

APPENDIX E-1

Phase I Environmental Site Assessment

Prepared by

Moore Twining Associates

May 2019



**PHASE I ENVIRONMENTAL SITE ASSESSMENT
CHESTNUT SOLAR
25TH AVENUE AND MADISON AVENUE
UNINCORPORATED AREA OF KINGS COUNTY, CALIFORNIA**

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EXECUTIVE SUMMARY

Moore Twining Associates, Inc. (Moore Twining) was retained by Mr. Bert Verrips to conduct a Phase I Environmental Site Assessment (Phase I ESA) for a large, rural property located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California (Site). This Phase I ESA was conducted in general conformance with the methods and procedures described in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (E1527-13), published November 2013, and in accordance with Moore Twining's proposal to Mr. Verrips, dated March 21, 2019.

This summary should be used in conjunction with the entire report. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the Site history and conditions. Please review the entire report for more information regarding Moore Twining's findings and opinions.

On-Site Summary

The Site is located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California (Site). The Site has been assigned the following Assessor's Parcel Numbers (APNs): 026-320-009, 026-339-001, and 026-339-074.

According to Moore Twining's review of historical aerial photographs, the Site has been used for agricultural purposes since at least 1950. According to the documentation provided by Mr. Verrips, the Site has been owned by Westlands Water District for approximately ten years and has been occupied by winter wheat during the wet season and fallow fields during the dry season.

At the time of the Site reconnaissance, the Site comprised 1,040 acres of agricultural fields and vacant land. Unpaved agricultural canals were located along 25th Avenue trending north and south. In addition, three (3) lateral unpaved irrigation canals were located throughout the Site, trending north and south. Overhead transmission lines were located along 25th Avenue and Madison Avenue.

One (1) irrigation well was observed on the northeast corner of the Site with an associated tank and electrical utilities. The well was accompanied by a hydraulic pump and a 35-gallon drum of hydraulic oil. Stained concrete was observed near the hydraulic pump.

Concrete standpipes with pumps and irrigation pipes were observed throughout the Site.

Three (3) pole-mounted transformers were observed on the Site along Madison Avenue, two (2) were located at the northwest corner of the Site and one (1) was located at the northeast corner. No staining or leaking was observed.

Five (5) water wells were listed on the EDR Well Search Data Map under State Water Well Information; however, only one (1) well was observed at the time of the Site reconnaissance. Four (4) wells were listed under Kern County and one (1) well was listed under Kings County. Information regarding installation dates or current status of the wells was not provided.

The Site was not listed on any regulatory databases.

Off-Site Summary

At the time of the Site Reconnaissance, the Site was bordered to the north by Madison Avenue and to the west by 25th Avenue with agricultural fields beyond. The adjoining properties in all directions were agricultural fields.

There were no regulatory listings found within the search radius.

Conclusions Summary

On behalf of Mr. Verrips, Moore Twining performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E1527-13 for a property located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California. This assessment has revealed no evidence of Controlled Recognized Environmental Conditions (CRECs), Historic Recognized Environmental Conditions (HRECs), or Recognized Environmental Conditions (RECs).

Additional Considerations

The legal application of agricultural chemicals is not considered a REC by the Comprehensive Environmental Response, Compensation and Liability (CERCLA) act of 1980. The exemption is noted in (4) *Application of Pesticides*—Section 107(i) of the ASTM E1527-13 standard. However, a clause is noted in the exemption stating, “The pesticide exemption also contains a “savings clause” that provides that the cost recovery prohibition does not alter or modify any obligations or liability under any other federal or state law for damages, injury or loss resulting from a release of hazardous substances, or for the costs of removal or remedial actions of such hazardous substances.” It has been Moore Twining’s experience that persistent pesticides can exist in soils after long-term use of agricultural chemicals. From the historical documents researched, no information was discovered that would indicate illegal agricultural activities occurred at the Site. As the Site was used from at least the 1950’s for agricultural purposes, persistent pesticides, and other related agricultural chemicals may exist in the soils at the Site. These constituents, even in low concentrations, can result in federal, state and local requirements for movement, disposal, assessment, and remediation. If present, costs could be incurred to address these conditions.

Recommendations

It is Moore Twining's recommendation that, prior to the sale, purchase, and/or development of the property, soil in the areas of former agricultural use should be sampled and analyzed to evaluate the potential for human health risk or special requirements for handling, disposal, assessment and remediation. The presence of pesticides or other constituents of concern in the soil could result in increased disposal fees, and costs for assessment and remediation depending on the concentration of the pesticides and/or other constituents of concern in soils at the Site.

1.0 INTRODUCTION

Moore Twining Associates, Inc. (Moore Twining) was retained by Mr. Bert Verrips to conduct a Phase I Environmental Site Assessment (Phase I ESA) for a large, rural property located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California (Site). This Phase I ESA was conducted in general conformance with the methods and procedures described in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (E1527-13), published November 2013, and in accordance with Moore Twining's proposal to Mr. Verrips, dated March 21, 2019.

1.1 Objective

The objective of this assessment was to identify Recognized Environmental Conditions (RECs) located at the Site or adjacent properties that could present material risk of harm to public health or to the environment. Recognized environmental conditions are defined in ASTM E1527-13 as the presence or likely presence of any hazardous wastes and/or substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into the ground, groundwater, or surface water of the property.

1.2 Scope of Services

This Phase I ESA was performed to evaluate the potential presence of environmental conditions that may have resulted from operations at the Site or at nearby properties. The assessment included a Site reconnaissance, a review of available documentation of land-use history for evidence of the use, storage and/or disposal of hazardous substances, and a review of available regulatory information. This Phase I ESA included the following tasks:

- A review of the current and past uses of the Site since 1929;
- A Site reconnaissance to assess evidence of current and/or past use or storage of toxic or hazardous material; on-Site ponds, landfills, drywells, waste streams or other disposal units; visible soil discoloration; aboveground or underground storage tanks; electrical transformers containing polychlorinated biphenyls (PCBs); and drums, barrels and other storage containers;
- Visual observation of adjacent properties in order to determine if current and/or historical operations associated with these properties may pose a threat to the subject Site;
- A review of available federal Environmental Protection Agency (EPA), state EPA and regulatory agency lists of known or potential hazardous waste sites or landfills, and sites currently under investigation for environmental violations in the Site area. Using area-

profile services provided by Environmental Data Resources, Inc. (EDR), Moore Twining cataloged properties near the Site that have been identified on regulatory agency lists. Search criteria were in conformance with ASTM E1527-13;

- Contact with relevant municipal, county and state agencies to review readily available records and permits; and
- Preparation of this report to present our methods, findings and conclusions.

The Scope of Services specifically excluded cultural, archeological, and biological assessments, as well as, sampling and analysis for the potential presence of asbestos containing building materials, lead based paint, or an assessment for radon gas. In addition, the Scope of Services did not include the collection and/or analysis of any materials including air, soil, soil-gas, or groundwater samples.

1.3 Limitations and Limited Conditions

The purpose of an environmental assessment is to reasonably assess the potential for, or actual impact of, past practices on a given site that may pose an environmental impairment to the Site. No assessment is thorough enough to identify all potential environmental impairments at a given site. If environmental impairments have not been identified during the assessment, such a finding should not, therefore, be construed as a guarantee of the absence of such conditions on the Site, but rather the result of the services performed within the scope, limitations, and cost of the work performed.

The conclusions presented in this report are solely professional opinions based on information provided regarding the Site and the findings of the reconnaissance and records search. Information obtained from the aerial photography is an interpretation of features observed in the photographs. Actual conditions at the Site may have been different from those interpreted. Conclusions presented are based on conditions as they existed at the time the work was performed. Changes in existing conditions of the Site due to time lapse, natural causes, or operations adjacent to the Site may deem conclusions presented in this Phase I ESA report invalid, unless the changes are reviewed and the conclusions reevaluated. Such conditions may require additional site reconnaissance and require field exploration and laboratory testing to assess if the conclusions are applicable considering the changed conditions.

This work was performed for the sole use of our client. Any reliance on this report by a third party is at such party's sole risk. Others who seek to rely on the findings have a duty to determine the adequacy of this report for their intended use, time, and location. Moore Twining does not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report. No other warranty, either expressed or implied, is made. The standard of practice is time-dependent. Services provided were performed consistent with generally accepted professional consulting principles and practices for environmental assessors at the time this work was performed. The findings and conclusions presented in this report are solely professional opinions derived in accordance with current standards of professional practice.

2.0 SITE DESCRIPTION

Information concerning the Site was obtained from a Site reconnaissance and a review of the documents referenced in Sections 4.0 and 5.0 of this report. The Site reconnaissance was conducted on April 30, 2019 by Ms. Cecilia Simpson, a representative of Moore Twining.

2.1 Location and Description of Property

The Site comprises 1,040 acres of open agricultural fields and vacant parcels. The Site is located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California (Site). The Site has been assigned the following Assessor’s Parcel Numbers (APNs): 026-320-009, 026-339-001, and 026-339-074.

The listed owners for the Site are:
Westlands Water District

A Site location map is presented as Drawing 1, and a Site plan, which includes Site boundaries, is presented as Drawing 2 in Appendix A. A parcel map is included in Appendix E.

2.2 Physical and Environmental Setting of the Site

Environmental characteristics including topography, geology, soil, and hydrogeology were evaluated based on Site observations, and review of published literature and maps. The findings are summarized in the following table.

PHYSICAL SETTING INFORMATION FOR THE SUBJECT SITE AND SURROUNDING AREA		SOURCE
Location	Stratford, California	EDR Report, April 3, 2019
Site Elevation	The Site elevation is approximately 230 feet above mean sea level.	
Topographic Gradient	Minimal sloping toward the east-southeast.	
Closest Surface Water	Unpaved canals transect and border the Site.	
Flood Plains¹	According to FEMA DFIRM Flood Data provided by EDR, the Site is not located within a 100-year or a 500-year flood zone.	FEMA DFIRM Flood Data Map 06031C0300C

¹ This is for general locational information only. The data presented should not be used for design or development purposes, as a comprehensive flood zone study has not been conducted.

PHYSICAL SETTING INFORMATION FOR THE SUBJECT SITE AND SURROUNDING AREA		SOURCE
Wetlands	No wetlands were mapped on the Site ² .	National Wetlands Inventory https://www.fws.gov/wetlands/data/mapper.html
General Soil Characteristics:		
Soil Type	Lethent- Clay Loam	United States Department of Agriculture, Soil Survey website; http://websoilsurvey.sc.egov.usda.gov
Description	Soils are clayey, partially hydric, moderately well drained, and have very slow infiltration rates.	
Area Specific Geology/Hydrogeology Characteristics:		
Geology	The Site is located within the southern portion of the San Joaquin Valley. The San Joaquin Valley forms the southern half of the Great Valley Geomorphic Province, a topographic and structural basin bound on the east by the Sierra Nevada and to the west by the Coast Range. The Sierra Nevada, a fault block dipping gently to the southwest, is composed of igneous and metamorphic rocks of pre-Tertiary age which comprise the basement complex beneath the valley. The subsurface of the Site and surrounding vicinity is characterized by a thick sequence of unconsolidated sediments from the Pleistocene epoch. Subsurface material beneath the Site is primarily composed of alluvial fan deposits and flood plain over-bank deposits including interbedded silts, sands, clays, and gravels.	(Wagner, 2002) (California Geologic Survey, 2010)
Hydrogeology	Groundwater and hydraulic gradient data were not available for the subject Site.	EDR Physical Setting Map-2019
Oil and Gas Wells:		

² This is for general locational information only. The data presented should not be used for development purposes, as a comprehensive wetland study has not been conducted.

PHYSICAL SETTING INFORMATION FOR THE SUBJECT SITE AND SURROUNDING AREA		SOURCE
Current Oil and Gas Wells on Subject Site	No oil and/or gas wells were reported to be on the Site.	California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) web site http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx
Historical Oil and Gas Wells on Subject Site	No historical oil and/or gas wells were reported to be located on the Site.	California Department of Conservation, DOGGR web site http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx

3.0 INFORMATION FROM THE SITE RECONNAISSANCE

The objective of the Site reconnaissance was to observe the Site for specific indicators of environmental conditions. The Site reconnaissance included a systematic search by vehicle of practically accessible areas of the Site and adjacent properties. Several dirt access roads traversed the Site at various locations and were used to scan the property from a slow-moving vehicle. Areas that included structures or features of interest were searched by foot. A Site Plan depicting the Site, adjoining property use, and observed on-Site features is presented in Appendix A. Additionally, photographs were taken during the Site reconnaissance, and selected photographs of the Site are presented in Appendix B.

The Site reconnaissance was conducted on April 30, 2019 by Ms. Cecilia Simpson, a representative of Moore Twining. The findings of the Site reconnaissance are summarized in the following subsections.

3.1 Site Reconnaissance - Description of Structures, Roads, and Other Site Improvements

At the time of the Site reconnaissance, the Site comprised 1,040 acres of agricultural fields and vacant land. Unpaved agricultural canals were located along 25th Avenue trending north and south. In addition, three (3) lateral unpaved irrigation canals were located throughout the Site, trending north and south. Overhead transmission lines were located along 25th Avenue and Madison Avenue.

3.2 Current Uses of the Site

At the time of the Site reconnaissance, the Site comprised open agricultural land and vacant parcels.

3.3 Current Uses of the Adjoining Properties

At the time of the Site Reconnaissance, the Site was bordered to the north by Madison Avenue and to the west by 25th Avenue with agricultural fields beyond. The adjoining properties in all directions were agricultural fields.

3.4 Site Reconnaissance - Specific Indicators of Environmental Conditions

In addition to the general description of the Site, specific indicators of environmental conditions were also evaluated for the Site. Observations made during the Site reconnaissance are summarized in the following table. Affirmative responses are discussed in more detail following the table.

Category	Feature	Observed
Interior (Not Applicable)	Elevators	N/A
	Air Compressors	N/A
	Incinerators	N/A
	Waste Treatment Systems	N/A
	Presses/Stamping Equipment	N/A
	Hydraulic Lifts or Hoists	N/A
	Paint Booth	N/A
	Plating Tanks	N/A
	Lathes, Screw Machines, etc.	N/A
	Regulated Hazardous Materials Use and Storage	N/A
	Floor Drains and Similar Facilities	N/A
Aboveground Chemical or Other Waste Storage or Waste Streams	Aboveground Storage Tanks (ASTs)	No
	Drums, Barrels and/or Containers > than 5-gallons	No
	Chip Hoppers	No
	Hazardous or Petroleum Waste Streams	No
Underground Chemical or Waste storage, Drainage or Collection Systems	Underground Storage Tanks (USTs)	No
	Fuel Dispensers	No
	Sumps or Cisterns	No
	Dry Wells	No
	Oil/Water Separators	No
	Flood Drains, Trench Drains, etc.	No
	Pipeline Markers	No
Exterior Observations	Stressed Vegetation	No
	Stained Soil or Pavement	Yes
	Pad or Pole-Mounted Transformers and/or Capacitors	Yes
	Soil Piles of Unknown Origin	No
	Leachate or Other Waste Seeps	No
	Trash, Debris, and/or Other Waste Materials	No
	Uncontrolled Dumping or Disposal Areas	No
	Surface Water Discoloration, Sheen or Free Product	No
	Strong, Pungent or Noxious Odors	No
	Groundwater Wells	Yes
	Storm Water Retention or Detention Ponds	No
Pits, Ponds or Lagoons	No	

Five (5) water wells were listed on the EDR Well Search Data Map; however, only one (1) well observed at the time of the Site reconnaissance. These records are discussed in Section 5.1 of this report.

One (1) irrigation well was observed on the northeast corner of the Site with an associated tank and electrical utilities. The well was accompanied by a hydraulic pump and a 35-gallon drum of hydraulic oil. Stained concrete was observed near the hydraulic pump.

Concrete standpipes with pumps and irrigation pipes were observed throughout the Site.

Three (3) pole-mounted transformers were observed on the Site along Madison Avenue, two (2) were located at the northwest corner of the Site and one (1) was located at the northeast corner. No staining or leaking was observed.

Other Specific Indicators of Environmental Conditions

No other specific indicators were observed during the Site reconnaissance.

4.0 HISTORICAL AND CURRENT INFORMATION ON THE PROPERTY AND ADJOINING PROPERTIES

The history of land-use on and near the Site was determined from the review of historic aerial photographs, topographic maps, Sanborn maps, building permits, and historic city directories. The findings are summarized in the following subsections.

4.1 Aerial Photograph Review

Available historical aerial photographs of the Site and vicinity for the years 1937, 1940, 1950, 1960, 1974, 1984, 1994, 2005, 2009, 2012, and 2016 were reviewed for indications of past Site use and/or Site activities which may have involved the manufacture, generation, use, storage, and/or disposal of hazardous materials. The results of the aerial photograph review are summarized in the following table. Copies of the historical aerial photographs are included in Appendix D.

Year	Summary of Information
1937-1940 (EDR)	The Site and the adjoining properties in all directions appear as undeveloped land.
1950-2016 (EDR)	The Site and adjoining properties are occupied by row crop agriculture. 25 th Avenue borders the Site to the north and Madison Avenue borders the Site to the west. Canals have been constructed alongside Madison Avenue and trending along other roads throughout the Site.

4.2 Topographic Map Review

Available topographic maps of the Site and vicinity for the years 1929, 1940, 1943, 1950, 1954, 1956, 1981, and 2012 were reviewed for indications of past Site use and/or Site activities which may have involved the manufacture, generation, use, storage, and/or disposal of hazardous materials. Copies of the historical topographic maps are included in Appendix D.

A review of the historical topographic maps did not prompt any environmental concerns.

4.3 Sanborn Fire Insurance Map Review

Sanborn maps were not available for the subject Site or surrounding areas.

4.4 Historical City Directory Review

City directories can provide information concerning past and current occupancy of the Site and adjacent areas. Historical city directory information was not provided for the Site.

4.5 Building Permits

Building records can provide a history of on-Site structures, features, and development. Building permits were not available due to the rural nature of the subject Site.

4.6 User Provided Information

This section summarizes information provided by the user that assisted in the identification of potential RECs associated with the Site.

4.6.1 Environmental Questionnaire

Moore Twining submitted an Environmental Questionnaire to Mr. Bert Verrips, a representative of Environmental Consulting Services. Mr. Verrips reported that aerial imagery shows that an agricultural well may be located on the eastern portion of the property. Mr. Verrips did not know if the well was active or abandoned. Mr. Verrips also indicated that Westland Water District lateral irrigation pipelines were present underground, running east and west along section lines throughout the Site.

Moore Twining submitted an Environmental Questionnaire to Environmental Consulting Services for distribution to the Site owner. At the time this report was issued to the client, the completed questionnaire had not been returned to Moore Twining.

A copy of the environmental questionnaire is included in Appendix E.

4.6.2 Previous Investigations

No reports of previous investigations were provided by the client or otherwise located; however, previous investigations have been conducted for properties located immediately to the north off-Site. Copies of the reports of the previous investigations are presented in Appendix E.

Off-Site

Soil & Water Analysis Report conducted by Provost & Pritchard Consulting Group, dated August 11, 2014

A Soil and Water Analysis Report was prepared by Provost & Pritchard Consulting Group dated August 11, 2014 for a 282-acre property 3.4 miles north of the Site located at the southeastern corner of Avenal Cutoff Road and 25th Avenue. The report was prepared for Westside Assets Solar Project. The report concluded that the property was not suitable for sustaining long-term agricultural crop production due to saline-sodic soils. Groundwater in the area was reported to indicate high levels of salinity, boron, chloride, sodium, carbonates, and bicarbonates. The report concluded the following:

“Since the proposed project is compatible for use with dry-farm seasonal grazing or a similar agricultural activity, the project is a compatible use with Farmland Security Zone contract pursuant to Government Code Section 51238.1(a) and the County of Kings Implementation Procedures for the California Land Conservation “Williamson” Act of 1965.”

Soil Sampling conducted by Moore Twining, dated November 18, 2016

Moore Twining conducted soil sampling in November 2016 for an area approximately 2.48 miles north of the Site. Per the Client’s request, two (2) soil borings were hand augered on November 3, 2016 for collection of shallow soil samples to characterize organochlorinated pesticides (OCPs) and arsenic in soil. The soil samples were analyzed for OCPs by EPA Method 8081A and arsenic by EPA Method 6010B. Based on the results of the analytical testing, the soil samples did not contain concentrations of OCPs above the laboratory reporting limits. Arsenic was detected in the soil samples at concentrations ranging from 5.6 milligrams per kilogram (mg/kg) to 6.8 mg/kg. These concentrations are considered representative of background concentrations for the vicinity. The detected concentrations of arsenic were of similar magnitude across the Site and are consistent with established background concentrations for California (Kearney Foundation of Soil Science, 1996). In addition, the detected concentrations of arsenic were below the soluble threshold limit concentration of 50 mg/kg for landfill sampling requirements.

Phase I Environmental Site Assessment Draft conducted by Moore Twining, dated January 2017

Moore Twining conducted a Phase I ESA in January 2017 for a 577-acre parcel approximately 2 miles to the north of the Site. The report for this Phase I ESA was not published. This report is in draft form and was not issued to the client. The assessment revealed no evidence of CRCs, HRECs, or RECs; however, the

assessment did reveal business risks. The business risks identified in the report included locating the high-pressure gas pipeline on-site to prevent hazards during development, addressing soil staining observed near a leaking 50-gallon drum of Rando HD ISO 46 hydraulic lubricating oil, and identifying the contents of two (2) approximately 400-gallon poly-tanks to determine if these tanks contained fertilizers or pesticides.

According to the unpublished Phase I ESA, the risk associated with the past agricultural uses of the Site was judged to be low based on the results of the analytical tests of soil samples collected at the two locations on the Site in Moore Twining's 2016 Soil Sampling, and no further action was recommended.

Phase I Environmental Site Assessment conducted by Moore Twining, dated November 16, 2018

Moore Twining conducted a Phase I ESA in November 2018 for a 1,825-acre parcel approximately 0.55 miles north of the Site. The assessment revealed a REC in connection with the Site, which included two (2) leaking hydraulic pumps located on the eastern portion of the Site. The hydraulic pumps were accompanied by 35-gallon drums of hydraulic oil. Staining was observed on the soil surrounding the drums of hydraulic oil and the hydraulic pumps. Three (3) additional considerations were included in the assessment, which included the possible presence of agricultural chemicals in soils at the Site, the location of the high-pressure natural gas pipeline located on the Site, and secondary containment for drums of hydraulic oil and other hazardous chemicals. Moore Twining recommended soil sampling and analysis in the areas of former agricultural use to evaluate the potential for human health risk or special requirements for handling, disposal, assessment, and remediation. Moore Twining also recommended that the shallow soil surrounding the leaking hydraulic pumps and oil drums be removed and disposed of in accordance with local, state, and federal laws and regulations.

Soil Sampling conducted by Moore Twining, dated November 2, 2018

Moore Twining conducted soil sampling in November 2018 for a 1,825-acre parcel approximately 0.55 miles north of the Site. Per the Client's request, four (4) soil borings (SB-1, SB-2, SB-3 and SB-4) were hand augered on October 24, 2018 for collection of shallow soil samples to characterize organochlorinated pesticides (OCPs) in soil. Four soil borings (LB-1, LB-2, LB-3 and LB-4) were hand augered on October 24, 2018 for collection of shallow soil samples to characterize aerially deposited lead (ADL) generated by automobile traffic on entries to major roads. LB-1 and LB-2 were taken from the northwest corner of the Site near Avenal Cutoff Road; LB-3 and LB-4 were taken from the southwest corner of the Site near Laurel Avenue.

The soil samples were analyzed for OCPs by EPA Method 8081A and lead by EPA Method 6010B. Based on the results of the analytical testing, the soil samples did not contain concentrations of OCPs above the laboratory reporting limits. Lead was detected in the soil samples at concentrations ranging from 7.7 milligrams per kilogram (mg/kg) to 10 mg/kg with an average concentration of 8.8 mg/kg. The detected concentrations were below the Human Health Risk Assessment (HHRA) for residential soils of 80 mg/kg

and below the soluble threshold limit concentration of 5 milligrams/Liter (mg/L) for landfill sampling requirements. No other chemicals of concern were detected above the method detection limit. Moore Twining did not recommend any further action.

4.6.3 Title Documentation

Title documents, including a chain of title and/or title report, can provide the environmental professional with information regarding current and past ownership and information regarding environmental liens and/or land use and activity limitations.

No environmental liens or activity/use restrictions regarding the Site were located; however, title and/or judicial records were not provided by the client or reviewed.

4.6.4 Institutional and Engineering Controls/Land Use Limitations/Environmental Liens

Institutional and Engineering Controls can indicate the current and/or historical presence of recognized environmental conditions that required remedial activity at the Site.

No institutional and engineering controls, land use limitations or environmental liens related to remediation and/or cleanup were found as part of this assessment; however, title and/or judicial records were not provided by the client or reviewed.

4.7 Past Uses of the Property

According to Moore Twining's review of historical aerial photographs, the Site has been used for agricultural purposes since at least 1950. According to the documentation provided by Mr. Verrips, the Site has been owned by Westlands Water District for approximately ten years and has been occupied by winter wheat during the wet season and fallow fields during the dry season.

4.8 Past Uses of Adjoining Property

According to Moore Twining's review of historical aerial photographs, Madison Avenue has bordered the Site to the north and 25th Avenue has bordered the Site to the west since at least 1937. The adjoining properties have been used for agricultural purposes since at least 1954.

5.0 REGULATORY RECORDS REVIEW

Requests to review files for the Site were submitted to the Regional Water Quality Control Board (RWQCB), the Department of Toxic Substances Control (DTSC), and the Kings County Department of Public Health (KCDPH).

The RWQCB, the DTSC, and the KCDPH did not report any files for the Site.

Printouts and information from regulatory databases and agencies are included in Appendix C.

5.1 Facilities Identified in the Regulatory Record Review

The information regarding the Site was obtained from the EDR report, the DTSC Envirostor website (<http://envirostor.dtsc.ca.gov/>, Envirostor), and the State Water Resource Control Board's GeoTracker website (<http://geotracker.waterboards.ca.gov/>, GeoTracker). At the time this report was issued to the client, the Site did not appear on the Envirostor or GeoTracker websites.

Five (5) water wells were listed on the EDR Well Search Data Map under State Water Well Information. Four (4) wells were listed under Kern County and one (1) well was listed under Kings County. Information regarding installation dates or current status of the wells was not provided.

5.2 Facilities Identified in the EDR Report

Moore Twining contracted EDR to perform a search of available federal, state, and local database information systems for identifying known recognized environmental conditions present on the Site and nearby properties that have the potential to adversely impact the Site being assessed in this study. EDR's findings are summarized below. The complete report furnished by EDR is included in Appendix D of the report.

TABLE 1 SUMMARY OF REGULATORY LISTS SEARCHED BY EDR AND RECORDS REVIEWED*								
Database	Target Site	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
Federal Facility		0.500	0	0	0	NR	NR	0
SEMS		0.500	0	0	0	NR	NR	0
SEMS Archive		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA-TSDF		0.500	0	0	0	NR	NR	0
RCRA Lg, Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROLS		0.500	0	0	0	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
RESPONSE		1.000	0	0	0	0	NR	0
ENVIROSTOR		1.000	0	0	0	0	NR	0
SWF/LF		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
SLIC		0.500	0	0	0	NR	NR	0
FEMA UST		0.250	0	0	NR	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0

NR = Not Requested (Beyond Search Distance)

TP = Target Property

* = Table includes only databases required for ASTM E1527-13 compliance. Other databases are included in the EDR report and discussed in the following sections as appropriate.

5.2.1 On-Site

The Site was not listed on any regulatory databases.

5.2.2 Off-Site

Moore Twining’s review of the referenced databases also considered the potential or likelihood of contamination from adjoining and nearby properties impacting this Site. To evaluate which of the adjoining and nearby properties identified in the regulatory database report present an environmental risk to the subject Site, Moore Twining considered the following criteria:

- The type of database on which the property is identified;
- The topographic position of the property relative to the subject Site;
- The direction and distance of the property from the subject Site;
- Local soil conditions in the area of the Site;
- The known or inferred groundwater flow direction;
- The status of the respective regulatory agency-required investigation(s) of the identified property, if any; and
- Surface and subsurface obstructions and diversions (e.g., buildings, roads, sewer systems, utility service lines, rivers, lakes and ditches) located between the property and the subject Site.

No regulatory listings were reported for the area within the stated search radius.

5.2.3 Orphan Sites

An Orphan Site is a listed property in the same zip code as the subject Site which cannot be mapped because of inadequate address information. Moore Twining reviewed ten (10) reported Orphan Sites provided by EDR. The Orphan Sites are summarized in the following table:

Summary of Orphan Properties					
Listing	Location	Database	Location Confirmed	Distance from Site	Risk, Rationale
(No Listing)	North of Dover Avenue, east of Highway 43	CDL	Yes	22 miles	No, distance from Site
(No Listing)	67750 Bailey Road, 600 yards west of	CHMIRS	Yes	16 miles	No, distance from Site

Summary of Orphan Properties					
Listing	Location	Database	Location Confirmed	Distance from Site	Risk, Rationale
	domestic sewage pond				
(No Listing)	1500 feet west of 20½ Avenue	ERNS	Yes	3 miles	No, distance from Site
Super Kat Inc. II	Nevada Avenue	HIST UST	Yes	1 mile	No, distance from Site
Westfarmers	Corner of Avenal Cutoff Road and Highway 41 just south of Nevada Avenue	CHMIRS	Yes	6 miles	No, distance from Site
(No Listing)	West side of Quebec Avenue and 6 th Avenue	CHMIRS	Yes	19 miles	No, distance from Site
(No Listing)	Avenue 20 ¼ mile north of Quebec	CHMIRS	Yes	8 miles	No, distance from Site
Stone Land Company	28251 Nevada Avenue	FINDS, ECHO	Yes	3 miles	No, distance from Site
Esajian Farming Co.	NW Corner of Gale Avenue and Nevada Avenue	FINDS, ECHO	Yes	9 miles	No, distance from Site
PG&E	1500 feet west of 20½ Avenue	HAZNET	Yes	3 miles	No, distance from Site

The ten (10) provided Orphan Site locations were confirmed and determined to be located in positions considered to be cross gradient, downgradient, or hydrologically isolated from the Site, or were beyond the applicable ASTM search parameters. It is considered a low potential that the Orphan Sites have adversely impacted the environmental condition of the Site.

6.0 SUMMARY OF FINDINGS AND OPINIONS

The findings of the Phase I ESA are summarized in the following sections:

6.1 On-Site

The Site is located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California (Site). The Site has been assigned the following Assessor's Parcel Numbers (APNs): 026-320-009, 026-339-001, and 026-339-074.

According to Moore Twining's review of historical aerial photographs, the Site has been used for agricultural purposes since at least 1950. According to the documentation provided by Mr. Verrips, the Site has been owned by Westlands Water District for approximately ten years and has been occupied by winter wheat during the wet season and fallow fields during the dry season.

At the time of the Site reconnaissance, the Site comprised 1,040 acres of agricultural fields and vacant land. Unpaved agricultural canals were located along 25th Avenue trending north and south. In addition, three (3) lateral unlined irrigation canals were located throughout the Site, trending north and south. Overhead transmission lines were located along 25th Avenue and Madison Avenue.

One (1) irrigation well was observed on the northeast corner of the Site with an associated tank and electrical utilities. The well was accompanied by a hydraulic pump and a 35-gallon drum of hydraulic oil. Stained concrete was observed near the hydraulic pump.

Concrete standpipes with pumps and irrigation pipes were observed throughout the Site.

Three (3) pole-mounted transformers were observed on the Site along Madison Avenue, two (2) were located at the northwest corner of the Site and one (1) was located at the northeast corner. No staining or leaking was observed.

Five (5) water wells were listed on the EDR Well Search Data Map under State Water Well Information; however, only one (1) well observed at the time of the Site reconnaissance. Four (4) wells were listed under Kern County and one (1) well was listed under Kings County. Information regarding installation dates or current status of the wells was not provided.

The Site was not listed on any regulatory databases.

6.2 Off-Site

At the time of the Site Reconnaissance, the Site was bordered to the northwest by Avenal Cutoff Road with agricultural fields beyond. The adjoining properties in all directions were agricultural land.

There were no regulatory listings found within the search radius.

6.3 Data Gaps, Limitations, and Deviations

Data gaps are described as a lack of or inability to obtain information required by the standards and practices listed in ASTM E1527-13, despite good faith efforts by the environmental professional or prospective landowner.

Chain of title and environmental lien information was not provided by the client. This is considered a data gap.

The material content of this report is intended to be consistent with a standard of practice as defined by ASTM E1527-13. However, the report format differs in style, arrangement, and presentation of material facts from the format described by ASTM.

7.0 CONCLUSIONS AND RECOMMENDATIONS

On behalf of Mr. Bert Verrips, Moore Twining performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E1527-13 for a property located at the southeast intersection of 25th Avenue and Madison Avenue in an unincorporated area of Kings County, west of the City of Stratford, California. This assessment has revealed no evidence of CRECs, HRECs, or RECs.

Additional Considerations

The legal application of agricultural chemicals is not considered a REC by the Comprehensive Environmental Response, Compensation and Liability (CERCLA) act of 1980. The exemption is noted in (4) *Application of Pesticides*—Section 107(i) of the ASTM E1527-13 standard. However, a clause is noted in the exemption stating, “The pesticide exemption also contains a “savings clause” that provides that the cost recovery prohibition does not alter or modify any obligations or liability under any other federal or state law for damages, injury or loss resulting from a release of hazardous substances, or for the costs of removal or remedial actions of such hazardous substances.” It has been Moore Twining’s experience that persistent pesticides can exist in soils after long-term use of agricultural chemicals. From the historical documents researched, no information was discovered that would indicate illegal agricultural activities occurred at the Site. As the Site was used from at least the 1950’s for agricultural purposes, persistent pesticides, and other related agricultural chemicals may exist in the soils at the Site. These constituents, even in low concentrations, can result in federal, state and local requirements for movement, disposal, assessment, and remediation. If present, costs could be incurred to address these conditions.

Recommendations

It is Moore Twining’s recommendation that, prior to the sale, purchase, and/or development of the property, the soil in the areas of former agricultural use should be sampled and analyzed to evaluate the potential for human health risk or special requirements for handling, disposal, assessment and remediation. The presence of pesticides or other constituents of concern in the soil could result in increased disposal fees, and costs for assessment and remediation depending on the concentration of the pesticides and/or other constituents of concern in soils at the Site.

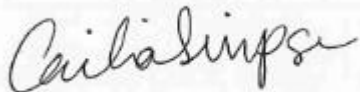
8.0 CLOSING

Moore Twining Associates, Inc. performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E1527-13 for the subject Site. Any exceptions to, or deletions from, this practice are described Section 6.3 of this report.

We appreciate the opportunity to be of service to Mr. Bert Verrips, AICP, Environmental Consulting, on this project. Please contact our office at (800) 268-7021 if you have any questions regarding this report.

Sincerely,

MOORE TWINING ASSOCIATES, INC.
Environmental Services Division



Cecilia Simpson
Phase I Assessment Project Manager



Katie Lister PG, QSD
Environmental Division Manager

"I declare that, to the best of my knowledge and belief, I meet the definition of Environmental Professional. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

9.0 REFERENCES

American Society for Testing and Materials. (2013). *ASTM Standards of Environmental Site Assessments for Commercial Real Estate, E1527-13, 2nd ed.* West Conshohocken, Pennsylvania: ASTM International.

California Geologic Survey. (2010). *Geologic Map of California 1:750,000 Scale.*

Environmental Data Resources, Inc. (April 3, 2019). *Verrips Chestnut Solar, East of 25th Avenue and South of Madison Avenue, Stratford, CA 93266- Inquiry Number: 05607929.3r.* Environmental Data Resources, Inc.

Kearney Foundation of Soil Science. (1996). *Background Concentrations of Trace and Major Elements in California Soils.*

Moore Twining Associates, Inc. (2018). *Phase I Environmental Site Assessment Aquamarine Solar Project.*

Moore Twining Associates, Inc. (2018). *Soil Sampling and Pesticide Analysis.*

Moore Twining Associates, Inc. (2017). *Phase I Environmental Site Assessment and Soil Sampling Westside Solar Project Phases 3 and 4.*

Moore Twining Associates, Inc. (2016). *Analytical Results for Samples.*

Provost & Pritchard Consulting Group. (2014). *Soil and Water Analysis Report for Westside Assets Solar Project.*

Wagner, D. (2002). *Note 36: Geomorphic Map of California.* California Geologic Survey.

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Moore Twining Associates, Inc. Phase I Environmental Site Assessment staff is composed of a group of environmental professionals that perform Environmental Site Assessments on a routine basis. The Phase I ESA staff is managed and supervised by individuals who conduct, prepare, oversee, and/or review Environmental Site Assessments on a daily basis. Qualification profiles for these individuals are provided in the following section.

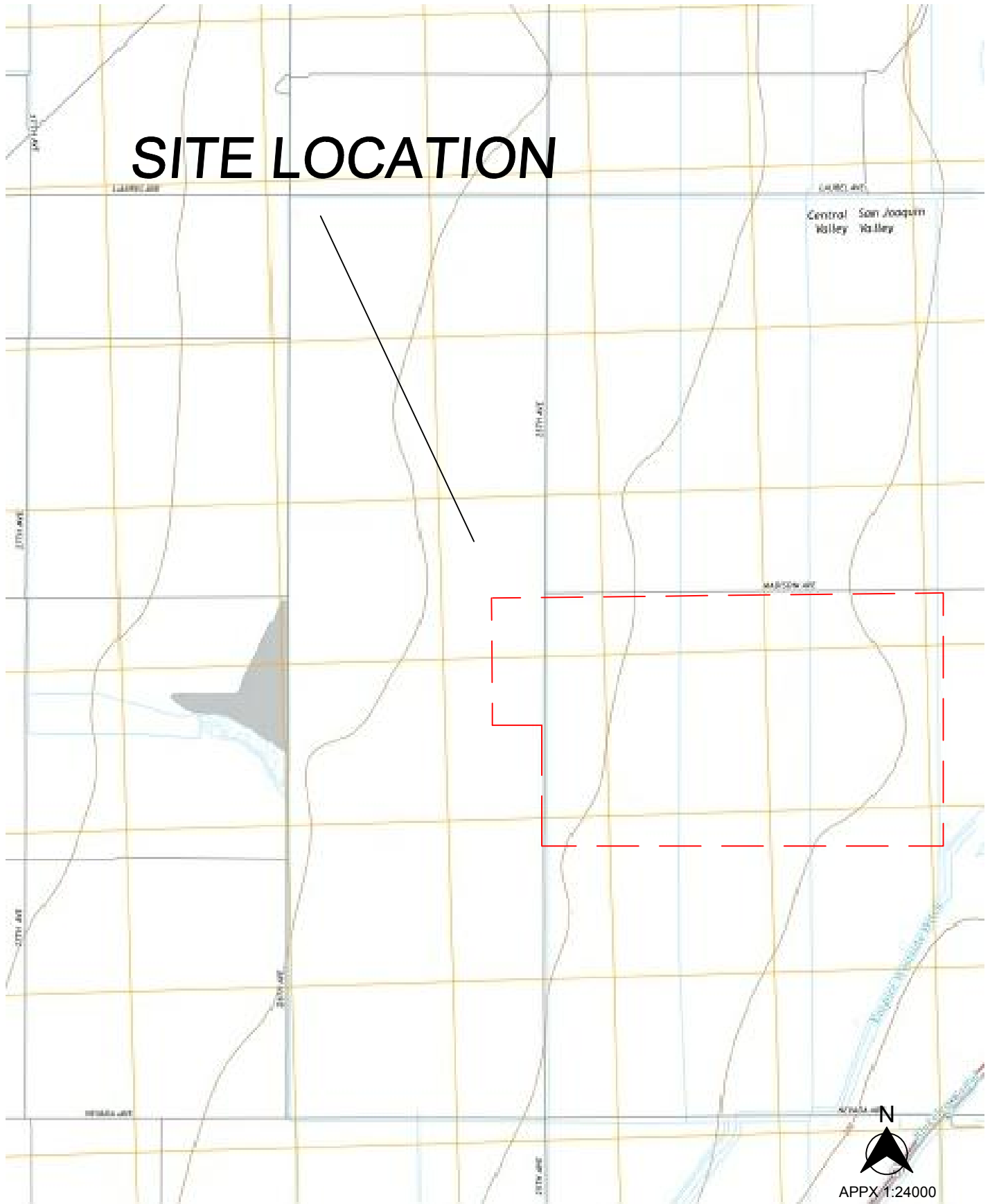
Reviewed by
Katie Lister PG, QSD
Environmental Division Manager

Mrs. Lister has fifteen years of experience conducting Phase I Environmental Site Assessments, Phase II assessment work, and Phase III remediation. Mrs. Lister has conducted environmental site assessments for a number of different project types including pesticide production facilities, shopping centers, gas stations, school sites, mines, large vacant properties, and agricultural sites.

APPENDIX A

DRAWINGS

SITE LOCATION

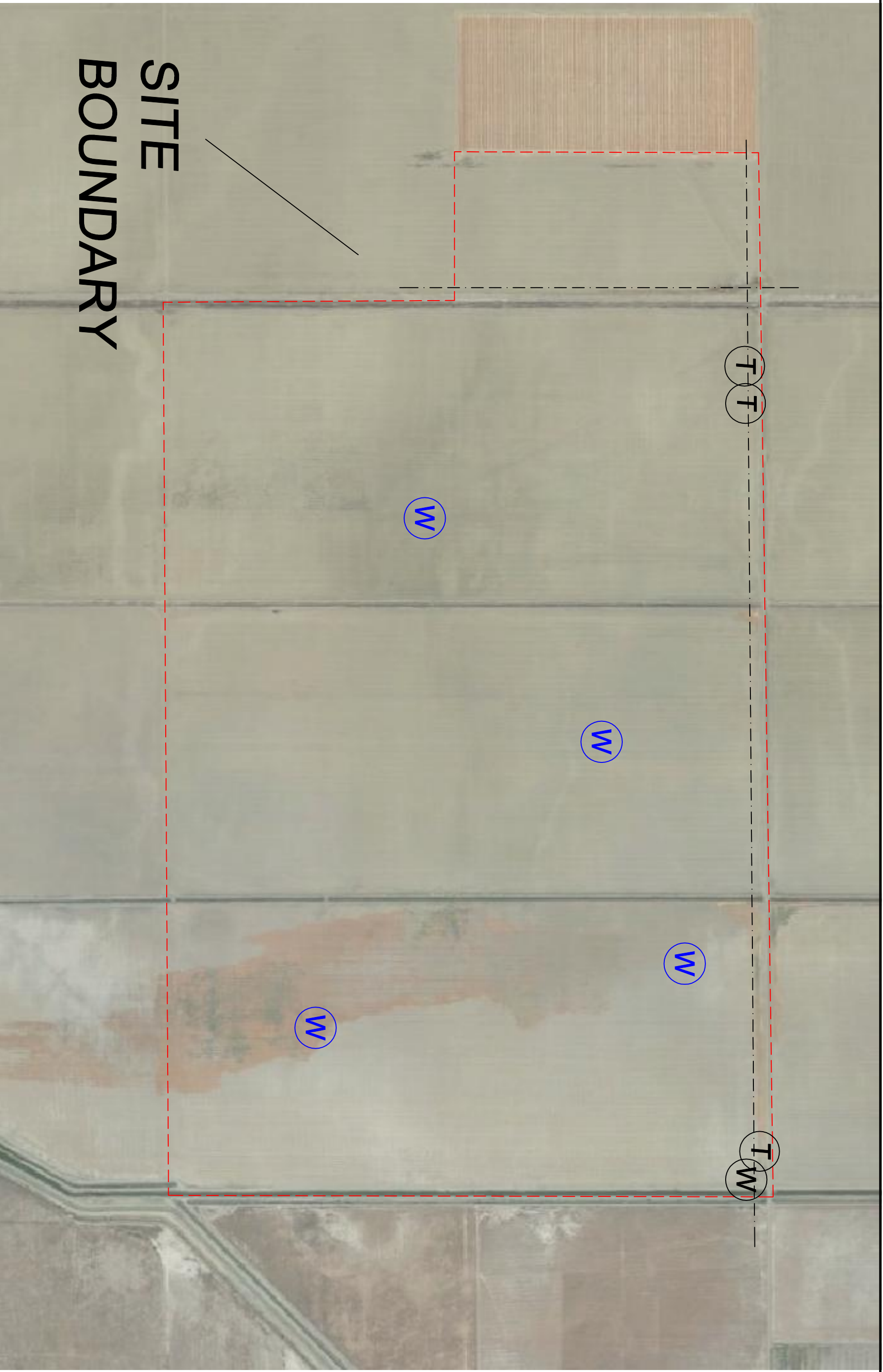


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APPX 1:24000

SITE LOCATION MAP
CHESTNUT SOLAR
25TH AVENUE AND MADISON AVENUE
KINGS COUNTY, CALIFORNIA

FILE NO. Site Loc Map	DATE DRAWN: 05/02/2019
DRAWN BY: CS	APPROVED BY:
PROJECT NO. C64407.0100	DRAWING NO. 1





SITE BOUNDARY



OBSERVED WELL



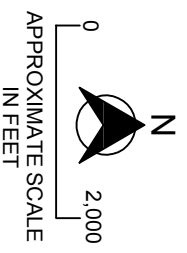
TRANSFORMER



EDR MAPPED WELL



POWERLINES



**MOORE TWINING
ASSOCIATES, INC.**

CHESTNUT SOLAR
25TH AVENUE AND MADISON AVENUE
KINGS COUNTY, CALIFORNIA

FILE NO.

DATE DRAWN:
05/02/2019

DRAWN BY:
CS

APPROVED BY:

PROJECT NO.
C64407.0100

DRAWING NO.
1

APPENDIX B

SITE PHOTOGRAPHS



View from northwest corner of Site facing east along Madison Avenue



View from 25th Avenue facing east



Pole-mounted transformers on Site



Unlined canal on Site facing south



General view of Site with pipes and standpipe facing south



Unlined canal on Site facing south



Madison Avenue facing west



Unpaved canal in east portion of Site facing south



Well with associated hydraulic tank in northeast corner of Site



Stained concrete at well in northeast corner of Site



Electrical utilities in northeast corner of Site



View from southeast corner of Site facing north

APPENDIX C

REGULATORY AGENCY DOCUMENTATION

Cecilia Simpson

From: Martin, Kelly@Waterboards <Kelly.Martin@Waterboards.ca.gov>
Sent: Wednesday, March 27, 2019 2:26 PM
To: Cecilia Simpson
Subject: Public Records Request Dated 3/26/2019

To Cecilia Simpson,

Central Valley Regional Water Quality Control Board does not have records for the following address:

- SE corner of 25th Avenue and Madison Avenue, Lemoore, CA.

Thank You,

Kelly Martin
Scientific Aide
Central Valley Regional Water Quality Control Board
Fresno Office
(559) 444-2489
Kelly.Martin@Waterboards.ca.gov

Cecilia Simpson

From: Ponce, Mari <Mari.Ponce@co.kings.ca.us>
Sent: Wednesday, May 08, 2019 11:41 AM
To: Cecilia Simpson
Subject: RE: 25th and Laurel Records Request

Good morning Cecilia,

In regards to the first request for the property on 25th & Madison we currently do not have any information on the property. My co-worker is currently working on the 2nd request. You should be receiving an email from her. Please let me know if you have any other questions or concerns. Thank you and have a great day.

Mari Ponce

Office Assistant II
Kings County Public Health Department
Environmental Health Services
330 Campus Drive, Bldg. #1
Hanford, CA 93230
Ph: (559)584-1411 Fax: (559) 584-6040

From: Cecilia Simpson [mailto:CeciliaS@mooretwining.com]
Sent: Wednesday, May 08, 2019 11:27 AM
To: Ponce, Mari
Subject: 25th and Laurel Records Request

Hello Mari,

Here are the APNs for that second site we talked about on the phone: 026-260-001, -002, -003, -016, -017, -018, -019, -021, -026, -027, -029, -031, -033, and 026-320-007.

Thank you for looking these up for me and let me know if I can provide any other informatio to help.



Cecilia Simpson
Phase I Assessment Project Manager
Moore Twining Associates, Inc.
2527 Fresno St.
Fresno, CA 93721
Ph: (559) 268-7021 Ext: 279
Toll Free: (800) 268-7021
Fax: (559) 777-8990
CeciliaS@mooretwining.com
www.mooretwining.com

APPENDIX D

EDR REPORT

[Note: Due to the very large file size the EDR Report is not reproduced here. Access to the EDR Report is available at the following web link:

<https://www.dropbox.com/s/4u7keccs8fv62ho/Bert%20Verrips%20Chestnut%20Solar%20Phase%20I%20FINAL.pdf?dl=0>