materials Management
P.O. Box 7600
Riverside, California 92513

ENV 6/93

June 7, 1993

Dear Sir/Madam,

On the behalf of our customers, please find enclosed the precision tank test results for:

Orco Banning Block
600 North Hathaway
Banning, California 92220

Tanks and piping passed. Should you have any questions, please do not hesitate to call us at (619) 949-4638.

Best Regards,

Sheri Fry

Sheri Fry
Earth Science Technology

9648 9th STREET, SUITE 5, HESPERIA, CALIFORNIA 92345 ☐ 619-949-4638 ☐ FAX 619-949-6200

EARTH SCIENCE TECHNOLOGY

TEST CERTIFICATE

TANK OWNER	Orco Banning Block
CONTACT PERSON	Charlie Whalen
ADDRESS	600 North Hathaway
CITY, STATE	Banning, California 92220
TELEPHONE	714/849-7891
TANK ADDRESS	600 North Hathaway
CITY, STATE	Banning, California 92220
TEST METHOD	Horner EZY-Chek Method I
TEST DATE	June 7, 1993

TANK	CAPACITY	PRODUCT	PASS/FAIL	TEST RESULTS
1	8,000	Diesel	Pass	-.00066
2	8,000	Gasoline	Pass	-.00828

REMARKS This is to certify that the above tank(s) are certified product tight and meet the criteria established by the N.F.P.A. pamphlet 329. Depth to ground water 50 feet.

APPROVAL [signature] LICENSE # 92-1036

9648 NINTH STREET, SUITE 5, HESPERIA, CALIFORNIA 92345 ☐ 619-949-4638

EARTH SCIENCE TECHNOLOGY

TEST CERTIFICATE

TANK OWNER	Orco-Banning Block
CONTACT PERSON	Charlie Whalen
ADDRESS	600 North Hathaway
CITY, STATE	Banning, California 92220
TELEPHONE	714/849-7891
TANK ADDRESS	600 North Hathaway
CITY, STATE	Banning, California 92220
TEST METHOD	Horner EZY-Chek
TEST DATE	May 17, 1991

TANK	CAPACITY	PRODUCT	HIGH TEST	LOW TEST
1	8,000	Diesel	+.00558	
2	8,000	Gasoline	+.00948	

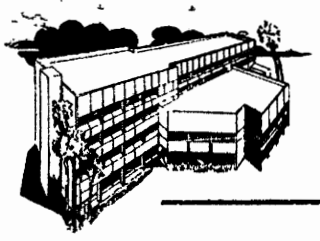
REMARKS This is to certify that the above tanks and their associated piping system was certified product tight and meets the criteria established by the N.F.P.A. Pamphlet 329.

APPROVAL Donald V. Horner SIGNATURE

Lic. # 92-1036

HORNER EZY-CHEK

1232 NORTH PADUA AVENUE, UNIT 7, UPLAND, CALIFORNIA 91786 ☐ 714-920-5774



COUNTY OF RIVERSIDE
DEPARTMENT OF HEALTH

E.J. GALLAGHER, M.D., M.P.H., M.A.
DIRECTOR OF HEALTH

Phone:

4065 COUNTY CIRCLE DR. RIVERSIDE, CA. 92503
(Mailing Address-P.O. Box 7600 Riverside, CA. 92513-7600)
FAX (714) 358-4529

2 Tanks ok
CJ 8-12-91

July 30, 1991

ATTACHED

ORCO BLOCK CO
600 N HATHAWAY
BANNING CA 92220

Dear Business Owner/Operator:

RE: Orco Block Company

It has come to our attention that you are the owner/operator of the property located at 600 N. Hathaway Street, Banning.

Our records indicate that we have not received the following information as indicated by the X mark(s) below.

[ ] Business Emergency Plan
[ ] California Form A
[ ] California Form B (One for each tank)
[X] Copy of Underground Storage Tank(s) Precision Test(s)
[ ] Generator Application
[ ] Monitoring Alternative for Underground Storage Tank(s)
[ ] Underground Storage Tank Closure/Abandonment Application
[ ] Quarterly Inventory Reporting Form

Please provide the above requested information to this office within thirty (30) days.

If you have any questions regarding this notice, please call Kari Whitehead at (714) 358-5055.

Sincerely,

Vince Sternjacob

Vince Sternjacob
Supervising Hazardous Materials
Management Specialist

VS:kw

Data Chart for Tank System Tightness Test

CAL PETRO, INC.

petro tite TANK TESTER

45-769 FLOWER ST.
INDIO, CA 92201

TESTED 8-88

2 TANKS PASSED

REVIEWED by PLM

1. OWNER Property ☐ Tank(s) ☐

Name	Address	Representative	Telephone
ORLO. BLOCK	600 NORTH HATHAWAY BANNING CA		714-849-7891
Name	Address	Representative	Telephone

2. OPERATOR

Name	Address	Telephone

3. REASON FOR TEST (Explain Fully)

ANNUAL PRECISION TEST to comply with Title 23 Permit Requirements.

4. WHO REQUESTED TEST AND WHEN

Name	Title	Company or Affiliation	Date
Address			Telephone

5. WHO IS PAYING FOR THIS TEST?

See #1

Company, Agency or Individual	Person Authorizing	Title	Telephone
Billing Address	City	State	Zip
Attention of:	Order No.	Other Instructions	

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/Fiberglass
NORTH	8000		UNL	9 yrs	Steel
SOUTH	8000		Diesel	9 yrs	Steel

7. INSTALLATION DATA

Location	Cover	Fills	Vents	Siphones	Pumps
middle of yard	concrete & earth	4"	2"	NONE	Suction
North inside driveway, Rear of station, etc.	Concrete, Black Top, Earth, etc.	Size, Fillfill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known

8. UNDERGROUND WATER

Depth to the Water table _____ "

Is the water over the tank? ☐ Yes ☐ No

9. FILL-UP ARRANGEMENTS

Tanks to be filled _____ hr. _____ Date Arranged by _____ Name _____ Telephone

Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry _____ Company _____ Name _____ Telephone

10. CONTRACTOR, MECHANICS, any other contractor involved

11. OTHER INFORMATION OR REMARKS

FAXED 9-16-88 JH

Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS

Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite TANK TESTER as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
NORTH	Yes	+.012	8-15-88
SOUTH	Yes	-.024	8-15-88

13. CERTIFICATION

This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

2-22-88
Date

Bobby Riggs
Technicians

CAL-PETRO
Testing Contractor or Company

Bobby Riggs
By: Signature

INDIO CA 619-347-3417
Address

4114812827
Serial No. of Thermal Sensor

14. ORCO BLOCK — Name of Supplier, Owner or Dealer

Address No. and Street(s) — City — State

8-15-85 — Date of Test

15. TANK TO TEST

NORTH — Identity by position

UNL — Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 8000 Gallons

By most accurate capacity chart available 8254 Gallons

From
- ☐ Station Chart
- ☐ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with
- ☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 in. (to ⅛") — 0 Gallons — 96 in. (Tank Diameter)

	Gallons	Total Gallons ea. Reading
Inventory		
Transfer total to line 25a		

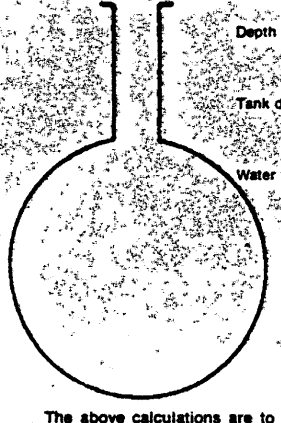
18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK ☐ Water in tank ☐ Line(s) being tested with LVLLT ☐ High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27).

Use maximum allowable test pressure for all tests.
Four pound rule does not apply to doublewalled tanks.

Complete section below:

1. Is four pound rule required? Yes ☐ No ☐
2. Height to 12" mark from bottom of tank _____ in.
3. Pressure at bottom of tank _____ P.S.I.
4. Pressure at top of tank _____ P.S.I.



NOTES:

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 140 in.
Add 30" for "T" probe assy. 170 30 in.
Total tubing to assemble — approximate 44 in.

20. EXTENSION HOSE SETTING

Tank top to grade* 44 in.
Extend hose on suction tube 6" or more below tank top 50 in.
*If Fill pipe extends above grade, use top of fill.

22. Thermal-Sensor reading after circulation 16498 digits
72.73 °F

23. Digits per °F in range of expected change 323 digits (Between)

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity
Observed A.P.I. Gravity
Hydrometer employed H
Observed Sample Temperature °F
Corrected A.P.I. Gravity @ 60°F, From Table A
Coefficient of Expansion for Involved Product From Table B
Transfer COE to Line 25b.

21. VAPOR RECOVERY SYSTEM ☒ Stage I ☒ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product Unl
Hydrometer Employed H
Temperature in Tank After Circulation 72.4 °F
Temperature of Sample 72 °F
Difference (+/-) .4 °F
Observed A.P.I. Gravity 60.6
Reciprocal 1467 Page # 64

8254 (Total quantity in full tank (16 or 17)) × 1467 (Reciprocal) = 5.626448534 (Volume change in this tank per °F) Transfer to Line 26a.

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C °F
Coefficient of Water Table D
Added Surfactant? ☐ Yes ☐ No Transfer COE to Line 25c.

25. (a) _____ (Total quantity in full tank (16 or 17)) × (b) _____ (Coefficient of expansion for involved product) = (c) _____ (Volume change in this tank per °F) gallons

26. (a) 5.626448534 (Volume change per °F (25 or 24b)) + 323 (Digits per °F in test Range (23)) = .017419345 (Volume change per digit Compute to 4 decimal places.) This is test factor (a) .0174

26. LOG OF TEST PROCEDURES: ORED Blue			30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO .001 GAL.			34. TEMPERATURE COMPENSATION USE FACTOR (a) .0174			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE 2-15-88 / TIME (24 hr.)	28. Record details of setting up and running test. (Use full length of line if needed.) DATA UPL 8005	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	33. Product Replaced (−): Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower − (c)	37. Computation (c) × (a) = Expansion + Contraction −	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (−) ø33(V) − ø37(T)	At High Level record Total End Deflection: At Low Level compute Change per Hour (NFPA criteria)
920	STARTED circulation			36								
1000	set High Level VALVES			42		120		16498				
15	1ST High Level READING	1	43.0	42	120	180	+.060	501	+3	+.052	+.008	
30	2ND	2	43.2	42	180	240	+.060	508	+7	+.122	−.062	
45	3RD	3	43.3	42	240	320	+.080	511	+3	+.052	+.028	
1100	4TH	4	43.5	42	320	400	+.080	517	+6	+.104	−.024	
15	5TH	5	43.5	42	400	480	+.080	520	+3	+.052	+.028	
30	6TH	6	43.5	42	480	570	+.090	526	+6	+.104	−.014	
45	7TH	7	43.5	42	570	650	+.080	532	+6	+.104	−.024	
1200	8TH	8	43.6	42/42	650	730	+.080	537	+5	+.087	−.007	
15	1ST Low Level READING	1	13.5	12	150	240	+.090	541	+4	+.070	+.020	15 hr/Low Lvl
30	2ND	2	13.5	12	240	330	+.090	546	+5	+.087	+.003	+.003
45	3RD	3	13.5	12	330	420	+.090	551	+5	+.087	+.003	+.006
1500	4TH	4	13.5	12	420	510	+.090	556	+5	+.087	+.003	+.009
15	5TH	5	13.5	12	510	600	+.090	561	+5	+.087	+.003	+.012
THE TANK SYSTEM TESTED TIGHT, with a volume change of +.012 GAL, which is within the ±.050 GAL guidelines.												

14. Orco Block — Name of Supplier, Owner or Dealer; Address No. and Street(s); City; State; Date of Test: 8-15-88

15. TANK TO TEST

South — Identity by position

Diesel — Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity: 8000 Gallons

By most accurate capacity chart available: 8254 Gallons

From:
- ☐ Station Chart
- ☐ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with
- ☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up: 0 to ⅛" in. — 0 Gallons — 94 Tank Diameter in.

	Gallons	Total Gallons ea. Reading
Inventory		
Transfer total to line 25a		

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

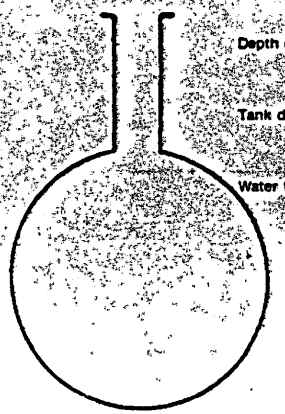
☑ Water in tank ☐ Line(s) being tested with LVLLT ☐ High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27).

Use maximum allowable test pressure for all tests.
Four pound rule does not apply to doublewalled tanks.

Complete section below:

1. Is four pound rule required? Yes ☐ No ☐
2. Height to 12" mark from bottom of tank _____ in.
3. Pressure at bottom of tank _____ P.S.I.
4. Pressure at top of tank _____ P.S.I.



Depth of burial _____ in.
Tank dia. _____ in.
Water table _____ in.

NOTES:

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 140 in.
Add 30" for "T" probe assy. 170 30 in.
Total tubing to assemble — approximate 14 in.

20. EXTENSION HOSE SETTING

Tank top to grade* 46 in.
Extend hose on suction tube 6" or more below tank top 52 in.
*If Fill pipe extends above grade, use top of fill.

22. Thermal-Sensor reading after circulation 18049 digits
77178 °F
23. Digits per °F in range of expected change 321 digits Between

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity
Observed A.P.I. Gravity
Hydrometer employed H
Observed Sample Temperature °F
Corrected A.P.I. Gravity @ 60°F, From Table A
Coefficient of Expansion for Involved Product From Table B
Transfer COE to Line 25b.

21. VAPOR RECOVERY SYSTEM ☐ Stage I ☐ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product Diesel
Hydrometer Employed 4 H
Temperature in Tank After Circulation 77.4 °F
Temperature of Sample 85 °F
Difference (+/-) 7.6 °F
Observed A.P.I. Gravity 33.5
Reciprocal 2197 Page # 57

8254 (Total quantity in full tank (16 or 17)) × 2197 (Reciprocal) = 3.756941283 (Volume change in this tank per °F)
Transfer to Line 26a.

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C °F
Coefficient of Water Table D
Added Surfactant? ☐ Yes ☐ No Transfer COE to Line 25b.

25. (a) _____ Total quantity in full tank (16 or 17) × (b) _____ Coefficient of expansion for involved product = (c) _____ Volume change in this tank per °F gallons

26. (a) 3.756941283 Volume change per °F (25 or 24b) + 321 Digits per °F in test = .011703866 Volume change per digit This is test .0117

26. LOG OF TEST PROCEDURES: Orco Block			30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO .001 GAL.			34. TEMPERATURE COMPENSATION USE FACTOR (a) .0117			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE 5-15-88 / TIME (24 hr.)	28. Record details of setting up and running test. (Use full length of line if needed.) Sout # Diesel 8000	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Standpipe Level in Inches: Level to which Pressured	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	33. Product Replaced (−): Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower − (c)	37. Computation (c) × (a) = Expansion + Contraction −	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (−) #33(V) − #37(T)	At High Level record Total End Deflection / At Low Level compute Change per Hour (NFPA criteria)
920	STARTED CIRCULATION											
1000	SET HIGH LEVEL VALUES					610		18049				
15	1ST HIGH LEVEL READING	1	41.0		610	550	-.060	051	+2	+.023	-.083	
30	2ND	2	41.3		550	520	-.040	053	+2	+.023	-.063	
45	3RD	3	41.5		520	480	-.030	056	+3	+.035	-.065	
1100	4TH	4	41.7		480	460	-.020	058	+2	+.023	-.043	
15	5TH	5	41.8		460	440	-.020	062	+4	+.047	-.067	
30	6TH	6	41.8		440	420	-.020	064	+2	+.023	-.043	
45	7TH	7	41.8		420	410	-.010	066	+2	+.023	-.033	
1200	8TH	8	41.9		410	400	-.010	070	+4	+.047	-.057	
15	1ST LOW LEVEL READING	1	12.5		180	200	+.020	072	+2	+.023	-.003	0.5 less than 10
30	2ND	2	12.4		200	220	+.020	075	+3	+.035	-.015	-.015
45	3RD	3	12.4		220	240	+.020	077	+2	+.023	-.003	-.018
1300	4TH	4	12.4		240	260	+.020	079	+2	+.025	-.005	-.023
15	5TH	5	12.4		260	280	+.020	081	+2	+.025	-.005	-.028
THE TANK SYSTEM TESTED TIGHT with a volume change of -.024 GPH, which is within the ±.050 GPH Guidelines												

Data Chart for Tank System Tightness Test

CAL PETRO, INC.

petro tite TANK TESTER

45-769 FLOWER ST.
INDIO, CA 92201

1. OWNER Property ☐ Tank(s) ☐

Name	Address	Representative	Telephone
FRED Lite BLOCKS	600 N. HATHAWAY	BANNING CA	714-849-7891
Name	Address	Representative	Telephone

2. OPERATOR

Name	Address	Telephone

3. REASON FOR TEST (Explain Fully)

SECOND ANNUAL PRECISION test to comply with title 23 Permit Requirements

4. WHO REQUESTED TEST AND WHEN

Name	Title	Company or Affiliation	Date
Address			Telephone

5. WHO IS PAYING FOR THIS TEST?

See #1

Company, Agency or Individual	Person Authorizing	Title	Telephone
Billing Address	City	State	Zip
Attention of:	Order No.	Other Instructions	

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/Fiberglass
NORTH	8000	ARCO	UNL	8 yrs	Steel
SOUTH	8000	"	Diesel	"	"

7. INSTALLATION DATA

Location	Cover	Fills	Vents	Siphones	Pumps
middle of MAN	Concrete & EARTH	4"	2"	NONE	Suction
North inside driveway, Rear of station, etc.	Concrete, Black Top, Earth, etc.	Size, Titefill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known

8. UNDERGROUND WATER

Depth to the Water table _____"

Is the water over the tank? ☐ Yes ☐ No

9. FILL-UP ARRANGEMENTS

Tanks to be filled _____ hr. _____ Date Arranged by _____ Name Telephone

Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry _____ Company Name Telephone

10. CONTRACTOR, MECHANICS, any other contractor involved

11. OTHER INFORMATION OR REMARKS

Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS

Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite TANK TESTER as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
UNL	Yes	-.030	9-21-87
Diesel	Yes	-.011	9-21-87

13. CERTIFICATION

This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Asociation Pamphlet 329.

Date	Technicians	Testing Contractor or Company.	By: Signature
9-26-87	Bobby Riggs	CAL-PETRO	Bobby Riggs
414812827		INDIO CA	619-347-3417
Serial No. of Thermal Sensor			Address

14. FRED LITE BLOCKS | BANNING | CA | 8-21-87

Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

15. TANK TO TEST

NORTH
Identity by position

REG
Brand and Grade

16. CAPACITY

Nominal Capacity 8000 Gallons

By most accurate capacity chart available 8254 Gallons

Is there doubt as to True Capacity? ☐

See Section "DETERMINING TANK CAPACITY"

From
- ☐ Station Chart
- ☐ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with petro tite
- ☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 to ⅛ in. — 0 Gallons

Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

	Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
Inventory			

Tank Diameter 96"

Product in full tank (up to fill pipe) — 8254

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (26).

NO ☒ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

YES ☐ Stage I ☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade*	140"
Add 30" for 4" L	30"
Add 24" for 3" L or air seal	120"
Total tubing to assemble Approximate	"

20. EXTENSION HOSE SETTING

Tank top to grade*	44"
Extend hose on suction tube 6" or more below tank top	50"

*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? Colder? ___° F Product in Tank ___° F Fill-up Product on Truck ___° F Expected Change (− or −)

22. Thermal-Sensor reading after circulation 17436 digits — 75/76 Nearest °F

23. Digits per °F in range of expected change 319 digits

24. 8254 total quantity in full tank (16 or 17) × .00057881 coefficient of expansion for involved product = 4.777749774 volume change in this tank per °F — gallons

25. 4.777749774 volume change per °F (24) ÷ 319 Digits per °F in test Range (23) = .014976481 Volume change per digit. Compute to 4 decimal places. — This is test factor (a)

SPECIFIC GRAVITY

HYDROMETER API READING 52.8

TEMPERATURE 82

"A" CHART (API @ 60°) 55.1

"B" COEFFICIENT OF EXPANSION .00057881

TEST FACTOR a .0150

(3) 9/15

Data Chart for Tank System Tightness Test

CAL PETRO, INC.

petro tite TANK TESTER

45-769 FLOWER ST.
INDIO, CA 92201

1. OWNER Property ☐ Tank(s) ☐

Name: FRED-LITE BLOCKS | Address: 600 N HATHAWAY | Representative: BANNING CA. | Telephone: 714-849-7891

Name | Address | Representative | Telephone

2. OPERATOR

Name | Address | Telephone

3. REASON FOR TEST (Explain Fully)

TO COMPLY WITH TITLE 23 PERMIT REQUIREMENTS

4. WHO REQUESTED TEST AND WHEN

Name: LEN MINYARD | Title: V.P. | Company or Affiliation | Date: 8-21-86

SEE #1 | Address | Telephone

5. WHO IS PAYING FOR THIS TEST?

SEE #1

Company, Agency or Individual | Person Authorizing | Title | Telephone

Billing Address | City | State | Zip

Attention of: | Order No. | Other Instructions

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/Fiberglass
North	8000	ARCO	UNL	6 YRS	STEEL
South	8,000	"	DIESEL	"	"

7. INSTALLATION DATA

Location	Cover	Fills	Vents	Siphones	Pumps
MIDDLE OF YARD	CONCRETE EARTH	4 11	2 11	NONE	SUCTION
North inside driveway, Rear of station, etc.	Concrete, Black Top, Earth, etc.	Size, Titefill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known

8. UNDERGROUND WATER

Depth to the Water table _____"

Is the water over the tank? ☐ Yes ☐ No

9. FILL-UP ARRANGEMENTS

Tanks to be filled 0800 hr. 9/15/86 Date Arranged by See #7 Name Telephone

Extra product to "top off" and run TSTT. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry ARCO Company Name Telephone

10. CONTRACTOR, MECHANICS, any other contractor involved

11. OTHER INFORMATION OR REMARKS

Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.

12. TEST RESULTS

Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite TANK TESTER as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
DIESEL	YES	-.039 GPH	9-15-86
REG	YES	+.046 GPH	9-15-86

13. CERTIFICATION

3/6/86 Date

4148 4/6 Serial No. of Thermal

This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

R. LUNK
S. Roberson Technicians

Cal Petro Inc. Testing Contractor or Company. By: S. RQ Signature

INDIO CA (619) 347 3417 Address

Reviewed by TKS

14. FRED LITE BLOCKS | 600 N HATHAWAY | BANNING | CA | 9-15-86

Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

15. TANK TO TEST

South
Identity by position

DIESEL
Brand and Grade

16. CAPACITY

Nominal Capacity 8,000 Gallons

By most accurate capacity chart available 8239 Gallons

Is there doubt as to True Capacity? ☐

See Section "DETERMINING TANK CAPACITY"

From
- Station Chart
- Tank Manufacturer's Chart
- Company Engineering Data
- Charts supplied with petro rite TANK TESTER
- Other _____

17. FILL-UP FOR TEST

	Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
Stick Water Bottom before Fill-up 0 " to ⅛ in. — 0 Gallons			
Inventory			
Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY			
Tank Diameter 94" — Product in full tank (up to fill pipe)	YES		8239

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (26).

☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

NO ☐ Stage I ☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade*	140 "
Add 30" for 4" L	170 "
Add 24" for 3" L or air seal	"
Total tubing to assemble Approximate	14 "

20. EXTENSION HOSE SETTING

Tank top to grade*	46 "
Extend hose on suction tube 6" or more below tank top	52 "

*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? Colder? ___° F Product in Tank ___° F Fill-up Product on Truck ° F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation 18536 digits — 78/79 Nearest °F

23. Digits per °F in range of expected change 321 digits

24. 8239 (total quantity in full tank (16 or 17)) × .00045535 (coefficient of expansion for involved product) = 3.7516286 (volume change in this tank per °F) gallons

25. 3.7516286 (volume change per °F (24)) ÷ 321 (Digits per °F in test Range (23)) = .01168731 (Volume change per digit. Compute to 4 decimal places.) This is test factor (a)

33.1°

SPECIFIC GRAVITY

HYDROMETER API READING 35.7

TEMPERATURE 79°

"A" CHART (API @ 60°) 34.3

"B" COEFFICIENT OF EXPANSION .00045535

TEST FACTOR a .0117

26. LOG OF TEST PROCEDURES — 8239 GAL DIESEL

FRED-LITE BLOCK

27. DATE / TIME (24 hr.)	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	30. HYDROSTATIC PRESSURE CONTROL: Standpipe Level in Inches — Beginning of Reading	Level to which Restored	31. VOLUME MEASUREMENTS (V) RECORD TO .001 GAL: Product in Graduate — Before Reading	After Reading	33. Product Replaced (−) — Product Recovered (+)	34. TEMPERATURE COMPENSATION USE FACTOR (a) .0117: 35. Thermal Sensor Reading	36. Change Higher + Lower − (c)	37. Computation (c) × (a) = Expansion + Contraction −	38. NET VOLUME CHANGES EACH READING: Temperature Adjustment — Volume Minus Expansion (+) or Contraction (−) #33(V) − #37(T)	39. ACCUMULATED CHANGE: At High Level record Total End Deflection — At Low Level compute Change per Hour (NFPA criteria)
9-15-86												
0900	START CIRCULATION											
	CHECK FOR VISIBLE LEAKS											
1100	SET HIGH LEVEL VALUES			42		.250		18536				
15	1ST " " READING	1	41.7	42	.250	.200	−.050	540	+4	+.047	−.097	
30	2ND " " "	2	42.0	42	.200	.200	+.000	540	+0	+.000	+.000	
45	3RD " " "	3	41.7	42	.870	.835	−.035	542	+2	+.023	−.058	
1200	4TH " " "	4	42.0	42	.835	.835	+.000	544	+2	+.023	−.023	
15	5TH " " "	5	41.9	42	.835	.810	−.025	546	+2	+.023	−.048	
30	6TH " " "	6	42.0	42	.810	.810	+.000	552	+6	+.070	−.070	
45	7TH " " "	7	42.0	42	.810	.810	+.000	552	+0	+.000	+.000	
1300	8TH " " "	8	42.0	42/12	.810	.810	+.000	554	+2	+.023	−.023	
15	1ST LOW LEVEL READING	1	12.7	12	.150	.190	+.040	556	+2	+.023	+.017	DISREGARD
30	2ND " " "	2	12.5	12	.190	.210	+.020	556	+0	+.000	+.020	+.020
45	3RD " " "	3	12.5	12	.210	.230	+.020	560	+4	+.047	−.027	−.007
1400	4TH " " "	4	12.5	12	.230	.260	+.030	563	+3	+.035	−.005	−.012
15	5TH " " "	5	12.5	12	.260	.280	+.020	567	+4	+.047	−.027	−.039
	TANK AND LINES TEST TIGHT WITH A −0.39 GPH VOLUME CHANGE!											

14. FREDLITE Blocks | 600 N. MATHEWAY | BANNING | CA | 9-15-86

Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

15. TANK TO TEST

NORTH
Identity by position

REG.
Brand and Grade

16. CAPACITY

Nominal Capacity 8000 Gallons

By most accurate capacity chart available 8254 Gallons

Is there doubt as to True Capacity? ☐

See Section "DETERMINING TANK CAPACITY"

From
- Station Chart
- Tank Manufacturer's Chart
- Company Engineering Data
- Charts supplied with petro tite TANK TESTER
- Other _____

17. FILL-UP FOR TEST

	Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
Stick Water Bottom before Fill-up 0 to ⅛ in. " 0 Gallons			
Inventory			
Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY			
Tank Diameter 95" — Product in full tank (up to fill pipe) YES			8254

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (26).

☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM
- ☑ Stage I
- ☑ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade*	138 "
Add 30" for 4" L	168 "
Add 24" for 3" L or air seal	"
Total tubing to assemble Approximate	14 "

20. EXTENSION HOSE SETTING

Tank top to grade*	43 "
Extend hose on suction tube 6" or more below tank top	49 "

*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? Colder? ____° F Product in Tank ____° F Fill-up Product on Truck ____° F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation 18252 digits — 78/79 Nearest °F

23. Digits per °F in range of expected change 321 digits

24. 8254 (total quantity in full tank (16 or 17)) × .00059585 (coefficient of expansion for involved product) = 4.91814459 gallons (volume change in this tank per °F)

25. 4.91814459 (volume change per °F (24)) ÷ 321 (Digits per °F in test Range (23)) = .01533213 (Volume change per digit. Compute to 4 decimal places.) This is test factor (a)

SPECIFIC GRAVITY

HYDROMETER API READING 59.5

TEMPERATURE 77°

"A" CHART (API @ 60°) 57.5

"B" COEFFICIENT OF EXPANSION .00059585

TEST FACTOR a .0153

26. LOG OF TEST PROCEDURES: FRED-LITE BLOCKS REGULAR			30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO .001 GAL.			34 TEMPERATURE COMPENSATION USE FACTOR (a) .0153			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE 9-15-86 / TIME (24 hr.)	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level in Inches: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	33. Product Replaced (−) / Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower − (c)	37. Computation (c) × (a) = Expansion + Contraction −	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (−) #33(V) − #37(T)	At High Level record Total End Deflection: At Low Level compute Change per Hour (NFPA criteria)
1015	START CIRCULATION											
	CHECK FOR VISIBLE LEAKS											
1115	SET HIGH LEVEL VALUES			42		810		18252				
30	1ST " " READING	1	40.0	42	.810	.725	−.085	239	+7	+.107		
45	2ND " " "	2	41.8	42	.725	.715	−.010	246	+7	+.107		
1200	3RD " " "	3	42.0	42	.715	.715	+.000	274	+8	+.122		
15	4TH " " "	4	42.0	42	.715	.715	+.000	276	+2	+.031		
30	5TH " " "	5	42.5	42	.715	.740	+.025	282	+6	+.092		
45	6TH " " "	6	42.5	42	.740	.765	+.025	284	+2	+.031		
1300	7TH " " "	7	42.2	42	.765	.775	+.010	287	+3	+.046		
15	8TH " " "	8	42.4	42/12	.775	.795	+.020	288	+1	+.015		
30	1ST LOW LEVEL READING	1	14.0	12	.040	.135	+.095	288	+0	+.000	DISREGARD	
45	2ND " " "	2	13.6	12	.135	.200	+.065	293	+5	+.077	−.012	−.012
1400	3RD " " "	3	13.2	12	.200	.250	+.050	298	+5	+.077	−.027	−.039
15	4TH " " "	4	13.1	12	.250	.295	+.045	296	−2	−.031	+.076	+.037
30	5TH " " "	5	13.3	12	.295	.350	+.055	299	+3	+.046	+.009	+.046
	TANK AND LINES TEST TIGHT WITH A +.046 G.P.H. VOLUME CHANGE.											

County of Riverside - DEPARTMENT OF HEALTH
3636 UNIVERSITY AVE, RIVERSIDE CA 92501

Re: FRED LITE BLOCKS - BANNING October 21, 1986

To: FRED-LITE BLOCKS
600 N HATHAWAY
BANNING CA 92220

FAILURE TO IMPLEMENT AN APPROVED MONITORING PLAN

*** A REPLY IS NECESSARY ***

The Riverside County Underground Storage Tank Program will be issuing operating permits to operators of underground storage tanks beginning in January of 1987. A recent review of our records indicate you have not completed some or all of the following items. These MUST be completed before you can be issued an operating permit:

1. Submit a monitoring option to this office for approval.
2. Implement the approved monitoring option.
3. Perform the first annual precision test and submit written verification of results to this office.

NOTE: Not all monitoring options require precision testing. If a certified tank tester was not available to test your tanks by the September 1, 1986 deadline, please have the tester forward to this office notification of your scheduled tank testing date.

September 1, 1986, was the deadline for implementing an approved monitoring option. Riverside County Ordinance 617, the California Underground Storage Tank Regulations, and the State Health & Safety Code all require that you comply with these requirements before permits can be issued.

If you do not comply with the appropriate tank requirements by January 1, 1987, your case will be turned over to the District Attorney's Office for whatever legal action he deems necessary.

If tank ownership has changed or it is your intention to close these tanks, please reply with that information ON THE BACK OF THIS FORM.

* * * * * * - NOTE - * * * * * *
* ALL OWNER / OPERATORS WHO HAVE NOT SUBMITTED *
* A MONITORING APPLICATION PLAN SHOULD BE AWARE *
* THAT IF YOU OWN OR OPERATE A WASTE OIL TANK, *
* THE STATE HAS GRANTED THE LOCAL ENFORCEMENT *
* AGENCY (RIVERSIDE COUNTY HEALTH) PERMISSION TO *
* ACCEPT ALTERNATIVE #7 AS A MONITORING OPTION *
* FOR WASTE OIL TANKS. *
* * * * * * * * * * * * * * * *

If you have any questions regarding this letter, feel free to contact the Riverside County Tank Program staff at (714) 369 - 1141. Return to the above address.

CAL PETRO, INC.

45-769 FLOWER STREET INDIO, CALIFORNIA 92201
INDIO (619) 347-3417 PALM SPRINGS (619) 345-4647
CONTRACTORS LICENSE
426626

SUBJECT: CALIF. ADMINISTRATIVE CODE # 2641
UNDERGROUND STORAGE TANK
ALTERNATIVE # 6

AUGUST 27, 1986

CUSTOMER FRED LITE BLOCKS

ADDRESS 600 N. HATHAWAY

CITY BANNING, CA

TEST DATE 9-15-86

NO. OF TANKS 2

GENTLEMAN:

THE ABOVE CUSTOMER HAS SCHEDULED TESTING OF THEIR TANKS TO COMPLY WITH UNDERGROUND TANK REGULATIONS.

WE CANNOT TEST THESE TANKS PRIOR TO SEPTEMBER 1ST 1986, HOWEVER WE DO HAVE THEM SCHEDULED FOR THE DATE BELOW.

9-15-86

SINCERELY,

PENNY SALMON (PRES)
CAL PETRO, INC.
PS/be

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS MANAGEMENT DIVISION

Underground Storage Tank Official Inspection Report

ENTERED 12/28/93

FACILITY NAME Orco Block Co. FACILITY I.D. NUMBER 000 20

FACILITY ADDRESS 600 N. Hathaway CITY Banning ZIP CODE

INSPECTION DATE Dec 13, 1993

TIME IN _____ TIME OUT _____

INSPECTION TYPE: Routine ☑ Follow-up ☐

	ID# 1	ID# 2	ID #
	Mon Opt 3C	Mon Opt 3C	Mon Opt
	Product MVF	Product Dio	Product
	Inst Dt	Inst Dt	Inst Dt
	Size 8K	Size 8K	Size

H&SC = Health & Safety Code 23 CCR = California Code of Regulations, Title 23

VIOLATIONS	YES	NO	N/A	YES	NO	N/A	YES	NO	N/A
1. Application for a "Permit to Operate" Submitted									
a. Form A & B Submitted (H&SC 25286) Old Form		✓			✓				
b. Form C Submitted (23 CCR 2635(a)(6))			✓			✓			
2. Submitted UST Fees									
a. Operating Fees (H&SC 25287(a))	✓			✓					
b. State Surcharge (H&SC 25287(b))	✓			✓					
3. Approved Monitoring Alternative Application Submitted (H&SC 25291, 25292)	✓			✓					
a. Unauthorized Release Response Plan Submitted (23 CCR 2632(e)2, 2634(c))			✓			✓			
b. Integrity Testing:									
1. UST Integrity Tested (H&SC 25292(b)(1)) 6/93	✓			✓					
2. Pipeline Integrity Tested (H&SC 25291(f))	✓			✓					
3. Tests Submitted Within 30 Days (23 CCR 2643(h))	✓			✓					
c. On-line Leak Detection Installed (H&SC 25292(b)(4)(c))			✓			✓			
d. Annual On-line Leak Detection Test Submitted (H&SC 25292(b)(4)(C))			✓			✓			
e. Inventory Reconciliation:									
1. Monthly Inventory Reconciliation (23 CCR 2646(i))		✓			✓				
2. Annual Inventory Reconciliation (23 CCR 2646(j))		✓			✓				
3. Meters Calibrated Annually (23 CCR 2646(f))		✓			✓				
f. Continuous Monitoring Device Operable (23 CCR 2641(i))			✓			✓			
g. Daily Monitoring of Suction Product Line (23 CCR 2641(c))	✓			✓					
h. Written Records Maintained On Site (H&SC 25293(a), 23 CCR 2712(b))	✓			✓					
4. UST System Monitored According To Conditions Of Permit (H&SC 25293)	✓			✓					
5. UST Operated with Permit (H&SC 25284(a))	✓			✓					
6. Written Contract Exists Between Owner & Operator To Monitor UST (H&SC 25293(b))			✓			✓			
7. Reported Changes In Usage/Conditions To Operate/Monitoring Alternative Procedures of UST System Within 30 Days (23 CCR 2712(d))			✓			✓			
8. Reported Change in Ownership Within 30 Days (23 CCR 2712(d))			✓			✓			
9. Statement Of Financial Responsibility Submitted (H&SC 25292.2(a)) Due Dec 30, 1993			✓						
10. Reported Unauthorized Release Within 24 Hours (H&SC 25294, 25295) ~~Due Dec 30, 1993~~			✓			✓			
11. Approved UST System Repairs (23 CCR 2661)			✓			✓			
12. Secured Monitoring Wells (23 CCR 2649(d)(7))			✓			✓			
13. Other									

RECHECK DATE: N/A

RECEIVED BY:

RIVERSIDE ☐ HEMET ☒ INDIO ☐

INSPECTOR: B. Mac Gregor

OFFICE TELEPHONE NO.: 654-3878

DEH-HEH-021 (Rev 11/92)

DISTRIBUTION: WHITE–Hazardous Materials Management Branch; CANARY–Owner/Operator

COUNTY OF RIVERSIDE HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS MANAGEMENT BRANCH

No.

SUPPLEMENTAL REPORT

Reference Date Dec 13, 1993

Name Orco Block Co

Address 600 N. Hathway City Banning

Topic Routine Inspection for Underground Storage Tanks (USTs)

REMARKS:

1a) Owner/Operator shall submit A & B forms. (New forms required) to Hazardous Materials

3e(1+2) Owner/Operator shall conduct monthly inventory reconciliation and submit an annual report to Hazardous Materials

3e3) Owner/Operator shall calibrate the pump meters annually

Inspector BM S

Received by

DOH-HEH-002 (Rev1/92)

DISTRIBUTION: ORIGINAL–Specialist; COPY–Supervisor

KERRY

County of Riverside Health Services Agency
Department of Environmental Health
Hazardous Materials Management Division
Underground Storage Tank Monitoring Alternative Application

Banning

Name of Facility ORCO Block Co. INC. Address of Facility 600 N. HATHAWAY

Name of Owner Rick Muth Address of Owner 8042 KATELLA AVE. STANTON

Name of Operator Charlie Whalen Address of Operator 600 N. HATHAWAY

Contact Person's Name Charlie Whalen Contact Person's Phone # 714-849-7891

		Tank 1	Tank 2	Tank 3	Tank 4
1.	Size of Tank (Capacity)	8,000	8,000		
2.	Type of material used in the construction of the tank. - Steel (S), Fiberglass (F), Plasteel (P), Other (O) - please specify.	S	S		
3.	Material stored in tank, past and present. - Motor Vehicle Fuel (MVF), Diesel (D), Waste Oil (W), Other (O) - please specify.	MVF	D		
4.	What type of corrosion protection does the tank have? Cathodic (C), Hydrocarbon (tar) Coating (H), Resin Coating (R), Other (O) None (N).	N	N		
5.	Has the primary tank been repaired? Yes (Y)(date), No (N).	N	N		
6.	Are the tanks located in the same or closely spaced excavation? Yes (Y), No (N)	Y	Y		
7.	Is there secondary containment of the tank? External non-coating liner (L), Double-walled Construction (DW), Other (O) - please specify, None (N).	N	N		
8.	Type of material used in the construction of the piping. - Fiberglass (F), Steel/Iron (S), Other (O) - please specify.	S	S		
9.	Is there secondary containment of the piping? Fiberglass (F), Non-coating External Liner (L), None (N).	N	N		
10.	Is the product piping pressurized, suction or gravity type? Pressurized (P), Suction (S), Gravity (G).	S	S		
11.	What is the average volume (gallons) and frequency of tank product input withdrawals? (Daily (D), Weekly (W), Monthly (M))	D	D		
12.	What is the highest anticipated groundwater and source of information? TEST WELL DUG APPROX 2,000 YDS ABOVE STORAGE AREA	300'	300'		
13.	Type of monitoring equipment presently installed/operational? - Please specify. Date of last tank/product line integrity test? 9-5-92				
14.	When was the last time the tank test was performed? (month, year, and name of testing company) 6-5-92 EARTH SCIENCE				
15A.	Indicate your choice of monitoring alternatives from Tables A and B for EXISTING tanks and piping OR	#3/C	#3/C A/B		
15B.	Indicate your choice of monitoring alternatives from Table C for NEW Double-walled tank systems.				

Applicant's Name (Print)	Applicant's Title	Applicant's Signature	Application Date
CHARLES WHALEN ORCO Block Co INC.	MANAGER	Charles Whalen	10-15-92

FOR OFFICE USE ONLY

APPROVED	✓
APPROVED WITH CHANGES (SEE COMMENTS)	
DISAPPROVED (SEE COMMENTS)	

COMMENTS:

3-18-86

Alternative #5 approved, phone conversation with contact person (H. Walcott). Will send via U.S. Mail copy of Alt #5 Invest. Recon. regulation and list of Tank testers as requested.

Reviewed By: JS

Date: 3-18-86

In accordance with Ordinance #617, the modification fee for your facility is: $ _____

Authorization to proceed with monitoring modification is automatic upon payment of fees.

Failure to comply with the conditions of this approval is subject to the civil and criminal penalties of Section 14, Ordinance #617.

Public Records Request- 6 APNs and 600 N Hathaway Street, Banning, CA

2 messages

Samantha Weis <sw@weisenviro.com> Wed, Feb 24, 2021 at 9:30 AM
To: records@rctlma.org

Hello Public Records Team,

Please find the attached public records request for the following property:
6 APNs and 600 N Hathaway Street, Banning, CA 92220

Thank you.

Best regards,

Samantha Weis
President
Weis Environmental LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008
sw@weisenviro.com
760.585.7070 (Office)
760.672.6339 (Mobile)

Archived Building Request-Banning.pdf
132K

Records <records@rivco.org> Wed, Feb 24, 2021 at 1:12 PM
To: Samantha Weis <sw@weisenviro.com>

Hello Samantha,

After a thorough search of our records, we are unable to locate any building records for this address or these APNs.

Our records date back to 1963. All building permit records prior to 1963 have been destroyed.

Also, these APNs are now located in the City of Banning's jurisdiction. You may want to contact their Building Department at (951) 922-3120 to check for any permits they may have issued.

If you have any questions, please contact us @ (951) 955-2017

Thank you,

Dan

County of Riverside

Transportation and Land Management Agency

Records And Information Management

(951) 955-2017

records@rivco.org

How are we doing? **Click the Link and tell us**

[Quoted text hidden]

Application Number . . . . . 12-00000113 Date 3/04/21
Property Address . . . . . 600 N HATHAWAY ST
Parcel Number: 532-110-001
Application type description DEMOLITION-NON RESIDENTIAL
Property Use . . . . . .
Property Zoning . . . . . NOT AVAILABLE
Application valuation 25000

Application desc
Remove 2 metal building and all kilns

Owner	Contractor
MUTH HOLDINGS LLC	AON INC
8042 KATELLA AVE	15358 VALLEY BLVD
STANTON CA 90680	FONTANA CA 92335
	(909) 350-8681

Permit . . . . . DEMOLITION PERMIT
Additional desc . .
Permit Fee . . . . 264.00 Plan Check Fee . . .00
Issue Date . . . . 4/02/12 Valuation 0
Expiration Date . . 2/18/13

Other Fees . . . . . PLAN/COMPUTER STORAGE 1.00

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	264.00	264.00	.00	.00
Plan Check Total	.00	.00	.00	.00
Other Fee Total	1.00	1.00	.00	.00
Grand Total	265.00	265.00	.00	.00

Application Number . . . . . 17-00000749 Date 3/04/21
Property Address . . . . . 798 N HATHAWAY ST 1/2
Parcel Number: 532-110-002
Application type description ELECTRICAL
Property Use . . . . . .
Property Zoning . . . . . NOT AVAILABLE
Application valuation 1000

Application desc
Electric meter pedestal for gas valve station

Owner	Contractor
Southern California Gas Co	OWNER/BUILDER
555 W. 5th St.	
LOS ANGELES CA 90013	BANNING CA 92220
(614) 397-5212	

Permit . . . . . ELECTRICAL PERMIT NO PC
Additional desc . .
Permit Fee . . . . 176.00 Plan Check Fee . . .00
Issue Date . . . . 2/13/17 Valuation 0
Expiration Date . . 8/21/17

Other Fees . . . . . BUILDING STANDARDS COMMIS 1.00
PLAN/COMPUTER STORAGE 1.00

Fee summary	Charged	Paid	Credited	Due
Permit Fee Total	176.00	176.00	.00	.00
Plan Check Total	.00	.00	.00	.00
Other Fee Total	2.00	2.00	.00	.00
Grand Total	178.00	178.00	.00	.00

APPENDIX C
HISTORICAL RESOURCES

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

2016

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

2012

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

HIG

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

2009

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

HIG

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

2005

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

2002

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

HIG

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1996

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

HIG

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1985

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

HIG

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1975

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

HIG

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1972

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1967

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1962

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com

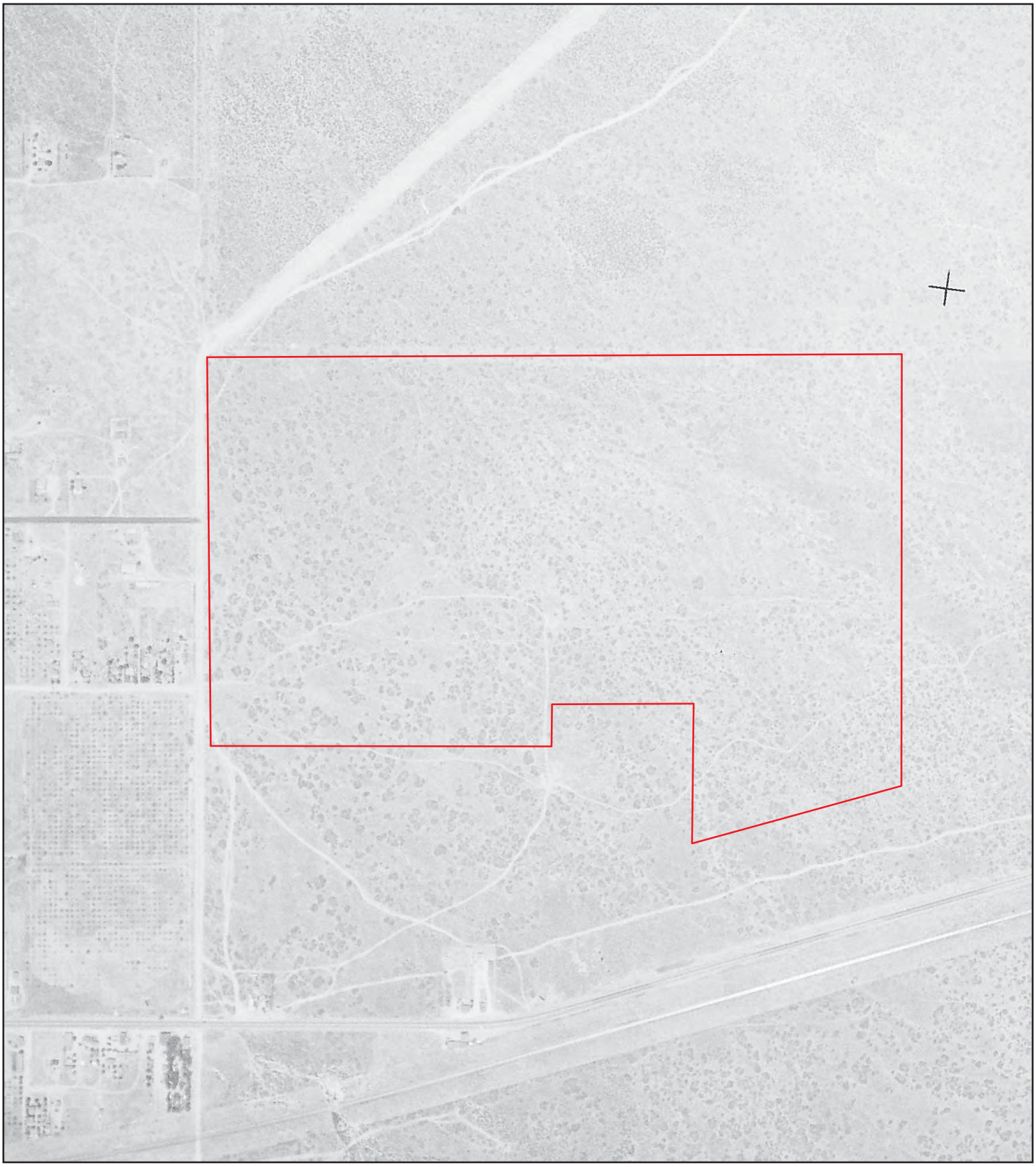
Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1955

HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com



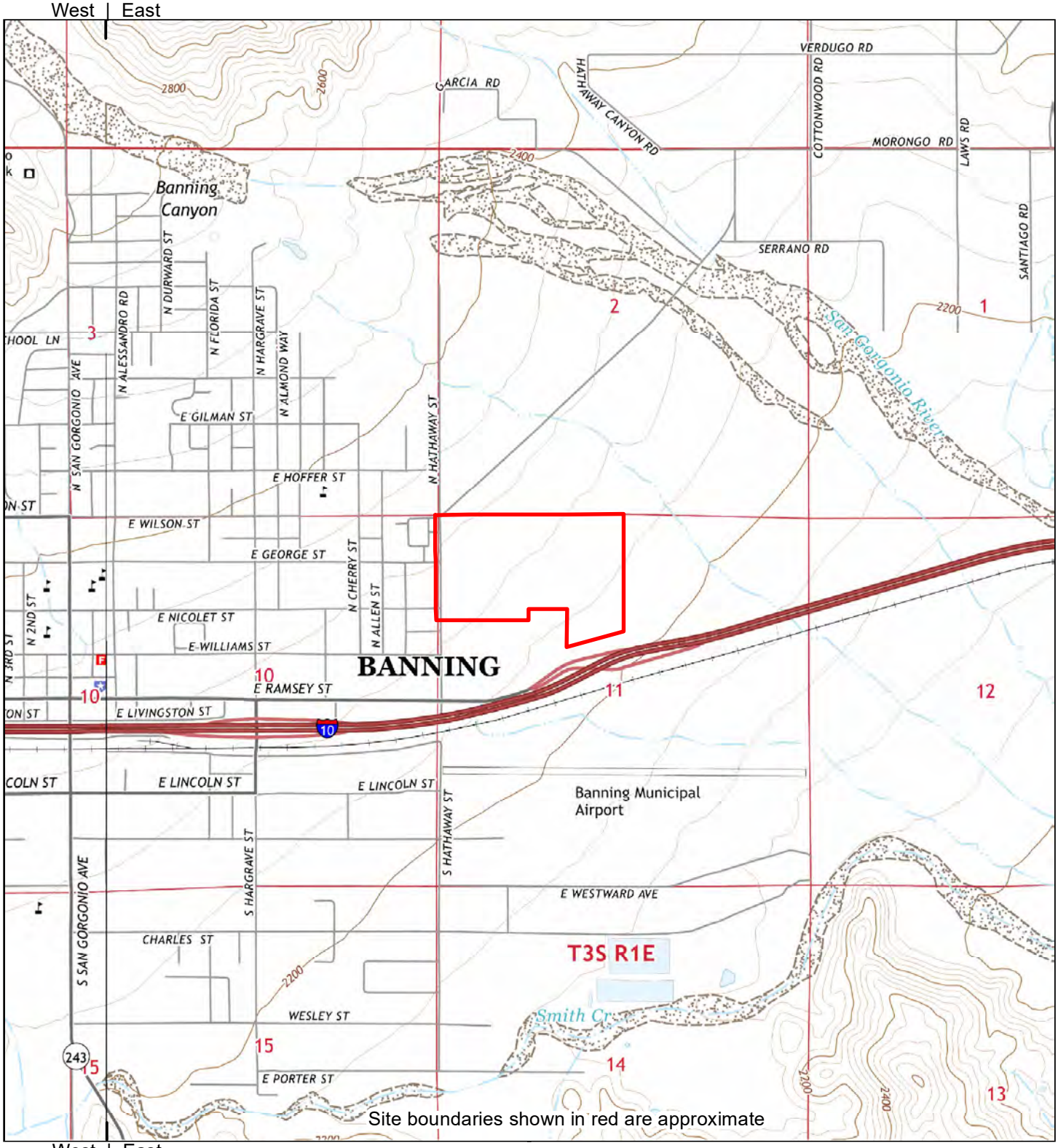
Site boundaries shown in red are approximate

600 N Hathaway St
600 N Hathaway St
Banning, CA

N

1936

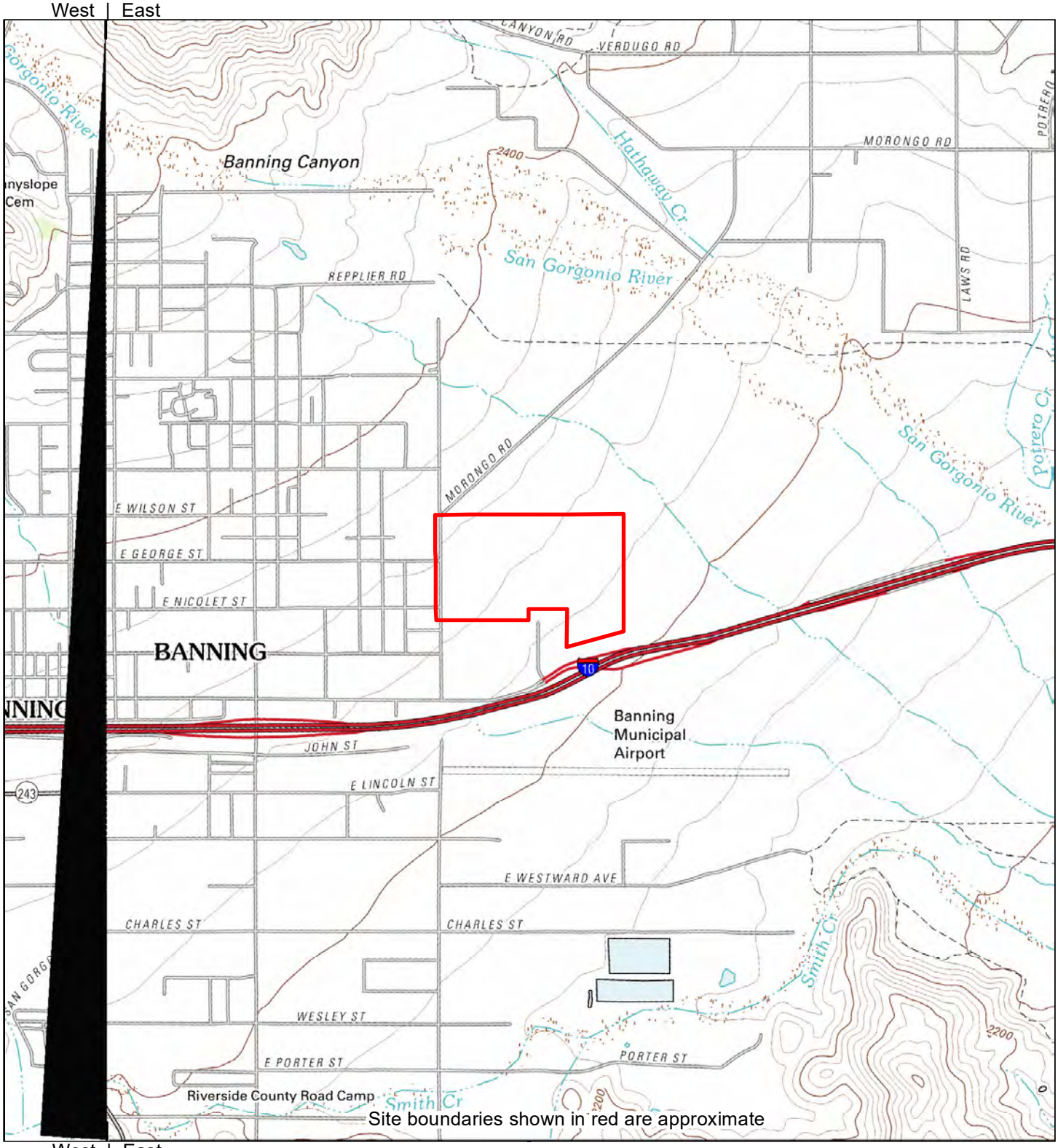
HIG Project # 2046888
Client Project # 21-02-033
Approximate Scale 1: 6,000 (1"=500')
www.historicalinfo.com



2015	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Weis Environmental LLC project #21-02-033 HIG #212046888 completed: 02/25/2021 10:21

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
East	Cabazon, CA	USGS	7½' x 7½'	2015	--	--	--
West	Beaumont, CA	USGS	7½' x 7½'	2015	--	--	--

116°52'30"W
West | East



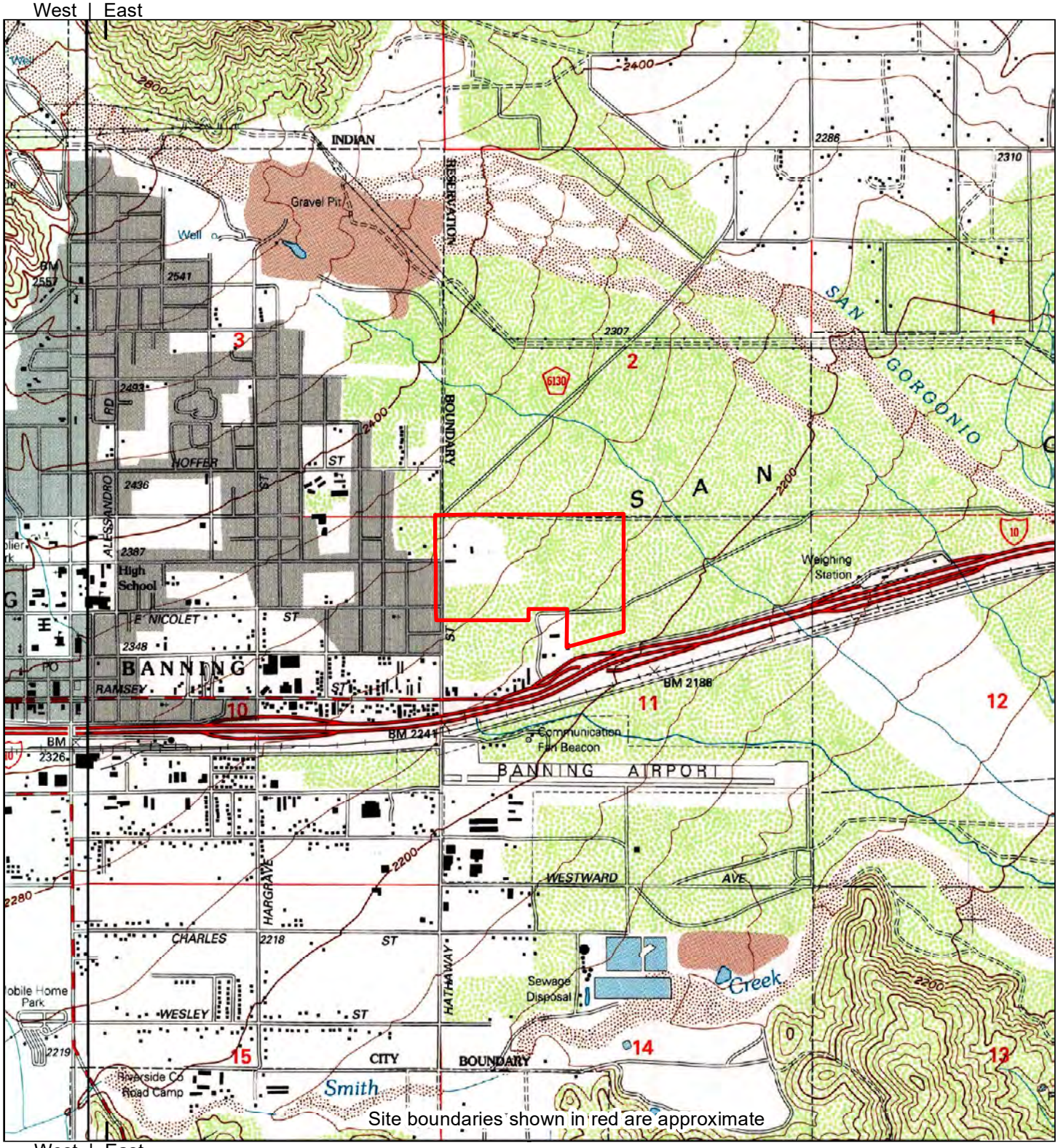
Site boundaries shown in red are approximate

West | East
116°52'30"W

2012	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Weis Environmental LLC project #21-02-033 HIG #212046888 completed: 02/25/2021 10:21	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
East	Cabazon, CA	USGS	7½' x 7½'	2012	--	--	--
West	Beaumont, CA	USGS	7½' x 7½'	2012	--	--	--

116°52'30"W
West | East



West | East
116°52'30"W

1996

0 Distance in Miles 1

1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N

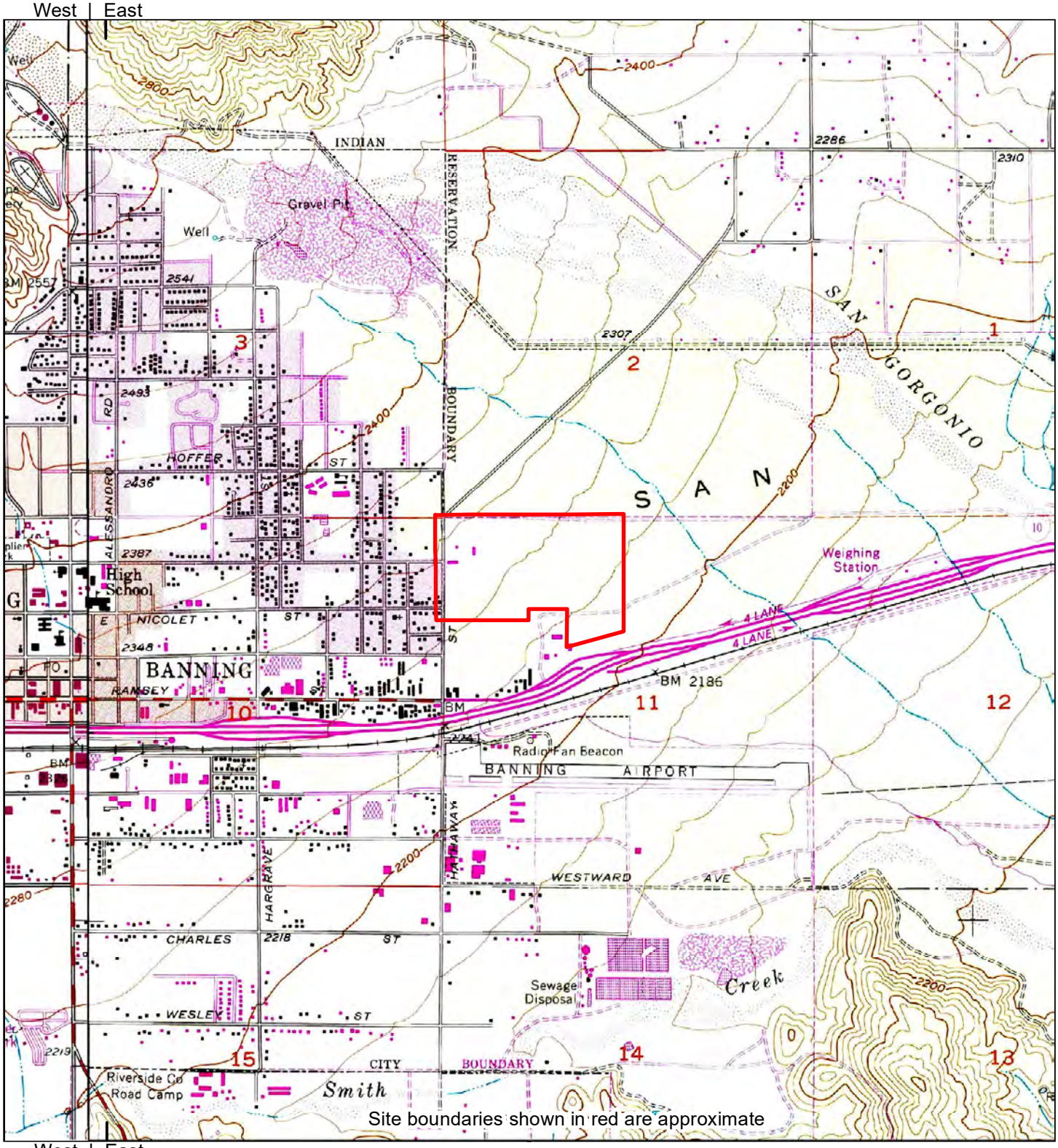
Site information:
600 N Hathaway St
600 N Hathaway St
Banning, CA

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

Weis Environmental LLC project #21-02-033
HIG #212046888 completed: 02/25/2021 10:21

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
East	Cabazon, CA	USFS;USGS	7½' x 7½'	1996	1994	--	--
West	Beaumont, CA	USFS;USGS	7½' x 7½'	1996	1994	--	--

116°52'30"W
West | East



West | East
116°52'30"W

1988

0 Distance in Miles 1

1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N

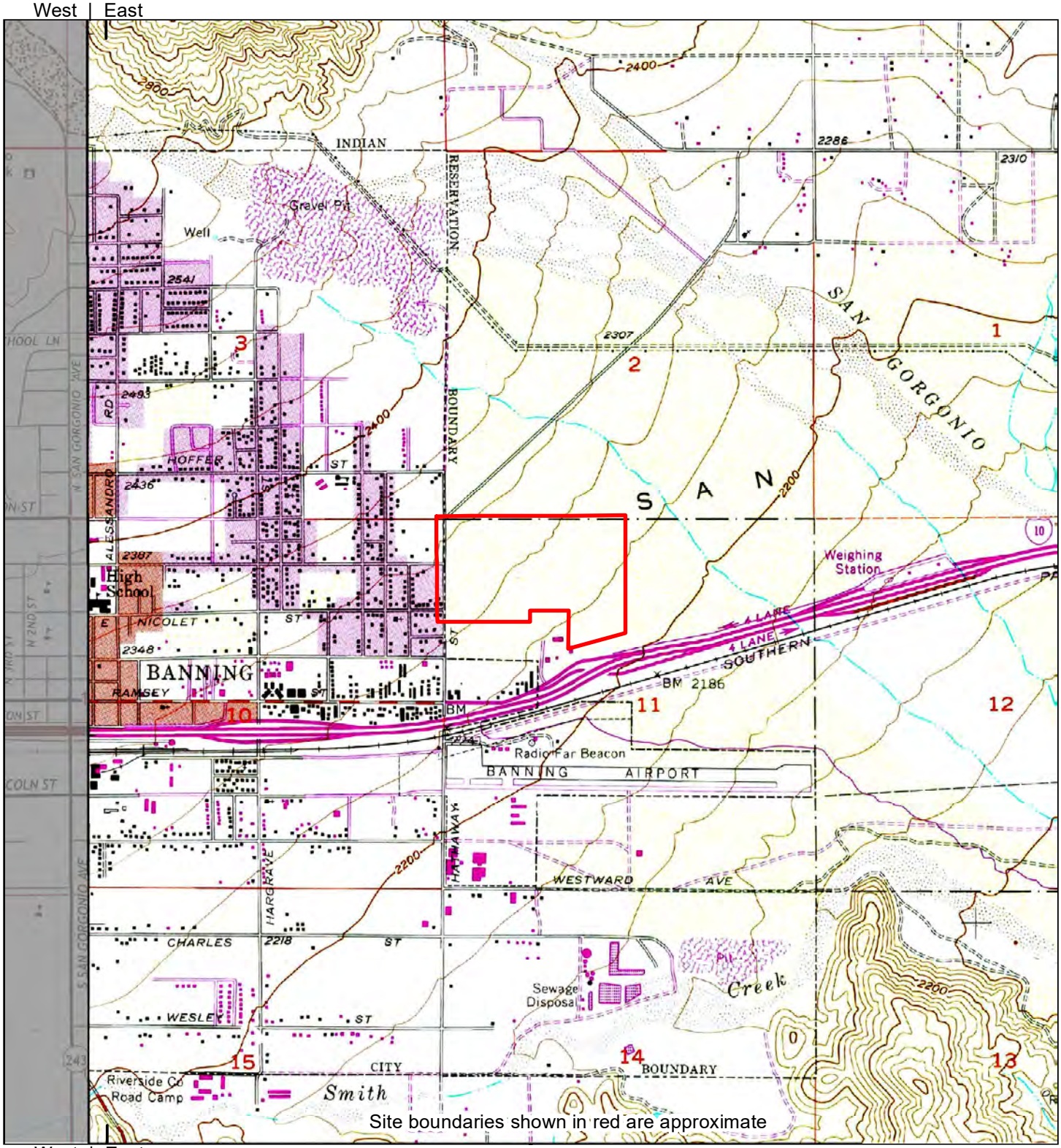
Site information:
600 N Hathaway St
600 N Hathaway St
Banning, CA

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

Weis Environmental LLC project #21-02-033
HIG #212046888 completed: 02/25/2021 10:21

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
East	Cabazon, CA	USGS	7½' x 7½'	1956	1985	--	1988
West	Beaumont, CA	USGS	7½' x 7½'	1953	1949	--	1988

116°52'30"W
West | East



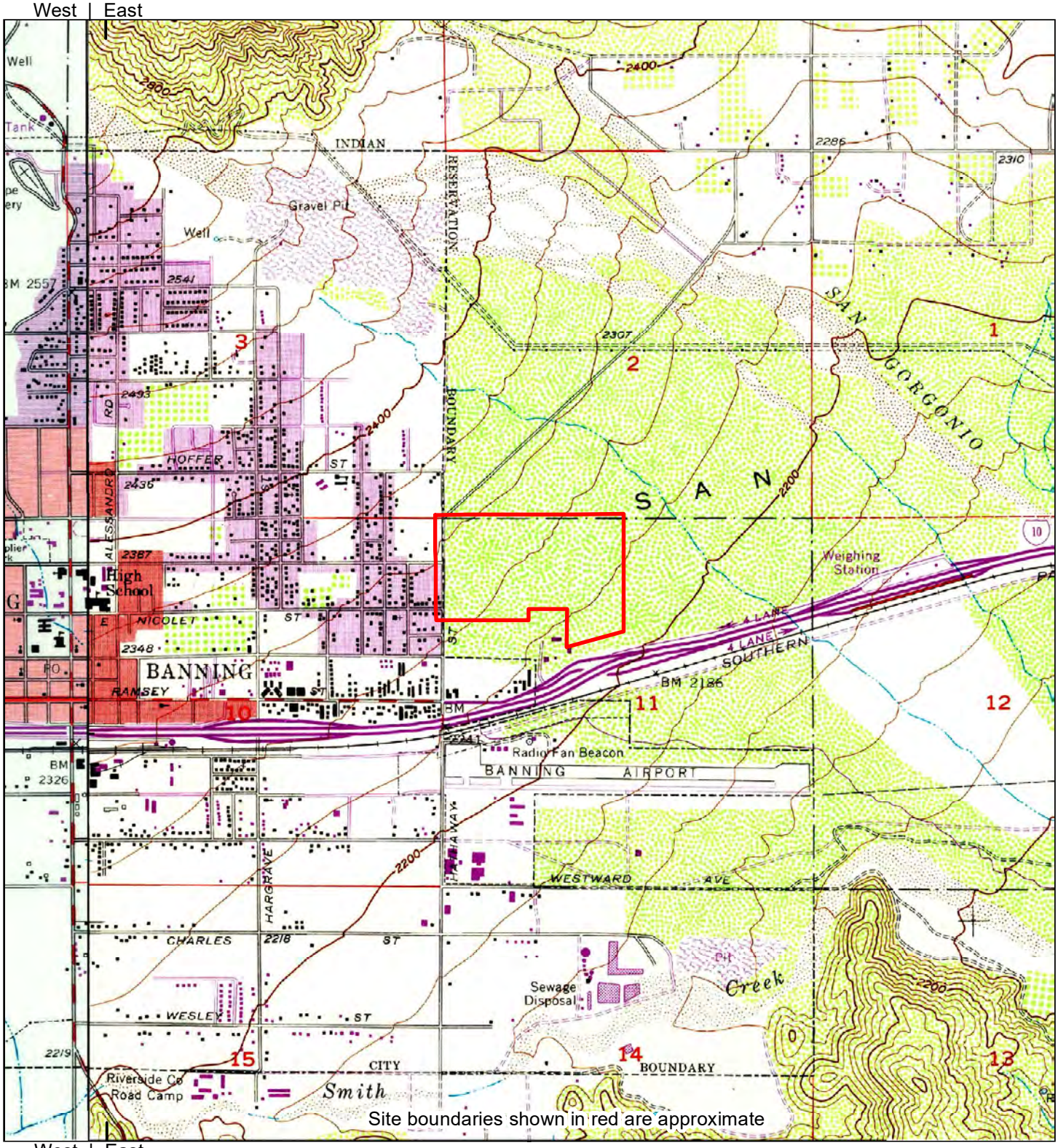
Site boundaries shown in red are approximate

West | East
116°52'30"W

1978	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Weis Environmental LLC project #21-02-033 HIG #212046888 completed: 02/25/2021 10:21	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
East	Cabazon, CA	USGS	7½' x 7½'	1956	1972	1978	1972

116°52'30"W
West | East



Site boundaries shown in red are approximate

West | East
116°52'30"W

1972

0 Distance in Miles 1

1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N

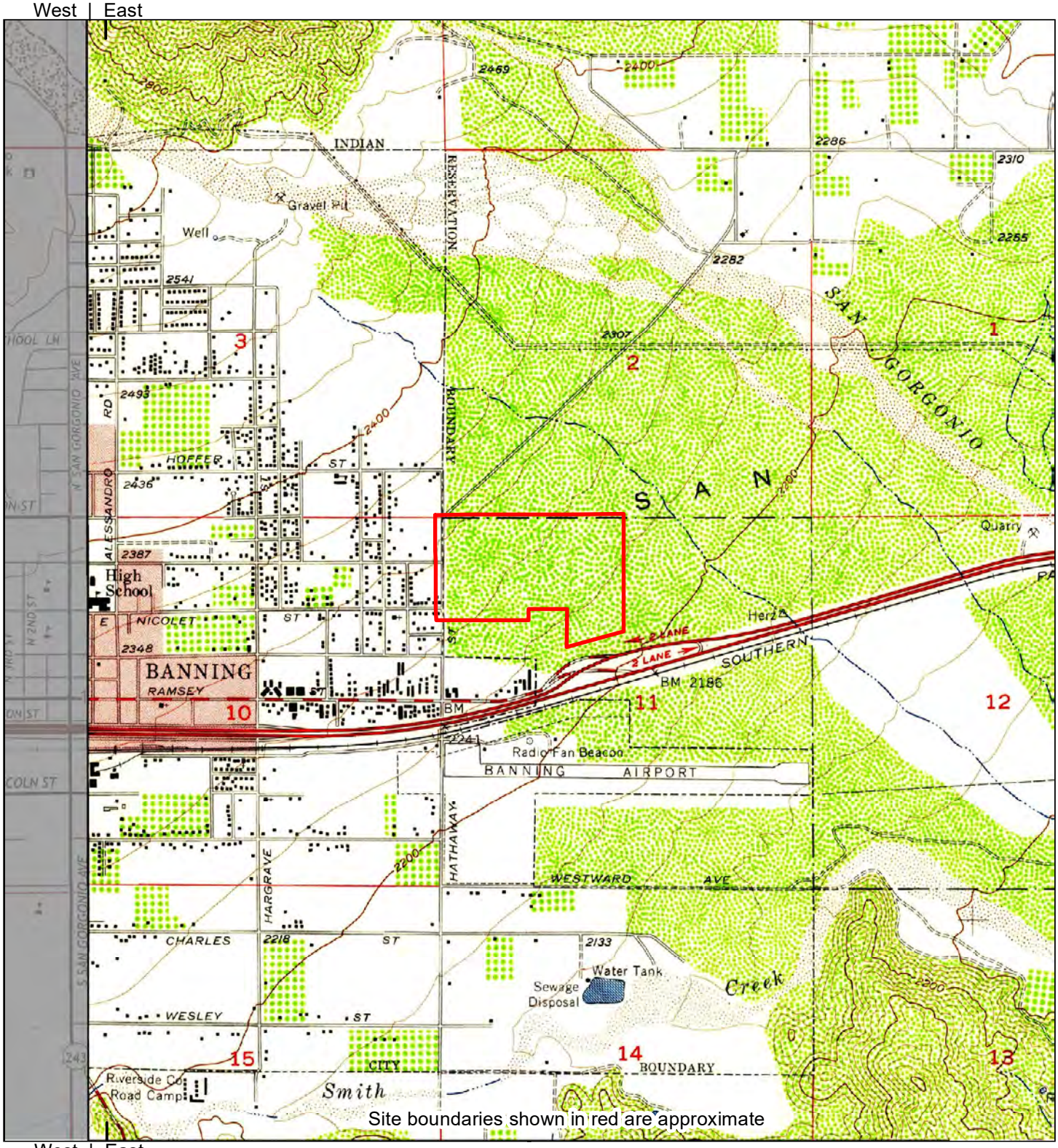
Site information:
600 N Hathaway St
600 N Hathaway St
Banning, CA

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

Weis Environmental LLC project #21-02-033
HIG #212046888 completed: 02/25/2021 10:21

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
East	Cabazon, CA	USGS	7½' x 7½'	1956	1972	--	1972
West	Beaumont, CA	USGS	7½' x 7½'	1953	1972	--	1972

116°52'30"W
West | East



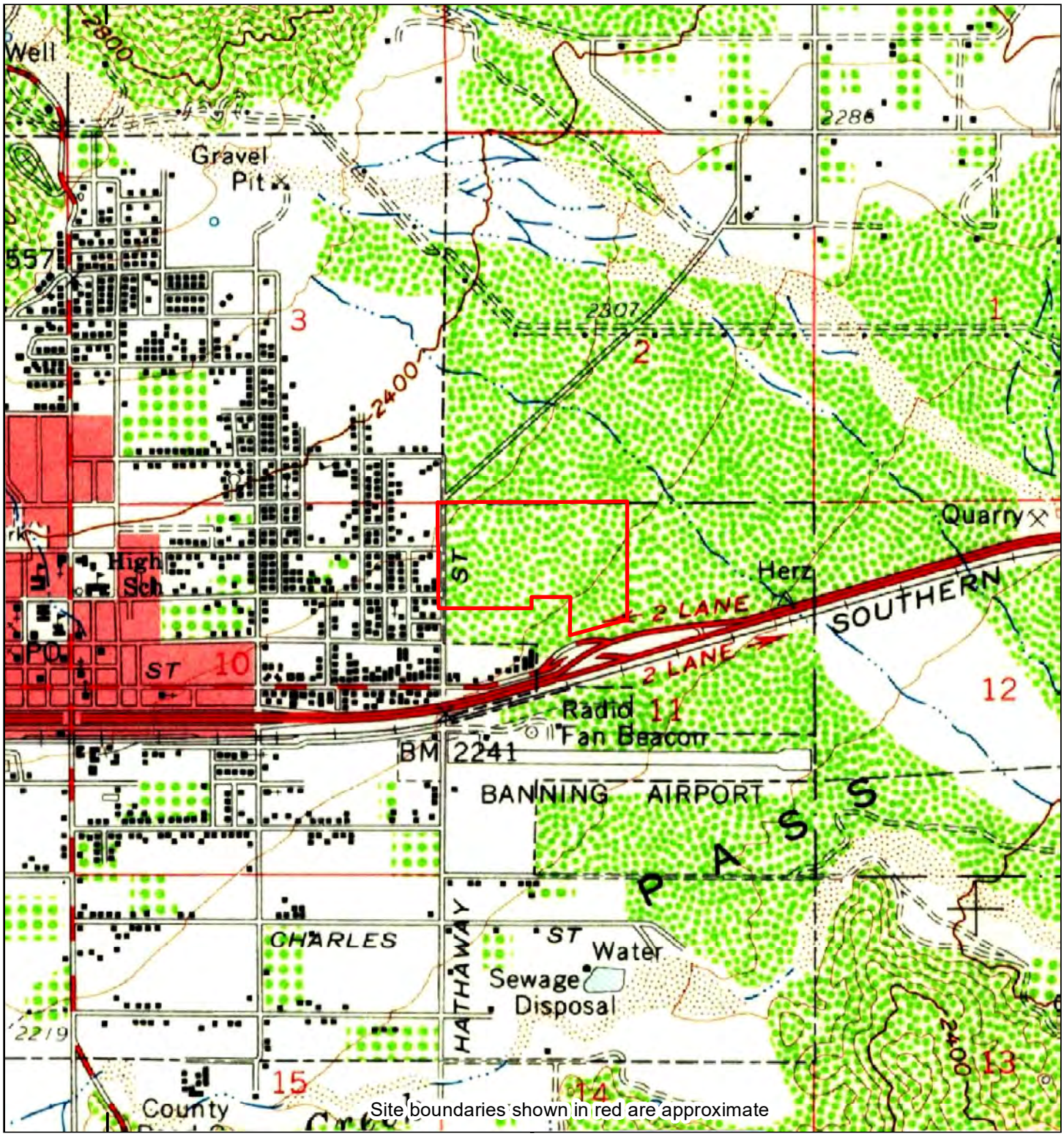
Site boundaries shown in red are approximate

West | East
116°52'30"W

1956	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Weis Environmental LLC project #21-02-033 HIG #212046888 completed: 02/25/2021 10:21	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates Photo Year	Inspected	Revised
East	Cabazon, CA	USGS	7½' x 7½'	1956	1951	--	--

116°52'30"W

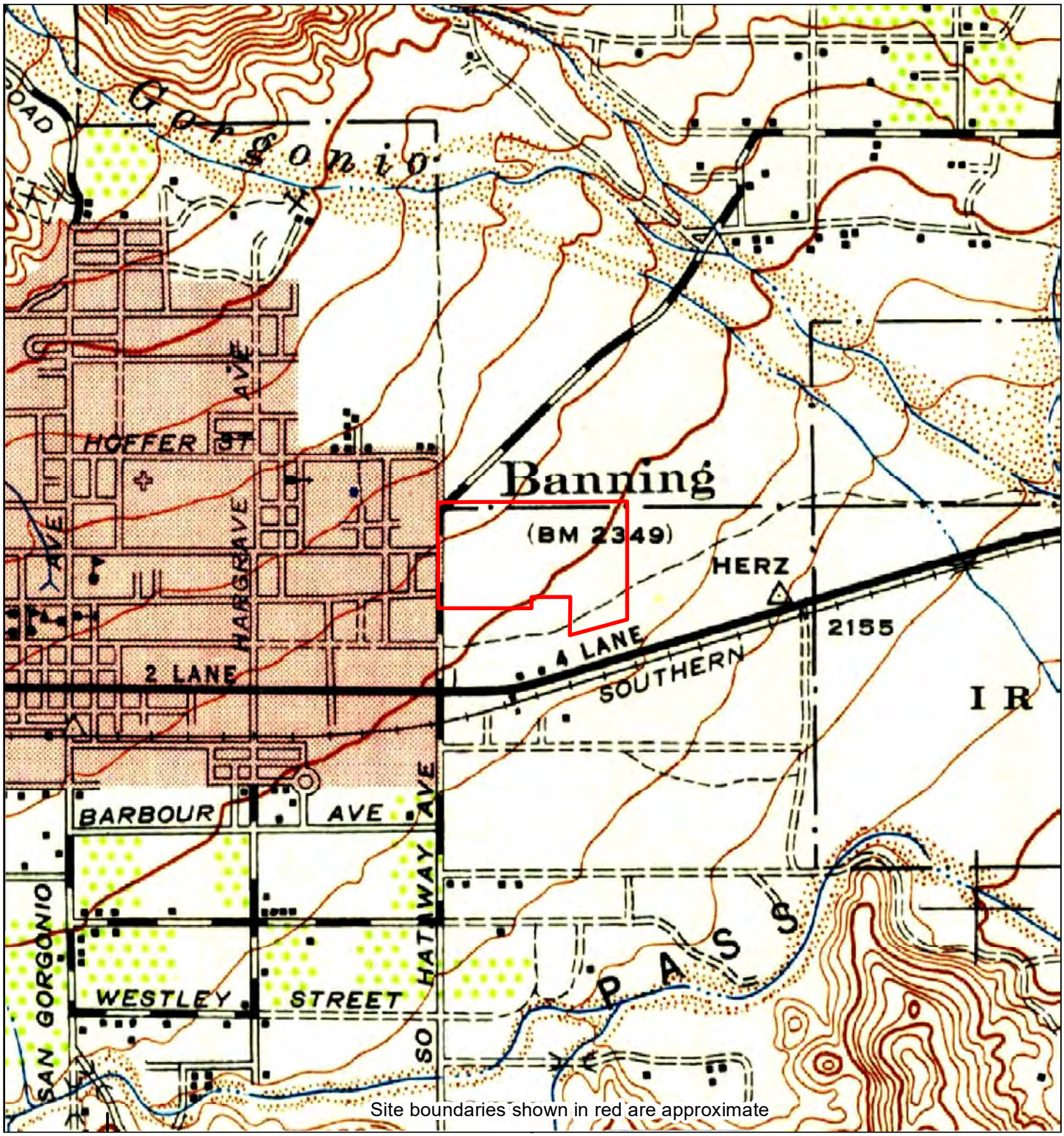


116°52'30"W

1956	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Weis Environmental LLC project #21-02-033 HIG #212046888 completed: 02/25/2021 10:21	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
All	Banning, CA	USGS	15' x 15'	1956	1951	--	--

116°52'30"W



Site boundaries shown in red are approximate

116°52'30"W

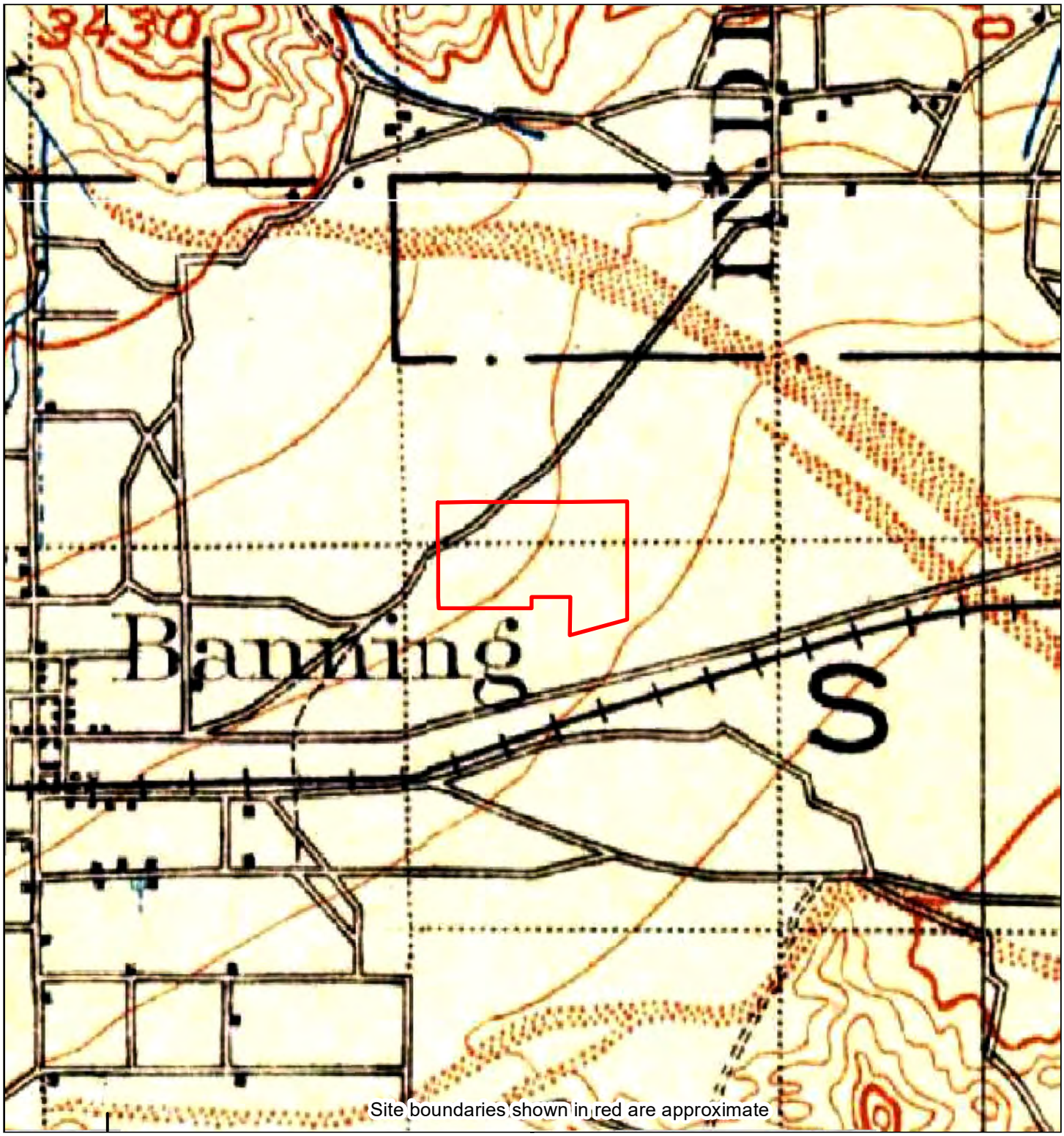
1943	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA

Unified maps show subdued modern topo features where corresponding maps of the same year were not published.

Weis Environmental LLC project #21-02-033
HIG #212046888 completed: 02/25/2021 10:21

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Year	Topo Updates Inspected	Topo Updates Revised
All	Banning, CA	WarD;CoE	15' x 15'	1943	1941	--	--

116°52'30"W



116°52'30"W

1901	0 Distance in Miles 1 1: 24,000 (1"=2,000') NAD 1983 UTM Zone 11N	Site information: 600 N Hathaway St 600 N Hathaway St Banning, CA
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.	Weis Environmental LLC project #21-02-033 HIG #212046888 completed: 02/25/2021 10:21	

Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates: Photo Year	Inspected	Revised
All	San Jacinto, CA	USGS	30' x 30'	1901	--	--	--

Research Summary for City Directory Abstract

Site Location
600 N Hathaway St
600 N Hathaway St
Banning, CA

Conducted For
Weis Environmental LLC
6453 Goldenbush Drive
Carlsbad, CA

HIG Project #
2046888
Client Project #
21-02-033
Date Created
02/25/2021

Historical Information Gatherers

HIG has produced a city directory abstract for one or more streets associated with the site location indicated above. The publications used to create the CD Abstract are listed below.

The information below is taken directly from the city directory books. The following are definitions as they are found in the Haines books:

XXXX = is no phone, no people or non-published phone.

600 XXXX = Correct address only. No other information.

X Streetname = intersecting cross street

Publication year, publisher and title

2018 Haines Palm Springs-Low Desert

2011 Haines Palm Springs - Low Desert

2005 Haines Palm Springs - Low Desert Area

2001 Haines Palm Springs - Low Desert Area

1996 Haines Riverside County

1991 Haines Riverside County

1986 Haines Riverside County

1981 Haines Riverside - San Bernardino

1976 Haines Riverside - San Bernardino

1971 Haines Riverside - San Bernardino

Abstract Section 1- This section includes the city directory data sorted by address.

231 North Hathaway Street	
2018	HOLGUIN Clarissa
2018	JARA Joseph
2011	XXXX
2005	CASTRO Evelyn
2001	CASTRO Evelyn
1996	XXXX
1991	PITTS Fred
1986	PITTS FRED
1981	PITTS Fred
1976	PITTS FRED
1971	PITTS FRED
275 North Hathaway Street	
2018	PELLUM Tanya
2018	WILSON Ivy
2011	XXXX
2005	PELLUM Thomye
2001	PELLUM Thomye
331 North Hathaway Street	
2018	JACKSON Nita
2018	PATRICK Beatrice
2018	PATRICK Percy R Jr
2011	XXXX
2005	XXXX
2001	HIBBARD A
1991	CLEMONS Clarence D
1991	MCAFEE Allen D
1986	HALL REBEL K
1981	XXXX
1976	SIMS THEODES
333 North Hathaway Street	
2018	SHERWOOD Anna
2011	CHAVEZ Rosa
2005	BUTLER E
2005	KLEIN Warren

2001	KLEIN Warren
1996	XXXX
1991	RACHSINGHARN S
1991	SOULIVONG T
1986	XXXX
1981	XXXX
1976	XXXX
1971	ELLISON MARY
443 North Hathaway Street	
2018	GOMEZ Adrianna
2018	GOMEZ George
2011	GOMEZ Marianna
447 North Hathaway Street	
2018	BATES Charles
2011	GOMEZ Marianna
2005	GATES Emeshine
2001	GATE Ernestine
1996	GATE Ernestine
1991	GATE Ernestine
1986	GATE ERNESTINE
1981	GATE ERNESTINE
1976	GATE ERNESTINE
1971	GATES ERNESTINE
481 North Hathaway Street	
2001	XXXX
1996	XXXX
1991	XXXX
1986	XXXX
555 North Hathaway Street	
2018	APARTMENTS
2018	SUMMIT RIDGE APARTMENTS
2011	APARTMENTS
2011	SUMMIT RIDGE APARTMENTS
2005	APARTMENTS
2005	SUMMIT RIDGE APARTMENTS
600 North Hathaway Street	

2018	XXXX
2011	ORCO BLOCK CO
2005	ORCO BLOCK CO
2001	ORCO BLOCK CO
1996	ORCO BLOCK CO
1991	ORCO BLOCK CO
1986	FRED LITE BLOCKS
1981	FRED LITE BLOCKS
820 North Hathaway Street	
2011	LAW STEEL
2005	LAW David
2005	LAW STEEL
2001	LAW David
1996	XXXX
1991	WIGGINS H V
1986	WIGGINS H V
1981	WIGGINS H V
1976	WIGGINS H V
947 North Hathaway Street	
2018	DOMINGUEZ Justino
2018	HUGHES Lilian
2011	DOMINGUEZ Justino
2005	BAKER Micheal
2001	BAKER Micheal
1991	BAKER Eugene
1986	XXXX
981 North Hathaway Street	
2018	MEDINA Mikeann
2018	TRINH Quyen
2011	TRINH Quyen
2005	MANLEY Candy
2001	MANLEY Lester A
1996	MANLEY Lester A
1991	MANLEY Lester A
1986	MANLEY LESTER A
1981	MANLEY LESTER A
1976	MANLEY LESTER A

1971	HOWARD BETTY
1805 North Hathaway Street	
2001	MATICH CORP
1996	MATICH CORP
1971	MATICH BROTHERS

Abstract Section 2: This section includes the city directory data sorted by the year the city directory was published.

2018	
	X E WILLIAMS ST
231	HOLGUIN Clarissa
231	JARA Joseph
275	PELLUM Tanya
275	WILSON Ivy
	X E JACINTO VIEW RD
331	JACKSON Nita
331	PATRICK Beatrice
331	PATRICK Percy R Jr
333	SHERWOOD Anna
	X E NICOLET ST
443	GOMEZ Adrianna
443	GOMEZ George
447	BATES Charles
555	APARTMENTS
555	SUMMIT RIDGE APARTMENTS
	X E GEORGE ST
600	XXXX
947	DOMINGUEZ Justino
947	HUGHES Lilian
981	MEDINA Mikeann
981	TRINH Quyen
2011	
	X E WILLIAMS ST
231	XXXX
275	XXXX
	X E JACINTO VIEW RD
331	XXXX

333	CHAVEZ Rosa
	X E NICOLET ST
443	GOMEZ Marianna
447	GOMEZ Marianna
555	APARTMENTS
555	SUMMIT RIDGE APARTMENTS
	X E GEORGE ST
600	ORCO BLOCK CO
820	LAW STEEL
947	DOMINGUEZ Justino
981	TRINH Quyen
	X E HOFFER ST
2005	
	X E WILLIAMS ST
231	CASTRO Evelyn
275	PELLUM Thomye
	X E JACINTO VIEW RD
331	XXXX
333	BUTLER E
333	KLEIN Warren
	X E NICOLET ST
447	GATES Emeshine
555	APARTMENTS
555	SUMMIT RIDGE APARTMENTS
	X E GEORGE ST
600	ORCO BLOCK CO
820	LAW David
820	LAW STEEL
947	BAKER Micheal
981	MANLEY Candy
	X E HOFFER ST
2001	
231	CASTRO Evelyn
275	PELLUM Thomye
	X JACINTO VIEW RD E
331	HIBBARD A
333	KLEIN Warren

	X NICOLET E
447	GATE Ernestine
481	XXXX
600	ORCO BLOCK CO
	X HOFFER E
	X BARBOUR E
820	LAW David
947	BAKER Micheal
981	MANLEY Lester A
1805	MATICH CORP
1996	
231	XXXX
333	XXXX
447	GATE Ernestine
481	XXXX
600	ORCO BLOCK CO
820	XXXX
981	MANLEY Lester A
1805	MATICH CORP
1991	
231	PITTS Fred
331	CLEMONS Clarence D
331	MCAFEE Allen D
333	RACHSINGHARN S
333	SOULIVONG T
447	GATE Ernestine
481	XXXX
600	ORCO BLOCK CO
820	WIGGINS H V
947	BAKER Eugene
981	MANLEY Lester A
1986	
231	PITTS FRED
331	HALL REBEL K
333	XXXX
447	GATE ERNESTINE
481	XXXX

600	FRED LITE BLOCKS
820	WIGGINS H V
947	XXXX
981	MANLEY LESTER A
1981	
231	PITTS Fred
331	XXXX
333	XXXX
447	GATE ERNESTINE
600	FRED LITE BLOCKS
820	WIGGINS H V
981	MANLEY LESTER A
1976	
231	PITTS FRED
331	SIMS THEODES
333	XXXX
447	GATE ERNESTINE
820	WIGGINS H V
981	MANLEY LESTER A
1971	
231	PITTS FRED
333	ELLISON MARY
447	GATES ERNESTINE
981	HOWARD BETTY
1805	MATICH BROTHERS

APPENDIX D
PHOTOGRAPHS

1. Southwestern portion of the Site.

2. South-central portion of the Site.

3. Typical drainage basin.

4. View of the Site facing northeast.

5. Southeast portion of the Site. Adjacent vacant land and Interstate-10 are visible beyond.

6. View of the eastern portion of the Site from the south.

Photograph Log

First Hathaway
Banning, California

7. View of the Site from the northwest.

8. Western portion of the Site facing south.

9. Typical paving in the northwestern portion of the Site.

10. West-central portion of the Site.

11. Southwestern portion of the Site.

12. Typical drainage feature.

13. Automobile tires.

14. Shack in the southeastern portion of the Site. An automobile and debris are visible.

15. Shack in the southeastern portion of the Site. An automobile and debris are visible.

16. Shack in the southeastern portion of the Site.

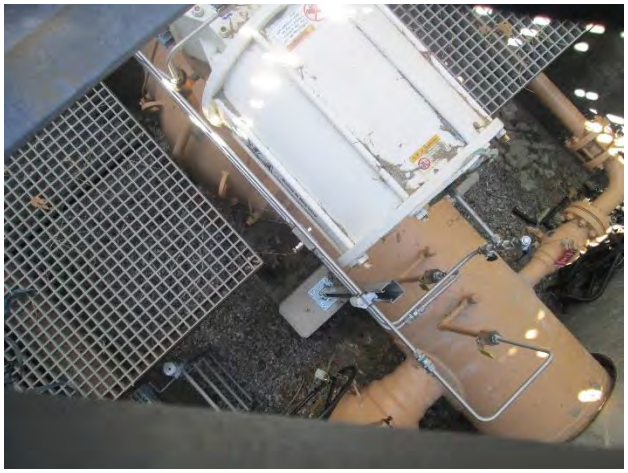
17. Typical drainage feature.

18. High pressure gas pipeline placard.

19. Debris near the shack structure.

20. Fiber optic utility placard.

21. High pressure gas pipeline placards.



22. Gas pipeline vault and infrastructure.

23. Gas pipeline vault.

24. Utilities in the northwestern corner of the Site. Adjacent residences (west) are visible.

25. West side of the Site building.

26. South side of the Site building.

27. Miscellaneous trash and debris.

28. Utility feature in the southwest portion of the Site.

29. Automobile tires in the southwest portion of the Site.

30. Building interior.

31. Building interior.

32. Building interior.

33. Building interior.

34. Building interior.

35. Empty plastic drum.

36. Adjacent vacant land (south).

37. Adjacent Caltrans yard.

38. Adjacent Caltrans yard.

39. East adjacent vacant land.

40. North adjacent vacant land.

41. Northwest adjacent Morongo Road and Indian Reservation entrance.

42. Western adjacent N Hathaway Street followed by vacant land and residences.

APPENDIX E

PHASE II ESA AND ASBESTOS AND LEAD SURVEY

1938 Kellogg Avenue, Suite 116, Carlsbad, CA 92008
(760) 585-7070
www.weisenviro.com

May 26, 2021

Mike Reese
First Industrial Realty Trust, Inc.
One North Wacker Drive, Suite 4200
Chicago, IL 60606

Subject: Phase II Environmental Site Assessment
First Hathaway
Banning, California 92220
Project Number 21-02-033-001

Dear Mr. Reese:

Weis Environmental, LLC has completed a Phase II Environmental Site Assessment (ESA) at the First Hathaway property in Banning, Riverside County, California (Site). The work was completed on behalf of First Industrial Realty Trust, Inc, First Industrial, L.P., and First Industrial Acquisitions II, LLC. The Site is a reported 95.04 acres and is further identified by the physical address of 600 N Hathaway Street and Riverside County Assessor's Parcel Numbers 532-110-001, -002, -003, -008, -009 and -010. The Site is situated generally north of East Ramsey Street and Intestate 10, east of North Hathaway Street and south and southeast of Morongo Road. A Vicinity Map and Site Plan are attached as Figures 1 and 2.

Site History

The Site is predominantly vacant and undeveloped land. Remnant improvements of an Orco Block Company facility (i.e. building, paving, former building slabs, etc.) are present in the northwestern portion of the Site. The 532-110-003, -008, -009 and -010 parcels appear to have undergone extensive former grading activities.

Two underground storage tanks (USTs) were formerly present at the Site. The tanks were formerly used to store gasoline and diesel fuel. In addition, the former facility reportedly utilized hazardous materials and generated hazardous waste (primarily used/mixed oil) during the course of its normal operations. Due to these conditions, soil sampling and analysis was proposed as a supplement to the Phase I ESA being completed concurrently with this Phase II ESA.

Methodology

We notified Underground Service Alert utility marking service prior to the commencement of field sampling and in accordance with State law. In addition, we prepared a health and safety plan that outlined the procedures that our personnel and subcontractors followed to minimize the potential for health and safety hazards during the course of work to be performed at the Site. We also retained a subcontractor to clear the sampling locations of subsurface utilities and other potential conflicts. Survey methods included ground penetrating radar, electrical conductive technologies and other methods as required. The final sampling locations were selected in part based on the findings of the utility clearance work.

Fifteen soil borings (identified as B1 through B15) were advanced at the Site on April 29, 2021, using a truck-mounted direct-push sampling rig equipped with approximate two-inch diameter stainless steel rods and soil sampling tools. The borings were drilled to depths varying from 10 to 20 feet. The sampling locations are depicted on the Site Plan attached to this report. As shown on the Site Plan, boring B10 was drilled in the area of the former USTs. Remaining borings were drilled within former structure or operations areas of the former Orco facility (B1 through B10) or along the periphery of the former facility in areas of possible fill material and/or materials storage (B11 through B15). The soil borings were advanced by Astech Environmental of Santa Ana, California under the oversight of our firm.

Soil samples were collected using stainless steel sampling rods lined with acetate sleeves. Soil samples were collected at one foot and at five foot vertical depth increments to the total depth of each boring. A total of 52 soil samples were obtained during the drilling activities. The acetate sleeves were cut, sealed with Parafilm® sheets, capped, appropriately labeled, and placed into a chilled cooler for transport to American Environmental Testing Laboratory (AETL) of Burbank, California.

Choice of samples to be analyzed was based on visual/olfactory conditions, Site history in each sampling location and professional judgment. AETL completed the following analytical laboratory testing on the samples:

- Thirty-three (33) soil samples were analyzed for total petroleum hydrocarbons (TPH) by United States Environmental Protection Agency (EPA) test Method 8015B
- Twenty-seven (27) soil samples were analyzed for volatile organic compounds (VOCs) by United States EPA test Method 8260B
- Sixteen (16) soil samples were analyzed for Title 22 Metals by United States EPA test Methods 6010B/7471A

Upon completion of drilling and sampling, the soil borings were backfilled with hydrated bentonite granules and capped to match existing surface conditions. Soil sampling equipment was decontaminated between uses by washing with a non-phosphate detergent solution followed by successive rinses in distilled water.

Results

With the exception of a slight hydrocarbon odor at the one-foot depth of boring B9, no suspect soil conditions (i.e. staining, odors, deleterious materials, etc.) were noted during the soil sampling activities. Photoionization detector (PID) screening was conducted on all of the soil samples and no detections of undifferentiated VOCs were detected by way of the instrument. Analytical data summaries in spreadsheet format and the analytical laboratory report are included as attachments to this report.

<u>TPH</u>

TPH in the gasoline range was not detected in any of the samples. TPH as diesel was detected at 72.5 mg/kg and 330 mg/kg at the one foot depths of borings B5 and B9, respectively. TPH as oil was also detected at these sample depths and locations at concentrations of 1,880 mg/kg (B5) and 241 mg/kg (B9) in addition to the one foot depth of boring B6 (17.8 mg/kg). TPH was not detected in underlying soils (i.e. greater depths) at each of these three sampling locations. The detected diesel and oil concentrations are below their respective residential and commercial human health risk based screening levels (see Table 1), with the exception of TPH as diesel detected in boring B9 at a concentration of 330 mg/kg, which is slightly above the residential screening level of 260 mg/kg.

However, commercial screening levels apply to the Site, and the detected concentration is well below the commercial screening level of 1,200 mg/kg. Moreover, no further action is required.

VOCs

VOCs were not detected at or above the laboratory reporting limits in any of the soil samples analyzed for such constituents.

Title 22 Metals

Eight (8) of the Title 22 Metals were detected at or above analytical laboratory reporting limits. The detected metals (and maximum concentrations) included barium (433 mg/kg), chromium (26.4 mg/kg), cobalt (11.9 mg/kg), copper (79.4 mg/kg), lead (7.77 mg/kg), nickel (17.8 mg/kg), vanadium (51.2 mg/kg) and zinc (58.0 mg/kg). None of the detected metals concentrations exceed their respective residential and commercial human health risk based screening levels (see Table 2).

Conclusions

Conclusions of this assessment are as follows:

- Insignificant detections of diesel and oil range hydrocarbons were identified in three of the soil samples at one foot depths. No further petroleum impacts were detected in underlying soils at each of these three sampling locations. Furthermore, the impacts are surficial in nature and do not require additional action.
- VOCs and metals are not considered to be contaminants of concern at the Site. VOCs were not detected at or above analytical laboratory reporting limits, and none of the detected metal concentration exceed their respective residential and commercial human health risk based screening levels.
- No petroleum impacts were identified in the area of the former USTs.
- No additional assessment is considered to be warranted.

Limitations

The services provided by our firm have been performed in accordance with practices and standards generally accepted by environmental scientists practicing in this industry. No other warranty, either express or implied is made. The results and conclusions described herein are based on a limited sampling program and do not purport to identify any and all sources or locations of subsurface impacts that may exist at the Site. Subsurface conditions at a given location may not be representative of conditions in other areas on the Site. In addition, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions, and other factors. Our conclusions regarding the condition of the Site does not represent a warranty that all areas of the Site are similar to those sampled. We are not responsible for the conclusions, opinions, or recommendations made by others based on this information.

Closure

We appreciate the opportunity to be of service on this project. If you should have any questions regarding this report, or if we can be of further assistance, please contact us at 760.585.7070.

Sincerely,

Daniel Weis, R.E.H.S.
Environmental Manager

Eric M. Cathcart, MS, PG
Senior Geologist
California Professional Geologist #7548

Attachments

Figure 2 - Site Plan

First Hathaway
Banning, California

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

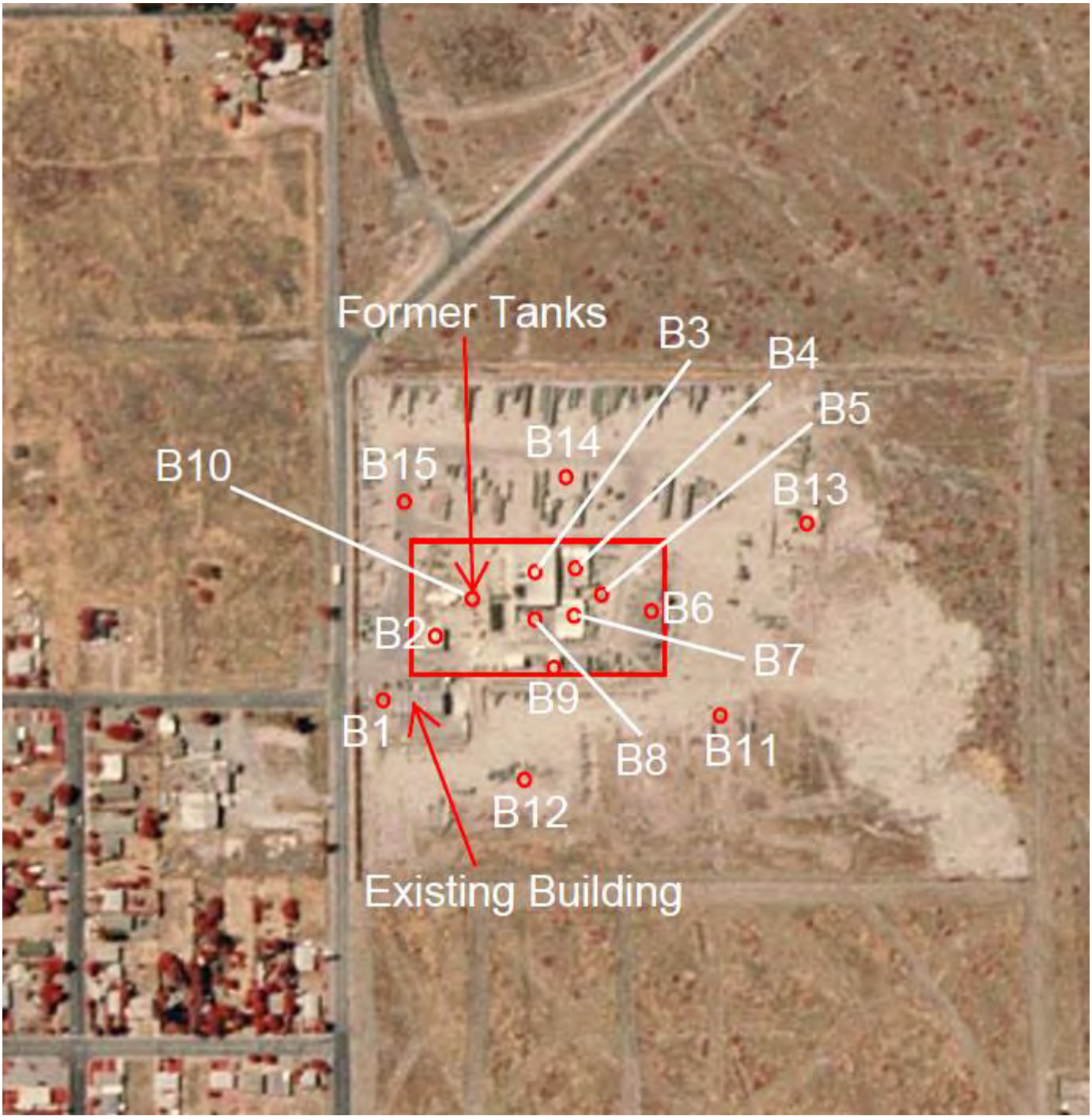


Figure 2 – Sampling Location Plan

First Hathaway
Banning, California

N

Approx. Scale 1'' = 300'

Boring Location

Former Operations Area

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

Table 1
TPH and VOCs in Soil
First Hathaway
Banning, California

Sample ID-Depth (Feet)	TPH Gasoline	TPH Diesel	TPH Oil	VOCs
B1-1	ND<0.200	ND<10	ND<10	--
B1-5	ND<0.200	ND<10	ND<10	ND
B1-10	--	--	--	ND
B2-1	ND<0.200	ND<10	ND<10	--
B2-5	--	--	--	--
B2-10	ND<0.200	ND<10	ND<10	ND
B2-15	--	--	--	--
B2-20	--	--	--	ND
B3-1	ND<0.200	ND<10	ND<10	--
B3-5	ND<0.200	ND<10	ND<10	ND
B3-10	--	--	--	ND
B4-1	ND<0.200	ND<10	ND<10	--
B4-5	--	--	--	--
B4-10	ND<0.200	ND<10	ND<10	ND
B4-15	--	--	--	ND
B5-1	ND<0.200	**72.5**	**1880**	--
B5-5	ND<0.200	ND<10	ND<10	ND
B5-10	--	--	--	--
B5-15	--	--	--	ND
B6-1	ND<0.200	ND<10	**17.8**	--
B6-5	--	--	--	ND
B6-10	ND<0.200	ND<10	ND<10	--
B6-15	--	--	--	ND
B7-1	ND<0.200	ND<10	ND<10	--
B7-5	ND<0.200	ND<10	ND<10	ND
B7-10	--	--	--	ND
B8-1	ND<0.200	ND<10	ND<10	--
B8-5	--	--	--	ND
B8-10	ND<0.200	ND<10	ND<10	ND
B9-1	ND<0.200	**330**	**241**	--
B9-5	ND<0.200	ND<10	ND<10	ND
B9-10	ND<0.200	ND<10	ND<10	ND
B10-1	--	--	--	--
B10-5	ND<0.200	ND<10	ND<10	ND
B10-10	ND<0.200	ND<10	ND<10	ND
B10-15	ND<0.200	ND<10	ND<10	ND
B10-20	ND<0.200	ND<10	ND<10	ND
B11-1	ND<0.200	ND<10	ND<10	--
B11-5	ND<0.200	ND<10	ND<10	ND
B11-10	--	--	--	--
B12-1	ND<0.200	ND<10	ND<10	--
B12-5	--	--	--	ND
B12-10	ND<0.200	ND<10	ND<10	--
B13-1	ND<0.200	ND<10	ND<10	--
B13-5	ND<0.200	ND<10	ND<10	ND

Sample ID-Depth (Feet)	TPH Gasoline	TPH Diesel	TPH Oil	VOCs
B13-10	--	--	--	--
B14-1	ND<0.200	ND<10	ND<10	--
B14-5	--	--	--	ND
B14-10	ND<0.200	ND<10	ND<10	--
B15-1	ND<0.200	ND<10	ND<10	--
B15-5	ND<0.200	ND<10	ND<10	ND
B15-10	--	--	--	--
Screening Level - Residential	430	260	12,000	ND
Screening Level - Commercial	2,000	1,200	180,000	ND

All results reported in mg/kg (milligrams per kilogram)
ND = Not detected above laboratory reporting limit
Screening Level = Region 2 Regional Water Quality Control Board Environmental Screening Level (mg/kg)

Table 2
Title 22 Metals in Soil
First Hathaway
Banning, California

Metal	Sample ID-Depth (Feet)																Screening Level	
	B1-1	B2-5	B3-1	B4-5	B5-1	B6-10	B7-1	B8-5	B9-1	B9-5	B10-15	B11-1	B12-5	B13-1	B14-5	B15-1	Residential	Commercial
Antimony	ND<4.81	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	31 - RSL	4,700 - RSL
Arsenic	ND<4.81	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	12 - DTSC	12 - DTSC
Barium	**50.1**	**14.2**	**75.9**	**68.4**	**56.2**	**78.2**	**56.9**	**433**	**45.4**	**74.4**	**39.1**	**62.2**	**54.7**	**20.4**	**43.6**	**77.9**	15,000 - RSL	220,000 - RSL
Beryllium	ND<2.40	ND<2.50	ND<2.48	ND<2.50	ND<2.50	ND<2.40	ND<2.45	ND<2.50	ND<2.50	ND<2.48	ND<2.50	ND<2.50	ND<2.50	ND<2.50	ND<2.45	ND<2.48	16 - DTSC	2,300 - DTSC
Cadmium	ND<2.40	ND<2.50	ND<2.48	ND<2.50	ND<2.50	ND<2.40	ND<2.45	ND<2.50	ND<2.50	ND<2.48	ND<2.50	ND<2.50	ND<2.50	ND<2.50	ND<2.45	ND<2.48	71 - DTSC	780 - DTSC
Chromium	**13.0**	ND<5.00	**23.3**	**16.1**	**18.0**	**18.2**	**16.7**	**23.6**	**13.3**	**26.4**	**18.8**	**19.2**	**17.4**	ND<5.00	**15.9**	**19.5**	120,000 - RSL	1,800,000 - RSL
Cobalt	**7.66**	**11.9**	**8.38**	**8.71**	**6.28**	**8.05**	**9.04**	**9.16**	**6.54**	**9.41**	**7.58**	**9.65**	**8.02**	ND<5.00	**6.92**	**9.07**	230 - RSL	3,500 - RSL
Copper	**10.6**	ND<5.00	**13.8**	**12.9**	**11.2**	**13.2**	**17.5**	**79.4**	**16.0**	**13.3**	**16.0**	**14.8**	**14.3**	ND<5.00	**14.4**	**16.9**	3,100 - RSL	47,000 - RSL
Lead	ND<4.81	ND<5.00	**7.77**	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	**5.18**	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	80 - DTSC	320 - DTSC
Molybdenum	ND<4.81	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	390 - RSL	5,800 - RSL
Nickel	**9.18**	ND<5.00	**11.2**	**10.9**	**8.48**	**10.4**	**10.0**	**17.8**	**7.21**	**12.5**	**10.6**	**11.8**	**10.5**	ND<5.00	**8.30**	**11.0**	820 - DTSC	11,000 - DTSC
Selenium	ND<4.81	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	390 - RSL	5,800 - RSL
Silver	ND<4.81	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	390 - RSL	5,800 - RSL
Thallium	ND<4.81	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<4.81	ND<4.90	ND<5.00	ND<5.00	ND<4.95	ND<5.00	ND<5.00	ND<5.00	ND<5.00	ND<4.90	ND<4.95	0.78 - RSL	1.2 - RSL
Vanadium	**26.9**	**51.2**	**33.1**	**35.7**	**26.7**	**33.5**	**36.4**	**33.3**	**28.9**	**37.1**	**27.7**	**35.9**	**31.6**	**17.3**	**26.0**	**35.2**	390 - RSL	5,800 - RSL
Zinc	**33.3**	**58.0**	**45.5**	**38.5**	**34.4**	**39.3**	**39.6**	**41.2**	**36.9**	**46.6**	**33.9**	**46.4**	**37.1**	**33.1**	**32.7**	**40.3**	23,000 - RSL	350,000 - RSL
Mercury	ND<0.00907	ND<0.100	ND<0.100	ND<0.100	ND<0.100	ND<0.100	ND<0.0990	ND<0.100	ND<0.100	ND<0.100	ND<0.0971	ND<0.100	ND<0.100	ND<0.100	ND<0.100	ND<0.0971	1.0 - DTSC	4.4 - DTSC

All results reported in mg/kg (milligrams per kilogram)
ND = Not detected above labopratory reporting limit
RSL = United States Environmental Protection Agency Regional Screening Level for Residential Soil
DTSC = California Department of Toxic Substances Screening Level for Residential Soil

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A KYZER LABS COMPANY

May 11, 2021

AETL Job No: BCE0016
Received Date: 05/03/2021
Project Number: [none]

Weis Environmental LLC
1938 Kellogg Ave. Ste 116
Carlsbad, CA 92008
Telephone: (760) 672-6338

Attention: Dan Weis

Project Name: 600 N. Hathaway Street
Site:

Enclosed please find the results of analyses for samples which were analyzed as specified on the attached chain of custody. If you have any questions concerning this report, please do not hesitate to call.

Checked By:

Corey Jones
Project Manager

Approved By:

Joe Sevrean
Laboratory Director

Table of Contents

Client Project Name: Soil Sampling ([none])
Work Order Number: BCE0016

AMERICAN ENVIRONMENTAL TESTING LABORATORY
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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Sample Condition on Receipt

Cooler ID: Default Cooler **Temperature: 4.0 °C**

Are the COCs Correct	Y		
Labels Legible	Y	Containers In Good Condition	Y
COC/Labels Agree	Y	Samples Preserved Properly	Y
Sufficient Sample Volume	Y	Sufficient Holding Time for all Tests	Y
Sample Labels intact	Y	Received on Ice	Y

14 El Vaquero

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CHAIN OF CUSTODY RECORD

AETL JOB No. BCE0016 Page 1 of 4

COMPANY: Weis Environmental LLC	PROJECT MANAGER: Dan Weis
COMPANY ADDRESS: 1938 Kellogg Ave. Ste 116, Carlsbad CA 92008	PHONE 760.672.6338 EMAIL dw@weisenviro.com
PROJECT NAME: 600 N. Hathaway Street	PROJECT #
SITE NAME AND ADDRESS: 600 N. Hathaway Street Banning, CA	PO #

SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.
1 B1-1	BCE0016-01	4/29/21		Soil	1 Acetate Liner	ICE
2 B1-5	BCE0016-02					
3 B1-10	BCE0016-03					
4 B2-1	BCE0016-04					
5 B2-5	BCE0016-05					
6 B2-10	BCE0016-06					
7 B2-15	BCE0016-07					
8 B2-20	BCE0016-08					
9 B3-1	BCE0016-09					
10 B3-5	BCE0016-10					
11 B3-10	BCE0016-11					
12 B4-1	BCE0016-12					
13 B4-5	BCE0016-13					
14 B4-10	BCE0016-14					
15 B4-15	BCE0016-15					

ANALYSIS REQUESTED: VOCs 8260B; TPH 8015B; THE 22 list

TEST INSTRUCTIONS & COMMENTS

TOTAL NUMBER OF CONTAINERS: 15

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Dan Weis	Printed Name:	Printed Name:
Date: 5/2/21 Time: 9:43pm	Date: Time:	Date: 5-3-21 Time: 1550
RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY LABORATORY: 3.
Signature:	Signature:	Signature:
Printed Name:	Printed Name:	Printed Name: Dayris Perez
Date: 5-3-21 Time: 1215	Date: Time:	Date: 5/3/21 Time: 1550

TURN AROUND TIME: ☑ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH ☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED: ☐ HARD COPY ☐ E-COPY ☐ GEOTRACKER (GLOBAL ID) _____ ☐ OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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CHAIN OF CUSTODY RECORD

AETL JOB No. BCE0016 Page 2 of 4

COMPANY	Weis Environmental LLC
COMPANY ADDRESS	1938 Kellogg Ave. Ste 116, Carlsbad CA 92008
PROJECT MANAGER	Dan Weis
PHONE	760.672.6338
EMAIL	dw@weisenviro.com
PROJECT NAME	600 N. Hathaway Street
PROJECT #	
SITE NAME AND ADDRESS	600 N. Hathaway Street Banning, CA
PO #	

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.
1	B5-1	BCE0016.16	4/29/21		Soil	1 Acetate Liner	ICE
2	B5-5	BCE0016.17					
3	B5-10	BCE0016.18					
4	B5-15	BCE0016.19					
5	B6-1	BCE0016.20					
6	B6-5	BCE0016.21					
7	B6-10	BCE0016.22					
8	B6-15	BCE0016.23					
9	B7-1	BCE0016.24					
10	B7-5	BCE0016.25					
11	B7-10	BCE0016.26					
12	B8-1	BCE0016.27					
13	B8-5	BCE0016.28					
14	B8-10	BCE0016.29					
15	B9-1	BCE0016.30					

ANALYSIS REQUESTED: VOCs 8260B; TPH-Bars 8; THE 22 Metals

TEST INSTRUCTIONS & COMMENTS

TOTAL NUMBER OF CONTAINERS: 15

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER:	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Dan Weis	Printed Name:	Printed Name:
Date: 5/2/21 Time: 9:43AM	Date: Time:	Date: 5-3-21 Time: 1550
RECEIVED BY: 1.	RECEIVED BY: 2.	RECEIVED BY LABORATORY: 3.
Signature:	Signature:	Signature:
Printed Name: Thomas Robinson	Printed Name:	Printed Name: Dorgis Pinon
Date: 5-3-21 Time: 1215	Date: Time:	Date: 5/3/21 Time: 1550

TURN AROUND TIME: ☑ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH ☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED: ☐ HARD COPY ☐ E-COPY ☐ GEOTRACKER (GLOBAL ID) _____ ☐ OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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CHAIN OF CUSTODY RECORD

AETL JOB No. BCE00016 Page 3 of 4

COMPANY: Weis Environmental LLC	PROJECT MANAGER: Dan Weis
COMPANY ADDRESS: 1938 Kellogg Ave. Ste 116, Carlsbad CA 92008	PHONE 760.672.6338 EMAIL dw@weisenviro.com
PROJECT NAME: 600 N. Hathaway Street	PROJECT #:
SITE NAME AND ADDRESS: 600 N. Hathaway Street. Banning CA	PO #:

	SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.	VOCs 8260B	TPH GAS B	THC 22 Metals	TEST INSTRUCTIONS & COMMENTS
1	B9-5	BCE00016.31	4/29/21		Soil	1 Acetate Liner	ICE	X	X	X	
2	B9-10	BCE00016.32						X	X		
3	B10-1	BCE00016.33						X	X		
4	B10-5	BCE00016.34						X	X		
5	B10-10	BCE00016.35						X	X		
6	B10-15	BCE00016.36						X	X	X	
7	B10-20	BCE00016.37						X	X		
8	B11-1	BCE00016.38						X	X	X	
9	B11-5	BCE00016.39						X	X		
10	B11-10	BCE00016.40									
11	B12-1	BCE00016.41						X	X		
12	B12-5	BCE00016.42						X	X	X	
13	B12-10	BCE00016.43							X		
14	B13-1	BCE00016.44						X	X		
15	B13-5	BCE00016.45						X	X		

TOTAL NUMBER OF CONTAINERS:

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Dan Weis	Printed Name:	Printed Name:
Date: 5/2/21 Time: 9:43pm	Date: Time:	Date: 5-3-21 Time: 1558
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: 3.**
Signature:	Signature:	Signature:
Printed Name: Thomas Gibson	Printed Name:	Printed Name: Daniels Rivera
Date: 5-3-21 Time: 1215	Date: Time:	Date: 5/3/21 Time: 1550

TURN AROUND TIME
☐ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH
☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED
☐ HARD COPY
☐ E-COPY
☐ GEOTRACKER (GLOBAL ID) _____
☐ OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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CHAIN OF CUSTODY RECORD

COMPANY: Weis Environmental LLC	PROJECT MANAGER: Dan Weis
COMPANY ADDRESS: 1938 Kellogg Ave. Ste 116, Carlsbad CA 92008	PHONE 760.672.6338 / EMAIL dw@weisenviro.com
PROJECT NAME: 600 N. Hathaway Street	PROJECT #
SITE NAME AND ADDRESS: 600 N. Hathaway Street Banning, CA	PO #

AETL JOB No. BCE0016 Page 4 of 4

SAMPLE ID	LAB ID	DATE	TIME	MATRIX	CONTAINER NUMBER/SIZE	PRES.
B13-10	BCE0016.46	4/29/21		Soil	1 Acetate Sleeve	ICE
B14-1	BCE0016.47					
B14-5	BCE0016.48					
B14-10	BCE0016.49					
B15-1	BCE0016.50					
B15-5	BCE0016.51					
B15-10	BCE0016.52					

ANALYSIS REQUESTED: VOCs 8260B; TPH 8015B; Tithe 22 Metals

TEST INSTRUCTIONS & COMMENTS

TOTAL NUMBER OF CONTAINERS: 7

BILLING INFORMATION / SPECIAL INSTRUCTIONS

RELINQUISHED BY SAMPLER: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature:	Signature:	Signature:
Printed Name: Dan Weis	Printed Name:	Printed Name:
Date: 5/2/21 Time: 4:43PM	Date: Time:	Date: 5-3-21 Time: 0550
RECEIVED BY: 1.	**RECEIVED BY: 2.**	**RECEIVED BY LABORATORY: 3.**
Signature:	Signature:	Signature:
Printed Name: Dennis LeBlanc	Printed Name:	Printed Name: Jorgis Pineda
Date: 5-3-21 Time: 745	Date: Time:	Date: 5/3/21 Time: 1550

TURN AROUND TIME: ☑ NORMAL ☐ SAME DAY RUSH ☐ NEXT DAY RUSH ☐ 2 DAYS RUSH ☐ 3 DAYS RUSH ☐ 4 DAYS RUSH

DATA DELIVERABLE REQUIRED: ☐ HARD COPY ☐ E-COPY ☐ GEOTRACKER (GLOBAL ID) _____ ☐ OTHER (PLEASE SPECIFY) _____

DISTRIBUTION: WHITE - Laboratory, CANARY - Laboratory, PINK - Project/Account Manager, YELLOW - Sampler/Originator

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TEL (888) 288-AETL (818) 845-8200 FAX (818) 845-8840 www.aetlab.com

COOLER RECEIPT FORM

Client Name: Wei's Environmental

Project Name:

AETL Job Number: 23CE0016

Date Received: 5/3/21 Received by: Sargis Pirch

Carrier: ☑ AETL Courier ☐ Client ☐ GLS ☐ FedEx ☐ UPS
☐ Others:

Samples were received in: ☑ Cooler (1) ☐ Other (Specify):

Inside temperature of shipping container No 1: 4 °C, No 2: , No 3:

Type of sample containers: ☐ VOA, ☐ Glass bottles, ☑ Wide mouth jars, ☐ HDPE bottles, ☐ Metal sleeves, ☐ Others (Specify):

How are samples preserved: ☐ None, ☐ Ice, ☐ Blue Ice, ☐ Dry Ice
☑ None, ☐ HNO_3, ☐ NaOH, ☐ ZnOAc, ☐ HCl, ☐ $Na_2S_2O_3$, ☐ MeOH, ☐ $NaHSO_4$
☐ Other (Specify):

	Yes	No*	N/A	Name, if client was notified.
1. Are the COCs Correct?	✓			
2. Are Sample labels legible & indelible ink?	✓			
3. Do samples match the COC?	✓			
4. Are the required analyses clear?	✓			
5. Is there enough samples for required analysis?	✓			
6. Does cooler or samples have custody seal(s)?			✓	
7. Are sample containers in good condition?	✓			
8. Are samples preserved?	✓			
9. Are samples preserved properly for the intended analysis?	✓			
10. Are the VOAs free of headspace?			✓	
11. Are the jars free of headspace?			✓	
* = see note below. N/A = Not Applicable				

PLEASE NOTE ALL SAMPLES WILL BE DISPOSED OF 30 DAYS AFTER RECEIVING DATE. IF AETL IS INFORMED OTHERWISE, THERE WILL BE A STORAGE CHARGE PER SAMPLE PER MONTH FOR ANY SAMPLE HELD BEYOND 30 DAYS.

***Explain all "No" answers for above questions:**

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Case Narrative

The following "Sample Received" Section summarizes the samples received and associated analyses requested as specified on the enclosed chain of custody.

Results as reported by the laboratory apply only to 1) the items tested, 2) as the samples are received, and 3) the accuracy of information provided. Information supplied by the customer that may affect validity of results and may be contained in this report include Project Name/Number, Site Location, Sample Locations, Sampling Dates/Times, Sample ID, Sample Preservation, Sample Matrix, Sample Properties, Field Blanks, Field Duplicates, Field Spikes, and Site Historical Data.

Accreditation applies only to the test methods listed on each scope of accreditation held by the laboratory; certifications held by the laboratory may not apply to results supplied in this report.

Unless otherwise noted, all results of soil and solid samples are based on wet weight.

No analytical non-conformances were encountered.

Qualifiers are noted in the report.

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B1-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-01 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B1-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-02 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID B1-10 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-03 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B2-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-04 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B2-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-05 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5

Client ID B2-10 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-06 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B2-20 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-08 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B3-1 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-09 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID: B3-5 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-10 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received

(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B3-10 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-11 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID B4-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-12 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B4-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-13 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B4-10 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-14 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B4-15 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-15 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B5-1 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-16 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B5-5 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-17 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B5-15 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-19 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B6-1 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-20 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received

(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B6-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-21 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID B6-10 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-22 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B6-15 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-23 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B7-1 **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-24 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID: B7-5 **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-25 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B7-10 **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-26 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B8-1 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-27 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID: B8-5 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-28 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B8-10 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-29 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received

(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B9-1 **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-30 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID: B9-5 **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-31 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B9-10 **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-32 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B10-5 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-34 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B10-10 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-35 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B10-15 **Sample Date:** 04/29/2021 0:00
Lab ID: BCE0016-36 **Matrix:** Soil **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID B10-20 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-37 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID B11-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-38 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID: B11-5 — **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-39 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID: B12-1 — **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-41 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID: B12-5 — **Sample Date:** 04/29/2021 0:00

Lab ID: BCE0016-42 — **Matrix:** Soil — **Quantity of Containers:** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B12-10 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-43 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B13-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-44 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B13-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-45 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

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1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B14-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-47 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B14-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-48 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Client ID B14-10 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-49 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Samples Received
(Continued)

AETL received the following samples on 05/03/2021 with the following specifications

Client ID B15-1 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-50 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 6010B	Title 22 Metals (SW-846)	mg/kg	5
EPA 7471A	Mercury Cold-Vapor Technique	mg/kg	5
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5

Client ID B15-5 — **Sample Date** 04/29/2021 0:00

Lab ID BCE0016-51 — **Matrix** Soil — **Quantity of Containers** 1

Method	Analyte	Units	TAT
EPA 8015B TPH DRO/ORO	TPH as Diesel and Heavy Hydrocarbons Using GC/FID	mg/kg	5
EPA 8015B TPH GRO	TPH as Gasoline and Light Hydrocarbons	mg/kg	5
EPA 8260B	Volatile Organic Compounds by GC/MS (SW846)	ug/kg	5

Total Number of Samples received: 46

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Positive Hits Summary

Lab ID	Client ID				Sampled
BCE0016-01	B1-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	50.1		mg/kg	05/06/2021 17:53
EPA 6010B	Chromium	13.0		mg/kg	05/06/2021 17:53
EPA 6010B	Cobalt	7.66		mg/kg	05/06/2021 17:53
EPA 6010B	Copper	10.6		mg/kg	05/06/2021 17:53
EPA 6010B	Nickel	9.18		mg/kg	05/06/2021 17:53
EPA 6010B	Vanadium	26.9		mg/kg	05/06/2021 17:53
EPA 6010B	Zinc	33.3		mg/kg	05/06/2021 17:53

Lab ID	Client ID				Sampled
BCE0016-05	B2-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	14.2		mg/kg	05/06/2021 18:07
EPA 6010B	Cobalt	11.9		mg/kg	05/06/2021 18:07
EPA 6010B	Vanadium	51.2		mg/kg	05/06/2021 18:07
EPA 6010B	Zinc	58.0		mg/kg	05/06/2021 18:07

Lab ID	Client ID				Sampled
BCE0016-09	B3-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	75.9		mg/kg	05/06/2021 18:09
EPA 6010B	Chromium	23.3		mg/kg	05/06/2021 18:09
EPA 6010B	Cobalt	8.38		mg/kg	05/06/2021 18:09
EPA 6010B	Copper	13.8		mg/kg	05/06/2021 18:09
EPA 6010B	Lead	7.77		mg/kg	05/06/2021 18:09
EPA 6010B	Nickel	11.2		mg/kg	05/06/2021 18:09
EPA 6010B	Vanadium	33.1		mg/kg	05/06/2021 18:09
EPA 6010B	Zinc	45.5		mg/kg	05/06/2021 18:09

Lab ID	Client ID				Sampled
BCE0016-13	B4-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	68.4		mg/kg	05/06/2021 18:12

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BCE0016-13	B4-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Chromium	16.1		mg/kg	05/06/2021 18:12
EPA 6010B	Cobalt	8.71		mg/kg	05/06/2021 18:12
EPA 6010B	Copper	12.9		mg/kg	05/06/2021 18:12
EPA 6010B	Nickel	10.9		mg/kg	05/06/2021 18:12
EPA 6010B	Vanadium	35.7		mg/kg	05/06/2021 18:12
EPA 6010B	Zinc	38.5		mg/kg	05/06/2021 18:12

Lab ID	Client ID				Sampled
BCE0016-16	B5-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	56.2		mg/kg	05/06/2021 18:14
EPA 6010B	Chromium	18.0		mg/kg	05/06/2021 18:14
EPA 6010B	Cobalt	6.28		mg/kg	05/06/2021 18:14
EPA 6010B	Copper	11.2		mg/kg	05/06/2021 18:14
EPA 6010B	Nickel	8.48		mg/kg	05/06/2021 18:14
EPA 6010B	Vanadium	26.7		mg/kg	05/06/2021 18:14
EPA 6010B	Zinc	34.4		mg/kg	05/06/2021 18:14
EPA 8015B TPH DRO/ORO	TPH as Diesel (C13-C22)	72.5		mg/kg	05/05/2021 04:04
EPA 8015B TPH DRO/ORO	TPH as Heavy Hydrocarbons (C23-40)	1880		mg/kg	05/05/2021 04:04
EPA 8015B TPH DRO/ORO	TPH Total as Diesel and Heavy HC (C13-C40)	1950		mg/kg	05/05/2021 04:04

Lab ID	Client ID				Sampled
BCE0016-20	B6-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 8015B TPH DRO/ORO	TPH as Heavy Hydrocarbons (C23-40)	17.8		mg/kg	05/05/2021 06:22
EPA 8015B TPH DRO/ORO	TPH Total as Diesel and Heavy HC (C13-C40)	21.1		mg/kg	05/05/2021 06:22

Lab ID	Client ID				Sampled
BCE0016-22	B6-10				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	78.2		mg/kg	05/06/2021 18:16
EPA 6010B	Chromium	18.2		mg/kg	05/06/2021 18:16

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BCE0016-22	B6-10				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Cobalt	8.05		mg/kg	05/06/2021 18:16
EPA 6010B	Copper	13.2		mg/kg	05/06/2021 18:16
EPA 6010B	Nickel	10.4		mg/kg	05/06/2021 18:16
EPA 6010B	Vanadium	33.5		mg/kg	05/06/2021 18:16
EPA 6010B	Zinc	39.3		mg/kg	05/06/2021 18:16

Lab ID	Client ID				Sampled
BCE0016-24	B7-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	56.9		mg/kg	05/06/2021 18:19
EPA 6010B	Chromium	16.7		mg/kg	05/06/2021 18:19
EPA 6010B	Cobalt	9.04		mg/kg	05/06/2021 18:19
EPA 6010B	Copper	17.5		mg/kg	05/06/2021 18:19
EPA 6010B	Nickel	10.0		mg/kg	05/06/2021 18:19
EPA 6010B	Vanadium	36.4		mg/kg	05/06/2021 18:19
EPA 6010B	Zinc	39.6		mg/kg	05/06/2021 18:19

Lab ID	Client ID				Sampled
BCE0016-28	B8-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	433		mg/kg	05/06/2021 18:21
EPA 6010B	Chromium	23.6		mg/kg	05/06/2021 18:21
EPA 6010B	Cobalt	9.16		mg/kg	05/06/2021 18:21
EPA 6010B	Copper	79.4		mg/kg	05/06/2021 18:21
EPA 6010B	Nickel	17.8		mg/kg	05/06/2021 18:21
EPA 6010B	Vanadium	33.3		mg/kg	05/06/2021 18:21
EPA 6010B	Zinc	41.2		mg/kg	05/06/2021 18:21

Lab ID	Client ID				Sampled
BCE0016-30	B9-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	45.4		mg/kg	05/06/2021 18:26

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BCE0016-30	B9-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Chromium	13.3		mg/kg	05/06/2021 18:26
EPA 6010B	Cobalt	6.54		mg/kg	05/06/2021 18:26
EPA 6010B	Copper	16.0		mg/kg	05/06/2021 18:26
EPA 6010B	Lead	5.18		mg/kg	05/06/2021 18:26
EPA 6010B	Nickel	7.21		mg/kg	05/06/2021 18:26
EPA 6010B	Vanadium	28.9		mg/kg	05/06/2021 18:26
EPA 6010B	Zinc	36.9		mg/kg	05/06/2021 18:26
EPA 8015B TPH DRO/ORO	TPH as Diesel (C13-C22)	330		mg/kg	05/04/2021 23:40
EPA 8015B TPH DRO/ORO	TPH as Heavy Hydrocarbons (C23-40)	241		mg/kg	05/04/2021 23:40
EPA 8015B TPH DRO/ORO	TPH Total as Diesel and Heavy HC (C13-C40)	571		mg/kg	05/04/2021 23:40

Lab ID	Client ID				Sampled
BCE0016-31	B9-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	74.4		mg/kg	05/06/2021 18:28
EPA 6010B	Chromium	26.4		mg/kg	05/06/2021 18:28
EPA 6010B	Cobalt	9.41		mg/kg	05/06/2021 18:28
EPA 6010B	Copper	13.3		mg/kg	05/06/2021 18:28
EPA 6010B	Nickel	12.5		mg/kg	05/06/2021 18:28
EPA 6010B	Vanadium	37.1		mg/kg	05/06/2021 18:28
EPA 6010B	Zinc	46.6		mg/kg	05/06/2021 18:28

Lab ID	Client ID				Sampled
BCE0016-36	B10-15				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	39.1		mg/kg	05/06/2021 18:30
EPA 6010B	Chromium	18.8		mg/kg	05/06/2021 18:30
EPA 6010B	Cobalt	7.58		mg/kg	05/06/2021 18:30
EPA 6010B	Copper	16.0		mg/kg	05/06/2021 18:30
EPA 6010B	Nickel	10.6		mg/kg	05/06/2021 18:30
EPA 6010B	Vanadium	27.7		mg/kg	05/06/2021 18:30
EPA 6010B	Zinc	33.9		mg/kg	05/06/2021 18:30

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BCE0016-38	B11-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	62.2		mg/kg	05/06/2021 18:33
EPA 6010B	Chromium	19.2		mg/kg	05/06/2021 18:33
EPA 6010B	Cobalt	9.65		mg/kg	05/06/2021 18:33
EPA 6010B	Copper	14.8		mg/kg	05/06/2021 18:33
EPA 6010B	Nickel	11.8		mg/kg	05/06/2021 18:33
EPA 6010B	Vanadium	35.9		mg/kg	05/06/2021 18:33
EPA 6010B	Zinc	46.4		mg/kg	05/06/2021 18:33

Lab ID	Client ID				Sampled
BCE0016-42	B12-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	54.7		mg/kg	05/06/2021 18:35
EPA 6010B	Chromium	17.4		mg/kg	05/06/2021 18:35
EPA 6010B	Cobalt	8.02		mg/kg	05/06/2021 18:35
EPA 6010B	Copper	14.3		mg/kg	05/06/2021 18:35
EPA 6010B	Nickel	10.5		mg/kg	05/06/2021 18:35
EPA 6010B	Vanadium	31.6		mg/kg	05/06/2021 18:35
EPA 6010B	Zinc	37.1		mg/kg	05/06/2021 18:35

Lab ID	Client ID				Sampled
BCE0016-44	B13-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	20.4		mg/kg	05/06/2021 18:44
EPA 6010B	Vanadium	17.3		mg/kg	05/06/2021 18:44
EPA 6010B	Zinc	33.1		mg/kg	05/06/2021 18:44

Lab ID	Client ID				Sampled
BCE0016-48	B14-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	Barium	43.6		mg/kg	05/06/2021 18:46
EPA 6010B	Chromium	15.9		mg/kg	05/06/2021 18:46
EPA 6010B	Cobalt	6.92		mg/kg	05/06/2021 18:46

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Positive Hits Summary
(Continued)

Lab ID	Client ID				Sampled
BCE0016-48	B14-5				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	**Copper**	**14.4**		**mg/kg**	**05/06/2021 18:46**
EPA 6010B	**Nickel**	**8.30**		**mg/kg**	**05/06/2021 18:46**
EPA 6010B	**Vanadium**	**26.0**		**mg/kg**	**05/06/2021 18:46**
EPA 6010B	**Zinc**	**32.7**		**mg/kg**	**05/06/2021 18:46**

Lab ID	Client ID				Sampled
BCE0016-50	B15-1				04/29/2021 00:00
Method	Analyte	Result	Qualifier	Unit	Analyzed
EPA 6010B	**Barium**	**77.9**		**mg/kg**	**05/06/2021 18:51**
EPA 6010B	**Chromium**	**19.5**		**mg/kg**	**05/06/2021 18:51**
EPA 6010B	**Cobalt**	**9.07**		**mg/kg**	**05/06/2021 18:51**
EPA 6010B	**Copper**	**16.9**		**mg/kg**	**05/06/2021 18:51**
EPA 6010B	**Nickel**	**11.0**		**mg/kg**	**05/06/2021 18:51**
EPA 6010B	**Vanadium**	**35.2**		**mg/kg**	**05/06/2021 18:51**
EPA 6010B	**Zinc**	**40.3**		**mg/kg**	**05/06/2021 18:51**

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B1-1

Lab ID: BCE0016-01 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.962	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Arsenic	ND		1	0.962	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Barium	**50.1**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Beryllium	ND		1	0.962	2.40	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Cadmium	ND		1	0.962	2.40	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Chromium	**13.0**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Cobalt	**7.66**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Copper	**10.6**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Lead	ND		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Molybdenum	ND		1	1.92	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Nickel	**9.18**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Selenium	ND		1	0.962	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Silver	ND		1	1.92	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Thallium	ND		1	0.673	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Vanadium	**26.9**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Zinc	**33.3**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 17:53	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.00145	0.00907	mg/kg	05/05/21 11:00	05/06/21 14:37	B1E0069	ZZZ	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 03:28	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.8%*				*75-120*		05/04/21 17:53	*05/06/21 03:28*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 21:38	B1E0029	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-1

Lab ID: BCE0016-01 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 21:38	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 21:38	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*90.5%*				*75-125*		05/04/21 10:24	*05/04/21 21:38*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-5

Lab ID: BCE0016-02 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-5

Lab ID: BCE0016-02 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 03:52	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*92.4%*				*75-125*		05/06/21 16:27	*05/07/21 03:52*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-5

Lab ID: BCE0016-02 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*98.9%*				*75-125*		05/06/21 16:27	*05/07/21 03:52*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*97.9%*				*75-125*		05/06/21 16:27	*05/07/21 03:52*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 04:09	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.8%*				*75-120*		05/04/21 17:53	*05/06/21 04:09*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 22:28	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 22:28	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 22:28	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*91.0%*				*75-125*		05/04/21 10:24	*05/04/21 22:28*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-10

Lab ID: BCE0016-03 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-10

Lab ID: BCE0016-03 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/05/21 23:34	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*103%*				*75-125*		05/05/21 17:15	*05/05/21 23:34*	B1E0076	*IN*	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B1-10

Lab ID: BCE0016-03 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*105%*				*75-125*		05/05/21 17:15	*05/05/21 23:34*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*104%*				*75-125*		05/05/21 17:15	*05/05/21 23:34*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B2-1

Lab ID: BCE0016-04 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/05/21 12:26	05/06/21 10:14	B1E0071	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.0%*				*75-120*		05/05/21 12:26	*05/06/21 10:14*	B1E0071	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 23:17	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 23:17	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/04/21 23:17	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*91.5%*				*75-125*		05/04/21 10:24	*05/04/21 23:17*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B2-5

Lab ID: BCE0016-05 (Soil) **Sampled: 04/29/21 0:00**

Metals Total

Method: EPA 6010B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Barium	**14.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Chromium	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Cobalt	**11.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Copper	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Nickel	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Vanadium	**51.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B
Zinc	**58.0**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:07	B1E0119	MM	3050B

Method: EPA 7471A

Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:10	B1E0069	ZZZ	7471A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B2-10

Lab ID: BCE0016-06 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B2-10

Lab ID: BCE0016-06 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 00:11	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*104%*				*75-125*		05/05/21 17:15	*05/06/21 00:11*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B2-10

Lab ID: BCE0016-06 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*106%*				*75-125*		05/05/21 17:15	*05/06/21 00:11*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*101%*				*75-125*		05/05/21 17:15	*05/06/21 00:11*	B1E0076	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 13:35	05/04/21 17:09	B1E0028	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*94.0%*				*75-120*		05/04/21 13:35	*05/04/21 17:09*	B1E0028	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 00:06	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 00:06	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 00:06	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*92.2%*				*75-125*		05/04/21 10:24	*05/05/21 00:06*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B2-20

Lab ID: BCE0016-08 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B2-20**
Lab ID: **BCE0016-08 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 00:47	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*104%*				*75-125*		05/05/21 17:15	*05/06/21 00:47*	B1E0076	*IN*	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B2-20

Lab ID: BCE0016-08 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*105%*				*75-125*		05/05/21 17:15	*05/06/21 00:47*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*101%*				*75-125*		05/05/21 17:15	*05/06/21 00:47*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B3-1

Lab ID: BCE0016-09 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Arsenic	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Barium	**75.9**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Beryllium	ND		1	0.990	2.48	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Cadmium	ND		1	0.990	2.48	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Chromium	**23.3**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Cobalt	**8.38**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Copper	**13.8**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Lead	**7.77**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Molybdenum	ND		1	1.98	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Nickel	**11.2**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Selenium	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Silver	ND		1	1.98	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Thallium	ND		1	0.693	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Vanadium	**33.1**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Zinc	**45.5**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:09	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:14	B1E0069	ZZZ	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:35	05/04/21 21:13	B1E0028	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.5%*				*75-120*		05/04/21 17:35	*05/04/21 21:13*	B1E0028	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 00:54	B1E0029	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-1

Lab ID: BCE0016-09 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 00:54	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 00:54	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*92.5%*				*75-125*		05/04/21 10:24	*05/05/21 00:54*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-5

Lab ID: BCE0016-10 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-5

Lab ID: BCE0016-10 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 01:23	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*105%*				*75-125*		05/05/21 17:15	*05/06/21 01:23*	B1E0076	*IN*	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-5

Lab ID: BCE0016-10 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*108%*				*75-125*		05/05/21 17:15	*05/06/21 01:23*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*101%*				*75-125*		05/05/21 17:15	*05/06/21 01:23*	B1E0076	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:35	05/04/21 21:53	B1E0028	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.8%*				*75-120*		05/04/21 17:35	*05/04/21 21:53*	B1E0028	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 01:43	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 01:43	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 01:43	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*90.2%*				*75-125*		05/04/21 10:24	*05/05/21 01:43*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-10

Lab ID: BCE0016-11 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-10

Lab ID: BCE0016-11 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 01:59	B1E0076	IN	5030
	Recovery			Acceptance Criteria							
Surrogate: Bromofluorobenzene	*105%*			*75-125*			05/05/21 17:15	*05/06/21 01:59*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B3-10

Lab ID: BCE0016-11 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*109%*				*75-125*		05/05/21 17:15	*05/06/21 01:59*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*101%*				*75-125*		05/05/21 17:15	*05/06/21 01:59*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B4-1

Lab ID: BCE0016-12 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 23:24	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.9%*				*75-120*		05/04/21 17:53	*05/05/21 23:24*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 02:30	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 02:30	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 02:30	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*92.8%*				*75-125*		05/04/21 10:24	*05/05/21 02:30*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B4-5
Lab ID: BCE0016-13 (Soil) **Sampled:** 04/29/21 0:00

Metals Total

Method: EPA 6010B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Barium	**68.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Chromium	**16.1**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Cobalt	**8.71**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Copper	**12.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Nickel	**10.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Vanadium	**35.7**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B
Zinc	**38.5**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:12	B1E0119	MM	3050B

Method: EPA 7471A

Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:17	B1E0069	ER	7471A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B4-10
Lab ID: BCE0016-14 (Soil) **Sampled:** 04/29/21 0:00

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B4-10**
Lab ID: **BCE0016-14 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 02:35	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*104%*				*75-125*		05/05/21 17:15	*05/06/21 02:35*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B4-10

Lab ID: BCE0016-14 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*111%*				*75-125*		05/05/21 17:15	*05/06/21 02:35*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*99.8%*				*75-125*		05/05/21 17:15	*05/06/21 02:35*	B1E0076	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 00:04	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.7%*				*75-120*		05/04/21 17:53	*05/06/21 00:04*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 03:17	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 03:17	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 03:17	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*91.9%*				*75-125*		05/04/21 10:24	*05/05/21 03:17*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B4-15

Lab ID: BCE0016-15 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B4-15**
Lab ID: **BCE0016-15 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 03:11	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*107%*				*75-125*		05/05/21 17:15	*05/06/21 03:11*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B4-15

Lab ID: BCE0016-15 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*112%*				*75-125*		05/05/21 17:15	*05/06/21 03:11*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*103%*				*75-125*		05/05/21 17:15	*05/06/21 03:11*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B5-1

Lab ID: BCE0016-16 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Barium	**56.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Chromium	**18.0**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Cobalt	**6.28**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Copper	**11.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Nickel	**8.48**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Vanadium	**26.7**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Zinc	**34.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:14	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:20	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 00:45	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.4%*				*75-120*		05/04/21 17:53	*05/06/21 00:45*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	**72.5**		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 04:04	B1E0029	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-1

Lab ID: BCE0016-16 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	**1880**		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 04:04	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	**1950**		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 04:04	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*92.2%*				*75-125*		05/04/21 10:24	*05/05/21 04:04*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-5

Lab ID: BCE0016-17 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-5

Lab ID: BCE0016-17 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 03:47	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*106%*				*75-125*		05/05/21 17:15	*05/06/21 03:47*	B1E0076	*IN*	5030

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A KYZER LABS COMPANY

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-5

Lab ID: BCE0016-17 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*109%*				*75-125*		05/05/21 17:15	*05/06/21 03:47*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*103%*				*75-125*		05/05/21 17:15	*05/06/21 03:47*	B1E0076	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 01:26	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.5%*				*75-120*		05/04/21 17:53	*05/06/21 01:26*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 04:50	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 04:50	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 04:50	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*93.4%*				*75-125*		05/04/21 10:24	*05/05/21 04:50*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street,
1938 Kellogg Ave. Ste 116	Project Number:	[none]		Banning, CA 92220
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-15

Lab ID: BCE0016-19 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-15

Lab ID: BCE0016-19 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 04:24	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*105%*				*75-125*		05/05/21 17:15	*05/06/21 04:24*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B5-15

Lab ID: BCE0016-19 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*110%*				*75-125*		05/05/21 17:15	*05/06/21 04:24*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*101%*				*75-125*		05/05/21 17:15	*05/06/21 04:24*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-1

Lab ID: BCE0016-20 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 02:07	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*93.4%*				*75-120*		05/04/21 17:53	*05/06/21 02:07*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 06:22	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	**17.8**		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 06:22	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	**21.1**		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 06:22	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*91.8%*				*75-125*		05/04/21 10:24	*05/05/21 06:22*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-5

Lab ID: BCE0016-21 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-5

Lab ID: BCE0016-21 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 05:00	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*105%*				*75-125*		05/05/21 17:15	*05/06/21 05:00*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B6-5**
Lab ID: **BCE0016-21 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*112%*				*75-125*		05/05/21 17:15	*05/06/21 05:00*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*99.9%*				*75-125*		05/05/21 17:15	*05/06/21 05:00*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B6-10

Lab ID: BCE0016-22 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.962	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Arsenic	ND		1	0.962	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Barium	**78.2**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Beryllium	ND		1	0.962	2.40	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Cadmium	ND		1	0.962	2.40	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Chromium	**18.2**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Cobalt	**8.05**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Copper	**13.2**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Lead	ND		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Molybdenum	ND		1	1.92	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Nickel	**10.4**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Selenium	ND		1	0.962	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Silver	ND		1	1.92	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Thallium	ND		1	0.673	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Vanadium	**33.5**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Zinc	**39.3**		1	2.40	4.81	mg/kg	05/05/21 11:06	05/06/21 18:16	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:24	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 03:59	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*97.3%*				*75-120*		05/04/21 17:36	*05/05/21 03:59*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 07:07	B1E0029	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-10

Lab ID: BCE0016-22 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 07:07	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 07:07	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*92.1%*				*75-125*		05/04/21 10:24	*05/05/21 07:07*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-15

Lab ID: BCE0016-23 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-15

Lab ID: BCE0016-23 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/05/21 17:15	05/06/21 05:36	B1E0076	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*107%*				*75-125*		05/05/21 17:15	*05/06/21 05:36*	B1E0076	*IN*	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B6-15

Lab ID: BCE0016-23 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*107%*				*75-125*		05/05/21 17:15	*05/06/21 05:36*	B1E0076	*IN*	5030
Surrogate: Toluene-d8	*102%*				*75-125*		05/05/21 17:15	*05/06/21 05:36*	B1E0076	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B7-1

Lab ID: BCE0016-24 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.980	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Arsenic	ND		1	0.980	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Barium	**56.9**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Beryllium	ND		1	0.980	2.45	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Cadmium	ND		1	0.980	2.45	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Chromium	**16.7**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Cobalt	**9.04**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Copper	**17.5**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Lead	ND		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Molybdenum	ND		1	1.96	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Nickel	**10.0**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Selenium	ND		1	0.980	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Silver	ND		1	1.96	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Thallium	ND		1	0.686	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Vanadium	**36.4**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Zinc	**39.6**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:19	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0158	0.0990	mg/kg	05/05/21 11:00	05/06/21 17:27	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 04:40	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.7%*				*75-120*		05/04/21 17:36	*05/05/21 04:40*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 07:53	B1E0029	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-1

Lab ID: BCE0016-24 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 07:53	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 07:53	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*92.6%*				*75-125*		05/04/21 10:24	*05/05/21 07:53*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-5

Lab ID: BCE0016-25 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-5

Lab ID: BCE0016-25 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 04:34	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*94.4%*				*75-125*		05/06/21 16:27	*05/07/21 04:34*	B1E0122	*IN*	5035A

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A KYZER LABS COMPANY

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-5

Lab ID: BCE0016-25 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*100%*				*75-125*		05/06/21 16:27	*05/07/21 04:34*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*100%*				*75-125*		05/06/21 16:27	*05/07/21 04:34*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 05:20	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.8%*				*75-120*		05/04/21 17:36	*05/05/21 05:20*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 08:41	B1E0029	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 08:41	B1E0029	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 10:24	05/05/21 08:41	B1E0029	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*91.6%*				*75-125*		05/04/21 10:24	*05/05/21 08:41*	B1E0029	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-10

Lab ID: BCE0016-26 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-10

Lab ID: BCE0016-26 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 05:17	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*94.0%*				*75-125*		05/06/21 16:27	*05/07/21 05:17*	B1E0122	*IN*	5035A

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B7-10

Lab ID: BCE0016-26 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*100%*				*75-125*		05/06/21 16:27	*05/07/21 05:17*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*100%*				*75-125*		05/06/21 16:27	*05/07/21 05:17*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B8-1

Lab ID: BCE0016-27 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 06:01	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.5%*				*75-120*		05/04/21 17:36	*05/05/21 06:01*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 22:08	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 22:08	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 22:08	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*101%*				*75-125*		05/04/21 14:42	*05/04/21 22:08*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B8-5

Lab ID: BCE0016-28 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Barium	**433**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Chromium	**23.6**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Cobalt	**9.16**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Copper	**79.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Nickel	**17.8**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Vanadium	**33.3**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Zinc	**41.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:21	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:30	B1E0069	ER	7471A
Volatile Organic Compounds											
Method: EPA 8260B											
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B8-5

Lab ID: BCE0016-28 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B8-5

Lab ID: BCE0016-28 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 05:59	B1E0122	IN	5035A
	Recovery			Acceptance Criteria							
Surrogate: Bromofluorobenzene	*94.9%*			*75-125*			05/06/21 16:27	*05/07/21 05:59*	B1E0122	*IN*	5035A
Surrogate: Dibromofluoromethane	*102%*			*75-125*			05/06/21 16:27	*05/07/21 05:59*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*102%*			*75-125*			05/06/21 16:27	*05/07/21 05:59*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B8-10

Lab ID: BCE0016-29 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B8-10

Lab ID: BCE0016-29 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 06:41	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*93.5%*				*75-125*		05/06/21 16:27	*05/07/21 06:41*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B8-10

Lab ID: BCE0016-29 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*102%*				*75-125*		05/06/21 16:27	*05/07/21 06:41*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*98.9%*				*75-125*		05/06/21 16:27	*05/07/21 06:41*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 06:42	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*94.4%*				*75-120*		05/04/21 17:36	*05/05/21 06:42*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 22:54	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 22:54	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 22:54	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*108%*				*75-125*		05/04/21 14:42	*05/04/21 22:54*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B9-1

Lab ID: BCE0016-30 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Barium	**45.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Chromium	**13.3**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Cobalt	**6.54**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Copper	**16.0**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Lead	**5.18**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Nickel	**7.21**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Vanadium	**28.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Zinc	**36.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:26	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:34	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/05/21 12:26	05/06/21 11:34	B1E0071	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.5%*				*75-120*		05/05/21 12:26	*05/06/21 11:34*	B1E0071	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	**330**		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 23:40	B1E0050	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B9-1

Lab ID: BCE0016-30 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	**241**		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 23:40	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	**571**		1	1.62	10.0	mg/kg	05/04/21 14:42	05/04/21 23:40	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*107%*				*75-125*		05/04/21 14:42	*05/04/21 23:40*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B9-5

Lab ID: BCE0016-31 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Arsenic	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Barium	**74.4**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Beryllium	ND		1	0.990	2.48	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Cadmium	ND		1	0.990	2.48	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Chromium	**26.4**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Cobalt	**9.41**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Copper	**13.3**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Lead	ND		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Molybdenum	ND		1	1.98	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Nickel	**12.5**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Selenium	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Silver	ND		1	1.98	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Thallium	ND		1	0.693	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Vanadium	**37.1**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Zinc	**46.6**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:28	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:37	B1E0069	ER	7471A
Volatile Organic Compounds											
Method: EPA 8260B											
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B9-5

Lab ID: BCE0016-31 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B9-5

Lab ID: BCE0016-31 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 07:24	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.0%*				*75-125*		05/06/21 16:27	*05/07/21 07:24*	B1E0122	*IN*	5035A
Surrogate: Dibromofluoromethane	*102%*				*75-125*		05/06/21 16:27	*05/07/21 07:24*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*101%*				*75-125*		05/06/21 16:27	*05/07/21 07:24*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/06/21 02:48	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.3%*				*75-120*		05/04/21 17:53	*05/06/21 02:48*	B1E0047	*DKH*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B9-5

Lab ID: BCE0016-31 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range (Continued)											
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 00:25	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 00:25	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 00:25	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*99.0%*				*75-125*		05/04/21 14:42	*05/05/21 00:25*	B1E0050	*TTN*	3550B

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B9-10

Lab ID: BCE0016-32 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B9-10**
Lab ID: **BCE0016-32 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 08:06	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*94.3%*				*75-125*		05/06/21 16:27	*05/07/21 08:06*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B9-10

Lab ID: BCE0016-32 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*101%*				*75-125*		05/06/21 16:27	*05/07/21 08:06*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*101%*				*75-125*		05/06/21 16:27	*05/07/21 08:06*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 09:09	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.3%*				*75-120*		05/04/21 17:36	*05/05/21 09:09*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 01:10	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 01:10	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 01:10	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*97.3%*				*75-125*		05/04/21 14:42	*05/05/21 01:10*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-5

Lab ID: BCE0016-34 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-5

Lab ID: BCE0016-34 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 08:49	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*94.9%*				*75-125*		05/06/21 16:27	*05/07/21 08:49*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-5

Lab ID: BCE0016-34 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*102%*				*75-125*		05/06/21 16:27	*05/07/21 08:49*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*100%*				*75-125*		05/06/21 16:27	*05/07/21 08:49*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 09:49	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.1%*				*75-120*		05/04/21 17:36	*05/05/21 09:49*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 02:39	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 02:39	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 02:39	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*96.0%*				*75-125*		05/04/21 14:42	*05/05/21 02:39*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-10

Lab ID: BCE0016-35 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Benzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Chloroethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-10

Lab ID: BCE0016-35 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Iodomethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Naphthalene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Styrene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
o-Xylene	ND		1	1.00	10.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/06/21 16:27	05/07/21 09:31	B1E0122	IN	5035A
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.0%*				*75-125*		05/06/21 16:27	*05/07/21 09:31*	B1E0122	*IN*	5035A

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-10

Lab ID: BCE0016-35 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*104%*				*75-125*		05/06/21 16:27	*05/07/21 09:31*	B1E0122	*IN*	5035A
Surrogate: Toluene-d8	*99.4%*				*75-125*		05/06/21 16:27	*05/07/21 09:31*	B1E0122	*IN*	5035A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 10:30	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.9%*				*75-120*		05/04/21 17:36	*05/05/21 10:30*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 03:24	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 03:24	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 03:24	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*96.3%*				*75-125*		05/04/21 14:42	*05/05/21 03:24*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B10-15

Lab ID: BCE0016-36 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Barium	**39.1**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Chromium	**18.8**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Cobalt	**7.58**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Copper	**16.0**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Nickel	**10.6**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Vanadium	**27.7**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Zinc	**33.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:30	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0155	0.0971	mg/kg	05/05/21 11:00	05/06/21 17:43	B1E0069	ER	7471A
Volatile Organic Compounds											
Method: EPA 8260B											
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-15

Lab ID: BCE0016-36 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B10-15

Lab ID: BCE0016-36 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 00:55	B1E0156	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*100%*				*75-125*		05/07/21 17:21	*05/08/21 00:55*	B1E0156	*IN*	5030
Surrogate: Dibromofluoromethane	*91.1%*				*75-125*		05/07/21 17:21	*05/08/21 00:55*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*102%*				*75-125*		05/07/21 17:21	*05/08/21 00:55*	B1E0156	*IN*	5030

TPH Gasoline Range

Method: EPA 8015B TPH GRO

TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 11:10	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*97.5%*				*75-120*		05/04/21 17:36	*05/05/21 11:10*	B1E0046	*DKH*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-15

Lab ID: BCE0016-36 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range (Continued)											
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 04:08	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 04:08	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 04:08	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*104%*				*75-125*		05/04/21 14:42	*05/05/21 04:08*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-20

Lab ID: BCE0016-37 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-20

Lab ID: BCE0016-37 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 01:37	B1E0156	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.8%*				*75-125*		05/07/21 17:21	*05/08/21 01:37*	B1E0156	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B10-20

Lab ID: BCE0016-37 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*87.7%*				*75-125*		05/07/21 17:21	*05/08/21 01:37*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*102%*				*75-125*		05/07/21 17:21	*05/08/21 01:37*	B1E0156	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/07/21 12:11	05/10/21 14:22	B1E0168	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*92.3%*				*75-120*		05/07/21 12:11	*05/10/21 14:22*	B1E0168	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 04:52	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 04:52	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 04:52	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*99.8%*				*75-125*		05/04/21 14:42	*05/05/21 04:52*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B11-1

Lab ID: BCE0016-38 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Barium	**62.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Chromium	**19.2**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Cobalt	**9.65**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Copper	**14.8**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Nickel	**11.8**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Vanadium	**35.9**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Zinc	**46.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:33	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:47	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 12:32	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.3%*				*75-120*		05/04/21 17:36	*05/05/21 12:32*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 05:35	B1E0050	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B11-1

Lab ID: BCE0016-38 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 05:35	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 05:35	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*98.2%*				*75-125*		05/04/21 14:42	*05/05/21 05:35*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B11-5

Lab ID: BCE0016-39 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street,
1938 Kellogg Ave. Ste 116	Project Number:	[none]		Banning, CA 92220
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B11-5

Lab ID: BCE0016-39 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 02:19	B1E0156	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.4%*				*75-125*		05/07/21 17:21	*05/08/21 02:19*	B1E0156	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B11-5

Lab ID: BCE0016-39 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*91.0%*				*75-125*		05/07/21 17:21	*05/08/21 02:19*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*102%*				*75-125*		05/07/21 17:21	*05/08/21 02:19*	B1E0156	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/05/21 12:26	05/06/21 12:15	B1E0071	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.1%*				*75-120*		05/05/21 12:26	*05/06/21 12:15*	B1E0071	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 06:19	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 06:19	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 06:19	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*101%*				*75-125*		05/04/21 14:42	*05/05/21 06:19*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B12-1

Lab ID: BCE0016-41 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:36	05/05/21 13:54	B1E0046	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.9%*				*75-120*		05/04/21 17:36	*05/05/21 13:54*	B1E0046	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 07:02	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 07:02	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 07:02	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*100%*				*75-125*		05/04/21 14:42	*05/05/21 07:02*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B12-5

Lab ID: BCE0016-42 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Barium	**54.7**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Chromium	**17.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Cobalt	**8.02**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Copper	**14.3**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Nickel	**10.5**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Vanadium	**31.6**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Zinc	**37.1**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:35	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:50	B1E0069	ER	7471A
Volatile Organic Compounds											
Method: EPA 8260B											
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B12-5**

Lab ID: **BCE0016-42 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B12-5

Lab ID: BCE0016-42 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 03:01	B1E0156	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.9%*				*75-125*		05/07/21 17:21	*05/08/21 03:01*	B1E0156	*IN*	5030
Surrogate: Dibromofluoromethane	*89.8%*				*75-125*		05/07/21 17:21	*05/08/21 03:01*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*100%*				*75-125*		05/07/21 17:21	*05/08/21 03:01*	B1E0156	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B12-10

Lab ID: BCE0016-43 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 18:40	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.7%*				*75-120*		05/04/21 17:53	*05/05/21 18:40*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 07:45	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 07:45	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 07:45	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*96.9%*				*75-125*		05/04/21 14:42	*05/05/21 07:45*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B13-1

Lab ID: BCE0016-44 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Arsenic	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Barium	**20.4**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Beryllium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Cadmium	ND		1	1.00	2.50	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Chromium	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Cobalt	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Copper	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Lead	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Molybdenum	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Nickel	ND		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Selenium	ND		1	1.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Silver	ND		1	2.00	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Thallium	ND		1	0.700	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Vanadium	**17.3**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Zinc	**33.1**		1	2.50	5.00	mg/kg	05/05/21 11:06	05/06/21 18:44	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:53	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 19:20	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.8%*				*75-120*		05/04/21 17:53	*05/05/21 19:20*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 08:29	B1E0050	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B13-1

Lab ID: BCE0016-44 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 08:29	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 08:29	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*96.8%*				*75-125*		05/04/21 14:42	*05/05/21 08:29*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B13-5

Lab ID: BCE0016-45 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B13-5

Lab ID: BCE0016-45 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 03:42	B1E0156	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.5%*				*75-125*		05/07/21 17:21	*05/08/21 03:42*	B1E0156	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B13-5

Lab ID: BCE0016-45 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*89.5%*				*75-125*		05/07/21 17:21	*05/08/21 03:42*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*103%*				*75-125*		05/07/21 17:21	*05/08/21 03:42*	B1E0156	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 20:00	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*96.3%*				*75-120*		05/04/21 17:53	*05/05/21 20:00*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 09:13	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 09:13	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 09:13	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*99.8%*				*75-125*		05/04/21 14:42	*05/05/21 09:13*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B14-1

Lab ID: BCE0016-47 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 20:41	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*93.5%*				*75-120*		05/04/21 17:53	*05/05/21 20:41*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 10:39	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 10:39	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 10:39	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*103%*				*75-125*		05/04/21 14:42	*05/05/21 10:39*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B14-5
Lab ID: BCE0016-48 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.980	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Arsenic	ND		1	0.980	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Barium	**43.6**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Beryllium	ND		1	0.980	2.45	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Cadmium	ND		1	0.980	2.45	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Chromium	**15.9**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Cobalt	**6.92**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Copper	**14.4**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Lead	ND		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Molybdenum	ND		1	1.96	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Nickel	**8.30**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Selenium	ND		1	0.980	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Silver	ND		1	1.96	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Thallium	ND		1	0.686	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Vanadium	**26.0**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Zinc	**32.7**		1	2.45	4.90	mg/kg	05/05/21 11:06	05/06/21 18:46	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0160	0.100	mg/kg	05/05/21 11:00	05/06/21 17:57	B1E0069	ER	7471A
Volatile Organic Compounds											
Method: EPA 8260B											
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: **B14-5**
Lab ID: **BCE0016-48 (Soil)** **Sampled:** **04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B14-5

Lab ID: BCE0016-48 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 04:24	B1E0156	IN	5030
	Recovery			Acceptance Criteria							
Surrogate: Bromofluorobenzene	*100%*			*75-125*			05/07/21 17:21	*05/08/21 04:24*	B1E0156	*IN*	5030
Surrogate: Dibromofluoromethane	*90.8%*			*75-125*			05/07/21 17:21	*05/08/21 04:24*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*104%*			*75-125*			05/07/21 17:21	*05/08/21 04:24*	B1E0156	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B14-10

Lab ID: BCE0016-49 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 21:22	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*92.4%*				*75-120*		05/04/21 17:53	*05/05/21 21:22*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 11:23	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 11:23	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 11:23	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*93.5%*				*75-125*		05/04/21 14:42	*05/05/21 11:23*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location: 600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]	
Carlsbad, CA 92008	Attention:	Dan Weis	
	Project Name:	600 N. Hathaway Street	Reported: 05/11/2021 18:52

Analytical Results

Client ID: B15-1

Lab ID: BCE0016-50 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Metals Total											
Method: EPA 6010B											
Antimony	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Arsenic	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Barium	**77.9**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Beryllium	ND		1	0.990	2.48	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Cadmium	ND		1	0.990	2.48	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Chromium	**19.5**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Cobalt	**9.07**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Copper	**16.9**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Lead	ND		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Molybdenum	ND		1	1.98	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Nickel	**11.0**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Selenium	ND		1	0.990	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Silver	ND		1	1.98	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Thallium	ND		1	0.693	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Vanadium	**35.2**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Zinc	**40.3**		1	2.48	4.95	mg/kg	05/05/21 11:06	05/06/21 18:51	B1E0119	MM	3050B
Method: EPA 7471A											
Mercury	ND		1	0.0155	0.0971	mg/kg	05/05/21 11:00	05/06/21 18:00	B1E0069	ER	7471A
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		1	0.116	0.200	mg/kg	05/04/21 17:53	05/05/21 22:03	B1E0047	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*99.3%*				*75-120*		05/04/21 17:53	*05/05/21 22:03*	B1E0047	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 12:07	B1E0050	TTN	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B15-1

Lab ID: BCE0016-50 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
TPH Diesel Range (Continued)											
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 12:07	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 12:07	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*98.5%*				*75-125*		05/04/21 14:42	*05/05/21 12:07*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B15-5

Lab ID: BCE0016-51 (Soil) **Sampled: 04/29/21 0:00**

Volatile Organic Compounds

Method: EPA 8260B

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Acetone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Benzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Bromobenzene (Phenyl bromide)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Bromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Bromodichloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Bromoform (Tribromomethane)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Bromomethane (Methyl bromide)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
2-Butanone (MEK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
n-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
sec-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
tert-Butylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Carbon Disulfide	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Carbon tetrachloride	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Chlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Chloroethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
2-Chloroethyl vinyl ether	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Chloroform (Trichloromethane)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Chloromethane (Methyl chloride)	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
2-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
4-Chlorotoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Dibromochloromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2-Dibromoethane (EDB)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Dibromomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,3-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,4-Dichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Dichlorodifluoromethane	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1-Dichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2-Dichloroethane (EDC)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
cis-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
trans-1,2-Dichloroethene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030

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1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B15-5

Lab ID: BCE0016-51 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
1,3-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
2,2-Dichloropropane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
cis-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
trans-1,3-Dichloropropene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Ethylbenzene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Hexachlorobutadiene	ND		1	15.0	30.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
2-Hexanone	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Iodomethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Isopropylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
p-Isopropyltoluene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
4-Methyl-2-pentanone (MIBK)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Methyl-tert-butyl ether (MTBE)	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Methylene chloride (DCM)	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Naphthalene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
n-Propylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Styrene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1,1,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1,2,2-Tetrachloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Tetrachloroethene	ND		1	2.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Toluene (Methyl benzene)	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2,3-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2,4-Trichlorobenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1,1-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,1,2-Trichloroethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Trichloroethene	ND		1	1.50	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Trichlorofluoromethane	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2,3-Trichloropropane	ND		1	1.00	5.00	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,2,4-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
1,3,5-Trimethylbenzene	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Vinyl Acetate	ND		1	25.0	50.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
Vinyl chloride (Chloroethene)	ND		1	5.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
o-Xylene	ND		1	1.00	10.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
m,p-Xylenes	ND		1	1.00	20.0	ug/kg	05/07/21 17:21	05/08/21 05:06	B1E0156	IN	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*98.4%*				*75-125*		05/07/21 17:21	*05/08/21 05:06*	B1E0156	*IN*	5030

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Analytical Results

Client ID: B15-5

Lab ID: BCE0016-51 (Soil) **Sampled: 04/29/21 0:00**

Analyte	Result	Qualifier	Dilution	MDL	RL	Units	Prepared Date/Time	Analyzed Date/Time	Batch	Analyst Initials	Prep. Method
Volatile Organic Compounds (Continued)											
Surrogate: Dibromofluoromethane	*91.4%*				*75-125*		05/07/21 17:21	*05/08/21 05:06*	B1E0156	*IN*	5030
Surrogate: Toluene-d8	*105%*				*75-125*		05/07/21 17:21	*05/08/21 05:06*	B1E0156	*IN*	5030
TPH Gasoline Range											
Method: EPA 8015B TPH GRO											
TPH as Gasoline and Light HC. (C4-C12)	ND		2	0.232	0.400	mg/kg	05/05/21 12:26	05/06/21 14:58	B1E0071	DKH	5030
	Recovery				Acceptance Criteria						
Surrogate: Bromofluorobenzene	*95.2%*				*75-120*		05/05/21 12:26	*05/06/21 14:58*	B1E0071	*DKH*	5030
TPH Diesel Range											
Method: EPA 8015B TPH DRO/ORO											
TPH as Diesel (C13-C22)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 12:52	B1E0050	TTN	3550B
TPH as Heavy Hydrocarbons (C23-40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 12:52	B1E0050	TTN	3550B
TPH Total as Diesel and Heavy HC (C13-C40)	ND		1	1.62	10.0	mg/kg	05/04/21 14:42	05/05/21 12:52	B1E0050	TTN	3550B
	Recovery				Acceptance Criteria						
Surrogate: Chlorobenzene	*101%*				*75-125*		05/04/21 14:42	*05/05/21 12:52*	B1E0050	*TTN*	3550B

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0119 - 3050B					**Prepared: 05/05/2021 11:06**						
Method Blank (B1E0119-BLK1)					**Analyzed: 05/06/2021 17:44**						
Antimony	ND	1.00	5.00	mg/kg							
Arsenic	ND	1.00	5.00	mg/kg							
Barium	ND	2.50	5.00	mg/kg							
Beryllium	ND	1.00	2.50	mg/kg							
Cadmium	ND	1.00	2.50	mg/kg							
Chromium	ND	2.50	5.00	mg/kg							
Cobalt	ND	2.50	5.00	mg/kg							
Copper	ND	2.50	5.00	mg/kg							
Lead	ND	2.50	5.00	mg/kg							
Molybdenum	ND	2.00	5.00	mg/kg							
Nickel	ND	2.50	5.00	mg/kg							
Selenium	ND	1.00	5.00	mg/kg							
Silver	ND	2.00	5.00	mg/kg							
Thallium	ND	0.700	5.00	mg/kg							
Vanadium	ND	2.50	5.00	mg/kg							
Zinc	ND	2.50	5.00	mg/kg							

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0119 - 3050B (Continued)					**Prepared: 05/05/2021 11:06**						
LCS (B1E0119-BS1)					**Analyzed: 05/06/2021 17:46**						
Antimony	50.5	1.00	5.00	mg/kg	50.0		101	75-125			
Arsenic	52.1	1.00	5.00	mg/kg	50.0		104	75-125			
Barium	52.9	2.50	5.00	mg/kg	50.0		106	75-125			
Beryllium	57.8	1.00	2.50	mg/kg	50.0		116	75-125			
Cadmium	51.7	1.00	2.50	mg/kg	50.0		103	75-125			
Chromium	53.5	2.50	5.00	mg/kg	50.0		107	75-125			
Cobalt	51.6	2.50	5.00	mg/kg	50.0		103	75-125			
Copper	50.8	2.50	5.00	mg/kg	50.0		102	75-125			
Lead	49.5	2.50	5.00	mg/kg	50.0		99.1	75-125			
Molybdenum	50.0	2.00	5.00	mg/kg	50.0		100	75-125			
Nickel	51.2	2.50	5.00	mg/kg	50.0		102	75-125			
Selenium	51.8	1.00	5.00	mg/kg	50.0		104	75-125			
Silver	53.2	2.00	5.00	mg/kg	50.0		106	75-125			
Thallium	49.6	0.700	5.00	mg/kg	50.0		99.3	75-125			
Vanadium	53.2	2.50	5.00	mg/kg	50.0		106	75-125			
Zinc	53.0	2.50	5.00	mg/kg	50.0		106	75-125			
LCSD (B1E0119-BSD1)					**Analyzed: 05/06/2021 17:49**						
Antimony	51.5	1.00	5.00	mg/kg	50.0		103	75-125	1.85	15	
Arsenic	51.6	1.00	5.00	mg/kg	50.0		103	75-125	<1.00	15	
Barium	52.0	2.50	5.00	mg/kg	50.0		104	75-125	1.72	15	
Beryllium	58.3	1.00	2.50	mg/kg	50.0		117	75-125	<1.00	15	
Cadmium	51.2	1.00	2.50	mg/kg	50.0		102	75-125	1.06	15	
Chromium	53.2	2.50	5.00	mg/kg	50.0		106	75-125	<1.00	15	
Cobalt	50.8	2.50	5.00	mg/kg	50.0		102	75-125	1.49	15	
Copper	50.9	2.50	5.00	mg/kg	50.0		102	75-125	<1.00	15	
Lead	49.3	2.50	5.00	mg/kg	50.0		98.5	75-125	<1.00	15	
Molybdenum	49.8	2.00	5.00	mg/kg	50.0		99.6	75-125	<1.00	15	
Nickel	50.2	2.50	5.00	mg/kg	50.0		100	75-125	1.87	15	
Selenium	51.8	1.00	5.00	mg/kg	50.0		104	75-125	<1.00	15	
Silver	52.6	2.00	5.00	mg/kg	50.0		105	75-125	1.15	15	
Thallium	49.4	0.700	5.00	mg/kg	50.0		98.7	75-125	<1.00	15	
Vanadium	52.4	2.50	5.00	mg/kg	50.0		105	75-125	1.41	15	
Zinc	52.2	2.50	5.00	mg/kg	50.0		104	75-125	1.47	15	

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0119 - 3050B (Continued)					**Prepared: 05/05/2021 11:06**						
Duplicate (B1E0119-DUP1)		**Source: BCE0016-01**			**Analyzed: 05/06/2021 17:55**						
Antimony	ND	0.990	4.95	mg/kg		ND			<1.00	15	
Arsenic	ND	0.990	4.95	mg/kg		ND			<1.00	15	
Barium	53.0	2.48	4.95	mg/kg		50.1			5.56	15	
Beryllium	ND	0.990	2.48	mg/kg		ND			<1.00	15	
Cadmium	1.17	0.990	2.48	mg/kg		ND				15	
Chromium	13.4	2.48	4.95	mg/kg		13.0			3.38	15	
Cobalt	8.01	2.48	4.95	mg/kg		7.66			4.50	15	
Copper	10.8	2.48	4.95	mg/kg		10.6			1.96	15	
Lead	3.38	2.48	4.95	mg/kg		3.12			7.87	15	
Molybdenum	ND	1.98	4.95	mg/kg		ND			<1.00	15	
Nickel	9.60	2.48	4.95	mg/kg		9.18			4.45	15	
Selenium	ND	0.990	4.95	mg/kg		ND			<1.00	15	
Silver	ND	1.98	4.95	mg/kg		ND			<1.00	15	
Thallium	ND	0.693	4.95	mg/kg		ND			<1.00	15	
Vanadium	27.9	2.48	4.95	mg/kg		26.9			3.36	15	
Zinc	34.6	2.48	4.95	mg/kg		33.3			3.63	15	
Matrix Spike (B1E0119-MS1)		**Source: BCE0016-01**			**Analyzed: 05/06/2021 18:00**						
Antimony	44.8	1.00	5.00	mg/kg	50.0	ND	89.7	75-125			
Arsenic	41.8	1.00	5.00	mg/kg	50.0	ND	83.7	75-125			
Barium	91.9	2.50	5.00	mg/kg	50.0	50.1	83.7	75-125			
Beryllium	56.3	1.00	2.50	mg/kg	50.0	ND	113	75-125			
Cadmium	45.5	1.00	2.50	mg/kg	50.0	ND	91.0	75-125			
Chromium	61.2	2.50	5.00	mg/kg	50.0	13.0	96.4	75-125			
Cobalt	54.8	2.50	5.00	mg/kg	50.0	7.66	94.4	75-125			
Copper	63.2	2.50	5.00	mg/kg	50.0	10.6	105	75-125			
Lead	44.8	2.50	5.00	mg/kg	50.0	3.12	83.4	75-125			
Molybdenum	46.9	2.00	5.00	mg/kg	50.0	ND	93.9	75-125			
Nickel	54.6	2.50	5.00	mg/kg	50.0	9.18	90.9	75-125			
Selenium	42.7	1.00	5.00	mg/kg	50.0	ND	85.5	75-125			
Silver	46.4	2.00	5.00	mg/kg	50.0	ND	92.8	75-125			
Thallium	32.0	0.700	5.00	mg/kg	50.0	ND	63.9	75-125			M
Vanadium	75.2	2.50	5.00	mg/kg	50.0	26.9	96.5	75-125			
Zinc	82.0	2.50	5.00	mg/kg	50.0	33.3	97.3	75-125			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Metals Total (EPA 6010B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0119 - 3050B (Continued)					**Prepared: 05/05/2021 11:06**						
Matrix Spike Dup (B1E0119-MSD1)		**Source: BCE0016-01**			**Analyzed: 05/06/2021 18:02**						
Antimony	46.1	1.00	5.00	mg/kg	50.0	ND	92.2	75-125	2.73	15	
Arsenic	42.8	1.00	5.00	mg/kg	50.0	ND	85.6	75-125	2.27	15	
Barium	91.9	2.50	5.00	mg/kg	50.0	50.1	83.7	75-125	<1.00	15	
Beryllium	55.7	1.00	2.50	mg/kg	50.0	ND	111	75-125	1.06	15	
Cadmium	45.5	1.00	2.50	mg/kg	50.0	ND	91.0	75-125	<1.00	15	
Chromium	61.5	2.50	5.00	mg/kg	50.0	13.0	97.1	75-125	<1.00	15	
Cobalt	55.1	2.50	5.00	mg/kg	50.0	7.66	94.9	75-125	<1.00	15	
Copper	63.0	2.50	5.00	mg/kg	50.0	10.6	105	75-125	<1.00	15	
Lead	44.8	2.50	5.00	mg/kg	50.0	3.12	83.3	75-125	<1.00	15	
Molybdenum	47.2	2.00	5.00	mg/kg	50.0	ND	94.4	75-125	<1.00	15	
Nickel	51.7	2.50	5.00	mg/kg	50.0	9.18	85.0	75-125	5.51	15	
Selenium	42.6	1.00	5.00	mg/kg	50.0	ND	85.3	75-125	<1.00	15	
Silver	46.3	2.00	5.00	mg/kg	50.0	ND	92.6	75-125	<1.00	15	
Thallium	31.9	0.700	5.00	mg/kg	50.0	ND	63.7	75-125	<1.00	15	M
Vanadium	75.1	2.50	5.00	mg/kg	50.0	26.9	96.4	75-125	<1.00	15	
Zinc	82.5	2.50	5.00	mg/kg	50.0	33.3	98.4	75-125	<1.00	15	

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Metals Total (EPA 7471A)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0069 - 7471A					**Prepared: 05/05/2021 11:00**						
Method Blank (B1E0069-BLK1)					**Analyzed: 05/06/2021 14:24**						
Mercury	ND	0.0160	0.100	mg/kg							

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Metals Total (EPA 7471A)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0069 - 7471A (Continued)					**Prepared: 05/05/2021 11:00**						
LCS (B1E0069-BS1)					**Analyzed: 05/06/2021 16:34**						
Mercury	0.427	0.0160	0.100	mg/kg	0.500		85.4	75-125			
LCSD (B1E0069-BSD1)					**Analyzed: 05/06/2021 16:38**						
Mercury	0.464	0.0160	0.100	mg/kg	0.500		92.7	75-125	8.24	15	
Duplicate (B1E0069-DUP1)		**Source: BCE0016-01**			**Analyzed: 05/06/2021 16:47**						
Mercury	ND	0.0160	0.100	mg/kg		ND			<1.00	15	R
Matrix Spike (B1E0069-MS1)		**Source: BCE0016-01**			**Analyzed: 05/06/2021 16:51**						
Mercury	0.536	0.0160	0.100	mg/kg	0.500	ND	107	75-125			
Matrix Spike Dup (B1E0069-MSD1)		**Source: BCE0016-01**			**Analyzed: 05/06/2021 16:54**						
Mercury	0.525	0.0160	0.100	mg/kg	0.500	ND	105	75-125	2.06	15	

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0076 - 5030					**Prepared: 05/05/2021 17:15**						
Method Blank (B1E0076-BLK1)					**Analyzed: 05/05/2021 22:22**						
Acetone	ND	25.0	50.0	ug/kg							
Benzene	ND	1.00	10.0	ug/kg							
Bromobenzene (Phenyl bromide)	ND	5.00	10.0	ug/kg							
Bromochloromethane	ND	5.00	10.0	ug/kg							
Bromodichloromethane	ND	5.00	10.0	ug/kg							
Bromoform (Tribromomethane)	ND	25.0	50.0	ug/kg							
Bromomethane (Methyl bromide)	ND	15.0	30.0	ug/kg							
2-Butanone (MEK)	ND	25.0	50.0	ug/kg							
n-Butylbenzene	ND	5.00	10.0	ug/kg							
sec-Butylbenzene	ND	5.00	10.0	ug/kg							
tert-Butylbenzene	ND	5.00	10.0	ug/kg							
Carbon Disulfide	ND	25.0	50.0	ug/kg							
Carbon tetrachloride	ND	5.00	10.0	ug/kg							
Chlorobenzene	ND	5.00	10.0	ug/kg							
Chloroethane	ND	15.0	30.0	ug/kg							
2-Chloroethyl vinyl ether	ND	25.0	50.0	ug/kg							
Chloroform (Trichloromethane)	ND	5.00	10.0	ug/kg							
Chloromethane (Methyl chloride)	ND	15.0	30.0	ug/kg							
2-Chlorotoluene	ND	5.00	10.0	ug/kg							
4-Chlorotoluene	ND	5.00	10.0	ug/kg							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.00	10.0	ug/kg							
Dibromochloromethane	ND	5.00	10.0	ug/kg							
1,2-Dibromoethane (EDB)	ND	5.00	10.0	ug/kg							
Dibromomethane	ND	5.00	10.0	ug/kg							
1,2-Dichlorobenzene	ND	5.00	10.0	ug/kg							
1,3-Dichlorobenzene	ND	5.00	10.0	ug/kg							
1,4-Dichlorobenzene	ND	5.00	10.0	ug/kg							
Dichlorodifluoromethane	ND	15.0	30.0	ug/kg							
1,1-Dichloroethane	ND	5.00	10.0	ug/kg							
1,2-Dichloroethane (EDC)	ND	5.00	10.0	ug/kg							
1,1-Dichloroethene	ND	5.00	10.0	ug/kg							
cis-1,2-Dichloroethene	ND	5.00	10.0	ug/kg							
trans-1,2-Dichloroethene	ND	5.00	10.0	ug/kg							
1,2-Dichloropropane	ND	5.00	10.0	ug/kg							
1,3-Dichloropropane	ND	5.00	10.0	ug/kg							
2,2-Dichloropropane	ND	5.00	10.0	ug/kg							
1,1-Dichloropropene	ND	5.00	10.0	ug/kg							
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/kg							
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/kg							
Ethylbenzene	ND	1.00	10.0	ug/kg							
Hexachlorobutadiene	ND	15.0	30.0	ug/kg							
2-Hexanone	ND	25.0	50.0	ug/kg							

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0076 - 5030 (Continued)					**Prepared: 05/05/2021 17:15**						
Method Blank (B1E0076-BLK1)					**Analyzed: 05/05/2021 22:22**						
Iodomethane	ND	5.00	10.0	ug/kg							
Isopropylbenzene	ND	5.00	10.0	ug/kg							
p-Isopropyltoluene	ND	5.00	10.0	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	25.0	50.0	ug/kg							
Methyl-tert-butyl ether (MTBE)	ND	2.00	10.0	ug/kg							
Methylene chloride (DCM)	ND	25.0	50.0	ug/kg							
Naphthalene	ND	5.00	10.0	ug/kg							
n-Propylbenzene	ND	5.00	10.0	ug/kg							
Styrene	ND	5.00	10.0	ug/kg							
1,1,1,2-Tetrachloroethane	ND	5.00	10.0	ug/kg							
1,1,2,2-Tetrachloroethane	ND	5.00	10.0	ug/kg							
Tetrachloroethene	ND	2.00	10.0	ug/kg							
Toluene (Methyl benzene)	ND	1.00	10.0	ug/kg							
1,2,3-Trichlorobenzene	ND	5.00	10.0	ug/kg							
1,2,4-Trichlorobenzene	ND	5.00	10.0	ug/kg							
1,1,1-Trichloroethane	ND	5.00	10.0	ug/kg							
1,1,2-Trichloroethane	ND	5.00	10.0	ug/kg							
Trichloroethene	ND	1.50	10.0	ug/kg							
Trichlorofluoromethane	ND	5.00	10.0	ug/kg							
1,2,3-Trichloropropane	ND	1.00	5.00	ug/kg							
1,2,4-Trimethylbenzene	ND	5.00	10.0	ug/kg							
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/kg							
Vinyl Acetate	ND	25.0	50.0	ug/kg							
Vinyl chloride (Chloroethene)	ND	5.00	10.0	ug/kg							
o-Xylene	ND	1.00	10.0	ug/kg							
m,p-Xylenes	ND	1.00	20.0	ug/kg							
Surrogate: Bromofluorobenzene	*52.5*			*ug/kg*	*50.0*		*105*	*75-125*			
Surrogate: Dibromofluoromethane	*49.9*			*ug/kg*	*50.0*		*99.7*	*75-125*			
Surrogate: Toluene-d8	*50.4*			*ug/kg*	*50.0*		*101*	*75-125*			

AMERICAN ENVIRONMENTAL TESTING LABORATORY
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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0076 - 5030 (Continued)					**Prepared: 05/05/2021 17:15**						
LCS (B1E0076-BS1)					**Analyzed: 05/05/2021 20:34**						
Benzene	50.7			ug/kg	50.0		101	75-125			
Carbon tetrachloride	51.9			ug/kg	50.0		104	75-125			
Chlorobenzene	51.8			ug/kg	50.0		104	75-125			
Chloroform (Trichloromethane)	48.3			ug/kg	50.0		96.7	75-125			
1,2-Dichlorobenzene	50.4			ug/kg	50.0		101	75-125			
1,1-Dichloroethane	48.6			ug/kg	50.0		97.2	75-125			
1,1-Dichloroethene	46.8			ug/kg	50.0		93.7	75-125			
cis-1,2-Dichloroethene	46.8			ug/kg	50.0		93.6	75-125			
Ethylbenzene	49.8			ug/kg	50.0		99.7	75-125			
Isopropylbenzene	48.1			ug/kg	50.0		96.3	75-125			
Methyl-tert-butyl ether (MTBE)	53.4			ug/kg	50.0		107	75-125			
n-Propylbenzene	48.6			ug/kg	50.0		97.3	75-125			
Toluene (Methyl benzene)	47.6			ug/kg	50.0		95.2	75-125			
1,1,1-Trichloroethane	51.5			ug/kg	50.0		103	75-125			
1,1,2-Trichloroethane	54.9			ug/kg	50.0		110	75-125			
Trichloroethene	52.9			ug/kg	50.0		106	75-125			
1,2,4-Trimethylbenzene	48.2			ug/kg	50.0		96.3	75-125			
1,3,5-Trimethylbenzene	47.9			ug/kg	50.0		95.7	75-125			
o-Xylene	48.9			ug/kg	50.0		97.9	75-125			
m,p-Xylenes	99.9			ug/kg	100		99.9	75-125			
Surrogate: Bromofluorobenzene	*49.3*			*ug/kg*	*50.0*		*98.6*	*75-125*			
Surrogate: Dibromofluoromethane	*48.0*			*ug/kg*	*50.0*		*96.1*	*75-125*			
Surrogate: Toluene-d8	*47.2*			*ug/kg*	*50.0*		*94.3*	*75-125*			
LCSD (B1E0076-BSD1)					**Analyzed: 05/05/2021 21:10**						
Benzene	50.4			ug/kg	50.0		101	75-125	<1.00	20	
Carbon tetrachloride	53.9			ug/kg	50.0		108	75-125	3.71	20	
Chlorobenzene	52.3			ug/kg	50.0		105	75-125	<1.00	20	
Chloroform (Trichloromethane)	48.3			ug/kg	50.0		96.7	75-125	<1.00	20	
1,2-Dichlorobenzene	50.3			ug/kg	50.0		101	75-125	<1.00	20	
1,1-Dichloroethane	48.2			ug/kg	50.0		96.3	75-125	<1.00	20	
1,1-Dichloroethene	47.9			ug/kg	50.0		95.8	75-125	2.26	20	
cis-1,2-Dichloroethene	47.3			ug/kg	50.0		94.6	75-125	1.02	20	
Ethylbenzene	50.8			ug/kg	50.0		102	75-125	1.97	20	
Isopropylbenzene	50.2			ug/kg	50.0		100	75-125	4.29	20	
Methyl-tert-butyl ether (MTBE)	50.9			ug/kg	50.0		102	75-125	4.70	20	
n-Propylbenzene	50.1			ug/kg	50.0		100	75-125	2.86	20	
Toluene (Methyl benzene)	48.1			ug/kg	50.0		96.2	75-125	1.09	20	
1,1,1-Trichloroethane	53.0			ug/kg	50.0		106	75-125	2.91	20	
1,1,2-Trichloroethane	53.2			ug/kg	50.0		106	75-125	3.18	20	
Trichloroethene	52.8			ug/kg	50.0		106	75-125	<1.00	20	
1,2,4-Trimethylbenzene	49.1			ug/kg	50.0		98.2	75-125	1.93	20	

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0076 - 5030 (Continued)					**Prepared: 05/05/2021 17:15**						
LCSD (B1E0076-BSD1)					**Analyzed: 05/05/2021 21:10**						
1,3,5-Trimethylbenzene	49.1			ug/kg	50.0		98.2	75-125	2.58	20	
o-Xylene	49.0			ug/kg	50.0		97.9	75-125	<1.00	20	
m,p-Xylenes	102			ug/kg	100		102	75-125	2.40	20	
Surrogate: Bromofluorobenzene	*49.7*			*ug/kg*	*50.0*		*99.4*	*75-125*			
Surrogate: Dibromofluoromethane	*46.9*			*ug/kg*	*50.0*		*93.8*	*75-125*			
Surrogate: Toluene-d8	*46.4*			*ug/kg*	*50.0*		*92.8*	*75-125*			
Matrix Spike (B1E0076-MS1)		**Source: BCE0016-06**			**Analyzed: 05/06/2021 06:12**						
Benzene	40.2			ug/kg	50.0	0.00	80.5	75-125			
Carbon tetrachloride	39.0			ug/kg	50.0	0.00	77.9	75-125			
Chlorobenzene	38.3			ug/kg	50.0	0.00	76.5	75-125			
Chloroform (Trichloromethane)	44.3			ug/kg	50.0	0.00	88.5	75-125			
1,2-Dichlorobenzene	36.1			ug/kg	50.0	0.00	72.2	75-125			M
1,1-Dichloroethane	43.6			ug/kg	50.0	0.00	87.2	75-125			
1,1-Dichloroethene	38.7			ug/kg	50.0	0.00	77.4	75-125			
cis-1,2-Dichloroethene	41.8			ug/kg	50.0	0.00	83.7	75-125			
Ethylbenzene	37.1			ug/kg	50.0	0.00	74.2	75-125			M
Isopropylbenzene	35.0			ug/kg	50.0	0.00	70.0	75-125			M
Methyl-tert-butyl ether (MTBE)	42.1			ug/kg	50.0	0.00	84.2	75-125			
n-Propylbenzene	34.2			ug/kg	50.0	0.00	68.3	75-125			M
Toluene (Methyl benzene)	37.0			ug/kg	50.0	0.00	73.9	75-125			M
1,1,1-Trichloroethane	39.1			ug/kg	50.0	0.00	78.3	75-125			
1,1,2-Trichloroethane	40.0			ug/kg	50.0	0.00	80.0	75-125			
Trichloroethene	42.8			ug/kg	50.0	0.00	85.6	75-125			
1,2,4-Trimethylbenzene	35.8			ug/kg	50.0	0.00	71.7	75-125			M
1,3,5-Trimethylbenzene	35.6			ug/kg	50.0	0.00	71.3	75-125			M
o-Xylene	37.9			ug/kg	50.0	0.00	75.7	75-125			
m,p-Xylenes	74.6			ug/kg	100	0.00	74.6	75-125			M
Surrogate: Bromofluorobenzene	*46.8*			*ug/kg*	*50.0*		*93.5*	*75-125*			
Surrogate: Dibromofluoromethane	*53.5*			*ug/kg*	*50.0*		*107*	*75-125*			
Surrogate: Toluene-d8	*47.4*			*ug/kg*	*50.0*		*94.7*	*75-125*			

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0076 - 5030 (Continued)					**Prepared: 05/05/2021 17:15**						
Matrix Spike Dup (B1E0076-MSD1)		**Source: BCE0016-06**			**Analyzed: 05/06/2021 06:48**						
Benzene	44.7			ug/kg	50.0	0.00	89.5	75-125	10.6	20	
Carbon tetrachloride	44.2			ug/kg	50.0	0.00	88.4	75-125	12.6	20	
Chlorobenzene	44.3			ug/kg	50.0	0.00	88.5	75-125	14.6	20	
Chloroform (Trichloromethane)	48.4			ug/kg	50.0	0.00	96.9	75-125	9.02	20	
1,2-Dichlorobenzene	43.7			ug/kg	50.0	0.00	87.4	75-125	19.1	20	
1,1-Dichloroethane	48.4			ug/kg	50.0	0.00	96.8	75-125	10.5	20	
1,1-Dichloroethene	44.0			ug/kg	50.0	0.00	88.1	75-125	12.9	20	
cis-1,2-Dichloroethene	46.2			ug/kg	50.0	0.00	92.4	75-125	9.90	20	
Ethylbenzene	42.6			ug/kg	50.0	0.00	85.3	75-125	13.8	20	
Isopropylbenzene	41.0			ug/kg	50.0	0.00	82.0	75-125	15.7	20	
Methyl-tert-butyl ether (MTBE)	47.4			ug/kg	50.0	0.00	94.7	75-125	11.8	20	
n-Propylbenzene	40.2			ug/kg	50.0	0.00	80.3	75-125	16.2	20	
Toluene (Methyl benzene)	42.6			ug/kg	50.0	0.00	85.1	75-125	14.1	20	
1,1,1-Trichloroethane	43.7			ug/kg	50.0	0.00	87.5	75-125	11.1	20	
1,1,2-Trichloroethane	45.0			ug/kg	50.0	0.00	90.1	75-125	11.9	20	
Trichloroethene	45.9			ug/kg	50.0	0.00	91.9	75-125	7.08	20	
1,2,4-Trimethylbenzene	41.7			ug/kg	50.0	0.00	83.4	75-125	15.1	20	
1,3,5-Trimethylbenzene	41.5			ug/kg	50.0	0.00	83.0	75-125	15.1	20	
o-Xylene	44.2			ug/kg	50.0	0.00	88.4	75-125	15.4	20	
m,p-Xylenes	86.1			ug/kg	100	0.00	86.1	75-125	14.3	20	
Surrogate: Bromofluorobenzene	*47.4*			*ug/kg*	*50.0*		*94.8*	*75-125*			
Surrogate: Dibromofluoromethane	*52.6*			*ug/kg*	*50.0*		*105*	*75-125*			
Surrogate: Toluene-d8	*48.3*			*ug/kg*	*50.0*		*96.6*	*75-125*			

Batch: B1E0122 - 5035A				**Prepared: 05/06/2021 16:27**	
Method Blank (B1E0122-BLK1)				**Analyzed: 05/07/2021 02:27**	
Acetone	ND	50.0	100	ug/kg	
Benzene	ND	1.00	10.0	ug/kg	
Bromobenzene (Phenyl bromide)	ND	5.00	10.0	ug/kg	
Bromochloromethane	ND	5.00	10.0	ug/kg	
Bromodichloromethane	ND	5.00	10.0	ug/kg	
Bromoform (Tribromomethane)	ND	25.0	50.0	ug/kg	
Bromomethane (Methyl bromide)	ND	15.0	30.0	ug/kg	
2-Butanone (MEK)	ND	25.0	50.0	ug/kg	
n-Butylbenzene	ND	5.00	10.0	ug/kg	
sec-Butylbenzene	ND	5.00	10.0	ug/kg	
tert-Butylbenzene	ND	5.00	10.0	ug/kg	
Carbon Disulfide	ND	25.0	50.0	ug/kg	
Carbon tetrachloride	ND	5.00	10.0	ug/kg	
Chlorobenzene	ND	5.00	10.0	ug/kg	
Chloroethane	ND	15.0	30.0	ug/kg	

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0122 - 5035A (Continued)					**Prepared: 05/06/2021 16:27**						
Method Blank (B1E0122-BLK1)					**Analyzed: 05/07/2021 02:27**						
2-Chloroethyl vinyl ether	ND	25.0	50.0	ug/kg							
Chloroform (Trichloromethane)	ND	5.00	10.0	ug/kg							
Chloromethane (Methyl chloride)	ND	15.0	30.0	ug/kg							
2-Chlorotoluene	ND	5.00	10.0	ug/kg							
4-Chlorotoluene	ND	5.00	10.0	ug/kg							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.00	10.0	ug/kg							
Dibromochloromethane	ND	5.00	10.0	ug/kg							
1,2-Dibromoethane (EDB)	ND	5.00	10.0	ug/kg							
Dibromomethane	ND	5.00	10.0	ug/kg							
1,2-Dichlorobenzene	ND	5.00	10.0	ug/kg							
1,3-Dichlorobenzene	ND	5.00	10.0	ug/kg							
1,4-Dichlorobenzene	ND	5.00	10.0	ug/kg							
Dichlorodifluoromethane	ND	15.0	30.0	ug/kg							
1,1-Dichloroethane	ND	5.00	10.0	ug/kg							
1,2-Dichloroethane (EDC)	ND	5.00	10.0	ug/kg							
1,1-Dichloroethene	ND	5.00	10.0	ug/kg							
cis-1,2-Dichloroethene	ND	5.00	10.0	ug/kg							
trans-1,2-Dichloroethene	ND	5.00	10.0	ug/kg							
1,2-Dichloropropane	ND	5.00	10.0	ug/kg							
1,3-Dichloropropane	ND	5.00	10.0	ug/kg							
2,2-Dichloropropane	ND	5.00	10.0	ug/kg							
1,1-Dichloropropene	ND	5.00	10.0	ug/kg							
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/kg							
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/kg							
Ethylbenzene	ND	1.00	10.0	ug/kg							
Hexachlorobutadiene	ND	15.0	30.0	ug/kg							
2-Hexanone	ND	25.0	50.0	ug/kg							
Iodomethane	ND	5.00	10.0	ug/kg							
Isopropylbenzene	ND	5.00	10.0	ug/kg							
p-Isopropyltoluene	ND	5.00	10.0	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	25.0	50.0	ug/kg							
Methyl-tert-butyl ether (MTBE)	ND	2.00	10.0	ug/kg							
Methylene chloride (DCM)	ND	25.0	50.0	ug/kg							
Naphthalene	ND	5.00	10.0	ug/kg							
n-Propylbenzene	ND	5.00	10.0	ug/kg							
Styrene	ND	5.00	10.0	ug/kg							
1,1,1,2-Tetrachloroethane	ND	5.00	10.0	ug/kg							
1,1,2,2-Tetrachloroethane	ND	5.00	10.0	ug/kg							
Tetrachloroethene	ND	2.00	10.0	ug/kg							
Toluene (Methyl benzene)	ND	1.00	10.0	ug/kg							
1,2,3-Trichlorobenzene	ND	5.00	10.0	ug/kg							
1,2,4-Trichlorobenzene	ND	5.00	10.0	ug/kg							

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0122 - 5035A (Continued)					**Prepared: 05/06/2021 16:27**						
Method Blank (B1E0122-BLK1)					**Analyzed: 05/07/2021 02:27**						
1,1,1-Trichloroethane	ND	5.00	10.0	ug/kg							
1,1,2-Trichloroethane	ND	5.00	10.0	ug/kg							
Trichloroethene	ND	1.50	10.0	ug/kg							
Trichlorofluoromethane	ND	5.00	10.0	ug/kg							
1,2,3-Trichloropropane	ND	1.00	5.00	ug/kg							
1,2,4-Trimethylbenzene	ND	5.00	10.0	ug/kg							
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/kg							
Vinyl Acetate	ND	25.0	50.0	ug/kg							
Vinyl chloride (Chloroethene)	ND	5.00	10.0	ug/kg							
o-Xylene	ND	1.00	10.0	ug/kg							
m,p-Xylenes	ND	1.00	20.0	ug/kg							
Surrogate: Bromofluorobenzene	*47.6*			*ug/kg*	*50.0*		*95.2*	*75-125*			
Surrogate: Dibromofluoromethane	*51.5*			*ug/kg*	*50.0*		*103*	*75-125*			
Surrogate: Toluene-d8	*50.1*			*ug/kg*	*50.0*		*100*	*75-125*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0122 - 5035A (Continued)					**Prepared: 05/06/2021 16:27**						
LCS (B1E0122-BS1)					**Analyzed: 05/07/2021 00:19**						
Benzene	54.9			ug/kg	50.0		110	75-125			
Carbon tetrachloride	51.8			ug/kg	50.0		104	75-125			
Chlorobenzene	53.0			ug/kg	50.0		106	75-125			
Chloroform (Trichloromethane)	56.3			ug/kg	50.0		113	75-125			
1,2-Dichlorobenzene	50.5			ug/kg	50.0		101	75-125			
1,1-Dichloroethane	55.3			ug/kg	50.0		111	75-125			
1,1-Dichloroethene	54.2			ug/kg	50.0		108	75-125			
cis-1,2-Dichloroethene	56.9			ug/kg	50.0		114	75-125			
Ethylbenzene	53.0			ug/kg	50.0		106	75-125			
Isopropylbenzene	49.0			ug/kg	50.0		98.0	75-125			
Methyl-tert-butyl ether (MTBE)	54.7			ug/kg	50.0		109	75-125			
n-Propylbenzene	49.1			ug/kg	50.0		98.1	75-125			
Toluene (Methyl benzene)	51.8			ug/kg	50.0		104	75-125			
1,1,1-Trichloroethane	53.3			ug/kg	50.0		107	75-125			
1,1,2-Trichloroethane	56.4			ug/kg	50.0		113	75-125			
Trichloroethene	55.3			ug/kg	50.0		111	75-125			
1,2,4-Trimethylbenzene	49.1			ug/kg	50.0		98.2	75-125			
1,3,5-Trimethylbenzene	49.1			ug/kg	50.0		98.2	75-125			
o-Xylene	53.0			ug/kg	50.0		106	75-125			
m,p-Xylenes	108			ug/kg	100		108	75-125			
Surrogate: Bromofluorobenzene	*47.5*			*ug/kg*	*50.0*		*95.0*	*75-125*			
Surrogate: Dibromofluoromethane	*51.2*			*ug/kg*	*50.0*		*102*	*75-125*			
Surrogate: Toluene-d8	*48.7*			*ug/kg*	*50.0*		*97.5*	*75-125*			
LCSD (B1E0122-BSD1)					**Analyzed: 05/07/2021 01:02**						
Benzene	56.6			ug/kg	50.0		113	75-125	2.92	20	
Carbon tetrachloride	53.5			ug/kg	50.0		107	75-125	3.26	20	
Chlorobenzene	54.6			ug/kg	50.0		109	75-125	2.97	20	
Chloroform (Trichloromethane)	59.3			ug/kg	50.0		119	75-125	5.21	20	
1,2-Dichlorobenzene	51.2			ug/kg	50.0		102	75-125	1.30	20	
1,1-Dichloroethane	57.3			ug/kg	50.0		115	75-125	3.46	20	
1,1-Dichloroethene	55.9			ug/kg	50.0		112	75-125	3.03	20	
cis-1,2-Dichloroethene	59.1			ug/kg	50.0		118	75-125	3.83	20	
Ethylbenzene	54.6			ug/kg	50.0		109	75-125	3.08	20	
Isopropylbenzene	50.4			ug/kg	50.0		101	75-125	2.76	20	
Methyl-tert-butyl ether (MTBE)	56.6			ug/kg	50.0		113	75-125	3.43	20	
n-Propylbenzene	50.2			ug/kg	50.0		100	75-125	2.30	20	
Toluene (Methyl benzene)	53.6			ug/kg	50.0		107	75-125	3.36	20	
1,1,1-Trichloroethane	54.6			ug/kg	50.0		109	75-125	2.26	20	
1,1,2-Trichloroethane	58.3			ug/kg	50.0		117	75-125	3.28	20	
Trichloroethene	57.0			ug/kg	50.0		114	75-125	2.97	20	
1,2,4-Trimethylbenzene	49.8			ug/kg	50.0		99.7	75-125	1.48	20	

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0122 - 5035A (Continued)					**Prepared: 05/06/2021 16:27**						
LCSD (B1E0122-BSD1)					**Analyzed: 05/07/2021 01:02**						
1,3,5-Trimethylbenzene	50.4			ug/kg	50.0		101	75-125	2.53	20	
o-Xylene	54.8			ug/kg	50.0		110	75-125	3.30	20	
m,p-Xylenes	111			ug/kg	100		111	75-125	3.23	20	
Surrogate: Bromofluorobenzene	*47.1*			*ug/kg*	*50.0*		*94.2*	*75-125*			
Surrogate: Dibromofluoromethane	*51.5*			*ug/kg*	*50.0*		*103*	*75-125*			
Surrogate: Toluene-d8	*48.6*			*ug/kg*	*50.0*		*97.2*	*75-125*			
Matrix Spike (B1E0122-MS1)		**Source: BCE0006-04**			**Analyzed: 05/07/2021 15:31**						
Benzene	56.8			ug/kg	50.0	0.00	114	75-125			
Carbon tetrachloride	55.2			ug/kg	50.0	0.00	110	75-125			
Chlorobenzene	54.5			ug/kg	50.0	0.00	109	75-125			
Chloroform (Trichloromethane)	59.7			ug/kg	50.0	0.00	119	75-125			
1,2-Dichlorobenzene	49.5			ug/kg	50.0	0.00	99.0	75-125			
1,1-Dichloroethane	59.6			ug/kg	50.0	0.00	119	75-125			
1,1-Dichloroethene	58.1			ug/kg	50.0	0.00	116	75-125			
cis-1,2-Dichloroethene	60.6			ug/kg	50.0	0.00	121	75-125			
Ethylbenzene	55.4			ug/kg	50.0	0.00	111	75-125			
Isopropylbenzene	51.4			ug/kg	50.0	0.00	103	75-125			
Methyl-tert-butyl ether (MTBE)	50.5			ug/kg	50.0	0.00	101	75-125			
n-Propylbenzene	52.6			ug/kg	50.0	0.00	105	75-125			
Toluene (Methyl benzene)	53.8			ug/kg	50.0	0.00	108	75-125			
1,1,1-Trichloroethane	55.3			ug/kg	50.0	0.00	111	75-125			
1,1,2-Trichloroethane	50.4			ug/kg	50.0	0.00	101	75-125			
Trichloroethene	60.1			ug/kg	50.0	0.00	120	75-125			
1,2,4-Trimethylbenzene	51.9			ug/kg	50.0	0.00	104	75-125			
1,3,5-Trimethylbenzene	52.1			ug/kg	50.0	0.00	104	75-125			
o-Xylene	55.3			ug/kg	50.0	0.00	111	75-125			
m,p-Xylenes	113			ug/kg	100	0.00	113	75-125			
Surrogate: Bromofluorobenzene	*47.4*			*ug/kg*	*50.0*		*94.9*	*75-125*			
Surrogate: Dibromofluoromethane	*52.5*			*ug/kg*	*50.0*		*105*	*75-125*			
Surrogate: Toluene-d8	*49.3*			*ug/kg*	*50.0*		*98.5*	*75-125*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0122 - 5035A (Continued)					**Prepared: 05/06/2021 16:27**						
Matrix Spike Dup (B1E0122-MSD1)		**Source: BCE0006-04**			**Analyzed: 05/07/2021 16:13**						
Benzene	56.4			ug/kg	50.0	0.00	113	75-125	<1.00	20	
Carbon tetrachloride	54.0			ug/kg	50.0	0.00	108	75-125	2.16	20	
Chlorobenzene	53.7			ug/kg	50.0	0.00	107	75-125	1.53	20	
Chloroform (Trichloromethane)	59.0			ug/kg	50.0	0.00	118	75-125	1.25	20	
1,2-Dichlorobenzene	48.5			ug/kg	50.0	0.00	97.1	75-125	2.02	20	
1,1-Dichloroethane	59.3			ug/kg	50.0	0.00	119	75-125	<1.00	20	
1,1-Dichloroethene	57.9			ug/kg	50.0	0.00	116	75-125	<1.00	20	
cis-1,2-Dichloroethene	60.5			ug/kg	50.0	0.00	121	75-125	<1.00	20	
Ethylbenzene	54.7			ug/kg	50.0	0.00	109	75-125	1.24	20	
Isopropylbenzene	50.2			ug/kg	50.0	0.00	100	75-125	2.26	20	
Methyl-tert-butyl ether (MTBE)	50.8			ug/kg	50.0	0.00	102	75-125	<1.00	20	
n-Propylbenzene	51.3			ug/kg	50.0	0.00	103	75-125	2.35	20	
Toluene (Methyl benzene)	53.3			ug/kg	50.0	0.00	107	75-125	<1.00	20	
1,1,1-Trichloroethane	54.8			ug/kg	50.0	0.00	110	75-125	1.04	20	
1,1,2-Trichloroethane	50.1			ug/kg	50.0	0.00	100	75-125	<1.00	20	
Trichloroethene	59.7			ug/kg	50.0	0.00	119	75-125	<1.00	20	
1,2,4-Trimethylbenzene	50.8			ug/kg	50.0	0.00	102	75-125	2.20	20	
1,3,5-Trimethylbenzene	51.0			ug/kg	50.0	0.00	102	75-125	2.12	20	
o-Xylene	54.2			ug/kg	50.0	0.00	108	75-125	2.12	20	
m,p-Xylenes	111			ug/kg	100	0.00	111	75-125	1.64	20	
Surrogate: Bromofluorobenzene	*47.7*			*ug/kg*	*50.0*		*95.3*	*75-125*			
Surrogate: Dibromofluoromethane	*52.5*			*ug/kg*	*50.0*		*105*	*75-125*			
Surrogate: Toluene-d8	*49.3*			*ug/kg*	*50.0*		*98.6*	*75-125*			

Batch: B1E0156 - 5030					**Prepared: 05/07/2021 17:21**
Method Blank (B1E0156-BLK1)					**Analyzed: 05/07/2021 23:31**
Acetone	ND	25.0	50.0	ug/kg	
Benzene	ND	1.00	10.0	ug/kg	
Bromobenzene (Phenyl bromide)	ND	5.00	10.0	ug/kg	
Bromochloromethane	ND	5.00	10.0	ug/kg	
Bromodichloromethane	ND	5.00	10.0	ug/kg	
Bromoform (Tribromomethane)	ND	25.0	50.0	ug/kg	
Bromomethane (Methyl bromide)	ND	15.0	30.0	ug/kg	
2-Butanone (MEK)	ND	25.0	50.0	ug/kg	
n-Butylbenzene	ND	5.00	10.0	ug/kg	
sec-Butylbenzene	ND	5.00	10.0	ug/kg	
tert-Butylbenzene	ND	5.00	10.0	ug/kg	
Carbon Disulfide	ND	25.0	50.0	ug/kg	
Carbon tetrachloride	ND	5.00	10.0	ug/kg	
Chlorobenzene	ND	5.00	10.0	ug/kg	
Chloroethane	ND	15.0	30.0	ug/kg	

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0156 - 5030 (Continued)					**Prepared: 05/07/2021 17:21**						
Method Blank (B1E0156-BLK1)					**Analyzed: 05/07/2021 23:31**						
2-Chloroethyl vinyl ether	ND	25.0	50.0	ug/kg							
Chloroform (Trichloromethane)	ND	5.00	10.0	ug/kg							
Chloromethane (Methyl chloride)	ND	15.0	30.0	ug/kg							
2-Chlorotoluene	ND	5.00	10.0	ug/kg							
4-Chlorotoluene	ND	5.00	10.0	ug/kg							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.00	10.0	ug/kg							
Dibromochloromethane	ND	5.00	10.0	ug/kg							
1,2-Dibromoethane (EDB)	ND	5.00	10.0	ug/kg							
Dibromomethane	ND	5.00	10.0	ug/kg							
1,2-Dichlorobenzene	ND	5.00	10.0	ug/kg							
1,3-Dichlorobenzene	ND	5.00	10.0	ug/kg							
1,4-Dichlorobenzene	ND	5.00	10.0	ug/kg							
Dichlorodifluoromethane	ND	15.0	30.0	ug/kg							
1,1-Dichloroethane	ND	5.00	10.0	ug/kg							
1,2-Dichloroethane (EDC)	ND	5.00	10.0	ug/kg							
1,1-Dichloroethene	ND	5.00	10.0	ug/kg							
cis-1,2-Dichloroethene	ND	5.00	10.0	ug/kg							
trans-1,2-Dichloroethene	ND	5.00	10.0	ug/kg							
1,2-Dichloropropane	ND	5.00	10.0	ug/kg							
1,3-Dichloropropane	ND	5.00	10.0	ug/kg							
2,2-Dichloropropane	ND	5.00	10.0	ug/kg							
1,1-Dichloropropene	ND	5.00	10.0	ug/kg							
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/kg							
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/kg							
Ethylbenzene	ND	1.00	10.0	ug/kg							
Hexachlorobutadiene	ND	15.0	30.0	ug/kg							
2-Hexanone	ND	25.0	50.0	ug/kg							
Iodomethane	ND	5.00	10.0	ug/kg							
Isopropylbenzene	ND	5.00	10.0	ug/kg							
p-Isopropyltoluene	ND	5.00	10.0	ug/kg							
4-Methyl-2-pentanone (MIBK)	ND	25.0	50.0	ug/kg							
Methyl-tert-butyl ether (MTBE)	ND	2.00	10.0	ug/kg							
Methylene chloride (DCM)	ND	25.0	50.0	ug/kg							
Naphthalene	ND	5.00	10.0	ug/kg							
n-Propylbenzene	ND	5.00	10.0	ug/kg							
Styrene	ND	5.00	10.0	ug/kg							
1,1,1,2-Tetrachloroethane	ND	5.00	10.0	ug/kg							
1,1,2,2-Tetrachloroethane	ND	5.00	10.0	ug/kg							
Tetrachloroethene	ND	2.00	10.0	ug/kg							
Toluene (Methyl benzene)	ND	1.00	10.0	ug/kg							
1,2,3-Trichlorobenzene	ND	5.00	10.0	ug/kg							
1,2,4-Trichlorobenzene	ND	5.00	10.0	ug/kg							

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0156 - 5030 (Continued)					**Prepared: 05/07/2021 17:21**						
Method Blank (B1E0156-BLK1)					**Analyzed: 05/07/2021 23:31**						
1,1,1-Trichloroethane	ND	5.00	10.0	ug/kg							
1,1,2-Trichloroethane	ND	5.00	10.0	ug/kg							
Trichloroethene	ND	1.50	10.0	ug/kg							
Trichlorofluoromethane	ND	5.00	10.0	ug/kg							
1,2,3-Trichloropropane	ND	1.00	5.00	ug/kg							
1,2,4-Trimethylbenzene	ND	5.00	10.0	ug/kg							
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/kg							
Vinyl Acetate	ND	25.0	50.0	ug/kg							
Vinyl chloride (Chloroethene)	ND	5.00	10.0	ug/kg							
o-Xylene	ND	1.00	10.0	ug/kg							
m,p-Xylenes	ND	1.00	20.0	ug/kg							
Surrogate: Bromofluorobenzene	*49.9*			*ug/kg*	*50.0*		*99.8*	*75-125*			
Surrogate: Dibromofluoromethane	*45.5*			*ug/kg*	*50.0*		*90.9*	*75-125*			
Surrogate: Toluene-d8	*50.5*			*ug/kg*	*50.0*		*101*	*75-125*			

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0156 - 5030 (Continued)					**Prepared: 05/07/2021 17:21**						
LCS (B1E0156-BS1)					**Analyzed: 05/07/2021 21:26**						
Benzene	53.5			ug/kg	50.0		107	75-125			
Carbon tetrachloride	50.5			ug/kg	50.0		101	75-125			
Chlorobenzene	54.1			ug/kg	50.0		108	75-125			
Chloroform (Trichloromethane)	52.2			ug/kg	50.0		104	75-125			
1,2-Dichlorobenzene	53.1			ug/kg	50.0		106	75-125			
1,1-Dichloroethane	51.3			ug/kg	50.0		103	75-125			
1,1-Dichloroethene	51.0			ug/kg	50.0		102	75-125			
cis-1,2-Dichloroethene	53.2			ug/kg	50.0		106	75-125			
Ethylbenzene	54.3			ug/kg	50.0		109	75-125			
Isopropylbenzene	50.8			ug/kg	50.0		102	75-125			
Methyl-tert-butyl ether (MTBE)	51.0			ug/kg	50.0		102	75-125			
n-Propylbenzene	51.8			ug/kg	50.0		104	75-125			
Toluene (Methyl benzene)	53.1			ug/kg	50.0		106	75-125			
1,1,1-Trichloroethane	51.3			ug/kg	50.0		103	75-125			
1,1,2-Trichloroethane	55.3			ug/kg	50.0		111	75-125			
Trichloroethene	54.1			ug/kg	50.0		108	75-125			
1,2,4-Trimethylbenzene	51.5			ug/kg	50.0		103	75-125			
1,3,5-Trimethylbenzene	51.2			ug/kg	50.0		102	75-125			
o-Xylene	54.2			ug/kg	50.0		108	75-125			
m,p-Xylenes	112			ug/kg	100		112	75-125			
Surrogate: Bromofluorobenzene	*52.0*			*ug/kg*	*50.0*		*104*	*75-125*			
Surrogate: Dibromofluoromethane	*46.9*			*ug/kg*	*50.0*		*93.7*	*75-125*			
Surrogate: Toluene-d8	*51.4*			*ug/kg*	*50.0*		*103*	*75-125*			
LCSD (B1E0156-BSD1)					**Analyzed: 05/07/2021 22:07**						
Benzene	54.3			ug/kg	50.0		109	75-125	1.54	20	
Carbon tetrachloride	51.8			ug/kg	50.0		104	75-125	2.50	20	
Chlorobenzene	55.4			ug/kg	50.0		111	75-125	2.54	20	
Chloroform (Trichloromethane)	53.6			ug/kg	50.0		107	75-125	2.69	20	
1,2-Dichlorobenzene	54.0			ug/kg	50.0		108	75-125	1.85	20	
1,1-Dichloroethane	52.6			ug/kg	50.0		105	75-125	2.52	20	
1,1-Dichloroethene	52.3			ug/kg	50.0		105	75-125	2.44	20	
cis-1,2-Dichloroethene	54.6			ug/kg	50.0		109	75-125	2.61	20	
Ethylbenzene	55.5			ug/kg	50.0		111	75-125	2.22	20	
Isopropylbenzene	52.4			ug/kg	50.0		105	75-125	3.02	20	
Methyl-tert-butyl ether (MTBE)	51.7			ug/kg	50.0		103	75-125	1.38	20	
n-Propylbenzene	53.0			ug/kg	50.0		106	75-125	2.35	20	
Toluene (Methyl benzene)	54.1			ug/kg	50.0		108	75-125	1.98	20	
1,1,1-Trichloroethane	52.8			ug/kg	50.0		106	75-125	2.82	20	
1,1,2-Trichloroethane	55.3			ug/kg	50.0		111	75-125	<1.00	20	
Trichloroethene	55.3			ug/kg	50.0		111	75-125	2.16	20	
1,2,4-Trimethylbenzene	52.6			ug/kg	50.0		105	75-125	1.96	20	

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

Volatile Organic Compounds (EPA 8260B)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0156 - 5030 (Continued)					**Prepared: 05/07/2021 17:21**						
LCSD (B1E0156-BSD1)					**Analyzed: 05/07/2021 22:07**						
1,3,5-Trimethylbenzene	52.6			ug/kg	50.0		105	75-125	2.76	20	
o-Xylene	55.3			ug/kg	50.0		111	75-125	1.92	20	
m,p-Xylenes	113			ug/kg	100		113	75-125	1.32	20	
Surrogate: Bromofluorobenzene	*51.6*			*ug/kg*	*50.0*		*103*	*75-125*			
Surrogate: Dibromofluoromethane	*46.8*			*ug/kg*	*50.0*		*93.6*	*75-125*			
Surrogate: Toluene-d8	*50.9*			*ug/kg*	*50.0*		*102*	*75-125*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Gasoline Range (EPA 8015B TPH GRO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0028 - 5030					**Prepared: 05/04/2021 09:35**						
Method Blank (B1E0028-BLK1)					**Analyzed: 05/04/2021 11:42**						
TPH as Gasoline and Light HC. (C4-C12)	ND	0.116	0.200	mg/kg							
Surrogate: Bromofluorobenzene	*46.5*			*ug/kg*	*50.0*		*93.1*	*75-120*			

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Gasoline Range (EPA 8015B TPH GRO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0028 - 5030 (Continued)					**Prepared: 05/04/2021 09:35**						
LCS (B1E0028-BS1)					**Analyzed: 05/04/2021 10:21**						
TPH as Gasoline and Light HC. (C4-C12)	947			ug/kg	1000		94.7	75-125			
Surrogate: Bromofluorobenzene	*48.8*			*ug/kg*	*50.0*		*97.6*	*75-120*			
LCSD (B1E0028-BSD1)					**Analyzed: 05/04/2021 11:02**						
TPH as Gasoline and Light HC. (C4-C12)	936			ug/kg	1000		93.6	75-125	1.10	15	
Surrogate: Bromofluorobenzene	*45.5*			*ug/kg*	*50.0*		*91.0*	*75-120*			
Matrix Spike (B1E0028-MS1)		**Source: BCE0015-03**			**Analyzed: 05/04/2021 22:33**						
TPH as Gasoline and Light HC. (C4-C12)	1370			ug/kg	1000	312	105	75-125			
Surrogate: Bromofluorobenzene	*46.3*			*ug/kg*	*50.0*		*92.5*	*75-120*			
Matrix Spike (B1E0028-MS2)		**Source: BCE0016-06**			**Analyzed: 05/04/2021 23:55**						
TPH as Gasoline and Light HC. (C4-C12)	984			ug/kg	1000	0.523	98.4	75-125			
Surrogate: Bromofluorobenzene	*46.5*			*ug/kg*	*50.0*		*93.0*	*75-120*			
Matrix Spike Dup (B1E0028-MSD1)		**Source: BCE0015-03**			**Analyzed: 05/04/2021 23:14**						
TPH as Gasoline and Light HC. (C4-C12)	1290			ug/kg	1000	312	97.9	75-125	5.58	15	
Surrogate: Bromofluorobenzene	*48.2*			*ug/kg*	*50.0*		*96.3*	*75-120*			
Matrix Spike Dup (B1E0028-MSD2)		**Source: BCE0016-06**			**Analyzed: 05/05/2021 00:35**						
TPH as Gasoline and Light HC. (C4-C12)	943			ug/kg	1000	0.523	94.2	75-125	4.29	15	
Surrogate: Bromofluorobenzene	*49.3*			*ug/kg*	*50.0*		*98.5*	*75-120*			
Batch: B1E0046 - 5030					**Prepared: 05/04/2021 17:36**						
Method Blank (B1E0046-BLK1)					**Analyzed: 05/05/2021 03:19**						
TPH as Gasoline and Light HC. (C4-C12)	ND	0.116	0.200	mg/kg							
Surrogate: Bromofluorobenzene	*46.8*			*ug/kg*	*50.0*		*93.6*	*75-120*			

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Gasoline Range (EPA 8015B TPH GRO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0046 - 5030 (Continued)					**Prepared: 05/04/2021 17:36**						
LCS (B1E0046-BS1)					**Analyzed: 05/05/2021 01:57**						
TPH as Gasoline and Light HC. (C4-C12)	882			ug/kg	1000		88.2	75-125			
Surrogate: Bromofluorobenzene	*46.5*			*ug/kg*	*50.0*		*93.0*	*75-120*			
LCSD (B1E0046-BSD1)					**Analyzed: 05/05/2021 02:39**						
TPH as Gasoline and Light HC. (C4-C12)	933			ug/kg	1000		93.3	75-125	5.70	15	
Surrogate: Bromofluorobenzene	*45.9*			*ug/kg*	*50.0*		*91.8*	*75-120*			
Matrix Spike (B1E0046-MS1)		**Source: BCE0016-25**			**Analyzed: 05/05/2021 14:35**						
TPH as Gasoline and Light HC. (C4-C12)	910			ug/kg	1000	0.00	91.0	75-125			
Surrogate: Bromofluorobenzene	*47.9*			*ug/kg*	*50.0*		*95.8*	*75-120*			
Matrix Spike Dup (B1E0046-MSD1)		**Source: BCE0016-25**			**Analyzed: 05/05/2021 15:16**						
TPH as Gasoline and Light HC. (C4-C12)	865			ug/kg	1000	0.00	86.5	75-125	5.03	15	
Surrogate: Bromofluorobenzene	*48.1*			*ug/kg*	*50.0*		*96.2*	*75-120*			
Batch: B1E0047 - 5030					**Prepared: 05/04/2021 17:53**						
Method Blank (B1E0047-BLK1)					**Analyzed: 05/05/2021 17:58**						
TPH as Gasoline and Light HC. (C4-C12)	ND	0.116	0.200	mg/kg							
Surrogate: Bromofluorobenzene	*48.1*			*ug/kg*	*50.0*		*96.2*	*75-120*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Gasoline Range (EPA 8015B TPH GRO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0047 - 5030 (Continued)					**Prepared: 05/04/2021 17:53**						
LCS (B1E0047-BS1)					**Analyzed: 05/05/2021 16:36**						
TPH as Gasoline and Light HC. (C4-C12)	981			ug/kg	1000		98.1	75-125			
Surrogate: Bromofluorobenzene	*48.3*			*ug/kg*	*50.0*		*96.7*	*75-120*			
LCSD (B1E0047-BSD1)					**Analyzed: 05/05/2021 17:17**						
TPH as Gasoline and Light HC. (C4-C12)	960			ug/kg	1000		96.0	75-125	2.13	15	
Surrogate: Bromofluorobenzene	*44.2*			*ug/kg*	*50.0*		*88.3*	*75-120*			
Matrix Spike (B1E0047-MS1)		**Source: BCE0016-45**			**Analyzed: 05/06/2021 04:48**						
TPH as Gasoline and Light HC. (C4-C12)	754			ug/kg	1000	13.8	74.0	75-125			M
Surrogate: Bromofluorobenzene	*48.4*			*ug/kg*	*50.0*		*96.8*	*75-120*			
Matrix Spike Dup (B1E0047-MSD1)		**Source: BCE0016-45**			**Analyzed: 05/06/2021 05:30**						
TPH as Gasoline and Light HC. (C4-C12)	790			ug/kg	1000	13.8	77.6	75-125	4.63	15	
Surrogate: Bromofluorobenzene	*47.0*			*ug/kg*	*50.0*		*94.1*	*75-120*			
Batch: B1E0071 - 5030					**Prepared: 05/05/2021 12:26**						
Method Blank (B1E0071-BLK1)					**Analyzed: 05/06/2021 08:11**						
TPH as Gasoline and Light HC. (C4-C12)	ND	0.116	0.200	mg/kg							
Surrogate: Bromofluorobenzene	*45.9*			*ug/kg*	*50.0*		*91.8*	*75-120*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Gasoline Range (EPA 8015B TPH GRO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0071 - 5030 (Continued)					**Prepared: 05/05/2021 12:26**						
LCS (B1E0071-BS1)					**Analyzed: 05/06/2021 06:50**						
TPH as Gasoline and Light HC. (C4-C12)	870			ug/kg	1000		87.0	75-125			
Surrogate: Bromofluorobenzene	*45.3*			*ug/kg*	*50.0*		*90.6*	*75-120*			
LCSD (B1E0071-BSD1)					**Analyzed: 05/06/2021 07:31**						
TPH as Gasoline and Light HC. (C4-C12)	905			ug/kg	1000		90.5	75-125	3.93	15	
Surrogate: Bromofluorobenzene	*46.1*			*ug/kg*	*50.0*		*92.1*	*75-120*			
Matrix Spike (B1E0071-MS1)		**Source: BCE0029-06**			**Analyzed: 05/06/2021 19:42**						
TPH as Gasoline and Light HC. (C4-C12)	902			ug/kg	1000	26.8	87.5	75-125			
Surrogate: Bromofluorobenzene	*48.9*			*ug/kg*	*50.0*		*97.8*	*75-120*			
Matrix Spike Dup (B1E0071-MSD1)		**Source: BCE0029-06**			**Analyzed: 05/06/2021 20:22**						
TPH as Gasoline and Light HC. (C4-C12)	891			ug/kg	1000	26.8	86.4	75-125	1.29	15	
Surrogate: Bromofluorobenzene	*48.2*			*ug/kg*	*50.0*		*96.4*	*75-120*			
Batch: B1E0168 - 5030					**Prepared: 05/07/2021 12:11**						
Method Blank (B1E0168-BLK1)					**Analyzed: 05/10/2021 12:19**						
TPH as Gasoline and Light HC. (C4-C12)	ND	0.116	0.200	mg/kg							
Surrogate: Bromofluorobenzene	*47.4*			*ug/kg*	*50.0*		*94.8*	*75-120*			

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Gasoline Range (EPA 8015B TPH GRO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0168 - 5030 (Continued)					**Prepared: 05/07/2021 12:11**						
LCS (B1E0168-BS1)					**Analyzed: 05/10/2021 10:58**						
TPH as Gasoline and Light HC. (C4-C12)	960			ug/kg	1000		96.0	75-125			
Surrogate: Bromofluorobenzene	*49.4*			*ug/kg*	*50.0*		*98.8*	*75-120*			
LCSD (B1E0168-BSD1)					**Analyzed: 05/10/2021 11:39**						
TPH as Gasoline and Light HC. (C4-C12)	875			ug/kg	1000		87.5	75-125	9.33	15	
Surrogate: Bromofluorobenzene	*48.0*			*ug/kg*	*50.0*		*96.0*	*75-120*			
Matrix Spike (B1E0168-MS1)		**Source: BCE0053-03**			**Analyzed: 05/10/2021 22:30**						
TPH as Gasoline and Light HC. (C4-C12)	1000			ug/kg	1000	24.6	97.6	75-125			
Surrogate: Bromofluorobenzene	*48.0*			*ug/kg*	*50.0*		*96.0*	*75-120*			
Matrix Spike Dup (B1E0168-MSD1)		**Source: BCE0053-03**			**Analyzed: 05/10/2021 23:11**						
TPH as Gasoline and Light HC. (C4-C12)	1040			ug/kg	1000	24.6	102	75-125	4.24	15	
Surrogate: Bromofluorobenzene	*41.5*			*ug/kg*	*50.0*		*83.1*	*75-120*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Diesel Range (EPA 8015B TPH DRO/ORO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0029 - 3550B					**Prepared: 05/04/2021 10:24**						
Method Blank (B1E0029-BLK1)					**Analyzed: 05/04/2021 13:54**						
TPH as Diesel (C13-C22)	ND	1.62	10.0	mg/kg							
TPH as Heavy Hydrocarbons (C23-40)	ND	1.62	10.0	mg/kg							
TPH Total as Diesel and Heavy HC (C13-C40)	ND	1.62	10.0	mg/kg							
Surrogate: Chlorobenzene	*93.7*			*mg/kg*	*100*		*93.7*	*75-125*			

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Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Diesel Range (EPA 8015B TPH DRO/ORO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0029 - 3550B (Continued)					**Prepared: 05/04/2021 10:24**						
LCSD (B1E0029-BSD1)					**Analyzed: 05/04/2021 13:07**						
TPH as Diesel (C13-C22)	483	1.62	10.0	mg/kg	500		96.7	75-125	200	20	R
Surrogate: Chlorobenzene	*86.9*			*mg/kg*	*100*		*86.9*	*75-125*			
Matrix Spike (B1E0029-MS1)		**Source: BCE0015-01**			**Analyzed: 05/04/2021 15:31**						
TPH as Diesel (C13-C22)	477	1.62	10.0	mg/kg	500	ND	95.4	75-125			
Surrogate: Chlorobenzene	*86.6*			*mg/kg*	*100*		*86.6*	*75-125*			
Matrix Spike Dup (B1E0029-MSD1)		**Source: BCE0015-01**			**Analyzed: 05/04/2021 16:16**						
TPH as Diesel (C13-C22)	483	1.62	10.0	mg/kg	500	ND	96.6	75-125	1.18	20	
Surrogate: Chlorobenzene	*87.9*			*mg/kg*	*100*		*87.9*	*75-125*			
Batch: B1E0050 - 3550B					**Prepared: 05/04/2021 14:42**						
Method Blank (B1E0050-BLK1)					**Analyzed: 05/04/2021 21:22**						
TPH as Diesel (C13-C22)	ND	1.62	10.0	mg/kg							
TPH as Heavy Hydrocarbons (C23-40)	ND	1.62	10.0	mg/kg							
TPH Total as Diesel and Heavy HC (C13-C40)	ND	1.62	10.0	mg/kg							
Surrogate: Chlorobenzene	*98.0*			*mg/kg*	*100*		*98.0*	*75-125*			

AMERICAN ENVIRONMENTAL TESTING LABORATORY
2840 North Naomi Street Burbank, CA 91504 • ELAP# 1541 & 2402 • LACSD# 10181
TEL (888) 288-AETL • (818) 845-8200 • www.aetlab.com
A KYZER LABS COMPANY

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Quality Control Results

TPH Diesel Range (EPA 8015B TPH DRO/ORO)

Analyte	Result	MDL	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: B1E0050 - 3550B (Continued)					**Prepared: 05/04/2021 14:42**						
LCS (B1E0050-BS1)					**Analyzed: 05/04/2021 18:11**						
TPH as Diesel (C13-C22)	430	1.62	10.0	mg/kg	500		85.9	75-125			
Surrogate: Chlorobenzene	*93.7*			*mg/kg*	*100*		*93.7*	*75-125*			
LCSD (B1E0050-BSD1)					**Analyzed: 05/04/2021 18:59**						
TPH as Diesel (C13-C22)	418	1.62	10.0	mg/kg	500		83.7	75-125	2.62	20	
Surrogate: Chlorobenzene	*97.0*			*mg/kg*	*100*		*97.0*	*75-125*			
Matrix Spike (B1E0050-MS1)		**Source: BCE0016-27**			**Analyzed: 05/04/2021 19:48**						
TPH as Diesel (C13-C22)	414	1.62	10.0	mg/kg	500	ND	82.8	75-125			
Surrogate: Chlorobenzene	*92.6*			*mg/kg*	*100*		*92.6*	*75-125*			
Matrix Spike Dup (B1E0050-MSD1)		**Source: BCE0016-27**			**Analyzed: 05/04/2021 20:35**						
TPH as Diesel (C13-C22)	426	1.62	10.0	mg/kg	500	ND	85.2	75-125	2.91	20	
Surrogate: Chlorobenzene	*88.7*			*mg/kg*	*100*		*88.7*	*75-125*			

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A KYZER LABS COMPANY

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

Qualifiers and Definitions

Item	Qualifiers
M	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference. Laboratory Control Samples(LCS/LCSD) recovery were acceptable.
R	The RPD was outside of QC acceptance limits due to possible matrix interference.

Item	Definitions
% wt	Percent Weight
%REC	Percent Recovery
°C	Degrees Celsius
AETL	American Environmental Testing Laboratory, LLC
C	Carbon
CARB	California Air Resources Board
COC	Chain of Custody
CRM	Certified Reference Material
DRO	Diesel Range Organics
Dup	Duplicate
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
GRO	Gasoline Range Organics
HC	Hydrocarbon
HMU	Hazardous Material Unit
LACSD	Los Angeles County Sanitation Districts
LCS	Laboratory Control Sample - A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes.
LCSD	Laboratory Control Sample Duplicate - A replicate of Laboratory Control Sample.
LOQ	Limit of Quantitation
MDL	Method Detection Limit - The minimum measured concentration of a substance that can be reported with 99% confidence. MDL is statistically derived number which is specific for each instrument, each method and each compound.
mg/kg	Miligrams per Kilogram
mg/L	Miligrams per Liter
MRO	Motor oil Range Organics
MS	Matrix Spike - A sample prepared, taken through all sample preparation and analytical steps of the procedure and analyzed as an independent test results.
MSD	Matrix Spike Duplicate - A replicate of Matrix Spike Sample.
N	No
ND	Analyte is not detected below Method Detection Limit.
ng/m3	Nanograms per cubic meter
NIOSH	National Institute for Occupational Safety and Health
nL/L	Nanoliters per Liter

Weis Environmental LLC	AETL Job Number:	BCE0016	Site Location:	600 N. Hathaway Street, Banning, CA 92220
1938 Kellogg Ave. Ste 116	Project Number:	[none]		
Carlsbad, CA 92008	Attention:	Dan Weis		
	Project Name:	600 N. Hathaway Street	Reported:	05/11/2021 18:52

NTU	Nephelometric Turbidity Units
Ohm-cm	Ohms per centimeter
ORO	Oil Range Organics
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PSU	Practical Salinity Unit
RL	Reporting Limit - The lowest concentration at which an analyte can be detected in a sample and its concentration can be reported with a specified degree of confidence, accuracy and precision. For usage at AETL, RL is equivalant to LOQ.
RPD	Relative Percent Difference
SIM	Selective Ion Monitoring
SM	Standard Method
SPLP	Synthetic Precipitation Leaching Procedure
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbons
TTLC	Total Threshold Limit Concentrations
ug/kg	Micrograms per Kilogram
ug/L	Micrograms per Liter
ug/m3	Micrograms per cubic meter
WET	Waste Extraction Test
Y	Yes
ZHE	Zero Headspace Extraction

Asbestos and Lead Survey

First Hathaway
Banning, California 92220

May 26, 2021

First Industrial Realty Trust, Inc., First Industrial, L.P.
and First Industrial Acquisitions II, LLC
One North Wacker Drive, Suite 4200
Chicago, IL 60606

Project Number 21-02-033-002

Prepared by:

Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008
(760) 585-7070
www.weisenviro.com

1938 Kellogg Avenue, Suite 116, Carlsbad, CA 92008
(760) 585-7070
www.weisenviro.com

May 26, 2021

Mike Reese
First Industrial Realty Trust, Inc.
One North Wacker Drive, Suite 4200
Chicago, IL 60606

Subject: Asbestos and Lead Survey
First Hathaway
Banning, California 92220

Dear Mr. Reese:

Weis Environmental, LLC has completed the contracted environmental consulting services for the above referenced project. This report describes the survey methods, laboratory results, conclusions and recommendations. We appreciate the opportunity to be of service to you on this project. Please contact us at 760-585-7070 if you have any questions or comments regarding this report or if we can be of further assistance.

Sincerely,

Weis Environmental, LLC

John Payne
State of California
Certified Asbestos Consultant
#93-1226

TABLE OF CONTENTS

1.0 INTRODUCTION

This report presents the methods and findings of an asbestos and lead survey of the property identified as First Hathaway in Banning, Riverside County, California (Site). The Site is further identified by a physical address of 600 N Hathaway Street and Riverside County Assessor's Parcel Numbers 532-110-001, -002, -003, -008, -009, and -010. The Site is developed with an approximately 4,400 square foot commercial building in its western portion and a small, partially finished shack in its eastern portion (approximately 100 square feet). The buildings will be demolished at a future date.

2.0 PURPOSE AND METHODS

The purpose of this survey was to locate and identify visible and accessible potential asbestos and lead containing building materials in and on the Site structures that could require abatement prior to demolition. The survey was completed by John Payne and Tim Lane who hold the following certifications:

- John Payne - State of California Certified Asbestos Consultant (CAC) No. 93-1226 (Exp. 06/24/2022)
- Time Lane - State of California Lead Inspector/Assessor No. LRC-00006635 (Exp. 6/4/2022)

Potential asbestos and lead identification were initially performed by way of a visual assessment of suspect materials followed by entering each functional space and assessing visible and accessible structural/mechanical components and architectural finishes. The locations and physical conditions of suspect asbestos containing materials were documented. The lead survey was also completed by entering each room equivalent. A room equivalent is an identifiable part of a building such as a room, office, hallway, staircase, foyer and exteriors. Readings were obtained from each building component identified within each room equivalent by the use of a hand-held X-Ray Fluorescence (XRF) lead-based paint analyzer.

2.1 Asbestos Survey Methodology

The asbestos survey methodology is summarized below:

- A visual evaluation for suspect asbestos containing materials was completed by the CAC.
- Each suspect material identified was sampled in accordance with sampling guidelines established by the United States Environmental Protection Agency (EPA).
- Building materials were categorized into homogeneous materials. A homogeneous material is defined as being uniform in texture, color, and date of application.
- A sampling program was developed based upon the location and quantities of the identified homogeneous materials.
- Friable and non-friable building materials assessments were conducted for each homogeneous building material by the use of hand pressure as defined in EPA 40 CFR Part 763 “Asbestos-Containing Materials in Schools, Final Rule” (AHERA). Friable material is defined as any building material that by the means of hand pressure can be crumbled into a powder. Sampling of any friable surfacing materials was conducted in accordance with the AHERA 3 (<1,000 square feet), 5 (>1,000 but <5,000 square feet), 7 (>5,000 square feet) rule.
- Bulk samples were collected by extracting a representative section of the selected material, placing it in a sampling container and assigning a unique sample number. The samples were placed into a sealed shipping container for delivery to an accredited laboratory for analysis by polarized light microscopy (PLM).
- The personnel performed proper decontamination procedures to prevent the spread of secondary contamination.
- Each bulk sample was recorded on a bulk sample log and possession of the samples was tracked by a chain of custody record. The laboratory analyzed the building material samples and reported results in accordance with State of California protocol. The lower limit of reliable

detection for this method is 1%. Samples that contain more than 1% of asbestos are reported in 5% ranges. Samples which contain asbestos in a concentration lower than the limit of reliable detection (<1%) are considered "trace" or an asbestos-containing construction material.

- All bulk samples were analyzed by PLM in accordance with the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples EPA - 600/M4-82-020" dated December 1982 and adopted by the National Voluntary Laboratory Accreditation Program (NVLAP) Title 15, part 7 of the Code of Federal Register as affiliated with the National Institute for Standards and Testing (NIST).
- A total of 33 samples were obtained at the Site during the sampling activities. John Payne (CAC) collected all samples during the sampling. The samples were analyzed for asbestos content via PLM by Eurofins CEI Laboratory of Cary, North Carolina. Eurofins is located at 730 SE Maynard Road in Cary, North Carolina (919-481-1413). The NVLAP approval number for Eurofins is 101768-0. Eurofins is accredited by the American Industrial Hygiene Association, NVLAP, NIST, and is a successful participant in the Proficiency Analytical Testing Program (PAT).

2.2 Lead Survey Methodology

As stated previously, lead readings were collected utilizing an XRF analyzer. Readings were collected in accordance with Chapter 7 of the HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards in Housing and U.S. Environmental Protection Agency (EPA) 40 CFR part 745 and Title X of the 1992 Housing and Community Development Act. Twenty (20) XRF readings were obtained in order to properly assess the Site buildings for painted surfaces potentially containing lead. In addition, typical calibration checks were performed.

The California Department of Health Services standard for the definition of lead-based paint is 1.0 mg/cm^2 or 5,000 parts per million (ppm). Further, the California Occupational Safety and Health Commission indicates that workers be properly protected when working with building components containing any level of lead in accordance with Title 8 CCR Section 1532.1.

3.0 FINDINGS

3.1 Asbestos

None of the building materials sampled during the survey were found to contain asbestos as noted in the tables below. Appendix A includes Site Plans. Appendix B includes the analytical laboratory report and asbestos sampling log. The samplers asbestos certification is included

Material	Sample Number	Location	Damage
Drywall/Joint Compound	01, 02, 03	Throughout Commercial Building Office	No
Acoustic Ceiling	04, 05, 06	Throughout Commercial Building Office	No
Ceiling Tile	07, 08, 09	Throughout Commercial Building Office	No
Vinyl Floor Tile/Mastic	10, 11, 12	Throughout Commercial Building Office	No
Baseboard/Mastic	13, 14, 15	Throughout Commercial Building Office	No
Concrete	16, 17. 18	Throughout Commercial Building Walls	No
Joint Compound	19, 20, 21	Throughout Shack Interior	No
Stucco	22, 23, 24	Throughout Shack Exterior	No
Roofing	25, 26, 27	Throughout Shack Roof	No
Concrete Paving	28, 29, 30	Throughout Western Portion of the Property	No
Asphalt Paving	31, 32, 33	Throughout Western Portion of the Property	No

3.2 Lead

None of the XRF readings were reported to contain lead.

Sample Number	Location	Component	Substrate	Condition	Pb mg/cm²
NA	----	Calibration	----	----	1.0
NA	----	Calibration	---	----	1.0
NA	---	Calibration	---	---	1.1
1	Interior	Wall – Commercial Building	Drywall	Good	0.00
2	Interior	Wall – Commercial Building	Drywall	Good	0.00
3	Interior	Wall – Commercial Building	Drywall	Good	0.00
4	Interior	Door Frame - Commercial Building	Wood	Good	0.00
5	Interior	Door Frame - Commercial Building	Wood	Good	0.00
6	Interior	Window Frame - Commercial Building	Metal	Good	0.00
7	Interior	Window Frame - Commercial Building	Metal	Good	0.00
8	Interior	Wall - Commercial Building	Brick	Good	0.00
9	Interior	Wall - Commercial Building	Brick	Good	0.00

Sample Number	Location	Component	Substrate	Condition	Pb mg/cm^2
10	Exterior	Wall - Commercial Building	Brick	Good	0.00
11	Exterior	Wall - Commercial Building	Brick	Good	0.00
12	Exterior	Siding - Commercial Building	Metal	Good	0.00
13	Exterior	Siding - Commercial Building	Metal	Good	0.00
14	Exterior	Siding - Commercial Building	Metal	Good	0.00
15	Exterior	Window Frame - Commercial Building	Metal	Good	0.00
16	Exterior	Window Frame - Commercial Building	Metal	Good	0.00
17	Interior	Door - Shack	Wood	Good	0.00
18	Interior	Door - Shack	Wood	Good	0.00
19	Interior	Wall - Shack	Wood	Good	0.00
20	Interior	Wall - Shack	Wood	Good	0.00

4.0 CONCLUSIONS AND RECOMMENDATIONS

We are providing the following conclusions and recommendations based on the results of this assessment:

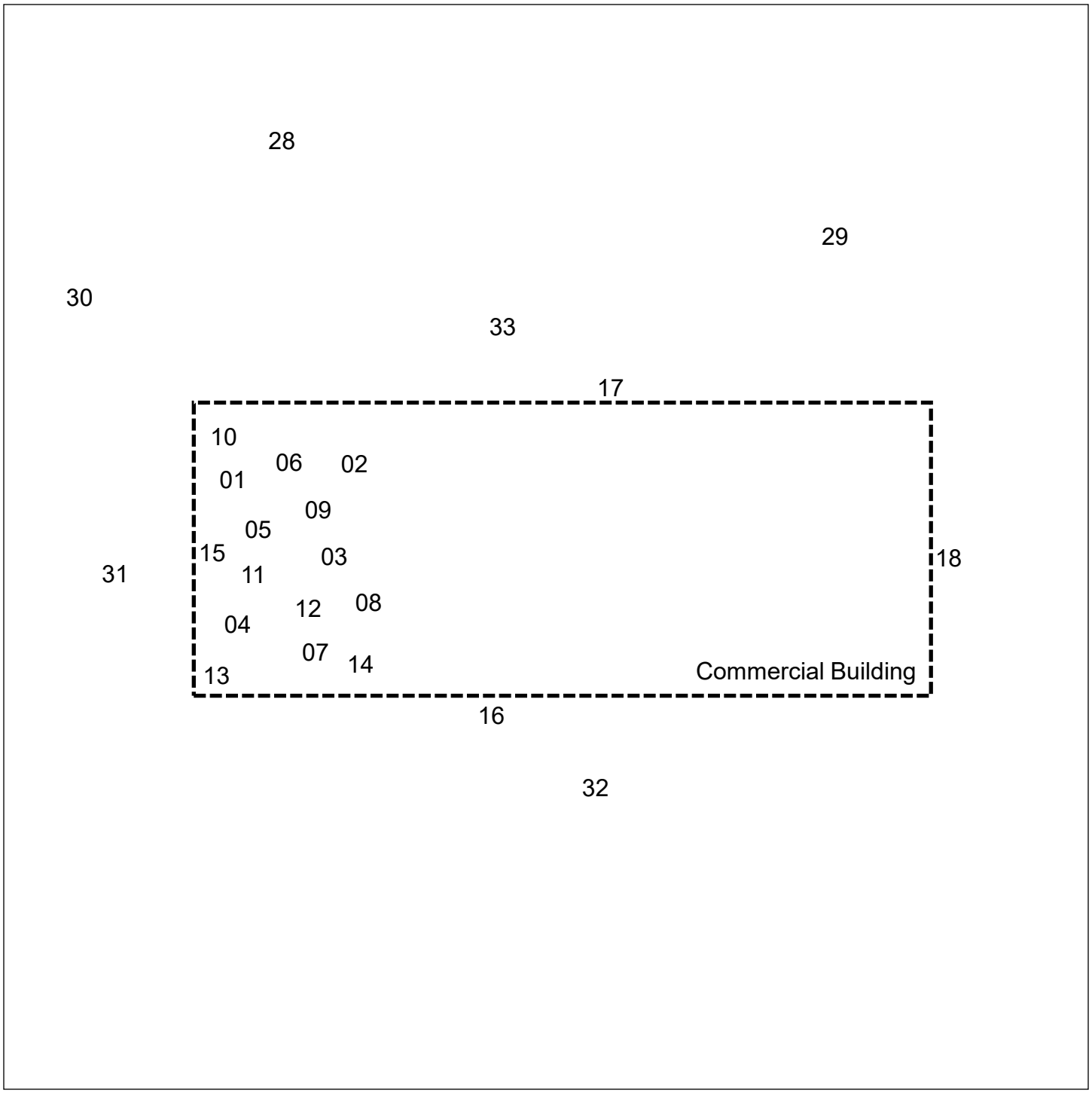
- No asbestos containing materials were identified during the completion of the survey.
- No lead-based paint or lead-containing paint were identified during the completion of the survey.
- It is the responsibility of the contractor to profile and dispose of all demolition related waste/debris generated during the course of the project, including materials that qualify as universal waste.
- The information above is designed to assist interested parties in locating building materials containing asbestos and lead within the scope of work and access constraints identified in this report. All estimated square footages identified are approximate. If there are any concerns regarding the content of the report, please notify us immediately. In addition, other materials containing asbestos may exist at the property within concealed areas of the property or outside the scope of work. All conditions of components identified in the above tables were identified during the time of the survey.

5.0 LIMITATIONS

The services for this project have been performed in general accordance with current and applicable regulatory standards/guidelines and the standard of care performed by environmental consultants completing similar work in the general locale. No other warranty, either express or implied, is made regarding the professional opinions described herein. The scope of this assessment included visual observations and sampling of suspect asbestos and lead in visible and accessible areas of the buildings. The observations made and samples collected are believed to be representative of the evaluated areas. Any previously unassessed or identified materials that are discovered at a later time must be sampled prior to disturbance. Opinions and recommendations presented herein apply to site conditions existing at the time of the survey and will not apply to site changes of which we are not aware and/or have not had the opportunity to evaluate.

APPENDICES

APPENDIX A
SITE PLANS



Site Plan
First Hathaway
Banning, California

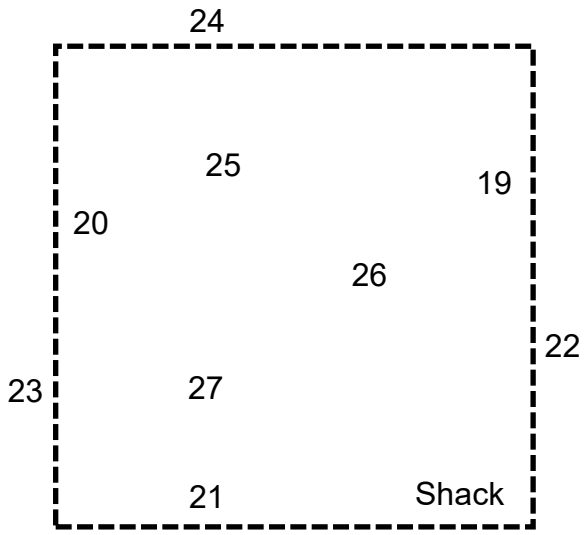
= Asbestos Sample Location

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL



Site Plan
First Hathaway
Banning, California

= Asbestos Sample Location

N

Prepared by:

Weis Environmental
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Weis ENVIRONMENTAL

APPENDIX B
LABORATORY REPORT AND SAMPLING LOG

eurofins | CEI

April 8, 2021

Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

CLIENT PROJECT: 600 N Hathaway Banning
CEI LAB CODE: A213826

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on April 5, 2021. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,

Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP TESTING
NVLAP LAB CODE 101768-0

eurofins | CEI

ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

Weis Environmental, LLC

CLIENT PROJECT: 600 N Hathaway Banning

LAB CODE: A213826

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 04/08/21

TOTAL SAMPLES ANALYZED: 33

SAMPLES >1% ASBESTOS:

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 600 N Hathaway Banning

LAB CODE: A213826

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
01		A55104	White,Tan	Drywall/Joint Compound	None Detected
02		A55105	White,Tan	Drywall/Joint Compound	None Detected
03		A55106	White,Tan	Drywall/Joint Compound	None Detected
04		A55107	White	Acoustic Ceiling	None Detected
05		A55108	White	Acoustic Ceiling	None Detected
06		A55109	White	Acoustic Ceiling	None Detected
07		A55110	White	Ceiling Tile	None Detected
08		A55111	White	Ceiling Tile	None Detected
09		A55112	White	Ceiling Tile	None Detected
10		A55113A	White	Vinyl Floor Tile	None Detected
		A55113B	Yellow	Mastic	None Detected
11		A55114A	White	Vinyl Floor Tile	None Detected
		A55114B	Yellow	Mastic	None Detected
12		A55115A	White	Vinyl Floor Tile	None Detected
		A55115B	Yellow	Mastic	None Detected
13		A55116A	Cream	Baseboard	None Detected
		A55116B	Cream	Mastic	None Detected
14		A55117A	Cream	Baseboard	None Detected
		A55117B	Cream	Mastic	None Detected
15		A55118A	Cream	Baseboard	None Detected
		A55118B	Cream	Mastic	None Detected
16		A55119	Gray	CMU	None Detected
17		A55120	Gray	CMU	None Detected
18		A55121	Gray	CMU	None Detected
19		A55122	White	Joint Compound	None Detected
20		A55123	White	Joint Compound	None Detected
21		A55124	White	Joint Compound	None Detected
22		A55125	Gray	Stucco	None Detected
23		A55126	Gray	Stucco	None Detected
24		A55127	Gray	Stucco	None Detected
25		A55128	Gray	Roofing	None Detected

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 600 N Hathaway Banning

LAB CODE: A213826

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
26		A55129	Gray	Roofing	None Detected
27		A55130	Gray	Roofing	None Detected
28		A55131	Gray	Concrete	None Detected
29		A55132	Gray	Concrete	None Detected
30		A55133	Gray	Concrete	None Detected
31		A55134	Black	Asphalt	None Detected
32		A55135	Black	Asphalt	None Detected
33		A55136	Black	Asphalt	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Lab Code: A213826
Date Received: 04-05-21
Date Analyzed: 04-08-21
Date Reported: 04-08-21

Project: 600 N Hathaway Banning

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
01 A55104	Drywall/Joint Compound	Heterogeneous White,Tan Fibrous Bound	20% 	Cellulose 	40% 25% 15%	Gypsum Calc Carb Binder	None Detected
02 A55105	Drywall/Joint Compound	Heterogeneous White,Tan Fibrous Bound	20% 	Cellulose 	40% 25% 15%	Gypsum Calc Carb Binder	None Detected
03 A55106	Drywall/Joint Compound	Heterogeneous White,Tan Fibrous Bound	20% 	Cellulose 	40% 25% 15%	Gypsum Calc Carb Binder	None Detected
04 A55107	Acoustic Ceiling	Heterogeneous White Fibrous Loose			3% 65% 32%	Paint Calc Carb Binder	None Detected
05 A55108	Acoustic Ceiling	Heterogeneous White Fibrous Loose			3% 65% 32%	Paint Calc Carb Binder	None Detected
06 A55109	Acoustic Ceiling	Heterogeneous White Fibrous Loose			3% 65% 32%	Paint Calc Carb Binder	None Detected
07 A55110	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	35% 30%	Cellulose Fiberglass	32% 3%	Perlite Paint	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Lab Code: A213826
Date Received: 04-05-21
Date Analyzed: 04-08-21
Date Reported: 04-08-21

Project: 600 N Hathaway Banning

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
08 A55111	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	35% 30%	Cellulose Fiberglass	32% 3%	Perlite Paint	None Detected
09 A55112	Ceiling Tile	Heterogeneous White Fibrous Loosely Bound	35% 30%	Cellulose Fiberglass	32% 3%	Perlite Paint	None Detected
10 A55113A	Vinyl Floor Tile	Heterogeneous White Non-fibrous Tightly Bound			65% 35%	Vinyl Calc Carb	None Detected
A55113B	Mastic	Heterogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
11 A55114A	Vinyl Floor Tile	Heterogeneous White Non-fibrous Tightly Bound			65% 35%	Vinyl Calc Carb	None Detected
A55114B	Mastic	Heterogeneous Yellow Non-fibrous Bound			100%	Mastic	None Detected
12 A55115A	Vinyl Floor Tile	Heterogeneous White Non-fibrous Tightly Bound			65% 35%	Vinyl Calc Carb	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Lab Code: A213826
Date Received: 04-05-21
Date Analyzed: 04-08-21
Date Reported: 04-08-21

Project: 600 N Hathaway Banning

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
A55115B	Mastic	Heterogeneous Yellow Non-fibrous Bound		100%	Mastic	None Detected
13 A55116A	Baseboard	Heterogeneous Cream Non-fibrous Bound		100%	Vinyl	None Detected
A55116B	Mastic	Heterogeneous Cream Non-fibrous Bound		100%	Mastic	None Detected
14 A55117A	Baseboard	Heterogeneous Cream Non-fibrous Bound		100%	Vinyl	None Detected
A55117B	Mastic	Heterogeneous Cream Non-fibrous Bound		100%	Mastic	None Detected
15 A55118A	Baseboard	Heterogeneous Cream Non-fibrous Bound		100%	Vinyl	None Detected
A55118B	Mastic	Heterogeneous Cream Non-fibrous Bound		100%	Mastic	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Lab Code: A213826
Date Received: 04-05-21
Date Analyzed: 04-08-21
Date Reported: 04-08-21

Project: 600 N Hathaway Banning

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
16 A55119	CMU	Heterogeneous Gray Non-fibrous Bound		85% 15%	Silicates Binder	None Detected
17 A55120	CMU	Heterogeneous Gray Non-fibrous Bound		85% 15%	Silicates Binder	None Detected
18 A55121	CMU	Heterogeneous Gray Non-fibrous Bound		85% 15%	Silicates Binder	None Detected
19 A55122	Joint Compound	Heterogeneous White Non-fibrous Bound		65% 33% 2%	Calc Carb Binder Paint	None Detected
20 A55123	Joint Compound	Heterogeneous White Non-fibrous Bound		65% 33% 2%	Calc Carb Binder Paint	None Detected
21 A55124	Joint Compound	Heterogeneous White Non-fibrous Bound		65% 33% 2%	Calc Carb Binder Paint	None Detected
22 A55125	Stucco	Heterogeneous Gray Non-fibrous Bound		85% 15%	Silicates Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Lab Code: A213826
Date Received: 04-05-21
Date Analyzed: 04-08-21
Date Reported: 04-08-21

Project: 600 N Hathaway Banning

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
23 A55126	Stucco	Heterogeneous Gray Non-fibrous Bound			85% 15%	Silicates Binder	None Detected
24 A55127	Stucco	Heterogeneous Gray Non-fibrous Bound			85% 15%	Silicates Binder	None Detected
25 A55128	Roofing	Heterogeneous Gray Non-fibrous Bound	15%	Fiberglass	20% 30% 35%	Silicates Binder Tar	None Detected
26 A55129	Roofing	Heterogeneous Gray Non-fibrous Bound	15%	Fiberglass	20% 30% 35%	Silicates Binder Tar	None Detected
27 A55130	Roofing	Heterogeneous Gray Non-fibrous Bound	15%	Fiberglass	20% 30% 35%	Silicates Binder Tar	None Detected
28 A55131	Concrete	Heterogeneous Gray Non-fibrous Bound			85% 15%	Silicates Binder	None Detected
29 A55132	Concrete	Heterogeneous Gray Non-fibrous Bound			85% 15%	Silicates Binder	None Detected

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ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: Weis Environmental, LLC
1938 Kellogg Avenue, Suite 116
Carlsbad, CA 92008

Lab Code: A213826
Date Received: 04-05-21
Date Analyzed: 04-08-21
Date Reported: 04-08-21

Project: 600 N Hathaway Banning

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous	ASBESTOS %
30 A55133	Concrete	Heterogeneous Gray Non-fibrous Bound	85% 15%	Silicates Binder	None Detected
31 A55134	Asphalt	Heterogeneous Black Non-fibrous Bound	70% 30%	Silicates Tar	None Detected
32 A55135	Asphalt	Heterogeneous Black Non-fibrous Bound	70% 30%	Silicates Tar	None Detected
33 A55136	Asphalt	Heterogeneous Black Non-fibrous Bound	70% 30%	Silicates Tar	None Detected

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LEGEND:
Non-Anth = Non-Asbestiform Anthophyllite
Non-Trem = Non-Asbestiform Tremolite
Calc Carb = Calcium Carbonate

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORTING LIMIT: <1% by visual estimation

REPORTING LIMIT FOR POINT COUNTS: 0.25% by 400 Points or 0.1% by 1,000 Points

REGULATORY LIMIT: >1% by weight

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Information provided by customer includes customer sample ID and sample description.

ANALYST: Saithya Painkal

APPROVED BY: Tianbao Bai, Ph.D., CIH
Laboratory Director

NVLAP TESTING
NVLAP LAB CODE 101768-0

A213826

A55104-A55136

WEIS EVIRONMENTAL
1938 Kellogg Avenue Suite 116
Carlsbad, California 92008

ASBESTOS BULK SAMPLE LOG

Page 1 of 4

33

Client Name: _____

Project Location: 600 N HATHAWAY BANNING

Date: 4-1-21 **Field Technician:** JOHN PAYNE

Project Number: _____ **Priority: ASAP** ___ **24 HR** ___ **3-5 Days** ___

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	SQUARE FOOTAGE
01	Office Area	Drywall and Joint compound	
02	"	"	
03	"	"	
04	Office Area Above ceiling tile	Acoustic ceiling	
05	"	"	
06	"	"	
07	Office Area	Ceiling Tile	
08	"	"	
09	"	"	
10	Office Area	Vinyl Floor Tile and mastic	

Chain of Custody **Analytical Method: PLM:** Y **TEM:** ____ **Other:** _____

Sampled By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By	J.C	**Date** 04/05	**Time** 9:40
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**

EUROFINS CEI. INC
SAMPLES ACCEPTED
J.C

A213826

WEIS EVIRONMENTAL
1938 Kellogg Avenue Suite 116
Carlsbad, California 92008

ASBESTOS BULK SAMPLE LOG

Client Name: _____

Project Location: 600 N HATHAWAY BANNING

Date: 4-1-21 **Field Technician:** JOHN PAYNE

Project Number: _____ **Priority: ASAP** ___ **24 HR** ___ **3-5 Days** ___

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	SQUARE FOOTAGE
11	office Area	Vinyl Floor Tile and MASTIC	
12	" "	" "	
13	office Area	BASE BOARD and MASTIC	
14	" "	" "	
15	" "	" "	
16	Exterior walls	CMU	
17	" "	" "	
18	" "	" "	
19	BACK BUILDING Exterior walls	Joint compound	
20	" "	" "	

Chain of Custody **Analytical Method: PLM:** Y **TEM:** ____ **Other:** _____

Sampled By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**

A213826

WEIS EVIRONMENTAL
1938 Kellogg Avenue Suite 116
Carlsbad, California 92008

ASBESTOS BULK SAMPLE LOG

Client Name: _____

Project Location: 600 N HATHAWAY BANNING

Date: 4-1-21 **Field Technician:** JOHN PAYNE

Project Number: _____ **Priority: ASAP** ___ **24 HR** ___ **3-5 Days** ___

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	SQUARE FOOTAGE
21	INTERIOR WALLS BACK BUILDING	JOINT COMPOUND	
22	BACK BUILDING INTERIOR WALLS	STUCCO	
23	↓ ↓	↓ ↓	
24	↓ ↓	↓ ↓	
25	ROOF BACK BUILDING	ROOFING	
26	↓ ↓	↓ ↓	
27	↓ ↓	↓ ↓	
28	THROUGHOUT 5 SF	CONCRETE	
29	↓ ↓	↓ ↓	
30	↓ ↓	↓ ↓	

Chain of Custody **Analytical Method: PLM:** Y **TEM:** ____ **Other:** _____

Sampled By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**

A213826

WEIS EVIRONMENTAL
1938 Kellogg Avenue Suite 116
Carlsbad, California 92008

ASBESTOS BULK SAMPLE LOG

Client Name: _____

Project Location: 600 N HATHAWAY BANNING

Date: 4-1-21 **Field Technician:** JOHN PAYNE

Project Number: _____ **Priority: ASAP** ___ **24 HR** ___ **3-5 Days** ___

SAMPLE NUMBER	SAMPLE LOCATION	MATERIAL DESCRIPTION	SQUARE FOOTAGE
31	THROUGHOUT SITE	ASPHALT	
32	"	"	
33	"	"	

Chain of Custody **Analytical Method: PLM:** Y **TEM:** ____ **Other:** _____

Sampled By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**
Relinquished By		**Date**	**Time**
Received By		**Date**	**Time**

APPENDIX C
CERTIFICATION

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

John Lee Payne
Name

Certification No. 93-1226

Expires on 06/24/21

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code

Asbestos Consultants and Site Surveillance Technicians

Search Results for Certified Consultants & Certified Technicians

New Search

Type	Last name	First name	Affiliation	City	Telephone
CAC	Payne	John	Ambient Environmental, Inc.	Corona	(951) 272-4730

New Search

Cal/OSHA

Emergency Response

- Cal/OSHA COVID-19 Guidance and Resources
  - Emergency Temporary Standards, Information and Resources
  - Revisions to the COVID-19 Prevention Emergency Temporary Standards
- Worker Safety and Health in Wildfire Regions

CHILDHOOD LEAD POISONING PREVENTION BRANCH

Certified Lead Professionals in California

Los Angeles Area, including San Fernando Valley (Area Codes 213, 310, 323, 562, 626, 818)

Inspector/Assessor

Project Designer

Project Monitor

Sampling Technician

Supervisor

Inspector/Assessor	LRC-00006635	Lane, Timothy	6/4/2022	CHINO HILLS	(626) 840-2086

APPENDIX F
QUALIFICATIONS

Resume Of Dan Weis, R.E.H.S.
Environmental Manager
Address: 1938 Kellogg Avenue, Suite 116, Carlsbad, CA 92008
Phone: 760.585.7070 | Email:dw@weisenviro.com

Professional Summary

Environmental Manager and California Registered Environmental Health Specialist with extensive expertise in environmental science and assessment, environmental and public health, risk assessment, health and safety, remedial design and implementation, strategic planning and project/program design and implementation. Over 20 years of professional experience and achievement. Successful completion of projects for a wide range of clientele including, but not limited to, local government entities, developers (affordable housing and market rate), educational institutions, Federal government entities, law firms, architectural and engineering firms, lending institutions, life insurance companies, conservancies, commercial/industrial real estate owners/managers, insurance companies, wireless telecommunication carriers and real estate developers. Extensive experienced in the completion of assessment, construction and remediation quality assurance during the completion of urban redevelopment/brownfields projects and public works projects, many of which have been located in downtown areas of San Diego, Los Angeles, Oakland, San Francisco, and other urban communities throughout the State of California. Proven ability to train and mentor professional, technical and support staff. Manages a comprehensive health and safety program. Holds a Master of Science in Public Health with an emphasis in environmental health science, risk assessment, health and safety, toxicology and environmental policy. Registered Environmental Health Specialist #8172 in the State of California.

Education and Professional Certification

- University of Delaware, Bachelor of Arts, 1995
- San Diego State University, Master of Science, Public/Environmental Health, 2001
- State of California Registered Environmental Health Specialist #8172
- Centers for Disease Control and Prevention National Center for Environmental Health Division of Emergency and Environmental Health Services - Environmental Health Training in Emergency Response
- Occupational Safety and Health Administration (OSHA) 40 Hour Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) Training and Annual 8 Hour HAZWOPER Refresher Training
- OSHA 8 Hour HAZWOPER Supervisor Training

Relevant Skills and Qualifications

- Proven ability to manage staff and programs/projects in challenging and diverse environments and regulatory settings. Consistently meets project schedules, goals, deadlines and budgetary restrictions.
- Completed or managed over 3,000 due diligence related environmental assessments and completed or managed over 500 subsurface environmental investigations of soil gas, soil, groundwater and other media. Investigations have included human health and ecological risk assessments, evaluations of indoor air conditions based on interpretations of subsurface conditions, underground storage tank (UST) evaluation/closure and hazardous waste characterization/management. Subsurface activities performed include the completion of soil borings using various drilling technologies, soil and groundwater sampling, installation and sampling of groundwater monitoring wells, free product evaluations, exploratory trenching and real-time delineation using mobile analytical laboratories and other soil screening technology.
- Managed over 100 remediation or construction management related projects primarily related to source removal of subsurface contaminants, including but not limited to, petroleum hydrocarbons, chlorinated solvents, heavy metals, organochlorine pesticides and other agricultural related chemicals, dioxins and furans and polychlorinated biphenyls. Has also assisted in cost recovery efforts from private parties and State/Federal funding programs for environmental assessment and remediation work and has served as an expert witness during legal proceedings pertaining to environmental related claims.
- Strong collaboration and negotiation skills with environmental regulatory agencies regarding project planning, initiation, status, approvals and implementation. Direct experience in interfacing with members of regulatory agencies including but not limited to the United States Environmental Protection Agency (EPA), California EPA Department of Toxic Substances Control and Office of Environmental Health Hazard Assessment, County of San Diego Departments of Environmental Health (DEH), Public Works and Planning and Land Use, San Diego Air Pollution Control District, South Coast Air Quality

Management District, Riverside County DEH, San Francisco City and County Department of Public Health (DPH), Arizona Department of Environmental Quality, County of Los Angeles County DPH and other local Certified Unified Program Agencies. Develop, manage and implement compliance and best practices efforts with Federal and State laws and regulations.

- Conducted and/or managed hundreds of public/environmental health related assessments including electromagnetic field surveys, radionuclide surveys, indoor air quality investigations, radon surveys, drinking water assessments, asbestos containing materials and lead-based paint surveys and mold/microbial evaluations.
- Recovered over $10,000,000 of assessment and cleanup costs for clientele from various sources including State of California Cleanup Funds, United States Environmental Protection Agency Brownfield grants and private parties including major oil companies.
- Responsible for facilitating a safe and healthy work environment in concert with the mission of the company while ensuring compliance with applicable Federal, State, and local regulations.
- Published technical papers pertaining to geogenic concentrations of metals in San Diego County, radioactive dating and pollutant chronologies in estuarine sediments and various urban runoff related implications.
- Delivered presentations pertaining to various environmental topics including human health risk assessment to membership at local and national trade conferences

Project Experience (Projects Completed at Multiple Firms)

- *14th and Island, San Diego, California* – Development of Site Mitigation Plan, contaminated soil management and disposal concurrent with site construction activities at the superblock construction site in downtown San Diego and achievement of regulatory closure with the County of San Diego Department of Environmental Health.
- *2198 Market Street, San Francisco, California* – Phase I and II Environmental Site Assessments, supplemental subsurface investigation, Site Mitigation Plan development, contaminated soil management and disposal concurrent with site construction activities and negotiation/achievement of regulatory closure with the City of San Francisco Department of Public Health.
- *Former EZ Serve, 9305 Mission Gorge Road, Santee, California* – Closure report preparation and San Diego Regional Water Quality Control Board interface and negotiation/achievement of regulatory closure under State of California low-threat policy.
- *French Field – Former Vista Burn Dump, Oceanside, California* – Oversight of the capping of a former burn dump/landfill facility and restoration for public use as a sports facility. Negotiation and achievement of regulatory closure with the California Department of Toxic Substances Control with concurrence from the San Diego Regional Water Quality Control Board and the County of San Diego Local Enforcement Agency.
- *Indoor Skydiving Facility, 1401 Imperial Avenue, San Diego, California* – Development of Soil Management Plan and contaminated soil management and disposal concurrent with site construction activities in downtown San Diego.
- Lemon Grove Avenue Realignment Project, Lemon Grove, California – Development of Impacted Soil Management Plan, Community Health and Safety Plan and Worker Health and Safety Plan and oversight of the implementation of such plans during construction activities.
- *North Side Interior Road and Utilities Project at San Diego International Airport, San Diego, California* - Subsurface assessment, development of Soil Management Plan and Work Health and Safety Plan and implementation and monitoring of soil management strategies.
- *Olympic and Hill, Los Angeles, California* – Removal of multiple underground storage tanks and underlying contaminated soil and achievement of regulatory closure with the City of Los Angeles Fire Department.
- *San Ysidro - U.S. Land Port of Entry, San Diego, California* – Subsurface assessment and development and implementation of soil management strategies.
- *VA Medical Center Long Beach, 5901 East 7th Street, Long Beach, California* - VA Long Beach: Seismic Corrections – Mental Health, Community Living Center and Chiller Replacements Project – Asbestos containing materials and lead-based paint surveys and preparation of abatement contractor bid specifications.

Appendix I

PROJECT-SPECIFIC WQMP SUMMARY DATA FORM

Project-Specific WQMP Summary Data Form

Applicant Information	
Name and Title	Michael Goodwin
Company	First Industrial Realty
Phone	310.606.1634
Email	mgoodwin2@firstindustrial.com

Project Information	
Project Name (as shown on project application/project-specific WQMP)	First Hathaway Logistics Center
Street Address	600 North Hathaway Street, Banning CA 92220
Nearest Cross Streets	Hathaway Street and Nicolet Street
Municipality (City or Unincorporated County)	City of Banning, CA
Zip Code	92220
Tract Number(s) and/or Assessor Parcel Number(s)	TPM 38256 (APN 532-110-001, 002, 003, 008, 009 & 010)
Other (other information to help identify location of project)	

Indicate type of project.	**Priority Development Projects (Use an "X" in cell preceding project type):**	
		SF hillside residence; impervious area ≥ 10,000 sq. ft.; Slope ≥ 25%
		SF hillside residence; impervious area ≥ 10,000 sq. ft.; Slope ≥ 10% & erosive soils
	X	Commercial or Industrial ≥ 100,000 sq. ft.
		Automotive repair shop
		Retail Gasoline Outlet disturbing > 5,000 sq. ft.
		Restaurant disturbing > 5,000 sq. ft.
		Home subdivision ≥ 10 housing units
	X	Parking lot ≥ 5,000 sq. ft. or ≥ 25 parking spaces

Date Project-Specific WQMP Submitted	Preliminary Report Submitted November 19, 2021
Size of Project Area (nearest 0.1 acre)	Gross: 94.9 Net 84.80
Will the project replace more than 50% of the impervious surfaces on an existing developed site?	yes
Project Area managed with LID/Site Design BMPs (nearest 0.1 acre)	84.8
Are Treatment Control BMPs required?	No. There is local ordinance for Infiltration of Urban Runoff
Is the project subject to onsite retention by ordinance or policy?	Yes.
Did the project meet the 100% LID/Site Design Measurable Goal?	Yes.
Name of the entity that will implement, operate, and maintain the post-construction BMPs	First Industrial Realty
Contact Name	Michael Goodwin
Street or Mailing Address	898 N. Pacific Coast Hwy. Suite 175
City	El Segundo, CA
Zip Code	90245
Phone	310.606.1634

Space Below for Use by City/County Staff Only	
Preceding Information Verified by (consistent with information in project-specific WQMP)	**Name:** **Date:**
Date Project-Specific WQMP Approved:	
Data Entered by	**Name:** **Date:**
Other Comments	