Appendix 4.2-2   Health Risk Assessment

RAMBOLL

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Development Services Department
777 Cypress Ave
Redding, CA 96001

PEER REVIEW OF HEALTH RISK ASSESSMENT
CITY OF REDDING RIVER CROSSING MARKETPLACE SPECIFIC PLAN

Dear Mr. Manuel:

Ramboll US Corporation (Ramboll) conducted an expert peer review of the health risk assessment (HRA) dated August 2017 prepared by PlaceWorks for the River Crossing Marketplace Specific Plan (Specific Plan). We found that the HRA was prepared in accordance with the applicable requirements the City of Redding (City). However, there are other potential topics that may warrant additional discussion in the interest of providing the most complete record possible. These topics are addressed below. Please note that none of the information below undermines the HRA's conclusions that development under the Specific Plan would not result in a significant health risk or otherwise discloses a new or substantially increased significant impact.

TECHNICAL ITEMS

1. Construction Health Risk Assessment Methodology and Results

Ramboll conducted a screening construction HRA for the River Crossing Marketplace Specific Plan to evaluate if construction of the Project would result in any significant impacts. For this HRA, Ramboll analyzed the human health effects from emissions of diesel particulate matter (DPM) associated with the Project construction equipment. Methods used in this HRA are consistent with the California air district[1], California Environmental Protection Agency (Cal/EPA), and United States Environmental Protection Agency (USEPA) risk assessment guidance. The analysis incorporates conservative (i.e., health protective)

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[1] Shasta County Air Quality Management District does not have air dispersion modeling or health risk assessment guidance. For this project, we used dispersion modeling guidance from South Coast Air Quality Management District and Bay Area Air Quality Management District, since this guidance would be most applicable to the Costco facility, which is warehousing facility with truck movements in and out of the site.

methodologies for the following: (1) the estimation of emissions; (2) the calculation of airborne concentrations of DPM during construction activities at receptor locations; and (3) the estimation of excess lifetime cancer risks.[2]

Emissions Calculation

Emissions from off-road construction equipment and haul trucks associated with Project development were estimated using California Emission Estimator Model version 2016.3.2 (CalEEMod®) by PlaceWorks for the EIR's air quality analysis. PlaceWorks provided a CalEEMod® model output estimating the overall project emissions (construction and operation) for the entire site plan. Ramboll used the annual average DPM exhaust emissions from the CalEEMod® model output to estimate emissions from the onsite construction equipment, offsite street and ramp improvement construction equipment, and haul trucks associated with the entire construction. Based on the CalEEMod® analysis, Placeworks estimated emissions for unmitigated and mitigated scenarios. Emissions for the unmitigated scenario were estimated using fleet-wide default emission factors and emissions for the mitigated scenario were estimated assuming all on-site construction equipment meet Tier 3 emissions standards. The PlaceWorks analysis assumed that the Project area will be developed over an 11-month time frame with on-site construction beginning in June 2019 and ending in April 2020. The offsite street and ramp improvements will take place concurrently, happening over a 10-month time period beginning in June 2019 and ending in March 2020. On-site construction is expected to last for roughly 9 hours a day, between the hours of 7 AM and 4 PM and the off-site street and ramp improvements would take place for 8 hours between 7 AM to 3 PM. The average daily unmitigated and mitigated emissions estimated from construction equipment and haul truck activity are summarized in **Table 1.** In addition to the unmitigated and mitigated scenarios estimated by PlaceWorks, Ramboll estimated emissions for an additional scenario reflecting Mitigation Measure AQ-1, which requires some construction equipment to meet Tier 4 standards and others to meet Tier 3 standards for both the onsite construction and street improvement. **Table 2** identifies the equipment in each phase that would meet Tier 3 and Tier 4 standards.[3]

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[2] For sources of diesel exhaust, such as construction equipment and haul trucks, the primary health impact is cancer risk. The DPM concentration at which the cancer risk significance threshold is exceeded is lower than the concentration for exceeding the chronic health index. Thus, non-cancer hazard indices from diesel exhaust were not explicitly estimated here.

[3] Note that Tier 3 engines with diesel particulate filters can also achieve similar reductions in emissions as Tier 4 engines.

Table 1: Emission Scenarios from Construction Equipment and Haul Truck Activity

Construction Phase	Construction Subphase	Year	Off-Road Equipment Exhaust PM$_{10}$ Emissions (lb/year)[a]			Haul Truck Exhaust PM$_{10}$ Emissions (lb/year)
			Unmitigated	Mitigated (Tier 3)	MM AQ-1 (Tier 3/Tier 4)	
Onsite Construction	Site Preparation	2019	4.9	1.8	0.25	0.1
	Grading	2019	177	34	6.7	1.7
	Building Construction	2019	84	33	2.6	14
	Building Construction	2020	97	43	3.5	12
	Paving	2019	4.1	1.6	0.15	0.3
	Paving	2020	4.8	2.0	0.20	0.3
	Architectural Coating	2019	8.4	6.2	0.26	0.2
	Architectural Coating	2020	9.7	8.3	0.34	0.2
	Total Emissions (lbs)		**390**	**130**	**14**	**28**
	Total Emissions (g/s)		**2.34E-02**	**7.75E-03**	**8.61E-04**	**1.68E-03**
Offsite Street and Ramp Improvements	Earthwork 1	2019	42	25	4.6	1.1
	Utilities and Concrete 1	2019	24	18	6.7	2.2
	Paving-Electrical-Striping 1	2019	18	13	13	2.7
	Earthwork 2	2020	42	25	4.6	1.1
	Utilities and Concrete 2	2019	24	18	6.7	2.2
	Paving-Electrical-Striping 2	2020	18	13	10	2.7
	Earthwork 3	2019	42	25	4.6	1.1
	Utilities and Concrete 3	2019	2.0	1.4	0.5	0.2
	Utilities and Concrete 3	2020	20	16	6.2	1.5
	Paving-Electrical-Striping 3	2020	16	13	10	2.0
	Total Emissions (lbs)		**248**	**167**	**67**	**17**
	Total Emissions (g/s)		**1.95E-02**	**1.33E-02**	**5.31E-03**	**1.32E-03**

[a] – Numbers in these columns may not add up exactly due to rounding.

Table 2: Construction Equipment Inventory

Phase	Subphase	Equipment Type	Quantity	Tier Standard
Onsite Construction Equipment	Site Preparation	Excavators	2	Tier 3
		Rollers	1	Tier 3
		Tractors/Loaders/Backhoes	2	Tier 3
	Grading	Excavators	3	Tier 4
		Graders	3	Tier 4
		Rollers	4	Tier 4
		Rubber Tired Dozers	1	Tier 4
		Scrapers	3	Tier 4
		Tractors/Loaders/Backhoes	5	Tier 4
	Building Construction (On-Site)	Cranes	1	Tier 3
		Forklifts	3	Tier 3
		Generator Sets	1	Tier 4
		Tractors/Loaders/Backhoes	3	Tier 4
		Welders	1	Tier 3
	Paving (On-Site)	Pavers	1	Tier 3
		Rollers	2	Tier 4
		Tractors/Loaders/Backhoes	1	Tier 3
	Architectural Coating (On-Site)	Air Compressors	1	Tier 3
Offsite Street and Ramp Improvements	Earthwork 1	Excavators	1	Tier 4
		Graders	2	Tier 4
		Paving Equipment	1	Tier 3
		Plate Compactors	1	Tier 3
		Scrapers	2	Tier 4
	Utilities and Concrete 1	Excavators	2	Tier 4
		Graders	1	Tier 4
		Plate Compactors	1	Tier 3
		Rubber Tired Loaders	2	Tier 3
		Tractors/Loaders/Backhoes	1	Tier 4

Table 2: Construction Equipment Inventory

Phase	Subphase	Equipment Type	Quantity	Tier Standard
	Paving-Electrical-Striping 1	Paving Equipment	1	Tier 3
		Rollers	3	Tier 3
		Tractors/Loaders/Backhoes	1	Tier 3
	Earthwork 2	Excavators	1	Tier 4
		Graders	2	Tier 4
		Paving Equipment	1	Tier 3
		Plate Compactors	1	Tier 3
		Scrapers	2	Tier 4
	Utilities and Concrete 2	Excavators	2	Tier 4
		Graders	1	Tier 4
		Plate Compactors	1	Tier 3
		Rubber Tired Loaders	2	Tier 3
		Tractors/Loaders/Backhoes	1	Tier 4
	Paving-Electrical-Striping 2	Paving Equipment	1	Tier 3
		Rollers	3	Tier 3
		Tractors/Loaders/Backhoes	1	Tier 4
	Earthwork 3	Excavators	1	Tier 4
		Graders	2	Tier 4
		Paving Equipment	1	Tier 3
		Plate Compactors	1	Tier 3
		Scrapers	2	Tier 4
	Utilities and Concrete 3	Excavators	2	Tier 4
		Graders	1	Tier 4
		Plate Compactors	1	Tier 3
		Rubber Tired Loaders	2	Tier 3
		Tractors/Loaders/Backhoes	1	Tier 4
	Paving-Electrical-Striping 3	Paving Equipment	1	Tier 3
		Rollers	3	Tier 3
		Tractors/Loaders/Backhoes	1	Tier 4

Air Dispersion Modeling

Near-field dispersion modeling of DPM emissions from construction sources was conducted using the USEPA's atmospheric dispersion modeling system (AERMOD, version 18081). A 20-meter-by-20-meter receptor grid was modeled out to 1,000 feet from the Project site boundary and health impacts at these receptor locations were evaluated.[4] Impacts for all receptors were conservatively analyzed assuming residential exposure parameters. Residential exposure assumptions are conservative because residents are assumed to be exposed to construction emissions during the entire construction period. A 20-meter-by-20-meter grid of volume sources was developed for the on-site construction equipment, with emissions within each parcel evenly distributed throughout the volume sources.[5] The model used meteorological data and terrain data from the closest monitoring station (KRDD, Redding Municipal Airport) for the years 2013-2017.[6]

Health Risk Assessment

The HRA was conducted using the same exposure parameters for receptors as described in the draft EIR, including the conservative assumption that all PM_{10} from diesel fueled construction equipment was DPM. Cancer risk was calculated using the total construction DPM emissions. In accordance with Office of Environmental Health Hazard Assessment (OEHHA) guidance, residential exposure begins in the third trimester to accommodate the increased susceptibility of exposures in early life. For construction periods of one year or less, we conservatively assume that exposure begins at birth (age 0), rather than at the third trimester due to higher overall intake of DPM. Following the OEHHA risk assessment procedures and the draft EIR, 95th percentile daily breathing rates for age groups 0-2 years old and for age groups that are greater than or equal to 2 years old were used. Breathing rates were referenced from the draft EIR for the operational health risk assessment.

Results

Table 3 summarizes the maximum incremental cancer risk for the Mitigation Measure AQ-1 – Tier3/Tier 4 scenario. With implementation of Mitigation Measure AQ-1, the Project's excess cancer risk from construction emissions would be below the OEHHA significance threshold, and there the Project would be less than significant.

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[4] BAAQMD 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

[5] SCAQMD 2008. Localized Significance Threshold Methodology. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

[6] The operational model in the draft EIR used meteorological data from 2009 to 2013. Ramboll used a more recent meteorological dataset to estimate construction impacts. However, this change will not have a significant impact on the cancer risk from DPM emissions since the dispersion model uses a 5-year average value.

Table 3: Maximum Incremental Cancer Risk from Project Construction on Residential Receptors			
	Maximum Incremental Cancer Risk (in a million)	**Receptor Location**	
Receptor Type	**Mitigation Measure AQ-1 – Tier 3/Tier 4 Scenario**	**UTMx**	**UTMy**
Residential	6.1	554700	4487620
OEHHA Threshold	10		
Exceeds Threshold?	No		

2. Offsite Diesel Particulate Matter (DPM) Emissions from Heavy-Duty Trucks

Ramboll conducted a screening-level analysis to evaluate the potential health risk from offsite DPM emissions from heavy-duty trucks during Project operations. To estimate annual off-site DPM emissions, emission factors in grams per mile were combined with the vehicle miles traveled (VMT) on the road segments outside the Project boundary.[7] Trucks traveling to and from the Project site were assumed to travel on I-5 before entering and exiting the site. **Figure 1** represents the modeled road segments.

Off-site DPM running emissions were estimated for Costco trucks (trucks with transport refrigeration units [TRUs]), fuel trucks, and other delivery trucks (without TRUs) using the same running emission factor, fleet mix, and operating schedule as for the on-site truck activities. The total off-site VMT per truck was estimated to be 0.83 miles for trucks entering and leaving the site, while the total on-site truck distance per truck was estimated to be 0.49 miles, based on the draft EIR. The off-site truck distance was estimated from the point where the trucks exit the highway to join the off-ramp until the project site, and from the project site to the point where the trucks join the highway on the on-ramp, as shown in **Figure 1**. The impacts from Project-related truck travel on the highways is negligible compared to impacts from all mobile source emissions on the highway and thus are not incorporated into the screening-level analysis.

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[7] For off-site truck emissions, the g/s emission factors reported in Table 2 were determined by multiplying the gram per mile emission factor obtained from the EIR with the VMT per day based on the off-site truck route. On-site emission factors were obtained from the draft EIR.

Table 4:	Emissions and Risk Contribution from Onsite and Offsite Trucks							
Receptor Type	Emissions Sources	Emissions Category	On-Site			Off-Site		
			Emission factors (g/s)	Emissions (g/year)	Cancer Risk (30 year)	Emission factors (g/s)	Emissions (g/year)	Cancer Risk (30 year)
Maximum Exposed Receptor - Existing Resident	Trucks with TRUs	Running	1.3×10^{-5}	144	0.034	2.3×10^{-5}	244	0.058
		Idling	3.6×10^{-6}	38	0.027	--	--	--
		TRU Genset Emissions	1.2×10^{-5}	127		--	--	--
	Fuel Trucks	Running	1.9×10^{-6}	43	0.014	3.2×10^{-6}	73	0.024
		Idling	5.1×10^{-7}	11	0.003	--	--	--
	Trucks w/o TRUs	Running	2.1×10^{-6}	51	0.014	4.6×10^{-6}	111	0.031
		Idling	2.0×10^{-6}	49	0.007	--	--	--
		Total Cancer Risk			0.10			0.11
Maximum Exposed Receptor - Future Resident	Trucks with TRUs	Running	1.3×10^{-5}	144	0.13	2.3×10^{-5}	244	0.221
		Idling	3.6×10^{-6}	38	0.089	--	--	--
		TRU Genset Emissions	1.2×10^{-5}	127		--	--	--
	Fuel Trucks	Running	1.9×10^{-6}	43	0.055	3.2×10^{-6}	73	0.093
		Idling	5.1×10^{-7}	11	0.007	--	--	--
	Trucks w/o TRUs	Running	2.1×10^{-6}	51	0.014	4.6×10^{-6}	111	0.031
		Idling	2.0×10^{-6}	49	0.014	--	--	--
		Total Cancer Risk			0.31			0.34

Table 4 summarizes the total on-site and off-site DPM emissions and risk contribution from truck activity. Off-site DPM emissions were estimated to be roughly similar to on-site DPM emissions even though the total distance traveled by trucks outside the Project boundary is higher. This is because on-site DPM emissions also include emissions from truck idling which are a major contributor to emissions. Idling is likely to occur off-site as well from trucks stopping at traffic lights, but it would be considered negligible compared to the 15 minutes of idling on-site.

Due to the lack of more specific truck route information, Ramboll performed a scaling analysis to determine the relative contribution to cancer risk from off-site DPM emissions compared to on-site DPM emissions. Cancer risk impacts from truck activity is determined primarily from the total DPM emissions and thus a scaling analysis provides a rough estimate of the relative contribution to cancer risk. For the existing maximally exposed individual resident (MEIR), total cancer risk from on-site DPM emissions was 0.10 in a

million, and the cancer risk contribution from off-site truck travel was estimated to be 0.11 in a million.[8] This would result in an overall cancer risk of 2.0 in a million from all sources, including the gasoline dispensing facility, well below the significance threshold of 10 in a million. For the future MEIR, total cancer risk from on-site DPM emissions was 0.31 in a million and contribution from the off-site truck travel was estimated to be 0.34 in a million.[8] This would result in an overall cancer risk of 2.2 in a million, again well below the significance threshold of 10 in a million.

3. Speciated Reactive Organic Gas (ROG) Emissions from Light-Duty Vehicles

Ramboll conducted a screening analysis to evaluate the potential contribution of ROG emissions from light-duty vehicles to the Project health risk assessment. Passenger cars travelling on the site and idling in the drive-thru restaurant can also emit toxic air contaminants (TACs). In order to obtain an estimate of the TAC emissions from on-site passenger car activity, Ramboll used CalEEMod®. This analysis used the same operational inputs as the PlaceWorks CalEEMod® analysis for the on-site trucks but utilized a vehicle fleet mix to reflect the light-duty vehicles (i.e., non-diesel vehicles). Ramboll used the light-duty vehicle ROG emissions from the CalEEMod® run and gasoline exhaust speciation factors from the California Air Resources Board (CARB) EMissions FACtor model (EMFAC) to quantify speciated ROG emissions from light-duty vehicles traveling onsite.[9] The estimated TAC emissions were then used along with cancer inhalation unit risk factors[10] to calculate their relative contribution to risks compared to DPM emissions from heavy-duty trucks. The results of this analysis are presented in **Table 5**.

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[8] Cancer risk from offsite DPM emissions was estimated by scaling the onsite cancer risk with the total onsite and offsite DPM emissions.
Off-site cancer risk = On-site cancer risk*Off-site DPM running emission/On-site DPM running emission. For Trucks with TRUs, off-site cancer risk at the existing MEIR = 244*0.034/13 = 0.058.

[9] BAAQMD 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards. May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

[10] ARB 2018. Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values. Available at: https://www.arb.ca.gov/toxics/healthval/contable.pdf.

Table 5: Relative Risk Associated with DPM and Light-Duty Truck Speciated ROG Emissions

Pollutant	Chemicals	ROG Speciation [A]	Annual Emissions (tpy)	Cancer Inhalation Risk Factor (µg/m3) [B]	Component Risk Weighted Annual Emissions [C]	Total Risk Weighted Annual Emissions [D]
ROG	Acetaldehyde	0.28%	0.009	2.7×10^{-6}	2.4×10^{-8}	5.8×10^{-6}
	Acrolein	0.13%	0.0042	--	--	
	Benzene	2.47%	0.078	2.9×10^{-5}	2.3×10^{-6}	
	1,3-Butadiene	0.55%	0.018	1.7×10^{-4}	3.0×10^{-6}	
	Ethylbenzene	1.05%	0.034	2.5×10^{-6}	8.4×10^{-8}	
	Formaldehyde	1.58%	0.051	6.0×10^{-6}	3.1×10^{-7}	
	Hexane	1.60%	0.051	--	--	
	Methanol	0.12%	0.0039	--	--	
	Methyl ethyl ketone	0.02%	0.00064	--	--	
	Naphthalene	0.05%	0.0016	3.4×10^{-5}	5.5×10^{-8}	
	Propylene	3.06%	0.098	--	--	
	Styrene	0.12%	0.0039	--	--	
	Toluene	5.76%	0.19	--	--	
	Xylenes	4.80%	0.15	--	--	
DPM			0.1	3.0×10^{-4}	3.0×10^{-5}	3.0×10^{-5}

A – Gasoline exhaust speciation from BAAQMD 2012. Recommended Methods for Screening and Modeling Local Risks and Hazards (Table 14). May. Available at: http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en
B - Cancer inhalation unit risk factors were obtained from https://www.arb.ca.gov/toxics/healthval/contable.pdf
C – Component risk weighted annual emissions was calculated by multiplying the total annual emissions by the corresponding cancer risk inhalation factor
D – Total risk weighted annual emissions is the sum of component risk weighted annual emissions.

The risk-weighted DPM emissions (5.8×10^{-6}) are approximately five times higher than the risk-weighted TAC emissions (3.0×10^{-5}) from light-duty vehicles. Given that the cancer risks associated with DPM emissions from the Project site are less than significant, the incorporation of cancer risks associated with TAC emissions from light-duty vehicles is not expected to substantially increase the total cancer risk presented in the HRA, and impacts would remain less than significant

4. Cumulative Analysis

Ramboll understands that a quantitative cumulative HRA analysis was not performed since information on nearby sources of TAC emissions is not available, and therefore it would be speculative to quantify the cumulative risk. Sources of TAC emissions near the Project site include emissions from trucks traveling on the highway (I-5), emissions from vehicles on major streets near the Project (e.g., S. Bonnyview Road), and other nearby stationary sources such as diesel generators and gasoline dispensing facilities.

In the absence of information on all nearby sources of TAC emissions, Ramboll reviewed South Coast Air Quality Management District guidance on addressing cumulative impacts for air quality. This guidance states that: "As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR". This indicates that the cumulative significance thresholds are the same as project-specific significance thresholds. Projects that exceed that project-specific significance thresholds are considered by the South Coast AQMD to be cumulatively considerable. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.[11] The same approach is taken by other large air districts in California such as San Joaquin Valley Air Pollution Control District (SJVAPCD) and Sacramento Metropolitan Air Quality Management District (SMAQMD).[12,13]

Based on the analysis done in the draft EIR, the overall Project level health risks are below the project-specific significance thresholds, and thus the Project's health risks are not cumulatively considerable.

5. Updated Emissions Model, EMFAC2017

Ramboll performed a screening analysis to assess the potential change if EMFAC2017 was used in the HRA since the HRA prepared by PlaceWorks calculates mobile source emissions using EMFAC2014. EMFAC2017 was released on December 22, 2017 with a revised version released on March 1, 2018. Notable changes include an increase in running exhaust emission rates for particulate matter smaller than 10 microns (PM_{10}) for both medium-heavy duty trucks (MHDT) and heavy-heavy duty trucks (HHDT) and a slight decrease in idling exhaust PM_{10} emission rates for MHDT and HHDT.

Since a majority of the trucks associated with the Project site are HHDT and MHDT, Ramboll estimated on-site DPM emissions using running and idling emission factors from EMFAC2017 to determine the changes in emissions and risk contribution. Emission factors in EMFAC2017 for running emissions for HHDT and MHDT were observed to be higher by a factor of 3.8 and 1.6, respectively. Idling emission factors in EMFAC2017 for HHDT and MHDT were observed to be lower by a factor of 0.87 and 0.69, respectively, compared to emission factors from EMFAC2014.

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[11] South Coast AQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, http://www.aqmd.gov/docs/default-source/Agendas/EnvironmentalJustice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4.

[12] SJVAPCD. 2015. Guidance for Assessing and Mitigating Air Quality Impacts.
http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

[13] SMAQMD. 2016. Guide to Air Quality Assessment in Sacramento County. Chapter 8: Cumulative.
http://www.airquality.org/LandUseTransportation/Documents/Ch8Cumulative%20FINAL5-2016.pdf

Ramboll performed a scaling analysis to determine the overall risk contribution with the use of EMFAC2017 emission factors. We observed that the total cancer risk for the existing MEIR due to DPM emissions from running and idling sources onsite would increase from 0.10 in a million to 0.27 in a million. Factoring in impacts from offsite DPM emissions would increase the total cancer risk to 0.70 in a million. Similarly, the total cancer risk on the future MEIR increased from 0.31 in a million to 0.86 in a million. Including the impacts from offsite DPM emissions would result in a total cancer risk of 2.2 in a million. These cancer risk impacts are still below the OEHHA significance threshold of 10 in a million [14], and this difference would not change the significance finding in the draft EIR.

6. Fraction at Home (FAH) Ratio

Ramboll conducted a screening analysis to evaluate the potential change in results if the fraction of time at home (FAH) assumption were changed. The HRA prepared by PlaceWorks uses a FAH for age groups less than 16 years of age that is less than one. As a more conservative approach, Ramboll performed a scaling analysis to determine the relative increase in risk when a FAH equal to one is used in the analysis. For the existing MEIR, the maximum cancer risk is expected to increase from 1.9 in a million to 2.4 in a million, and the maximum cancer risk for the future MEIR is expected to increase from 0.71 in a million to 0.88 in a million. The change in cancer risk is roughly 24-27% but this difference will not change the less than significance finding in the Draft EIR, well below the significance threshold of 10 in a million.

CLOSING

Please contact us if you have any questions regarding our comments on the PlaceWorks HRA.

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[14] OEHHA 2015. Air Toxics Hot sports Program Guidance Manual for the Preparation of Health Risk Assessment. February. Available at: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

FIGURE

OFFSITE TRUCK ROUTE

RIVER CROSSING MARKETPLACE SPECIFIC PLAN
REDDING, CALIFORNIA

FIGURE

1

Legend

— Offsite Truck Route

☐ Project Boundary

SCALE IN FEET

0   410

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

RAMBØLL

DATE: 1/22/2019

PROJECT:

DRAFTED BY:

Z:\01_Projects\Costco_Redding\Workspace.mxd

August 2017 | **Health Risk Assessment**

RIVER CROSSING MARKETPLACE SPECIFIC PLAN
City of Redding

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PLACEWORKS

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1. Introduction

The project applicant is requesting adoption of the River Crossing Marketplace Specific Plan, which would result in construction of approximately 220,000 square feet of retail uses consisting of a 152,000-square-foot Costco Wholesale store with up to 15 fuel pumps (30 fuel dispensers) and five retail pads accommodating approximately 70,000 square feet of retail, restaurants (some with drive-through lanes), and service uses. The project site is on the northeast corner of S. Bonnyview Road and Bechelli Lane in the City of Redding (City), Shasta County, California.

Operation of the proposed project would generate toxic air contaminants (TACs) emissions due to truck activity and gasoline dispensing in proximity to nearby sensitive receptors (i.e. residents). Guidance from the California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard Assessment (OEHHA), California Air Pollution Control Officers Association (CAPCOA), and the Shasta County Air Quality Management District (SCAQMD) recommend the completion of health risk assessments to determine the impacts of hazardous air emissions upon sensitive receptors in the vicinity of the project. The project would emit TACs within 350 feet of existing residences to the northeast and northwest and within 100 feet of the future residences planned at the parcel north of the project site.

This HRA considers the health impact to sensitive receptors (adults and children in the nearby residences) of operational phase emissions from diesel trucks (diesel particulate matter or DPM), transport refrigeration units (TRUs), and volatile organic compounds (VOCs) from activities associated with gasoline dispensing facilities. It should be noted that these health impacts were based on conservative (i.e., health protective) assumptions. The United States Environmental Protection Agency (USEPA 2005) and OEHHA (2015) note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks. Therefore, the estimated risks do not necessarily represent actual risks experienced by populations near a site.

For this residential-based risk assessment, the following conservative assumptions were used:

- It was assumed that maximum-exposed residential receptors (both children and adults) stood outside and were subject to TAC emissions at their residence for 24 hours per day, 350 days per year. In reality, California residents typically will spend on average 2 hours per day outdoors at their residences (USEPA 2011). This would result in lower exposures to project related TAC emissions and lower estimated risk values.

- The calculated risk for infants from third trimester to age 2 is multiplied by a factor of 10 and for children from 2-16 years is multiplied by a factor of 3 to account for early life exposure and uncertainty in child versus adult exposure impacts (OEHHA 2015).

Thus, the estimated risks provided in this HRA are conservative.

1. Introduction

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2. Project Description

The approximately 25-acre project site is located at the northeast corner of S. Bonnyview Road and Bechelli Lane in the City of Redding, California. The project site is bounded by S. Bonnyview Road to the south, Bechelli Lane to the west, a conservation easement and vacant land to the north, and Interstate 5 (I-5) to the east. The existing project site is densely vegetated and contains no existing development.

The project applicant is requesting adoption of the River Crossing Marketplace Specific Plan, which would result in construction of approximately 220,000 square feet of retail uses consisting of a 152,000-square-foot Costco Wholesale store with up to 15 fuel pumps (30 fuel dispensers) and five retail pads accommodating approximately 70,000 square feet of retail, restaurants (some with drive-through lanes), and service uses. Project construction is anticipated to begin in the spring of 2018 and be completed in 11 months as early as the spring of 2019.

The project site and vicinity are depicted in Figure 1.

2. Project Description

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Source: Google Earth Pro, 2017

Figure 1
Site and Model Layout

2. Project Description

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3. Emissions Inventory

DPM emissions would be emitted from diesel-fueled trucks traveling along the designated delivery truck routes for the Costco warehouse and major retail buildings, and emitted from trucks idling at loading docks and truck bays. Additionally, the proposed project would be a source of gasoline vapors that would include TACs such as benzene, methyl tertiary-butyl ether, toluene, and xylene. However, not until the benzene concentrations generate an incremental cancer risk of more than two orders of magnitude above the 10 per million cancer risk threshold do the emissions of toluene and xylene begin to cause adverse health effects (South Coast Air Quality Management District 2007). Therefore, benzene is the primary TAC associated with gas stations. Gasoline vapors are released during the filling of the underground storage tanks (USTs) and during the transfer from those underground tanks to individual vehicles (e.g. refueling and spillage).

The projected truck volumes, number equipped with TRUs, and gasoline throughput provided by the City and project applicant. California Air Resources Board (CARB) has developed the EMFAC2014 emission factor model to account for the emission standards representative of the California fleet. EMFAC2014 was used to identify pollutant emission rates for DPM for Heavy-Heavy Duty Trucks (HHDT) and Medium-Heavy Duty Trucks (MHDT) (CARB 2014). The PM_{10} emission factor for diesel-fueled vehicles was used as the surrogate for DPM. A summary of the emissions sources evaluated during this assessment is provided below in Table 1.

Table 1   Emission Sources

Source	Amount and Time of Day	Location
Costco Wholesale – Diesel Trucks, running emissions	10 HHDT per day, with TRUs; 2AM to 10AM	Along warehouse delivery truck route
Costco Wholesale – Diesel Trucks, idling emissions	10 HHDT per day, with TRUs; 2AM to 10AM	Warehouse loading docks (4 truck bays)
Costco Wholesale – Gasoline Dispensing	20 million gallons per year; 5AM to 10PM	Gasoline fueling area
Costco Wholesale – Fuel Trucks, running emissions (for gasoline dispensing facility)	3 HHDT per day; 5AM to 10PM	Along warehouse delivery truck route
Costco Wholesale – Fuel Trucks, idling emissions (for gasoline dispensing facility)	3 HHDT per day; 5AM to 10PM	Gasoline fueling area
Major Retail Buildings – Diesel Trucks, running emissions	8 HHDT per week, 8 MHDT per week; 6AM to 12AM	Along major retail delivery truck route
Major Retail Buildings – Diesel Trucks, idling emissions	8 HHDT per week, 8 MHDT per week; 6AM to 12AM	Major retail loading docks (2 truck bays)

3. Emissions Inventory

To the degree practical, all contaminant emissions generated from each source location were considered in the analysis. The limiting factor for the inclusion of a compound was the availability of published exposure factors and other toxicity data in the CARB's Hotspots Analysis and Reporting Program (HARP2) database enabling risks to be quantified and, where appropriate, target organs identified (CARB 2017). The compounds emitted from each emission source are listed in Table 2.

Table 2   Compounds Emitted from Emission Sources

Source	Contaminant
Costco Wholesale	Diesel Particulate Matter (DPM) – truck running emissions, truck idling emissions; TRU generator sets Benzene - gasoline dispensing (refueling, spillage, UST venting)
Major Retail Buildings	Diesel Particulate Matter (DPM) – truck running emissions, truck idling emissions

Appendix A contains emission rate calculations and Appendix B contains a graphical representation for each emitting source.

4. Air Dispersion Modeling

To assess the impact of emitted compounds on sensitive receptors near the project, air quality modeling using the AERMOD atmospheric dispersion model was performed. The model is a steady state Gaussian plume model and is an approved model by OEHHA for estimating ground-level impacts from point and fugitive sources in simple and complex terrain.

The model requires additional input parameters, including local meteorology. Meteorological (met) data provided by CARB for the nearest representative met station with the five latest available years of record (Redding Municipal Airport, 2009-2013) was used to represent local weather conditions and prevailing winds. The prevailing wind direction at the Redding Municipal Airport met station is to the south-southeast. The wind rose is provided in Appendix B.

The modeling analysis also considered the spatial distribution and elevation of each emitting source in relation to the sensitive receptors. To accommodate the model's Cartesian grid format, direction-dependent calculations were obtained by identifying the Universal Transverse Mercator (UTM) coordinates for source and receptor locations. In addition, digital elevation model (DEM) data for the area were obtained and included in AERMOD to account for complex terrain. An emission release height of 4.15 meters (m) was used as representative of the stack exhaust height for diesel trucks, and an initial vertical dispersion parameter of 1.93 m was used, per CARB guidance (2000). The source emission rates were divided between the volume sources for truck route running emissions. The model's hour-of-day (HROFDY) scalar option was invoked to predict concentrations from variable hourly emissions for each source. The air dispersion model output is presented in Appendix C.

The existing and future residential receptor locations, truck routes, gasoline dispensing area and maximum exposed receptor (MER) locations are presented in Figure 1.

4. Air Dispersion Modeling

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5.   Risk Characterizations

5.1   CARCINOGENIC CHEMICAL RISK

Carcinogenic compounds are not considered to have threshold levels (i.e., dose levels below which there are no risks). Any exposure, therefore, will have some associated risk. OEHHA and the SCAQMD have established a threshold of 10 in a million (10×10^{-6}) as a level posing no significant risk for exposures to carcinogens.

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. The cancer risk probability is determined by multiplying the chemical's annual concentration by its cancer potency factor (CPF), a measure of the carcinogenic potential of a chemical when a dose is received through the inhalation pathway. For residential receptors, it is an upper-limit estimate of the probability of contracting cancer as a result of continuous exposure to an ambient concentration of one microgram per cubic meter ($\mu g/m^3$) over the high end residency time of 30 years, in accordance with the OEHHA guidelines. Additionally, the maximum lifetime residency exposure (70-year exposure) and the average residency exposure (9-year exposure) were determined and provided for informational purposes.

Recent guidance from OEHHA recommends a refinement to the standard point estimate approach with the use of age-specific breathing rates and age sensitivity factors (ASFs) to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose for each age group. Once determined, contaminant dose is multiplied by the cancer potency factor in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to accommodate the unique exposures associated with the proposed residential population, the following dose algorithm was used.

$$\text{Dose}_{\text{AIR,per age group}} = (C_{\text{air}} \times EF \times [\frac{BR}{BW}] \times A \times CF)$$

Where:

Dose$_{\text{AIR}}$	=	dose by inhalation (mg/kg-day), per age group
C$_{\text{air}}$	=	concentration of contaminant in air ($\mu g/m^3$)
EF	=	exposure frequency (0.96, 350 days/365 days)
BR/BW	=	daily breathing rate normalized to body weight (L/kg-day)
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor ($1x10^{-6}$, μg to mg, L to m^3)

The inhalation absorption factor (A) is a unitless factor that is only used if the cancer potency factor included a correction for absorption across the lung. For this assessment, the default value of 1 was used. The

5. Risk Characterizations

exposure frequency (EF) of 0.96 is used to represent 350 days per year to allow for a two-week period away from home each year (OEHHA 2015). The 95th percentile daily breathing rates (BR/BW), exposure duration (ED), age sensitivity factors (ASFs), and fraction of time at home (FAH) for the various age groups are provided herein:

Age Groups	BR/BW (L/kg-day)	ED	ASF	FAH
Third trimester	361	0.25	10	0.85
0–2 age group	1,090	2	10	0.85
2–9 age group	861	7	3	0.72
2–16 age group	745	14	3	0.72
16–30 age group	335	14	1	0.73
16–70 age group	290	54	1	0.73

To calculate the overall cancer risk, the risk for each appropriate age group is calculated per the following equation:

$$\text{Cancer Risk}_{AIR} = \text{Dose}_{AIR} \times \text{CPF} \times \text{ASF} \times \text{FAH} \times \frac{\text{ED}}{AT}$$

Where:

Dose$_{AIR}$	=	dose by inhalation (mg/kg-day), per age group
CPF	=	cancer potency factor, chemical-specific (mg/kg-day)$^{-1}$
ASF	=	age sensitivity factor, per age group
FAH	=	fraction of time at home, per age group
ED	=	exposure duration (years)
AT	=	averaging time period over which exposure duration is averaged (always 70 years)

The CPFs used in the assessment were obtained from OEHHA guidance. The excess lifetime cancer risks for the maximally exposed resident were calculated based on the factors provided above. The cancer risks for each age group are summed to estimate the total cancer risk for each toxic chemical species. The final step converts the cancer risk in scientific notation to a whole number that expresses the cancer risk in "chances per million" by multiplying the cancer risk by a factor of 1×10^6 (i.e., 1 million).

The assessment was based on reasonable maximum exposure, defined as the "highest exposure that is reasonably expected to occur" for a given receptor population. Lifetime risk values for the adult residents were calculated for an exposure of 350 days per year for 30 years (high-end estimate) in accordance with OEHHA's guidance. Additionally, the maximum lifetime residency exposure (70-year scenario) and the average residency exposure (9-year scenario) risk values were determined for informational purposes. It was assumed that the MER spent 24 hours per day, 7 days per week, 350 days per year outside near the residence, per default exposure parameters.

CARB's Hotspots Analysis and Reporting Program (HARP2) Risk Assessment Standalone Tool was used to calculate the cancer risk values (CARB 2017) and is provided in Appendix D.

5.2   NON-CARCINOGENIC HAZARDS

An evaluation was conducted of the potential non-cancer effects of chronic and acute chemical exposures. Adverse health effects are evaluated by comparing the annual receptor level (ground-level) concentration of each chemical compound with the appropriate reference exposure limit (REL). Available RELs promulgated by OEHHA were considered in the assessment.

The hazard index approach was used to quantify non-carcinogenic impacts. The hazard index assumes that chronic and acute sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). Target organs presented in regulatory guidance were used for each discrete chemical exposure (CARB 2017). To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity value. This ratio is summed for compounds affecting the same toxicological endpoint. A health hazard is presumed to exist where the total equals or exceeds one.

For the operational risk calculations, CARB's HARP2 Risk Assessment Standalone Tool was used to calculate the chronic and acute health risk values (CARB 2017) and is provided in Appendix D.

5. Risk Characterizations

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6.   Conclusions

The results of the operational health risk assessment are provided in Table 3. The incremental cancer risk for the residential MER locations are 0.7 in a million for existing residences and 1.9 for future residences north of the project site. In comparison to the significance threshold of 10 in a million, carcinogenic risks do not exceed the threshold value for residents in vicinity of the project. For non-carcinogenic effects, the chronic and acute hazard indices identified for each toxicological endpoint totaled less than one for existing and future residences. Therefore, chronic and acute non-carcinogenic hazards are below the significance threshold. Consequently, the project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during operation.

Table 3   HRA Results

Receptor	Cancer Risk [1] (per million)	Chronic Hazard Index	Acute Hazard Index
Existing Residences – MER	0.7	0.003	0.052
Future Residences - MER	1.9	0.008	0.067
OEHHA Threshold	10	1.0	1.0
Exceeds Threshold?	**No**	**No**	**No**

Source: Lakes AERMOD View 9.4 (2017); CARB HARP2 (2017).
1   OEHHA (2015) recommends that a 30-year (high end residency time) exposure duration be used to estimate individual cancer risk for the maximum exposed receptor. The cancer risks for the maximum lifetime (70-year) and average residency (9-year) exposure durations are provided for informational purposes. For the maximum exposed existing residential receptor, the 70-year and 9-year cancer risks were calculated as 0.8 in a million and 0.5 in a million, respectively. For the maximum exposed future residential receptor, the 70-year and 9-year cancer risks were calculated as 2.2 in a million and 1.3 in a million, respectively.

Based on a comparison to the carcinogenic and non-carcinogenic thresholds established by OEHHA and SCAQMD, hazardous air emissions generated from operation of the project are not anticipated to pose an actual or potential endangerment to the surrounding sensitive receptors and no mitigation measures are required.

6. Conclusions

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7. References

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7. References

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Appendix A.   Emissions Inventory

Appendix

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Source 1
Costco Wholesale
S. Bonnyview Road and Bechelli Lane
Redding, California 96002

Operation: Shipping and Receiving, Truck Activities with Transport Refrigeration Units (TRUs)

	hours	days	weeks
Temporal Profile:	8	7	52

Truck Activity:

Trucks with TRUs/Day	10
Miles Traveled/Trip (Ingress/Egress)	0.49
Idling Duration (min)	15
Truck Bays	4
TRU Cycle Duration (min)	15

Running Emissions (line volume source):

Emission Factor (g/mi) [1]	0.0805
Running Emissions (g/sec)	**1.38E-05**

Idling Emissions (point-source):

Emission Factor (g/hr) [2]	0.0418
Idling Emissions (g/sec)	3.63E-06

TRU Genset Emissions (point-source):

Emission Factor (g/bhp-hr) [3]	0.02
Load Factor [4]	0.28
Low Emission TRU Horsepower (bhp)	25
Emission Factor (g/sec)	3.89E-05
TRU Genset Emissions (g/day)	3.50E-01
TRU Genset Emissions (g/sec)	1.22E-05
Idling+TRU Genset Emissions (g/sec)	1.58E-05
Idling+TRU Genset Emissions (g/sec/bay)	**3.94E-06**

Point Source Specifications (vertical release): [5]

Stack Temperature	366	K
Stack Velocity	51.7	m/s
Stack Diameter	4.0	inches
Stack Height	4.15	m
Building Height	34.67	feet

(1) Running PM10 emission factor for Heavy-Heavy Duty Trucks (HHDT) obtained from CARB (EMFAC2014) for analysis year 2019. Based upon a lot travel speed of 5 mph.

(2) Idling PM10 emission factor for Heavy-Heavy Duty Trucks (HHDT) class obtained from CARB (EMFAC2014) for analysis year 2019.

(3) Emission Factor for TRU generator set obtained from CARB, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transporation Refrigeration Units (TRU) and TRU Generator Sets, and Facilities where TRUs Operate (2005), Table 1 - Low - Emission In-Use Performance Standards.

(4) TRU load factor based on CARB Diesel Risk Reduction Program, Appendix VII (2000).

(5) Stack parameters for idling trucks from CARB's Risk Characterization Scenarios, Appendix VII for idling diesel trucks (October 2000).

Source 2a
Costco Wholesale
S. Bonnyview Road and Bechelli Lane
Redding, California 96002

Operation: Gasoline Dispensing

	hours	days	weeks
Temporal Profile:	17	7	52

Materials: [1]

Unleaded Gasoline	2.00E+07	gal/yr

Emission Factor: [2]

Phase II Fueling Non-ORVR	0.42	lbs VOC/1,000 gal
Phase II Fueling ORVR	0.021	lbs VOC/1,000 gal
Phase I Bulk Transfer Losses	0.15	lbs VOC/1,000 gal
Pressure Driven Losses	0.024	lbs VOC/1,000 gal
Phase II Fueling - Spillage	0.24	lbs VOC/1,000 gal
Hose Permeation (2017)	0.009	lbs VOC/1,000 gal

Volume Source Emissions [3]

Refueling [4]		0.13	lbs VOC/1,000 gal
Refueling Emissions	4.32E-01	lbs VOC/hr
	5.45E-02	g VOC/s
	1.63E-04	**g Benzene/s**

Spillage [5]		0.24	lbs VOC/1,000 gal
Spillage Emissions	7.76E-01	lbs/hr
	9.77E-02	g VOC/s
	9.77E-04	**g Benzene/s**

Point Source Emissions [6]

Transfer and Pressure Losses [7]		0.17	lbs VOC/1,000 gal
Transfer and Pressure Emission	5.62E-01	lbs/hr
	7.09E-02	g VOC/s
	2.13E-04	**g Benzene/s**

(1) Gasoline dispensed amount based maximum throughput, per SCAQMD permit N29566. EVR Phase I and Phase II controls.

(2) Emission factors is based upon CARB's Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (CARB, 2013). TAC speciation: 0.3% benzene for transfer, pressure losses and refueling emissions; 1% benzene for spillage California Air Pollution Control Officers Assocation (CAPCOA) Gasoline Service Station Industrywide Risk Assessment Guidelines (CAPCOA, 1998).

(3) Volume sources modeled as 4 m high, 36 m long and 36 m wide.

(4) Refueling emission include fueling non-ORVR and ORVR vehicles (74% of vehicles; CARB, 2013) and hose permeation (2017 emission rate). Release height 1 m (CAPCOA, 1998).

(5) Release height 0 m for spillage (CAPCOA, 1998).

(6) Point sources modeled as vertical stack with release height 12 feet, diameter 2 inches, temperature 60F, and exit velocity 0.01 m/s (CAPCOA, 1998).

(7) Transfer and pressure driven loss emissions modeling as a single vent pipe (CAPCOA, 1998).

Source 2b
Costco Wholesale
S. Bonnyview Road and Bechelli Lane
Redding, California 96002

Operation: Shipping and Receiving, Fuel Truck Activities

	hours	days	weeks
Temporal Profile:	17	7	52

Truck Activity:

Fuel trucks per day	3
Miles Traveled/Trip (Ingress/Egress)	0.49
Idling Duration (min)	15

Running Emissions (line volume source):

Emission Factor (g/mi) [1]	0.0805
Running Emissions (g/sec)	**1.94E-06**

Idling Emissions (point-source):

Emission Factor (g/hr) [2]	0.0418
Idling Emissions (g/sec)	**5.12E-07**

Point Source Specifications (vertical release): [3]

Stack Temperature	366	K
Stack Velocity	51.7	m/s
Stack Diameter	4.0	inches
Stack Height	4.15	m

(1) Running PM10 emission factor for Heavy-Heavy Duty Trucks (HHDT) obtained from CARB (EMFAC2014) for analysis year 2019. Based upon a lot travel speed of 5 mph.

(2) Idling PM10 emission factor for Heavy-Heavy Duty Trucks (HHDT) class obtained from CARB (EMFAC2014) for analysis year 2019.

(3) Stack parameters for idling trucks from CARB's Risk Characterization Scenarios, Appendix VII for idling diesel trucks (October 2000).

Source 3
Major Retail Buildings
S. Bonnyview Road and Bechelli Lane
Redding, California 96002

Operation: Shipping and Receiving, Truck Activities

	hours	days	weeks
Temporal Profile:	18	7	52

Truck Activity:

Heavy-Heavy Duty Trucks/Week	8
Medium-Heavy Duty Trucks/Week	8
Miles Traveled/Trip (Ingress/Egress)	0.38
Idling Duration (min)	15
Truck Bays	2

Running Emissions (line volume source): [1]

HHDT Emission Factor (g/mi)	0.0805
HHDT Running Emissions (g/sec)	5.35E-07
MHDT Emission Factor (g/mi)	0.239
MHDT Running Emissions (g/sec)	1.59E-06
Combined Running Emissions (g/sec)	**2.13E-06**

Idling Emissions (point-source): [2]

HHDT Emission Factor (g/hr)	0.0418
HHDT Idling Emissions (g/sec)	1.84E-07
MHDT Emission Factor (g/hr)	0.433
MHDT Idling Emissions (g/sec)	1.91E-06
Combined Idling Emissions (g/sec/bay)	**1.05E-06**

Point Source Specifications (vertical release): [3]

Stack Temperature	366	K
Stack Velocity	51.7	m/s
Stack Diameter	4.0	inches
Stack Height	4.15	m
Building Height	28	feet

(1) Running PM10 emission factor for Heavy-Heavy Duty Trucks (HHDT) and Medium-Heavy Duty Trucks (MHDT) obtained from CARB (EMFAC2014) for analysis year 2019. Based upon a lot travel speed of 5 mph.

(2) Idling PM10 emission factor for Heavy-Heavy Duty Trucks (HHDT) and Medium-Heavy Duty Trucks (MHDT) class obtained from CARB (EMFAC2014) for analysis year 2019.

(3) Stack parameters for idling trucks from CARB's Risk Characterization Scenarios, Appendix VII for idling diesel trucks (October 2000).

Appendix B.   Graphical Representations of Emitting Sources

Appendix

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Source 1
Costco Wholesale
S. Bonnyview Road and Bechelli Lane
Redding, CA 96002
Sunday - Saturday: 2:00 AM - 10:00 AM (delivery hours)

Operations
Heavy-Heavy Duty Trucks: 10 trucks with TRUs per day
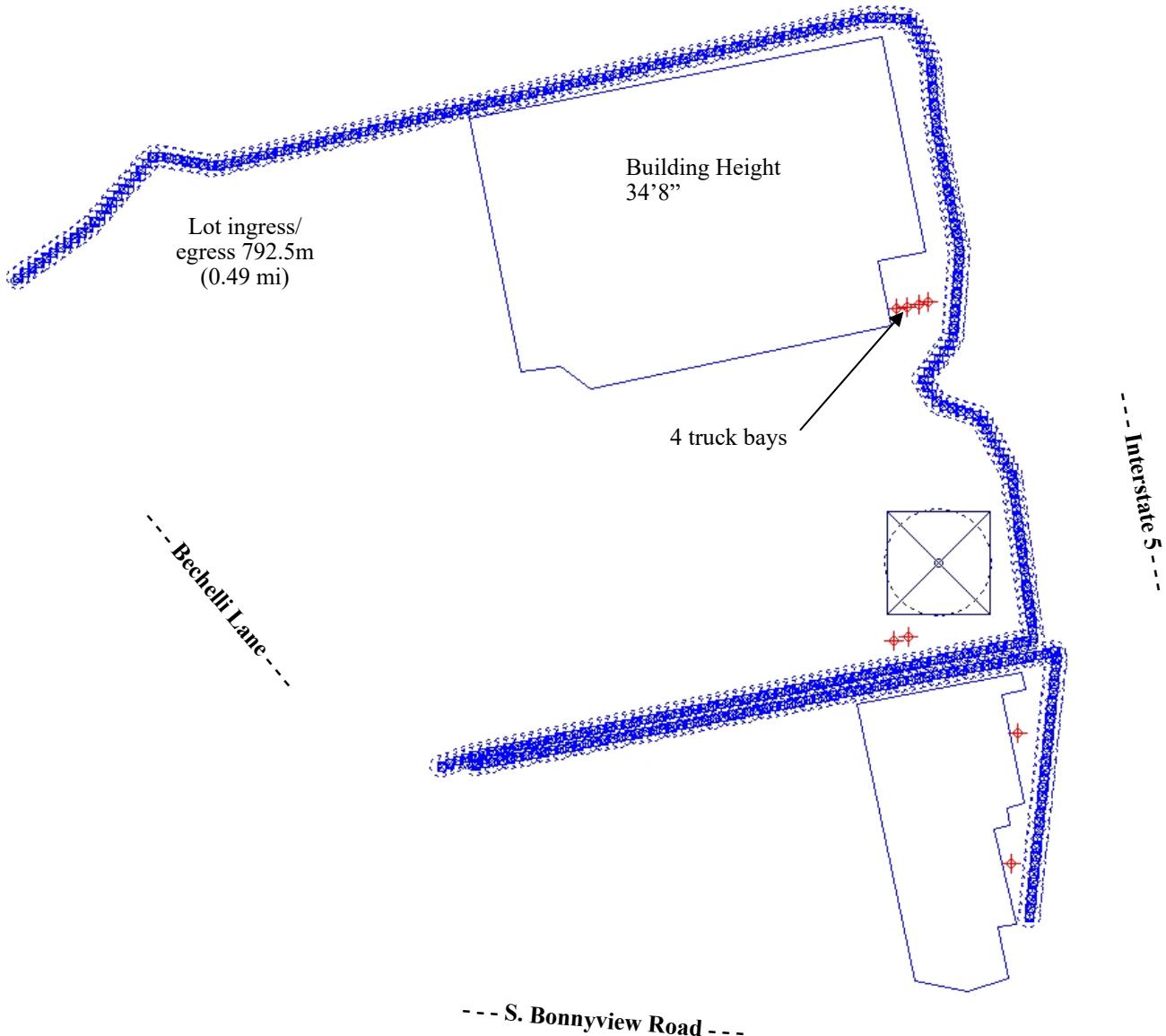
N

Building Height
34'8"

Lot ingress/
egress 792.5m
(0.49 mi)

4 truck bays

Interstate 5 - - -

Bechelli Lane - - -

S. Bonnyview Road - - -

- Lot area is based upon Google Earth Pro, Version 7.3

- Release height of 4.15 m and initial vertical dimension (δy) of 1.93 m is based upon California Air Resources Board's "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (2000).

Source 2
Costco Wholesale
S. Bonnyview Road and Bechelli Lane
Redding, CA 96002
Sunday - Saturday: 5:00 AM - 10:00 PM (gasoline dispensing hours)

Operations
Gasoline Dispensing: 20 million gallons per year
Heavy-Heavy Duty Trucks: 3 trucks per day

N

Lot ingress/
egress 792.5m
(0.49 mi)

Gas Fueling Area
(36m x 36m)

Fuel truck stack
(idling)

Vent Stack
Height 12'
Diameter 2"

Interstate 5

Bechelli Lane

S. Bonnyview Road
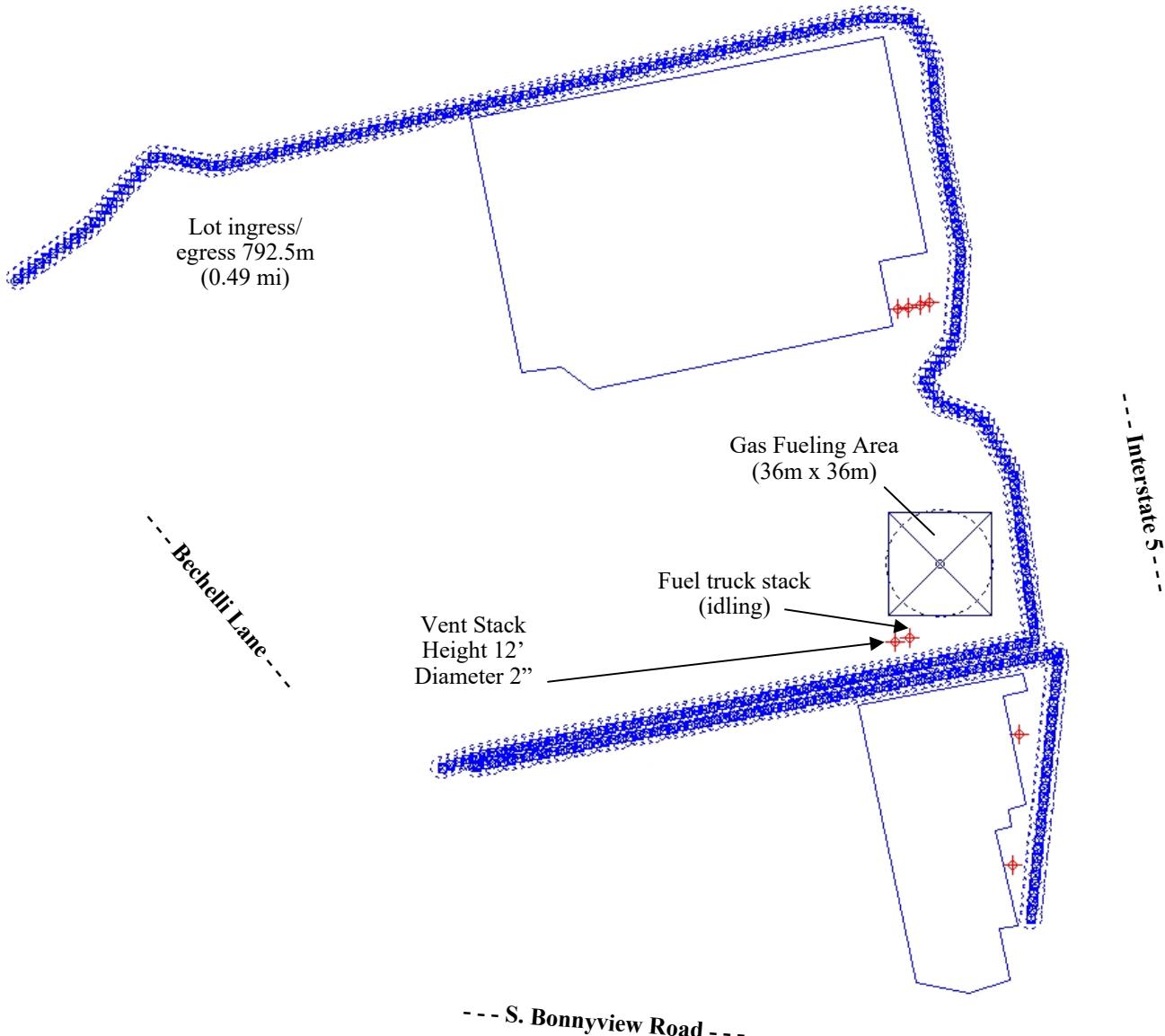
- Fueling area is based upon California Air Pollution Control Officers Association (CAPCOA) *Gasoline Service Station Industrywide Risk Assessment Guidelines* (1998). Volume source parameters: 4 m height; 36 m x 36 m area

- Volume Source Modeling (Refueling and hose permeation): Source height of 4 m, release height of 1 m, and δz of 0.93 m are based upon CAPCOA guidance (1998).

– Volume Source Modeling (Spillage): Source height of 4 m, release height of 0 m, and δz of 1.86 m are based upon based upon CAPCOA guidance (1998).

- Point Source Modeling (Transfer and Pressure Driven Losses): Stack parameters based upon CAPCOA guidance (1998).

- Lot area is based upon Google Earth Pro, Version 7.3

- Release height of 4.15 m and initial vertical dimension (δy) of 1.93 m is based upon California Air Resources Board's "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (2000).

Source 3
Major Retail Buildings
S. Bonnyview Road and Bechelli Lane
Redding, CA 96002
Sunday - Saturday: 6:00 AM - 12:00 AM

Operations
Heavy-Heavy Duty Trucks: 8 trucks per week
Medium-Heavy Duty Trucks: 8 trucks per week
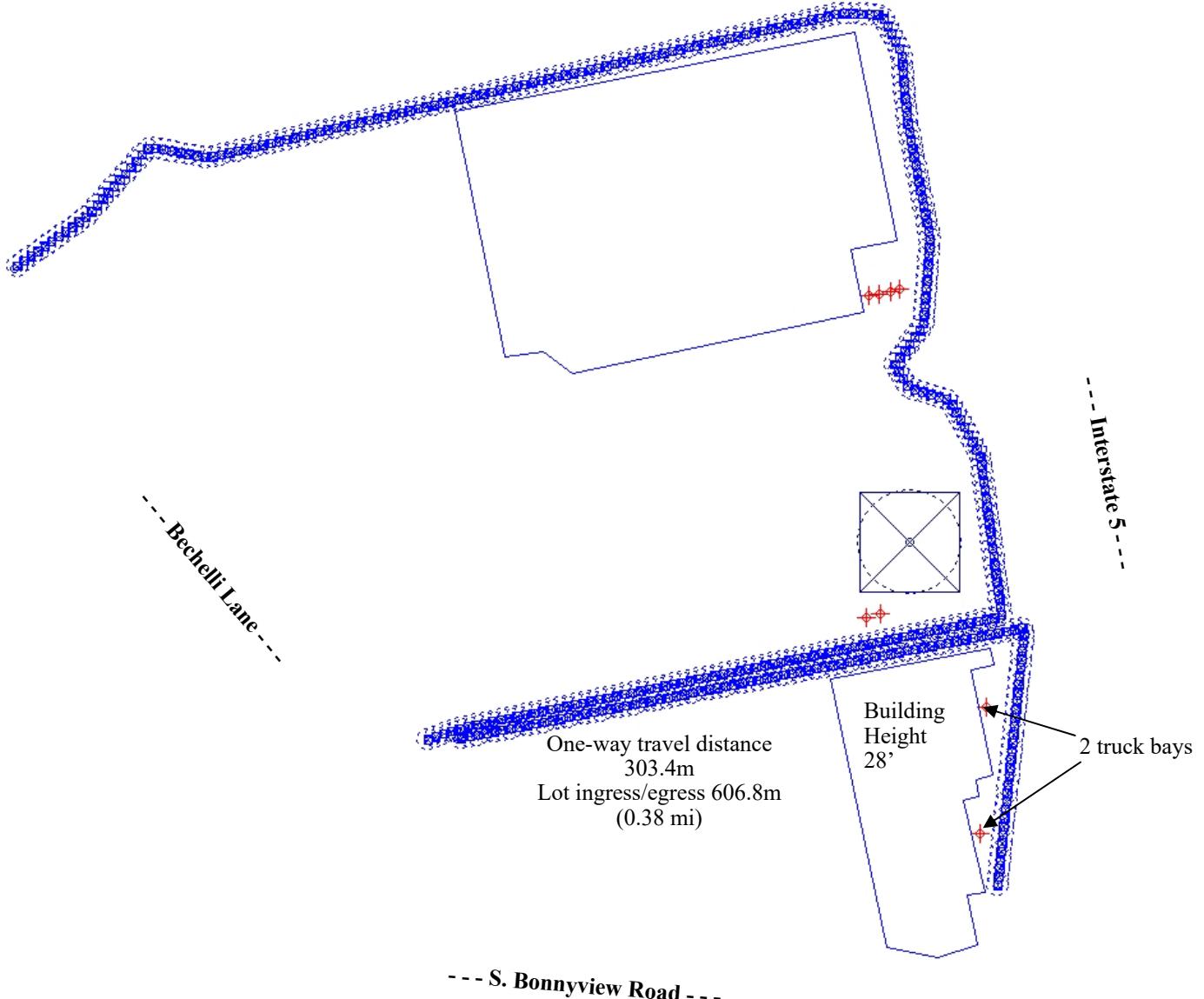
N

Interstate 5 - - -

Bechelli Lane - - -

One-way travel distance
303.4m
Lot ingress/egress 606.8m
(0.38 mi)

Building
Height
28'

2 truck bays

- - - S. Bonnyview Road - - -

- Lot area is based upon Google Earth Pro, Version 7.3

- Release height of 4.15 m and initial vertical dimension (δy) of 1.93 m is based upon California Air Resources Board's "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (2000).

WIND ROSE PLOT:

Redding Municipal Airport Meteorological Station
2009-2013

DISPLAY:

Wind Speed
Flow Vector (blowing to)

NORTH

5.45%

4.36%

3.27%

2.18%

1.09%

WEST

EAST

SOUTH

WIND SPEED
(m/s)

⬛ (cyan)	>= 11.10
⬛ (green)	8.80 - 11.10
⬛ (blue)	5.70 - 8.80
⬛ (red)	3.60 - 5.70
⬛ (yellow)	2.10 - 3.60
⬛ (grey)	0.50 - 2.10

Calms: 34.02%
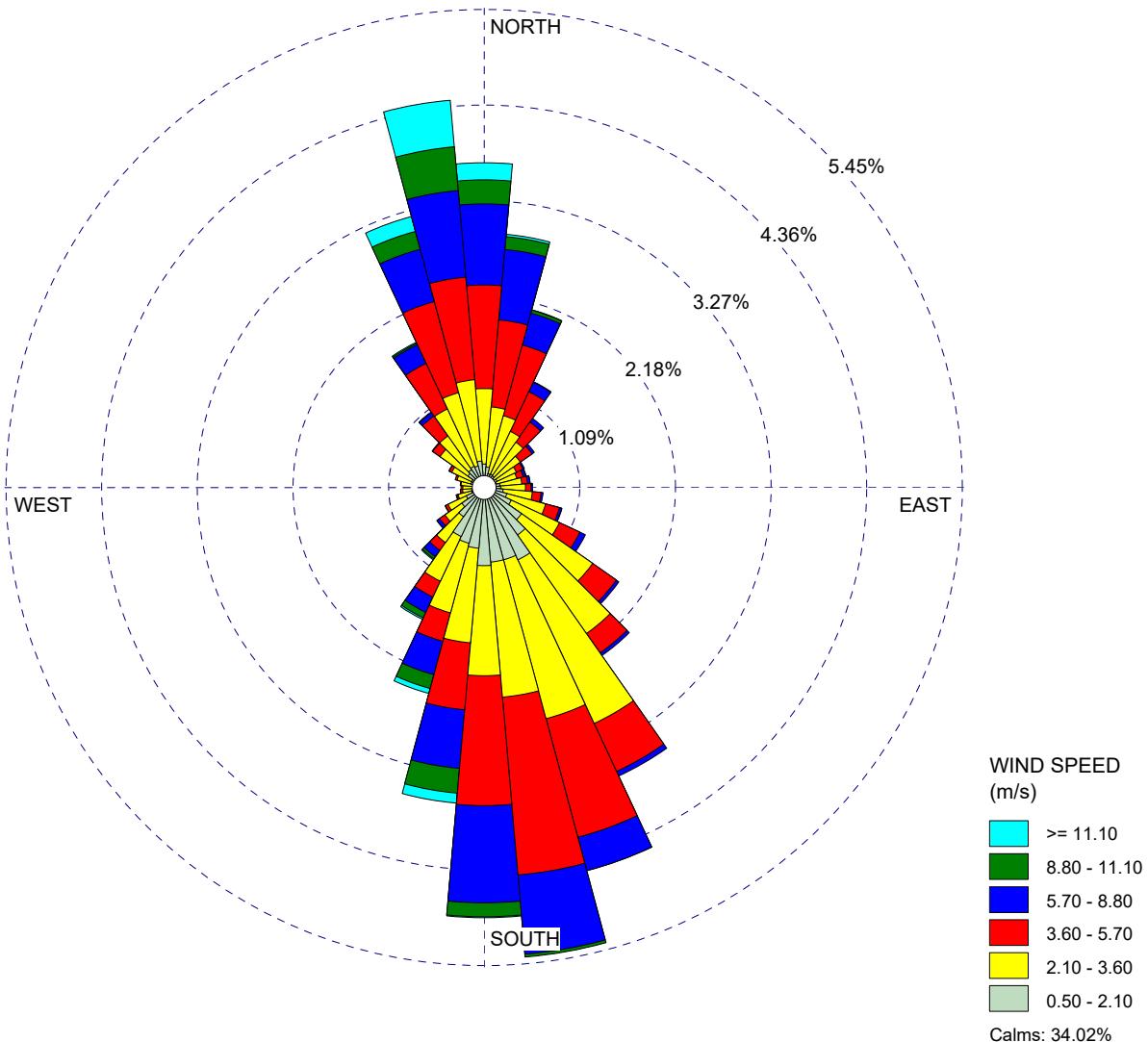
COMMENTS:	DATA PERIOD:	COMPANY NAME:	
All Hours	**Start Date: 1/1/2009 - 00:00** **End Date: 1/2/2014 - 23:59**		
		MODELER:	
	CALM WINDS: **34.02%**	TOTAL COUNT: **42200 hrs.**	
	AVG. WIND SPEED: **2.57 m/s**	DATE: **8/23/2017**	PROJECT NO.: **CRD-02.0**

Appendix C.   Air Dispersion Model Output

Appendix

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Results Summary

Costco Wholesale HRA
Redding, CA

Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00993	ug/m^3	554911.90	4488225.75	158.27	0.00	158.27	

Existing Residential MER

Concentration - Source Group: FUELHAUL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00002	ug/m^3	554494.88	4488210.28	158.33	0.00	158.33	

Concentration - Source Group: FUELIDLE

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00000	ug/m^3	555011.90	4488125.75	158.15	0.00	158.15	

Concentration - Source Group: LOADDOCK

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00004	ug/m^3	554911.90	4488225.75	158.27	0.00	158.27	

Results Summary

Costco Wholesale HRA
Redding, CA

Concentration - Source Group: MAJORTRU

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00002	ug/m^3	554695.92	4487615.83	139.53	0.00	158.50	

Concentration - Source Group: MJRDOCKS

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00001	ug/m^3	555011.90	4488125.75	158.15	0.00	158.15	

Concentration - Source Group: REFUEL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.13827	ug/m^3	555011.90	4488125.75	158.15	0.00	158.15	1/31/2012, 22
PERIOD		0.00117	ug/m^3	554911.90	4488225.75	158.27	0.00	158.27	

Concentration - Source Group: SPILL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.98459	ug/m^3	555011.90	4488125.75	158.15	0.00	158.15	1/31/2012, 22
PERIOD		0.00698	ug/m^3	554911.90	4488225.75	158.27	0.00	158.27	

Results Summary

Costco Wholesale HRA
Redding, CA

Concentration - Source Group: TRUCKHAU

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00005	ug/m^3	554534.88	4488210.28	158.33	0.00	158.33	

Concentration - Source Group: VENTING

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.27586	ug/m^3	554891.90	4488245.75	158.31	0.00	158.31	10/28/2012, 6
PERIOD		0.00167	ug/m^3	554911.90	4488225.75	158.27	0.00	158.27	

```
*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA                                    ***         08/28/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                             ***         11:54:33
                                                                                                           PAGE    1
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                      ***      MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

   --  DEPOSITION LOGIC  --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
**Model Uses NO WET DEPLETION.  WETDPLT  =  F

**Model Uses URBAN Dispersion Algorithm for the SBL for   630 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =      91808.0 ;  Urban Roughness Length =  1.000 m

**Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of:  OTHER

**Model Calculates  1 Short Term Average(s) of:   1-HR
    and Calculates PERIOD Averages

**This Run Includes:    630 Source(s);      10 Source Group(s); and     399 Receptor(s)

                with:      8 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    622 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with      0 line(s)


**Model Set To Continue RUNning After the Setup Testing.
```

```
**The AERMET Input Meteorological Data Version Date:  14134

**Output Options Selected:
        Model Outputs Tables of PERIOD Averages by Receptor
        Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
        Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
        Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   151.50 ;  Decay Coef. =    0.000      ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                               ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     5.0 MB of RAM.

**Detailed Error/Message File:   Redding.err
**File for Summary of Results:   Redding.sum
```

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                        ***           08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                                 ***           11:54:33
                                                                                                                PAGE   2
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                           *** POINT SOURCE DATA ***

                NUMBER EMISSION RATE                 BASE    STACK   STACK    STACK     STACK    BLDG   URBAN  CAP/  EMIS RATE
      SOURCE    PART.  (GRAMS/SEC)    X       Y       ELEV.  HEIGHT   TEMP.  EXIT VEL. DIAMETER  EXISTS SOURCE HOR   SCALAR
        ID      CATS.              (METERS) (METERS) (METERS)(METERS)(DEG.K)  (M/SEC)  (METERS)                      VARY BY
      - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


      STCK1        0   0.39400E-05  554806.1 4488049.5  157.6    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
      STCK2        0   0.39400E-05  554810.0 4488050.0  157.6    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
      STCK3        0   0.39400E-05  554813.8 4488050.7  157.6    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
      STCK4        0   0.39400E-05  554817.4 4488051.6  157.6    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
      VENTING      0   0.70900E-01  554805.0 4487932.9  157.2    3.66   288.71     0.01     0.05    YES    YES    NO   HROFDY
      FUELIDLE     0   0.51200E-06  554810.3 4487934.2  157.3    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
      STCK5        0   0.10500E-05  554848.6 4487900.5  157.2    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
      STCK6        0   0.10500E-05  554846.3 4487854.7  156.2    4.15   366.00    51.70     0.10    YES    YES    NO   HROFDY
```

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                    ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                             ***        11:54:33
                                                                                                         PAGE   3

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

```
                                 *** VOLUME SOURCE DATA ***


            NUMBER EMISSION RATE                   BASE   RELEASE   INIT.    INIT.   URBAN   EMISSION RATE
   SOURCE   PART.  (GRAMS/SEC)     X        Y      ELEV.  HEIGHT     SY       SZ     SOURCE   SCALAR VARY
     ID     CATS.             (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)              BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


   L0000621    0   0.53080E-07  554497.4 4488060.1  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000622    0   0.53080E-07  554499.9 4488061.9  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000623    0   0.53080E-07  554502.4 4488063.6  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000624    0   0.53080E-07  554504.9 4488065.4  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000625    0   0.53080E-07  554507.4 4488067.1  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000626    0   0.53080E-07  554509.8 4488068.9  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000627    0   0.53080E-07  554512.3 4488070.7  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000628    0   0.53080E-07  554514.8 4488072.4  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000629    0   0.53080E-07  554517.3 4488074.2  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000630    0   0.53080E-07  554519.8 4488075.9  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000631    0   0.53080E-07  554522.3 4488077.7  156.4   4.15     1.42     1.93     YES     HROFDY
   L0000632    0   0.53080E-07  554524.4 4488079.9  156.5   4.15     1.42     1.93     YES     HROFDY
   L0000633    0   0.53080E-07  554526.4 4488082.2  156.6   4.15     1.42     1.93     YES     HROFDY
   L0000634    0   0.53080E-07  554528.5 4488084.4  156.7   4.15     1.42     1.93     YES     HROFDY
   L0000635    0   0.53080E-07  554530.5 4488086.7  156.7   4.15     1.42     1.93     YES     HROFDY
   L0000636    0   0.53080E-07  554532.5 4488089.0  156.8   4.15     1.42     1.93     YES     HROFDY
   L0000637    0   0.53080E-07  554534.6 4488091.2  156.9   4.15     1.42     1.93     YES     HROFDY
   L0000638    0   0.53080E-07  554536.6 4488093.5  157.0   4.15     1.42     1.93     YES     HROFDY
   L0000639    0   0.53080E-07  554538.6 4488095.8  157.0   4.15     1.42     1.93     YES     HROFDY
   L0000640    0   0.53080E-07  554540.7 4488098.0  157.1   4.15     1.42     1.93     YES     HROFDY
   L0000641    0   0.53080E-07  554542.7 4488100.3  157.2   4.15     1.42     1.93     YES     HROFDY
   L0000642    0   0.53080E-07  554544.8 4488102.6  157.2   4.15     1.42     1.93     YES     HROFDY
   L0000643    0   0.53080E-07  554547.5 4488102.8  157.3   4.15     1.42     1.93     YES     HROFDY
   L0000644    0   0.53080E-07  554550.5 4488102.2  157.3   4.15     1.42     1.93     YES     HROFDY
   L0000645    0   0.53080E-07  554553.5 4488101.7  157.4   4.15     1.42     1.93     YES     HROFDY
   L0000646    0   0.53080E-07  554556.5 4488101.1  157.4   4.15     1.42     1.93     YES     HROFDY
   L0000647    0   0.53080E-07  554559.5 4488100.6  157.4   4.15     1.42     1.93     YES     HROFDY
   L0000648    0   0.53080E-07  554562.5 4488100.1  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000649    0   0.53080E-07  554565.5 4488099.5  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000650    0   0.53080E-07  554568.5 4488099.7  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000651    0   0.53080E-07  554571.4 4488100.4  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000652    0   0.53080E-07  554574.4 4488101.1  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000653    0   0.53080E-07  554577.4 4488101.8  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000654    0   0.53080E-07  554580.3 4488102.5  157.5   4.15     1.42     1.93     YES     HROFDY
   L0000655    0   0.53080E-07  554583.3 4488103.2  157.6   4.15     1.42     1.93     YES     HROFDY
   L0000656    0   0.53080E-07  554586.3 4488103.9  157.6   4.15     1.42     1.93     YES     HROFDY
   L0000657    0   0.53080E-07  554589.2 4488104.6  157.6   4.15     1.42     1.93     YES     HROFDY
   L0000658    0   0.53080E-07  554592.2 4488105.2  157.6   4.15     1.42     1.93     YES     HROFDY
```

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L0000659       0    0.53080E-07   554595.2 4488105.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0000660       0    0.53080E-07   554598.2 4488106.6   157.6    4.15    1.42    1.93    YES    HROFDY
L0000661       0    0.53080E-07   554601.1 4488107.3   157.6    4.15    1.42    1.93    YES    HROFDY
L0000662       0    0.53080E-07   554604.1 4488108.0   157.6    4.15    1.42    1.93    YES    HROFDY
L0000663       0    0.53080E-07   554607.1 4488108.7   157.6    4.15    1.42    1.93    YES    HROFDY
L0000664       0    0.53080E-07   554610.0 4488109.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000665       0    0.53080E-07   554613.0 4488110.1   157.6    4.15    1.42    1.93    YES    HROFDY
L0000666       0    0.53080E-07   554616.0 4488110.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000667       0    0.53080E-07   554618.9 4488111.4   157.7    4.15    1.42    1.93    YES    HROFDY
L0000668       0    0.53080E-07   554621.9 4488112.1   157.7    4.15    1.42    1.93    YES    HROFDY
L0000669       0    0.53080E-07   554624.9 4488112.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000670       0    0.53080E-07   554627.8 4488113.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0000671       0    0.53080E-07   554630.8 4488114.2   157.7    4.15    1.42    1.93    YES    HROFDY
L0000672       0    0.53080E-07   554633.8 4488114.9   157.7    4.15    1.42    1.93    YES    HROFDY
L0000673       0    0.53080E-07   554636.8 4488115.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000674       0    0.53080E-07   554639.7 4488116.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000675       0    0.53080E-07   554642.7 4488117.0   157.7    4.15    1.42    1.93    YES    HROFDY
L0000676       0    0.53080E-07   554645.7 4488117.6   157.8    4.15    1.42    1.93    YES    HROFDY
L0000677       0    0.53080E-07   554648.6 4488118.3   157.8    4.15    1.42    1.93    YES    HROFDY
L0000678       0    0.53080E-07   554651.6 4488119.0   157.8    4.15    1.42    1.93    YES    HROFDY
L0000679       0    0.53080E-07   554654.6 4488119.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0000680       0    0.53080E-07   554657.5 4488120.4   157.8    4.15    1.42    1.93    YES    HROFDY
L0000681       0    0.53080E-07   554660.5 4488121.1   157.8    4.15    1.42    1.93    YES    HROFDY
L0000682       0    0.53080E-07   554663.5 4488121.8   157.8    4.15    1.42    1.93    YES    HROFDY
L0000683       0    0.53080E-07   554666.4 4488122.5   157.8    4.15    1.42    1.93    YES    HROFDY
L0000684       0    0.53080E-07   554669.4 4488123.2   157.8    4.15    1.42    1.93    YES    HROFDY
L0000685       0    0.53080E-07   554672.4 4488123.8   157.8    4.15    1.42    1.93    YES    HROFDY
L0000686       0    0.53080E-07   554675.4 4488124.5   157.9    4.15    1.42    1.93    YES    HROFDY
L0000687       0    0.53080E-07   554678.3 4488125.2   157.9    4.15    1.42    1.93    YES    HROFDY
L0000688       0    0.53080E-07   554681.3 4488125.9   157.9    4.15    1.42    1.93    YES    HROFDY
L0000689       0    0.53080E-07   554684.3 4488126.5   157.9    4.15    1.42    1.93    YES    HROFDY
L0000690       0    0.53080E-07   554687.2 4488127.2   157.9    4.15    1.42    1.93    YES    HROFDY
L0000691       0    0.53080E-07   554690.2 4488127.9   157.9    4.15    1.42    1.93    YES    HROFDY
L0000692       0    0.53080E-07   554693.2 4488128.5   157.9    4.15    1.42    1.93    YES    HROFDY
L0000693       0    0.53080E-07   554696.2 4488129.2   157.9    4.15    1.42    1.93    YES    HROFDY
L0000694       0    0.53080E-07   554699.1 4488129.9   158.0    4.15    1.42    1.93    YES    HROFDY
L0000695       0    0.53080E-07   554702.1 4488130.5   158.0    4.15    1.42    1.93    YES    HROFDY
L0000696       0    0.53080E-07   554705.1 4488131.2   158.0    4.15    1.42    1.93    YES    HROFDY
L0000697       0    0.53080E-07   554708.1 4488131.9   158.0    4.15    1.42    1.93    YES    HROFDY
L0000698       0    0.53080E-07   554711.0 4488132.6   158.0    4.15    1.42    1.93    YES    HROFDY
L0000699       0    0.53080E-07   554714.0 4488133.2   158.0    4.15    1.42    1.93    YES    HROFDY
L0000700       0    0.53080E-07   554717.0 4488133.9   158.0    4.15    1.42    1.93    YES    HROFDY
```

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                   ***         08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                            ***         11:54:33
                                                                                                         PAGE   5

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                              *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE               BASE    RELEASE    INIT.    INIT.   URBAN   EMISSION RATE
   SOURCE     PART.  (GRAMS/SEC)    X        Y   ELEV.   HEIGHT      SY       SZ    SOURCE   SCALAR VARY
     ID       CATS.             (METERS) (METERS)(METERS)(METERS) (METERS) (METERS)            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


 L0000701        0   0.53080E-07   554720.0 4488134.6   158.0    4.15     1.42     1.93     YES    HROFDY
 L0000702        0   0.53080E-07   554722.9 4488135.2   158.0    4.15     1.42     1.93     YES    HROFDY
 L0000703        0   0.53080E-07   554725.9 4488135.9   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000704        0   0.53080E-07   554728.9 4488136.6   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000705        0   0.53080E-07   554731.9 4488137.2   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000706        0   0.53080E-07   554734.8 4488137.9   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000707        0   0.53080E-07   554737.8 4488138.6   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000708        0   0.53080E-07   554740.8 4488139.2   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000709        0   0.53080E-07   554743.8 4488139.9   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000710        0   0.53080E-07   554746.7 4488140.6   158.1    4.15     1.42     1.93     YES    HROFDY
 L0000711        0   0.53080E-07   554749.7 4488141.2   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000712        0   0.53080E-07   554752.7 4488141.9   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000713        0   0.53080E-07   554755.6 4488142.6   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000714        0   0.53080E-07   554758.6 4488143.2   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000715        0   0.53080E-07   554761.6 4488143.9   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000716        0   0.53080E-07   554764.6 4488144.6   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000717        0   0.53080E-07   554767.5 4488145.2   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000718        0   0.53080E-07   554770.5 4488145.9   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000719        0   0.53080E-07   554773.5 4488146.6   158.2    4.15     1.42     1.93     YES    HROFDY
 L0000720        0   0.53080E-07   554776.5 4488147.2   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000721        0   0.53080E-07   554779.4 4488147.9   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000722        0   0.53080E-07   554782.4 4488148.6   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000723        0   0.53080E-07   554785.4 4488149.3   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000724        0   0.53080E-07   554788.4 4488149.9   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000725        0   0.53080E-07   554791.3 4488150.6   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000726        0   0.53080E-07   554794.3 4488151.3   158.3    4.15     1.42     1.93     YES    HROFDY
 L0000727        0   0.53080E-07   554797.3 4488151.6   158.4    4.15     1.42     1.93     YES    HROFDY
 L0000728        0   0.53080E-07   554800.4 4488151.5   158.4    4.15     1.42     1.93     YES    HROFDY
 L0000729        0   0.53080E-07   554803.4 4488151.4   158.4    4.15     1.42     1.93     YES    HROFDY
 L0000730        0   0.53080E-07   554806.4 4488151.2   158.4    4.15     1.42     1.93     YES    HROFDY
 L0000731        0   0.53080E-07   554809.5 4488151.1   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000732        0   0.53080E-07   554811.7 4488149.7   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000733        0   0.53080E-07   554813.1 4488146.9   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000734        0   0.53080E-07   554814.4 4488144.2   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000735        0   0.53080E-07   554815.8 4488141.5   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000736        0   0.53080E-07   554817.1 4488138.8   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000737        0   0.53080E-07   554818.2 4488135.9   158.5    4.15     1.42     1.93     YES    HROFDY
 L0000738        0   0.53080E-07   554818.4 4488132.9   158.4    4.15     1.42     1.93     YES    HROFDY
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L0000739      0    0.53080E-07   554818.7 4488129.9    158.3    4.15    1.42    1.93    YES    HROFDY
L0000740      0    0.53080E-07   554818.9 4488126.8    158.2    4.15    1.42    1.93    YES    HROFDY
L0000741      0    0.53080E-07   554819.2 4488123.8    158.2    4.15    1.42    1.93    YES    HROFDY
L0000742      0    0.53080E-07   554819.4 4488120.8    158.1    4.15    1.42    1.93    YES    HROFDY
L0000743      0    0.53080E-07   554819.7 4488117.7    158.0    4.15    1.42    1.93    YES    HROFDY
L0000744      0    0.53080E-07   554819.9 4488114.7    158.0    4.15    1.42    1.93    YES    HROFDY
L0000745      0    0.53080E-07   554820.3 4488111.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0000746      0    0.53080E-07   554820.9 4488108.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0000747      0    0.53080E-07   554821.5 4488105.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0000748      0    0.53080E-07   554822.0 4488102.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0000749      0    0.53080E-07   554822.6 4488099.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0000750      0    0.53080E-07   554823.2 4488096.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000751      0    0.53080E-07   554823.8 4488093.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000752      0    0.53080E-07   554824.4 4488090.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000753      0    0.53080E-07   554824.9 4488087.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000754      0    0.53080E-07   554825.5 4488084.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000755      0    0.53080E-07   554826.1 4488081.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000756      0    0.53080E-07   554826.7 4488078.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0000757      0    0.53080E-07   554827.3 4488075.8    157.7    4.15    1.42    1.93    YES    HROFDY
L0000758      0    0.53080E-07   554827.9 4488072.8    157.7    4.15    1.42    1.93    YES    HROFDY
L0000759      0    0.53080E-07   554828.4 4488069.8    157.7    4.15    1.42    1.93    YES    HROFDY
L0000760      0    0.53080E-07   554828.2 4488066.7    157.7    4.15    1.42    1.93    YES    HROFDY
L0000761      0    0.53080E-07   554828.0 4488063.7    157.7    4.15    1.42    1.93    YES    HROFDY
L0000762      0    0.53080E-07   554827.7 4488060.7    157.7    4.15    1.42    1.93    YES    HROFDY
L0000763      0    0.53080E-07   554827.5 4488057.6    157.7    4.15    1.42    1.93    YES    HROFDY
L0000764      0    0.53080E-07   554827.2 4488054.6    157.7    4.15    1.42    1.93    YES    HROFDY
L0000765      0    0.53080E-07   554827.0 4488051.5    157.7    4.15    1.42    1.93    YES    HROFDY
L0000766      0    0.53080E-07   554826.7 4488048.5    157.7    4.15    1.42    1.93    YES    HROFDY
L0000767      0    0.53080E-07   554826.5 4488045.5    157.7    4.15    1.42    1.93    YES    HROFDY
L0000768      0    0.53080E-07   554826.2 4488042.4    157.7    4.15    1.42    1.93    YES    HROFDY
L0000769      0    0.53080E-07   554826.0 4488039.4    157.7    4.15    1.42    1.93    YES    HROFDY
L0000770      0    0.53080E-07   554824.6 4488036.8    157.7    4.15    1.42    1.93    YES    HROFDY
L0000771      0    0.53080E-07   554822.8 4488034.3    157.7    4.15    1.42    1.93    YES    HROFDY
L0000772      0    0.53080E-07   554821.0 4488031.8    157.6    4.15    1.42    1.93    YES    HROFDY
L0000773      0    0.53080E-07   554819.2 4488029.4    157.6    4.15    1.42    1.93    YES    HROFDY
L0000774      0    0.53080E-07   554817.4 4488026.9    157.6    4.15    1.42    1.93    YES    HROFDY
L0000775      0    0.53080E-07   554815.6 4488024.4    157.6    4.15    1.42    1.93    YES    HROFDY
L0000776      0    0.53080E-07   554817.0 4488021.9    157.6    4.15    1.42    1.93    YES    HROFDY
L0000777      0    0.53080E-07   554818.6 4488019.3    157.6    4.15    1.42    1.93    YES    HROFDY
L0000778      0    0.53080E-07   554820.2 4488016.7    157.6    4.15    1.42    1.93    YES    HROFDY
L0000779      0    0.53080E-07   554822.8 4488015.3    157.6    4.15    1.42    1.93    YES    HROFDY
L0000780      0    0.53080E-07   554825.7 4488014.4    157.7    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                              ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***        11:54:33
                                                                                                   PAGE   7
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000781	0	0.53080E-07	554828.6	4488013.5	157.7	4.15	1.42	1.93	YES	HROFDY
L0000782	0	0.53080E-07	554831.5	4488012.6	157.8	4.15	1.42	1.93	YES	HROFDY
L0000783	0	0.53080E-07	554834.4	4488011.7	157.9	4.15	1.42	1.93	YES	HROFDY
L0000784	0	0.53080E-07	554836.5	4488009.8	157.9	4.15	1.42	1.93	YES	HROFDY
L0000785	0	0.53080E-07	554837.9	4488007.1	157.9	4.15	1.42	1.93	YES	HROFDY
L0000786	0	0.53080E-07	554839.4	4488004.4	158.0	4.15	1.42	1.93	YES	HROFDY
L0000787	0	0.53080E-07	554840.9	4488001.7	158.0	4.15	1.42	1.93	YES	HROFDY
L0000788	0	0.53080E-07	554842.3	4487999.1	158.1	4.15	1.42	1.93	YES	HROFDY
L0000789	0	0.53080E-07	554843.8	4487996.4	158.1	4.15	1.42	1.93	YES	HROFDY
L0000790	0	0.53080E-07	554845.3	4487993.7	158.1	4.15	1.42	1.93	YES	HROFDY
L0000791	0	0.53080E-07	554846.6	4487991.0	158.2	4.15	1.42	1.93	YES	HROFDY
L0000792	0	0.53080E-07	554847.0	4487988.0	158.2	4.15	1.42	1.93	YES	HROFDY
L0000793	0	0.53080E-07	554847.4	4487985.0	158.1	4.15	1.42	1.93	YES	HROFDY
L0000794	0	0.53080E-07	554847.8	4487981.9	158.1	4.15	1.42	1.93	YES	HROFDY
L0000795	0	0.53080E-07	554848.2	4487978.9	158.1	4.15	1.42	1.93	YES	HROFDY
L0000796	0	0.53080E-07	554848.6	4487975.9	158.1	4.15	1.42	1.93	YES	HROFDY
L0000797	0	0.53080E-07	554849.0	4487972.9	158.0	4.15	1.42	1.93	YES	HROFDY
L0000798	0	0.53080E-07	554849.4	4487969.9	158.0	4.15	1.42	1.93	YES	HROFDY
L0000799	0	0.53080E-07	554849.8	4487966.8	158.0	4.15	1.42	1.93	YES	HROFDY
L0000800	0	0.53080E-07	554850.2	4487963.8	158.0	4.15	1.42	1.93	YES	HROFDY
L0000801	0	0.53080E-07	554850.6	4487960.8	157.9	4.15	1.42	1.93	YES	HROFDY
L0000802	0	0.53080E-07	554851.0	4487957.8	157.9	4.15	1.42	1.93	YES	HROFDY
L0000803	0	0.53080E-07	554851.5	4487954.8	157.9	4.15	1.42	1.93	YES	HROFDY
L0000804	0	0.53080E-07	554851.9	4487951.7	157.9	4.15	1.42	1.93	YES	HROFDY
L0000805	0	0.53080E-07	554852.3	4487948.7	157.9	4.15	1.42	1.93	YES	HROFDY
L0000806	0	0.53080E-07	554852.7	4487945.7	157.8	4.15	1.42	1.93	YES	HROFDY
L0000807	0	0.53080E-07	554853.1	4487942.7	157.8	4.15	1.42	1.93	YES	HROFDY
L0000808	0	0.53080E-07	554853.5	4487939.6	157.8	4.15	1.42	1.93	YES	HROFDY
L0000809	0	0.53080E-07	554853.9	4487936.6	157.8	4.15	1.42	1.93	YES	HROFDY
L0000810	0	0.53080E-07	554854.3	4487933.6	157.7	4.15	1.42	1.93	YES	HROFDY
L0000811	0	0.53080E-07	554851.8	4487932.6	157.7	4.15	1.42	1.93	YES	HROFDY
L0000812	0	0.53080E-07	554848.8	4487932.0	157.7	4.15	1.42	1.93	YES	HROFDY
L0000813	0	0.53080E-07	554845.8	4487931.4	157.7	4.15	1.42	1.93	YES	HROFDY
L0000814	0	0.53080E-07	554842.8	4487930.8	157.7	4.15	1.42	1.93	YES	HROFDY
L0000815	0	0.53080E-07	554839.9	4487930.2	157.6	4.15	1.42	1.93	YES	HROFDY
L0000816	0	0.53080E-07	554836.9	4487929.5	157.6	4.15	1.42	1.93	YES	HROFDY
L0000817	0	0.53080E-07	554833.9	4487928.9	157.6	4.15	1.42	1.93	YES	HROFDY
L0000818	0	0.53080E-07	554830.9	4487928.3	157.6	4.15	1.42	1.93	YES	HROFDY

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L0000819       0    0.53080E-07   554827.9 4487927.7   157.6    4.15    1.42    1.93    YES    HROFDY
L0000820       0    0.53080E-07   554824.9 4487927.1   157.5    4.15    1.42    1.93    YES    HROFDY
L0000821       0    0.53080E-07   554821.9 4487926.5   157.5    4.15    1.42    1.93    YES    HROFDY
L0000822       0    0.53080E-07   554819.0 4487925.8   157.5    4.15    1.42    1.93    YES    HROFDY
L0000823       0    0.53080E-07   554816.0 4487925.2   157.5    4.15    1.42    1.93    YES    HROFDY
L0000824       0    0.53080E-07   554813.0 4487924.6   157.4    4.15    1.42    1.93    YES    HROFDY
L0000825       0    0.53080E-07   554810.0 4487924.0   157.4    4.15    1.42    1.93    YES    HROFDY
L0000826       0    0.53080E-07   554807.0 4487923.4   157.4    4.15    1.42    1.93    YES    HROFDY
L0000827       0    0.53080E-07   554804.0 4487922.8   157.4    4.15    1.42    1.93    YES    HROFDY
L0000828       0    0.53080E-07   554801.1 4487922.1   157.4    4.15    1.42    1.93    YES    HROFDY
L0000829       0    0.53080E-07   554798.1 4487921.5   157.3    4.15    1.42    1.93    YES    HROFDY
L0000830       0    0.53080E-07   554795.1 4487920.9   157.3    4.15    1.42    1.93    YES    HROFDY
L0000831       0    0.53080E-07   554792.1 4487920.3   157.3    4.15    1.42    1.93    YES    HROFDY
L0000832       0    0.53080E-07   554789.1 4487919.7   157.3    4.15    1.42    1.93    YES    HROFDY
L0000833       0    0.53080E-07   554786.1 4487919.1   157.3    4.15    1.42    1.93    YES    HROFDY
L0000834       0    0.53080E-07   554783.1 4487918.4   157.2    4.15    1.42    1.93    YES    HROFDY
L0000835       0    0.53080E-07   554780.2 4487917.8   157.2    4.15    1.42    1.93    YES    HROFDY
L0000836       0    0.53080E-07   554777.2 4487917.2   157.2    4.15    1.42    1.93    YES    HROFDY
L0000837       0    0.53080E-07   554774.2 4487916.6   157.2    4.15    1.42    1.93    YES    HROFDY
L0000838       0    0.53080E-07   554771.2 4487916.0   157.2    4.15    1.42    1.93    YES    HROFDY
L0000839       0    0.53080E-07   554768.2 4487915.4   157.1    4.15    1.42    1.93    YES    HROFDY
L0000840       0    0.53080E-07   554765.2 4487914.7   157.1    4.15    1.42    1.93    YES    HROFDY
L0000841       0    0.53080E-07   554762.2 4487914.1   157.1    4.15    1.42    1.93    YES    HROFDY
L0000842       0    0.53080E-07   554759.3 4487913.5   157.1    4.15    1.42    1.93    YES    HROFDY
L0000843       0    0.53080E-07   554756.3 4487912.9   157.1    4.15    1.42    1.93    YES    HROFDY
L0000844       0    0.53080E-07   554753.3 4487912.3   157.0    4.15    1.42    1.93    YES    HROFDY
L0000845       0    0.53080E-07   554750.3 4487911.7   157.0    4.15    1.42    1.93    YES    HROFDY
L0000846       0    0.53080E-07   554747.3 4487911.0   157.0    4.15    1.42    1.93    YES    HROFDY
L0000847       0    0.53080E-07   554744.3 4487910.4   157.0    4.15    1.42    1.93    YES    HROFDY
L0000848       0    0.53080E-07   554741.4 4487909.8   157.0    4.15    1.42    1.93    YES    HROFDY
L0000849       0    0.53080E-07   554738.4 4487909.2   156.9    4.15    1.42    1.93    YES    HROFDY
L0000850       0    0.53080E-07   554735.4 4487908.6   156.9    4.15    1.42    1.93    YES    HROFDY
L0000851       0    0.53080E-07   554732.4 4487908.0   156.9    4.15    1.42    1.93    YES    HROFDY
L0000852       0    0.53080E-07   554729.4 4487907.3   156.9    4.15    1.42    1.93    YES    HROFDY
L0000853       0    0.53080E-07   554726.4 4487906.7   156.8    4.15    1.42    1.93    YES    HROFDY
L0000854       0    0.53080E-07   554723.4 4487906.1   156.8    4.15    1.42    1.93    YES    HROFDY
L0000855       0    0.53080E-07   554720.5 4487905.5   156.8    4.15    1.42    1.93    YES    HROFDY
L0000856       0    0.53080E-07   554717.5 4487904.9   156.8    4.15    1.42    1.93    YES    HROFDY
L0000857       0    0.53080E-07   554714.5 4487904.3   156.8    4.15    1.42    1.93    YES    HROFDY
L0000858       0    0.53080E-07   554711.5 4487903.6   156.7    4.15    1.42    1.93    YES    HROFDY
L0000859       0    0.53080E-07   554708.5 4487903.0   156.7    4.15    1.42    1.93    YES    HROFDY
L0000860       0    0.53080E-07   554705.5 4487902.4   156.7    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                    ***         08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                             ***         11:54:33
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*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN



                                              *** VOLUME SOURCE DATA ***


                  NUMBER EMISSION RATE                  BASE     RELEASE    INIT.     INIT.    URBAN   EMISSION RATE
        SOURCE    PART.  (GRAMS/SEC)     X        Y      ELEV.    HEIGHT      SY        SZ      SOURCE  SCALAR VARY
          ID      CATS.              (METERS) (METERS) (METERS) (METERS)  (METERS)  (METERS)            BY
        - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


        L0000861    0   0.53080E-07  554702.5 4487901.8   156.7    4.15     1.42      1.93     YES     HROFDY
        L0000862    0   0.53080E-07  554699.6 4487901.2   156.7    4.15     1.42      1.93     YES     HROFDY
        L0000863    0   0.53080E-07  554696.6 4487900.6   156.6    4.15     1.42      1.93     YES     HROFDY
        L0000864    0   0.53080E-07  554693.6 4487899.9   156.6    4.15     1.42      1.93     YES     HROFDY
        L0000865    0   0.53080E-07  554690.6 4487899.3   156.6    4.15     1.42      1.93     YES     HROFDY
        L0000866    0   0.53080E-07  554687.6 4487898.7   156.6    4.15     1.42      1.93     YES     HROFDY
        L0000867    0   0.53080E-07  554684.6 4487898.1   156.6    4.15     1.42      1.93     YES     HROFDY
        L0000868    0   0.53080E-07  554681.7 4487897.5   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000869    0   0.53080E-07  554678.7 4487896.9   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000870    0   0.53080E-07  554675.7 4487896.2   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000871    0   0.53080E-07  554672.7 4487895.6   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000872    0   0.53080E-07  554669.7 4487895.0   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000873    0   0.53080E-07  554666.7 4487894.4   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000874    0   0.53080E-07  554663.7 4487893.8   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000875    0   0.53080E-07  554660.8 4487893.2   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000876    0   0.53080E-07  554657.8 4487892.5   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000877    0   0.53080E-07  554654.9 4487891.6   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000878    0   0.53080E-07  554652.0 4487890.5   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000879    0   0.53080E-07  554649.2 4487889.5   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000880    0   0.53080E-07  554646.3 4487888.4   156.4    4.15     1.42      1.93     YES     HROFDY

        L0000881    0   0.74620E-08  554497.4 4488060.1   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000882    0   0.74620E-08  554499.9 4488061.9   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000883    0   0.74620E-08  554502.4 4488063.6   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000884    0   0.74620E-08  554504.9 4488065.4   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000885    0   0.74620E-08  554507.4 4488067.1   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000886    0   0.74620E-08  554509.8 4488068.9   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000887    0   0.74620E-08  554512.3 4488070.7   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000888    0   0.74620E-08  554514.8 4488072.4   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000889    0   0.74620E-08  554517.3 4488074.2   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000890    0   0.74620E-08  554519.8 4488075.9   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000891    0   0.74620E-08  554522.3 4488077.7   156.4    4.15     1.42      1.93     YES     HROFDY
        L0000892    0   0.74620E-08  554524.4 4488079.9   156.5    4.15     1.42      1.93     YES     HROFDY
        L0000893    0   0.74620E-08  554526.4 4488082.2   156.6    4.15     1.42      1.93     YES     HROFDY
        L0000894    0   0.74620E-08  554528.5 4488084.4   156.7    4.15     1.42      1.93     YES     HROFDY
        L0000895    0   0.74620E-08  554530.5 4488086.7   156.7    4.15     1.42      1.93     YES     HROFDY
        L0000896    0   0.74620E-08  554532.5 4488089.0   156.8    4.15     1.42      1.93     YES     HROFDY
        L0000897    0   0.74620E-08  554534.6 4488091.2   156.9    4.15     1.42      1.93     YES     HROFDY
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L0000898      0   0.74620E-08  554536.6 4488093.5  157.0    4.15    1.42    1.93    YES    HROFDY
L0000899      0   0.74620E-08  554538.6 4488095.8  157.0    4.15    1.42    1.93    YES    HROFDY
L0000900      0   0.74620E-08  554540.7 4488098.0  157.1    4.15    1.42    1.93    YES    HROFDY
L0000901      0   0.74620E-08  554542.7 4488100.3  157.2    4.15    1.42    1.93    YES    HROFDY
L0000902      0   0.74620E-08  554544.8 4488102.6  157.2    4.15    1.42    1.93    YES    HROFDY
L0000903      0   0.74620E-08  554547.5 4488102.8  157.3    4.15    1.42    1.93    YES    HROFDY
L0000904      0   0.74620E-08  554550.5 4488102.2  157.3    4.15    1.42    1.93    YES    HROFDY
L0000905      0   0.74620E-08  554553.5 4488101.7  157.4    4.15    1.42    1.93    YES    HROFDY
L0000906      0   0.74620E-08  554556.5 4488101.1  157.4    4.15    1.42    1.93    YES    HROFDY
L0000907      0   0.74620E-08  554559.5 4488100.6  157.4    4.15    1.42    1.93    YES    HROFDY
L0000908      0   0.74620E-08  554562.5 4488100.1  157.5    4.15    1.42    1.93    YES    HROFDY
L0000909      0   0.74620E-08  554565.5 4488099.5  157.5    4.15    1.42    1.93    YES    HROFDY
L0000910      0   0.74620E-08  554568.5 4488099.7  157.5    4.15    1.42    1.93    YES    HROFDY
L0000911      0   0.74620E-08  554571.4 4488100.4  157.5    4.15    1.42    1.93    YES    HROFDY
L0000912      0   0.74620E-08  554574.4 4488101.1  157.5    4.15    1.42    1.93    YES    HROFDY
L0000913      0   0.74620E-08  554577.4 4488101.8  157.5    4.15    1.42    1.93    YES    HROFDY
L0000914      0   0.74620E-08  554580.3 4488102.5  157.5    4.15    1.42    1.93    YES    HROFDY
L0000915      0   0.74620E-08  554583.3 4488103.2  157.6    4.15    1.42    1.93    YES    HROFDY
L0000916      0   0.74620E-08  554586.3 4488103.9  157.6    4.15    1.42    1.93    YES    HROFDY
L0000917      0   0.74620E-08  554589.2 4488104.6  157.6    4.15    1.42    1.93    YES    HROFDY
L0000918      0   0.74620E-08  554592.2 4488105.2  157.6    4.15    1.42    1.93    YES    HROFDY
L0000919      0   0.74620E-08  554595.2 4488105.9  157.6    4.15    1.42    1.93    YES    HROFDY
L0000920      0   0.74620E-08  554598.2 4488106.6  157.6    4.15    1.42    1.93    YES    HROFDY
L0000921      0   0.74620E-08  554601.1 4488107.3  157.6    4.15    1.42    1.93    YES    HROFDY
L0000922      0   0.74620E-08  554604.1 4488108.0  157.6    4.15    1.42    1.93    YES    HROFDY
L0000923      0   0.74620E-08  554607.1 4488108.7  157.6    4.15    1.42    1.93    YES    HROFDY
L0000924      0   0.74620E-08  554610.0 4488109.4  157.6    4.15    1.42    1.93    YES    HROFDY
L0000925      0   0.74620E-08  554613.0 4488110.1  157.6    4.15    1.42    1.93    YES    HROFDY
L0000926      0   0.74620E-08  554616.0 4488110.8  157.7    4.15    1.42    1.93    YES    HROFDY
L0000927      0   0.74620E-08  554618.9 4488111.4  157.7    4.15    1.42    1.93    YES    HROFDY
L0000928      0   0.74620E-08  554621.9 4488112.1  157.7    4.15    1.42    1.93    YES    HROFDY
L0000929      0   0.74620E-08  554624.9 4488112.8  157.7    4.15    1.42    1.93    YES    HROFDY
L0000930      0   0.74620E-08  554627.8 4488113.5  157.7    4.15    1.42    1.93    YES    HROFDY
L0000931      0   0.74620E-08  554630.8 4488114.2  157.7    4.15    1.42    1.93    YES    HROFDY
L0000932      0   0.74620E-08  554633.8 4488114.9  157.7    4.15    1.42    1.93    YES    HROFDY
L0000933      0   0.74620E-08  554636.8 4488115.6  157.7    4.15    1.42    1.93    YES    HROFDY
L0000934      0   0.74620E-08  554639.7 4488116.3  157.7    4.15    1.42    1.93    YES    HROFDY
L0000935      0   0.74620E-08  554642.7 4488117.0  157.7    4.15    1.42    1.93    YES    HROFDY
L0000936      0   0.74620E-08  554645.7 4488117.6  157.8    4.15    1.42    1.93    YES    HROFDY
L0000937      0   0.74620E-08  554648.6 4488118.3  157.8    4.15    1.42    1.93    YES    HROFDY
L0000938      0   0.74620E-08  554651.6 4488119.0  157.8    4.15    1.42    1.93    YES    HROFDY
L0000939      0   0.74620E-08  554654.6 4488119.7  157.8    4.15    1.42    1.93    YES    HROFDY
L0000940      0   0.74620E-08  554657.5 4488120.4  157.8    4.15    1.42    1.93    YES    HROFDY
```

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                    ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                             ***        11:54:33
                                                                                                          PAGE  11

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                         *** VOLUME SOURCE DATA ***


          NUMBER EMISSION RATE                    BASE    RELEASE   INIT.    INIT.    URBAN  EMISSION RATE
  SOURCE  PART.  (GRAMS/SEC)      X        Y       ELEV.   HEIGHT    SY       SZ       SOURCE SCALAR VARY
    ID    CATS.                (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


  L0000941    0   0.74620E-08  554660.5 4488121.1  157.8    4.15    1.42     1.93      YES    HROFDY
  L0000942    0   0.74620E-08  554663.5 4488121.8  157.8    4.15    1.42     1.93      YES    HROFDY
  L0000943    0   0.74620E-08  554666.4 4488122.5  157.8    4.15    1.42     1.93      YES    HROFDY
  L0000944    0   0.74620E-08  554669.4 4488123.2  157.8    4.15    1.42     1.93      YES    HROFDY
  L0000945    0   0.74620E-08  554672.4 4488123.8  157.8    4.15    1.42     1.93      YES    HROFDY
  L0000946    0   0.74620E-08  554675.4 4488124.5  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000947    0   0.74620E-08  554678.3 4488125.2  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000948    0   0.74620E-08  554681.3 4488125.9  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000949    0   0.74620E-08  554684.3 4488126.5  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000950    0   0.74620E-08  554687.2 4488127.2  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000951    0   0.74620E-08  554690.2 4488127.9  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000952    0   0.74620E-08  554693.2 4488128.5  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000953    0   0.74620E-08  554696.2 4488129.2  157.9    4.15    1.42     1.93      YES    HROFDY
  L0000954    0   0.74620E-08  554699.1 4488129.9  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000955    0   0.74620E-08  554702.1 4488130.5  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000956    0   0.74620E-08  554705.1 4488131.2  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000957    0   0.74620E-08  554708.1 4488131.9  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000958    0   0.74620E-08  554711.0 4488132.6  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000959    0   0.74620E-08  554714.0 4488133.2  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000960    0   0.74620E-08  554717.0 4488133.9  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000961    0   0.74620E-08  554720.0 4488134.6  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000962    0   0.74620E-08  554722.9 4488135.2  158.0    4.15    1.42     1.93      YES    HROFDY
  L0000963    0   0.74620E-08  554725.9 4488135.9  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000964    0   0.74620E-08  554728.9 4488136.6  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000965    0   0.74620E-08  554731.9 4488137.2  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000966    0   0.74620E-08  554734.8 4488137.9  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000967    0   0.74620E-08  554737.8 4488138.6  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000968    0   0.74620E-08  554740.8 4488139.2  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000969    0   0.74620E-08  554743.8 4488139.9  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000970    0   0.74620E-08  554746.7 4488140.6  158.1    4.15    1.42     1.93      YES    HROFDY
  L0000971    0   0.74620E-08  554749.7 4488141.2  158.2    4.15    1.42     1.93      YES    HROFDY
  L0000972    0   0.74620E-08  554752.7 4488141.9  158.2    4.15    1.42     1.93      YES    HROFDY
  L0000973    0   0.74620E-08  554755.6 4488142.6  158.2    4.15    1.42     1.93      YES    HROFDY
  L0000974    0   0.74620E-08  554758.6 4488143.2  158.2    4.15    1.42     1.93      YES    HROFDY
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  L0000976    0   0.74620E-08  554764.6 4488144.6  158.2    4.15    1.42     1.93      YES    HROFDY
  L0000977    0   0.74620E-08  554767.5 4488145.2  158.2    4.15    1.42     1.93      YES    HROFDY
  L0000978    0   0.74620E-08  554770.5 4488145.9  158.2    4.15    1.42     1.93      YES    HROFDY
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L0000979      0   0.74620E-08   554773.5 4488146.6   158.2    4.15    1.42    1.93    YES    HROFDY
L0000980      0   0.74620E-08   554776.5 4488147.2   158.3    4.15    1.42    1.93    YES    HROFDY
L0000981      0   0.74620E-08   554779.4 4488147.9   158.3    4.15    1.42    1.93    YES    HROFDY
L0000982      0   0.74620E-08   554782.4 4488148.6   158.3    4.15    1.42    1.93    YES    HROFDY
L0000983      0   0.74620E-08   554785.4 4488149.3   158.3    4.15    1.42    1.93    YES    HROFDY
L0000984      0   0.74620E-08   554788.4 4488149.9   158.3    4.15    1.42    1.93    YES    HROFDY
L0000985      0   0.74620E-08   554791.3 4488150.6   158.3    4.15    1.42    1.93    YES    HROFDY
L0000986      0   0.74620E-08   554794.3 4488151.3   158.3    4.15    1.42    1.93    YES    HROFDY
L0000987      0   0.74620E-08   554797.3 4488151.6   158.4    4.15    1.42    1.93    YES    HROFDY
L0000988      0   0.74620E-08   554800.4 4488151.5   158.4    4.15    1.42    1.93    YES    HROFDY
L0000989      0   0.74620E-08   554803.4 4488151.4   158.4    4.15    1.42    1.93    YES    HROFDY
L0000990      0   0.74620E-08   554806.4 4488151.2   158.4    4.15    1.42    1.93    YES    HROFDY
L0000991      0   0.74620E-08   554809.5 4488151.1   158.5    4.15    1.42    1.93    YES    HROFDY
L0000992      0   0.74620E-08   554811.7 4488149.7   158.5    4.15    1.42    1.93    YES    HROFDY
L0000993      0   0.74620E-08   554813.1 4488146.9   158.5    4.15    1.42    1.93    YES    HROFDY
L0000994      0   0.74620E-08   554814.4 4488144.2   158.5    4.15    1.42    1.93    YES    HROFDY
L0000995      0   0.74620E-08   554815.8 4488141.5   158.5    4.15    1.42    1.93    YES    HROFDY
L0000996      0   0.74620E-08   554817.1 4488138.8   158.5    4.15    1.42    1.93    YES    HROFDY
L0000997      0   0.74620E-08   554818.2 4488135.9   158.5    4.15    1.42    1.93    YES    HROFDY
L0000998      0   0.74620E-08   554818.4 4488132.9   158.4    4.15    1.42    1.93    YES    HROFDY
L0000999      0   0.74620E-08   554818.7 4488129.9   158.3    4.15    1.42    1.93    YES    HROFDY
L0001000      0   0.74620E-08   554818.9 4488126.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0001001      0   0.74620E-08   554819.2 4488123.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0001002      0   0.74620E-08   554819.4 4488120.8   158.1    4.15    1.42    1.93    YES    HROFDY
L0001003      0   0.74620E-08   554819.7 4488117.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0001004      0   0.74620E-08   554819.9 4488114.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0001005      0   0.74620E-08   554820.3 4488111.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001006      0   0.74620E-08   554820.9 4488108.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001007      0   0.74620E-08   554821.5 4488105.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001008      0   0.74620E-08   554822.0 4488102.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001009      0   0.74620E-08   554822.6 4488099.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001010      0   0.74620E-08   554823.2 4488096.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001011      0   0.74620E-08   554823.8 4488093.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001012      0   0.74620E-08   554824.4 4488090.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001013      0   0.74620E-08   554824.9 4488087.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001014      0   0.74620E-08   554825.5 4488084.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001015      0   0.74620E-08   554826.1 4488081.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001016      0   0.74620E-08   554826.7 4488078.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001017      0   0.74620E-08   554827.3 4488075.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001018      0   0.74620E-08   554827.9 4488072.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001019      0   0.74620E-08   554828.4 4488069.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001020      0   0.74620E-08   554828.2 4488066.7   157.7    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                              ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***        11:54:33
                                                                                                   PAGE  13

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                            *** VOLUME SOURCE DATA ***


                NUMBER EMISSION RATE              BASE    RELEASE   INIT.    INIT.    URBAN  EMISSION RATE
        SOURCE  PART.  (GRAMS/SEC)    X       Y   ELEV.   HEIGHT     SY       SZ     SOURCE  SCALAR VARY
          ID    CATS.             (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
        - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


        L0001021     0   0.74620E-08  554828.0 4488063.7   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001022     0   0.74620E-08  554827.7 4488060.7   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001023     0   0.74620E-08  554827.5 4488057.6   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001024     0   0.74620E-08  554827.2 4488054.6   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001025     0   0.74620E-08  554827.0 4488051.5   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001026     0   0.74620E-08  554826.7 4488048.5   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001027     0   0.74620E-08  554826.5 4488045.5   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001028     0   0.74620E-08  554826.2 4488042.4   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001029     0   0.74620E-08  554826.0 4488039.4   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001030     0   0.74620E-08  554824.6 4488036.8   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001031     0   0.74620E-08  554822.8 4488034.3   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001032     0   0.74620E-08  554821.0 4488031.8   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001033     0   0.74620E-08  554819.2 4488029.4   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001034     0   0.74620E-08  554817.4 4488026.9   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001035     0   0.74620E-08  554815.6 4488024.4   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001036     0   0.74620E-08  554817.0 4488021.9   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001037     0   0.74620E-08  554818.6 4488019.3   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001038     0   0.74620E-08  554820.2 4488016.7   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001039     0   0.74620E-08  554822.8 4488015.3   157.6    4.15     1.42     1.93      YES    HROFDY
        L0001040     0   0.74620E-08  554825.7 4488014.4   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001041     0   0.74620E-08  554828.6 4488013.5   157.7    4.15     1.42     1.93      YES    HROFDY
        L0001042     0   0.74620E-08  554831.5 4488012.6   157.8    4.15     1.42     1.93      YES    HROFDY
        L0001043     0   0.74620E-08  554834.4 4488011.7   157.9    4.15     1.42     1.93      YES    HROFDY
        L0001044     0   0.74620E-08  554836.5 4488009.8   157.9    4.15     1.42     1.93      YES    HROFDY
        L0001045     0   0.74620E-08  554837.9 4488007.1   157.9    4.15     1.42     1.93      YES    HROFDY
        L0001046     0   0.74620E-08  554839.4 4488004.4   158.0    4.15     1.42     1.93      YES    HROFDY
        L0001047     0   0.74620E-08  554840.9 4488001.7   158.0    4.15     1.42     1.93      YES    HROFDY
        L0001048     0   0.74620E-08  554842.3 4487999.1   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001049     0   0.74620E-08  554843.8 4487996.4   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001050     0   0.74620E-08  554845.3 4487993.7   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001051     0   0.74620E-08  554846.6 4487991.0   158.2    4.15     1.42     1.93      YES    HROFDY
        L0001052     0   0.74620E-08  554847.0 4487988.0   158.2    4.15     1.42     1.93      YES    HROFDY
        L0001053     0   0.74620E-08  554847.4 4487985.0   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001054     0   0.74620E-08  554847.8 4487981.9   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001055     0   0.74620E-08  554848.2 4487978.9   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001056     0   0.74620E-08  554848.6 4487975.9   158.1    4.15     1.42     1.93      YES    HROFDY
        L0001057     0   0.74620E-08  554849.0 4487972.9   158.0    4.15     1.42     1.93      YES    HROFDY
        L0001058     0   0.74620E-08  554849.4 4487969.9   158.0    4.15     1.42     1.93      YES    HROFDY
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L0001059      0    0.74620E-08   554849.8 4487966.8    158.0    4.15    1.42    1.93    YES    HROFDY
L0001060      0    0.74620E-08   554850.2 4487963.8    158.0    4.15    1.42    1.93    YES    HROFDY
L0001061      0    0.74620E-08   554850.6 4487960.8    157.9    4.15    1.42    1.93    YES    HROFDY
L0001062      0    0.74620E-08   554851.0 4487957.8    157.9    4.15    1.42    1.93    YES    HROFDY
L0001063      0    0.74620E-08   554851.5 4487954.8    157.9    4.15    1.42    1.93    YES    HROFDY
L0001064      0    0.74620E-08   554851.9 4487951.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0001065      0    0.74620E-08   554852.3 4487948.7    157.9    4.15    1.42    1.93    YES    HROFDY
L0001066      0    0.74620E-08   554852.7 4487945.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0001067      0    0.74620E-08   554853.1 4487942.7    157.8    4.15    1.42    1.93    YES    HROFDY
L0001068      0    0.74620E-08   554853.5 4487939.6    157.8    4.15    1.42    1.93    YES    HROFDY
L0001069      0    0.74620E-08   554853.9 4487936.6    157.8    4.15    1.42    1.93    YES    HROFDY
L0001070      0    0.74620E-08   554854.3 4487933.6    157.7    4.15    1.42    1.93    YES    HROFDY
L0001071      0    0.74620E-08   554851.8 4487932.6    157.7    4.15    1.42    1.93    YES    HROFDY
L0001072      0    0.74620E-08   554848.8 4487932.0    157.7    4.15    1.42    1.93    YES    HROFDY
L0001073      0    0.74620E-08   554845.8 4487931.4    157.7    4.15    1.42    1.93    YES    HROFDY
L0001074      0    0.74620E-08   554842.8 4487930.8    157.7    4.15    1.42    1.93    YES    HROFDY
L0001075      0    0.74620E-08   554839.9 4487930.2    157.6    4.15    1.42    1.93    YES    HROFDY
L0001076      0    0.74620E-08   554836.9 4487929.5    157.6    4.15    1.42    1.93    YES    HROFDY
L0001077      0    0.74620E-08   554833.9 4487928.9    157.6    4.15    1.42    1.93    YES    HROFDY
L0001078      0    0.74620E-08   554830.9 4487928.3    157.6    4.15    1.42    1.93    YES    HROFDY
L0001079      0    0.74620E-08   554827.9 4487927.7    157.6    4.15    1.42    1.93    YES    HROFDY
L0001080      0    0.74620E-08   554824.9 4487927.1    157.5    4.15    1.42    1.93    YES    HROFDY
L0001081      0    0.74620E-08   554821.9 4487926.5    157.5    4.15    1.42    1.93    YES    HROFDY
L0001082      0    0.74620E-08   554819.0 4487925.8    157.5    4.15    1.42    1.93    YES    HROFDY
L0001083      0    0.74620E-08   554816.0 4487925.2    157.5    4.15    1.42    1.93    YES    HROFDY
L0001084      0    0.74620E-08   554813.0 4487924.6    157.4    4.15    1.42    1.93    YES    HROFDY
L0001085      0    0.74620E-08   554810.0 4487924.0    157.4    4.15    1.42    1.93    YES    HROFDY
L0001086      0    0.74620E-08   554807.0 4487923.4    157.4    4.15    1.42    1.93    YES    HROFDY
L0001087      0    0.74620E-08   554804.0 4487922.8    157.4    4.15    1.42    1.93    YES    HROFDY
L0001088      0    0.74620E-08   554801.1 4487922.1    157.4    4.15    1.42    1.93    YES    HROFDY
L0001089      0    0.74620E-08   554798.1 4487921.5    157.3    4.15    1.42    1.93    YES    HROFDY
L0001090      0    0.74620E-08   554795.1 4487920.9    157.3    4.15    1.42    1.93    YES    HROFDY
L0001091      0    0.74620E-08   554792.1 4487920.3    157.3    4.15    1.42    1.93    YES    HROFDY
L0001092      0    0.74620E-08   554789.1 4487919.7    157.3    4.15    1.42    1.93    YES    HROFDY
L0001093      0    0.74620E-08   554786.1 4487919.1    157.3    4.15    1.42    1.93    YES    HROFDY
L0001094      0    0.74620E-08   554783.1 4487918.4    157.2    4.15    1.42    1.93    YES    HROFDY
L0001095      0    0.74620E-08   554780.2 4487917.8    157.2    4.15    1.42    1.93    YES    HROFDY
L0001096      0    0.74620E-08   554777.2 4487917.2    157.2    4.15    1.42    1.93    YES    HROFDY
L0001097      0    0.74620E-08   554774.2 4487916.6    157.2    4.15    1.42    1.93    YES    HROFDY
L0001098      0    0.74620E-08   554771.2 4487916.0    157.2    4.15    1.42    1.93    YES    HROFDY
L0001099      0    0.74620E-08   554768.2 4487915.4    157.1    4.15    1.42    1.93    YES    HROFDY
L0001100      0    0.74620E-08   554765.2 4487914.7    157.1    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA                                    ***         08/28/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                             ***         11:54:33
                                                                                                           PAGE  15

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
                                            *** VOLUME SOURCE DATA ***


                   NUMBER EMISSION RATE                    BASE     RELEASE    INIT.    INIT.    URBAN   EMISSION RATE
       SOURCE      PART.  (GRAMS/SEC)     X        Y        ELEV.    HEIGHT     SY       SZ       SOURCE  SCALAR VARY
        ID         CATS.               (METERS) (METERS)  (METERS)  (METERS)  (METERS) (METERS)           BY
      - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

      L0001101        0   0.74620E-08  554762.2 4487914.1   157.1     4.15     1.42     1.93      YES     HROFDY
      L0001102        0   0.74620E-08  554759.3 4487913.5   157.1     4.15     1.42     1.93      YES     HROFDY
      L0001103        0   0.74620E-08  554756.3 4487912.9   157.1     4.15     1.42     1.93      YES     HROFDY
      L0001104        0   0.74620E-08  554753.3 4487912.3   157.0     4.15     1.42     1.93      YES     HROFDY
      L0001105        0   0.74620E-08  554750.3 4487911.7   157.0     4.15     1.42     1.93      YES     HROFDY
      L0001106        0   0.74620E-08  554747.3 4487911.0   157.0     4.15     1.42     1.93      YES     HROFDY
      L0001107        0   0.74620E-08  554744.3 4487910.4   157.0     4.15     1.42     1.93      YES     HROFDY
      L0001108        0   0.74620E-08  554741.4 4487909.8   157.0     4.15     1.42     1.93      YES     HROFDY
      L0001109        0   0.74620E-08  554738.4 4487909.2   156.9     4.15     1.42     1.93      YES     HROFDY
      L0001110        0   0.74620E-08  554735.4 4487908.6   156.9     4.15     1.42     1.93      YES     HROFDY
      L0001111        0   0.74620E-08  554732.4 4487908.0   156.9     4.15     1.42     1.93      YES     HROFDY
      L0001112        0   0.74620E-08  554729.4 4487907.3   156.9     4.15     1.42     1.93      YES     HROFDY
      L0001113        0   0.74620E-08  554726.4 4487906.7   156.8     4.15     1.42     1.93      YES     HROFDY
      L0001114        0   0.74620E-08  554723.4 4487906.1   156.8     4.15     1.42     1.93      YES     HROFDY
      L0001115        0   0.74620E-08  554720.5 4487905.5   156.8     4.15     1.42     1.93      YES     HROFDY
      L0001116        0   0.74620E-08  554717.5 4487904.9   156.8     4.15     1.42     1.93      YES     HROFDY
      L0001117        0   0.74620E-08  554714.5 4487904.3   156.8     4.15     1.42     1.93      YES     HROFDY
      L0001118        0   0.74620E-08  554711.5 4487903.6   156.7     4.15     1.42     1.93      YES     HROFDY
      L0001119        0   0.74620E-08  554708.5 4487903.0   156.7     4.15     1.42     1.93      YES     HROFDY
      L0001120        0   0.74620E-08  554705.5 4487902.4   156.7     4.15     1.42     1.93      YES     HROFDY
      L0001121        0   0.74620E-08  554702.5 4487901.8   156.7     4.15     1.42     1.93      YES     HROFDY
      L0001122        0   0.74620E-08  554699.6 4487901.2   156.7     4.15     1.42     1.93      YES     HROFDY
      L0001123        0   0.74620E-08  554696.6 4487900.6   156.6     4.15     1.42     1.93      YES     HROFDY
      L0001124        0   0.74620E-08  554693.6 4487899.9   156.6     4.15     1.42     1.93      YES     HROFDY
      L0001125        0   0.74620E-08  554690.6 4487899.3   156.6     4.15     1.42     1.93      YES     HROFDY
      L0001126        0   0.74620E-08  554687.6 4487898.7   156.6     4.15     1.42     1.93      YES     HROFDY
      L0001127        0   0.74620E-08  554684.6 4487898.1   156.6     4.15     1.42     1.93      YES     HROFDY
      L0001128        0   0.74620E-08  554681.7 4487897.5   156.5     4.15     1.42     1.93      YES     HROFDY
      L0001129        0   0.74620E-08  554678.7 4487896.9   156.5     4.15     1.42     1.93      YES     HROFDY
      L0001130        0   0.74620E-08  554675.7 4487896.2   156.5     4.15     1.42     1.93      YES     HROFDY
      L0001131        0   0.74620E-08  554672.7 4487895.6   156.5     4.15     1.42     1.93      YES     HROFDY
      L0001132        0   0.74620E-08  554669.7 4487895.0   156.5     4.15     1.42     1.93      YES     HROFDY
      L0001133        0   0.74620E-08  554666.7 4487894.4   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001134        0   0.74620E-08  554663.7 4487893.8   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001135        0   0.74620E-08  554660.8 4487893.2   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001136        0   0.74620E-08  554657.8 4487892.5   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001137        0   0.74620E-08  554654.9 4487891.6   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001138        0   0.74620E-08  554652.0 4487890.5   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001139        0   0.74620E-08  554649.2 4487889.5   156.4     4.15     1.42     1.93      YES     HROFDY
      L0001140        0   0.74620E-08  554646.3 4487888.4   156.4     4.15     1.42     1.93      YES     HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                     ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                              ***        11:54:33
                                                                                                          PAGE  16

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                              *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                   BASE   RELEASE    INIT.    INIT.   URBAN   EMISSION RATE
  SOURCE      PART.  (GRAMS/SEC)    X        Y       ELEV.  HEIGHT     SY       SZ      SOURCE  SCALAR VARY
    ID        CATS.            (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)            BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


  REFUEL       0    0.54500E-01  554820.9 4487960.0  157.7   1.00     8.37     0.93     YES     HROFDY
  SPILL        0    0.97700E-01  554820.9 4487960.0  157.7   0.00     8.37     1.86     YES     HROFDY

  L0001141     0    0.21300E-07  554658.5 4487889.0  156.4   4.15     1.42     1.93     YES     HROFDY
  L0001142     0    0.21300E-07  554661.5 4487889.6  156.4   4.15     1.42     1.93     YES     HROFDY
  L0001143     0    0.21300E-07  554664.5 4487890.2  156.4   4.15     1.42     1.93     YES     HROFDY
  L0001144     0    0.21300E-07  554667.5 4487890.8  156.4   4.15     1.42     1.93     YES     HROFDY
  L0001145     0    0.21300E-07  554670.5 4487891.4  156.5   4.15     1.42     1.93     YES     HROFDY
  L0001146     0    0.21300E-07  554673.5 4487891.9  156.5   4.15     1.42     1.93     YES     HROFDY
  L0001147     0    0.21300E-07  554676.4 4487892.5  156.5   4.15     1.42     1.93     YES     HROFDY
  L0001148     0    0.21300E-07  554679.4 4487893.1  156.5   4.15     1.42     1.93     YES     HROFDY
  L0001149     0    0.21300E-07  554682.4 4487893.7  156.6   4.15     1.42     1.93     YES     HROFDY
  L0001150     0    0.21300E-07  554685.4 4487894.3  156.6   4.15     1.42     1.93     YES     HROFDY
  L0001151     0    0.21300E-07  554688.4 4487894.9  156.6   4.15     1.42     1.93     YES     HROFDY
  L0001152     0    0.21300E-07  554691.4 4487895.5  156.6   4.15     1.42     1.93     YES     HROFDY
  L0001153     0    0.21300E-07  554694.4 4487896.0  156.7   4.15     1.42     1.93     YES     HROFDY
  L0001154     0    0.21300E-07  554697.4 4487896.6  156.7   4.15     1.42     1.93     YES     HROFDY
  L0001155     0    0.21300E-07  554700.4 4487897.2  156.7   4.15     1.42     1.93     YES     HROFDY
  L0001156     0    0.21300E-07  554703.4 4487897.8  156.7   4.15     1.42     1.93     YES     HROFDY
  L0001157     0    0.21300E-07  554706.4 4487898.4  156.7   4.15     1.42     1.93     YES     HROFDY
  L0001158     0    0.21300E-07  554709.3 4487899.0  156.8   4.15     1.42     1.93     YES     HROFDY
  L0001159     0    0.21300E-07  554712.3 4487899.6  156.8   4.15     1.42     1.93     YES     HROFDY
  L0001160     0    0.21300E-07  554715.3 4487900.1  156.8   4.15     1.42     1.93     YES     HROFDY
  L0001161     0    0.21300E-07  554718.3 4487900.7  156.8   4.15     1.42     1.93     YES     HROFDY
  L0001162     0    0.21300E-07  554721.3 4487901.3  156.9   4.15     1.42     1.93     YES     HROFDY
  L0001163     0    0.21300E-07  554724.3 4487901.9  156.9   4.15     1.42     1.93     YES     HROFDY
  L0001164     0    0.21300E-07  554727.3 4487902.5  156.9   4.15     1.42     1.93     YES     HROFDY
  L0001165     0    0.21300E-07  554730.3 4487903.1  156.9   4.15     1.42     1.93     YES     HROFDY
  L0001166     0    0.21300E-07  554733.3 4487903.7  157.0   4.15     1.42     1.93     YES     HROFDY
  L0001167     0    0.21300E-07  554736.3 4487904.2  157.0   4.15     1.42     1.93     YES     HROFDY
  L0001168     0    0.21300E-07  554739.3 4487904.8  157.0   4.15     1.42     1.93     YES     HROFDY
  L0001169     0    0.21300E-07  554742.2 4487905.4  157.0   4.15     1.42     1.93     YES     HROFDY
  L0001170     0    0.21300E-07  554745.2 4487906.0  157.0   4.15     1.42     1.93     YES     HROFDY
  L0001171     0    0.21300E-07  554748.2 4487906.6  157.1   4.15     1.42     1.93     YES     HROFDY
  L0001172     0    0.21300E-07  554751.2 4487907.2  157.1   4.15     1.42     1.93     YES     HROFDY
  L0001173     0    0.21300E-07  554754.2 4487907.8  157.1   4.15     1.42     1.93     YES     HROFDY
  L0001174     0    0.21300E-07  554757.2 4487908.3  157.1   4.15     1.42     1.93     YES     HROFDY
  L0001175     0    0.21300E-07  554760.2 4487908.9  157.2   4.15     1.42     1.93     YES     HROFDY
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L0001176     0    0.21300E-07  554763.2 4487909.5   157.2     4.15     1.42     1.93     YES     HROFDY
L0001177     0    0.21300E-07  554766.2 4487910.1   157.2     4.15     1.42     1.93     YES     HROFDY
L0001178     0    0.21300E-07  554769.2 4487910.7   157.2     4.15     1.42     1.93     YES     HROFDY
L0001179     0    0.21300E-07  554772.2 4487911.3   157.2     4.15     1.42     1.93     YES     HROFDY
L0001180     0    0.21300E-07  554775.2 4487911.9   157.3     4.15     1.42     1.93     YES     HROFDY
L0001181     0    0.21300E-07  554778.1 4487912.4   157.3     4.15     1.42     1.93     YES     HROFDY
L0001182     0    0.21300E-07  554781.1 4487913.0   157.3     4.15     1.42     1.93     YES     HROFDY
L0001183     0    0.21300E-07  554784.1 4487913.6   157.3     4.15     1.42     1.93     YES     HROFDY
L0001184     0    0.21300E-07  554787.1 4487914.2   157.4     4.15     1.42     1.93     YES     HROFDY
L0001185     0    0.21300E-07  554790.1 4487914.8   157.4     4.15     1.42     1.93     YES     HROFDY
L0001186     0    0.21300E-07  554793.1 4487915.4   157.4     4.15     1.42     1.93     YES     HROFDY
L0001187     0    0.21300E-07  554796.1 4487916.0   157.4     4.15     1.42     1.93     YES     HROFDY
L0001188     0    0.21300E-07  554799.1 4487916.5   157.5     4.15     1.42     1.93     YES     HROFDY
L0001189     0    0.21300E-07  554802.1 4487917.1   157.5     4.15     1.42     1.93     YES     HROFDY
L0001190     0    0.21300E-07  554805.1 4487917.7   157.5     4.15     1.42     1.93     YES     HROFDY
L0001191     0    0.21300E-07  554808.1 4487918.3   157.5     4.15     1.42     1.93     YES     HROFDY
L0001192     0    0.21300E-07  554811.0 4487918.9   157.5     4.15     1.42     1.93     YES     HROFDY
L0001193     0    0.21300E-07  554814.0 4487919.5   157.6     4.15     1.42     1.93     YES     HROFDY
L0001194     0    0.21300E-07  554817.0 4487920.1   157.6     4.15     1.42     1.93     YES     HROFDY
L0001195     0    0.21300E-07  554820.0 4487920.6   157.6     4.15     1.42     1.93     YES     HROFDY
L0001196     0    0.21300E-07  554823.0 4487921.2   157.6     4.15     1.42     1.93     YES     HROFDY
L0001197     0    0.21300E-07  554826.0 4487921.8   157.7     4.15     1.42     1.93     YES     HROFDY
L0001198     0    0.21300E-07  554829.0 4487922.4   157.7     4.15     1.42     1.93     YES     HROFDY
L0001199     0    0.21300E-07  554832.0 4487923.0   157.7     4.15     1.42     1.93     YES     HROFDY
L0001200     0    0.21300E-07  554835.0 4487923.6   157.7     4.15     1.42     1.93     YES     HROFDY
L0001201     0    0.21300E-07  554838.0 4487924.2   157.8     4.15     1.42     1.93     YES     HROFDY
L0001202     0    0.21300E-07  554841.0 4487924.8   157.8     4.15     1.42     1.93     YES     HROFDY
L0001203     0    0.21300E-07  554843.9 4487925.3   157.8     4.15     1.42     1.93     YES     HROFDY
L0001204     0    0.21300E-07  554846.9 4487925.9   157.8     4.15     1.42     1.93     YES     HROFDY
L0001205     0    0.21300E-07  554849.9 4487926.5   157.8     4.15     1.42     1.93     YES     HROFDY
L0001206     0    0.21300E-07  554852.9 4487927.1   157.9     4.15     1.42     1.93     YES     HROFDY
L0001207     0    0.21300E-07  554855.9 4487927.7   157.9     4.15     1.42     1.93     YES     HROFDY
L0001208     0    0.21300E-07  554858.9 4487928.3   157.9     4.15     1.42     1.93     YES     HROFDY
L0001209     0    0.21300E-07  554861.9 4487928.8   157.9     4.15     1.42     1.93     YES     HROFDY
L0001210     0    0.21300E-07  554862.4 4487926.7   157.9     4.15     1.42     1.93     YES     HROFDY
L0001211     0    0.21300E-07  554862.1 4487923.7   157.8     4.15     1.42     1.93     YES     HROFDY
L0001212     0    0.21300E-07  554861.8 4487920.7   157.8     4.15     1.42     1.93     YES     HROFDY
L0001213     0    0.21300E-07  554861.5 4487917.6   157.7     4.15     1.42     1.93     YES     HROFDY
L0001214     0    0.21300E-07  554861.1 4487914.6   157.6     4.15     1.42     1.93     YES     HROFDY
L0001215     0    0.21300E-07  554860.8 4487911.6   157.5     4.15     1.42     1.93     YES     HROFDY
L0001216     0    0.21300E-07  554860.5 4487908.6   157.5     4.15     1.42     1.93     YES     HROFDY
L0001217     0    0.21300E-07  554860.2 4487905.5   157.4     4.15     1.42     1.93     YES     HROFDY
L0001218     0    0.21300E-07  554859.9 4487902.5   157.3     4.15     1.42     1.93     YES     HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                      ***         08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                                ***         11:54:33
                                                                                                             PAGE  18

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                          *** VOLUME SOURCE DATA ***

            NUMBER EMISSION RATE                  BASE     RELEASE    INIT.    INIT.    URBAN   EMISSION RATE
  SOURCE    PART.  (GRAMS/SEC)      X        Y     ELEV.    HEIGHT     SY       SZ      SOURCE   SCALAR VARY
    ID      CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)                BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


  L0001219     0   0.21300E-07  554859.6 4487899.5  157.3    4.15     1.42     1.93     YES     HROFDY
  L0001220     0   0.21300E-07  554859.2 4487896.4  157.2    4.15     1.42     1.93     YES     HROFDY
  L0001221     0   0.21300E-07  554858.9 4487893.4  157.1    4.15     1.42     1.93     YES     HROFDY
  L0001222     0   0.21300E-07  554858.6 4487890.4  157.1    4.15     1.42     1.93     YES     HROFDY
  L0001223     0   0.21300E-07  554858.3 4487887.3  157.0    4.15     1.42     1.93     YES     HROFDY
  L0001224     0   0.21300E-07  554858.0 4487884.3  156.9    4.15     1.42     1.93     YES     HROFDY
  L0001225     0   0.21300E-07  554857.6 4487881.3  156.8    4.15     1.42     1.93     YES     HROFDY
  L0001226     0   0.21300E-07  554857.3 4487878.2  156.8    4.15     1.42     1.93     YES     HROFDY
  L0001227     0   0.21300E-07  554857.0 4487875.2  156.7    4.15     1.42     1.93     YES     HROFDY
  L0001228     0   0.21300E-07  554856.7 4487872.2  156.6    4.15     1.42     1.93     YES     HROFDY
  L0001229     0   0.21300E-07  554856.4 4487869.1  156.6    4.15     1.42     1.93     YES     HROFDY
  L0001230     0   0.21300E-07  554856.0 4487866.1  156.5    4.15     1.42     1.93     YES     HROFDY
  L0001231     0   0.21300E-07  554855.7 4487863.1  156.4    4.15     1.42     1.93     YES     HROFDY
  L0001232     0   0.21300E-07  554855.4 4487860.1  156.3    4.15     1.42     1.93     YES     HROFDY
  L0001233     0   0.21300E-07  554855.1 4487857.0  156.3    4.15     1.42     1.93     YES     HROFDY
  L0001234     0   0.21300E-07  554854.8 4487854.0  156.2    4.15     1.42     1.93     YES     HROFDY
  L0001235     0   0.21300E-07  554854.4 4487851.0  156.1    4.15     1.42     1.93     YES     HROFDY
  L0001236     0   0.21300E-07  554854.1 4487847.9  156.1    4.15     1.42     1.93     YES     HROFDY
  L0001237     0   0.21300E-07  554853.8 4487844.9  156.0    4.15     1.42     1.93     YES     HROFDY
  L0001238     0   0.21300E-07  554853.5 4487841.9  155.9    4.15     1.42     1.93     YES     HROFDY
  L0001239     0   0.21300E-07  554853.2 4487838.8  155.9    4.15     1.42     1.93     YES     HROFDY
  L0001240     0   0.21300E-07  554852.9 4487835.8  155.8    4.15     1.42     1.93     YES     HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                  ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                           ***        11:54:33
                                                                                                       PAGE  19
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                   *** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID                                        SOURCE IDs
-----------                                        ----------


 FUELHAUL    L0000881 through L0001140     ,

 FUELIDLE    FUELIDLE     ,

 MAJORTRU    L0001141 through L0001240     ,

 REFUEL      REFUEL       ,

 SPILL       SPILL        ,

 TRUCKHAU    L0000621 through L000880      ,

 VENTING     VENTING      ,

 LOADDOCK    STCK1        , STCK2        , STCK3          , STCK4          ,

 MJRDOCKS    STCK5        , STCK6        ,

 ALL         All Sources (volume and point)
```

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                               ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                        ***        11:54:33
                                                                                                    PAGE  28
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                   *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                SOURCE IDs
  --------   ---------                                ----------


  Redding     91808.   All Sources (Volume and Point)
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                          ***          08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                   ***          11:54:33
                                                                                                 PAGE  32

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                *** DIRECTION SPECIFIC BUILDING DIMENSIONS ***


SOURCE ID: STCK1
 IFV    BH      BW      BL      XADJ    YADJ      IFV    BH      BW      BL      XADJ    YADJ
  1   10.6,  166.2,  139.4,  -46.4,   76.2,       2   10.6,  166.9,  153.8,  -66.0,   80.4,
  3   10.6,  165.0,  165.2,  -85.2,   80.8,       4   10.6,  160.6,  171.5, -101.7,   77.6,
  5   10.6,  151.3,  172.7, -115.2,   71.9,       6   10.6,  137.4,  168.5, -125.2,   64.1,
  7   10.6,  119.4,  159.3, -131.4,   54.4,       8   10.6,  103.8,  149.8, -136.2,   42.8,
  9   10.6,  123.5,  160.5, -150.0,   33.5,      10   10.6,  139.4,  166.2, -159.4,   23.3,
 11   10.6,  153.8,  166.9, -163.8,   10.9,      12   10.6,  165.2,  165.0, -163.3,   -2.6,
 13   10.6,  171.5,  160.6, -157.9,  -16.0,      14   10.6,  172.7,  151.3, -147.6,  -28.9,
 15   10.6,  168.5,  137.4, -132.8,  -40.9,      16   10.6,  159.3,  119.4, -114.1,  -51.7,
 17   10.6,  149.8,  103.8,  -94.7,  -61.2,      18   10.6,  160.5,  123.5,  -95.3,  -69.8,
 19   10.6,  166.2,  139.4,  -93.0,  -76.2,      20   10.6,  166.9,  153.8,  -87.8,  -80.4,
 21   10.6,  165.0,  165.2,  -80.0,  -80.8,      22   10.6,  160.6,  171.5,  -69.8,  -77.6,
 23   10.6,  151.3,  172.7,  -57.4,  -71.9,      24   10.6,  137.4,  168.5,  -43.3,  -64.1,
 25   10.6,  119.4,  159.3,  -27.9,  -54.4,      26   10.6,  103.8,  149.8,  -13.7,  -42.8,
 27   10.6,  123.5,  160.5,  -10.4,  -33.5,      28   10.6,  139.4,  166.2,   -6.9,  -23.3,
 29   10.6,  153.8,  166.9,   -3.1,  -10.9,      30   10.6,  165.2,  165.0,   -1.7,    2.6,
 31   10.6,  171.5,  160.6,   -2.7,   16.0,      32   10.6,  172.7,  151.3,   -3.7,   28.9,
 33   10.6,  168.5,  137.4,   -4.6,   40.9,      34   10.6,  159.3,  119.4,   -5.3,   51.7,
 35   10.6,  149.8,  103.8,   -9.1,   61.2,      36   10.6,  160.5,  123.5,  -28.2,   69.8,


SOURCE ID: STCK2
 IFV    BH      BW      BL      XADJ    YADJ      IFV    BH      BW      BL      XADJ    YADJ
  1   10.6,  166.2,  139.4,  -47.5,   80.0,       2   10.6,  166.9,  153.8,  -67.8,   83.9,
  3   10.6,  165.0,  165.2,  -87.5,   84.0,       4   10.6,  160.6,  171.5, -104.6,   80.3,
  5   10.6,  151.3,  172.7, -118.5,   74.1,       6   10.6,  137.4,  168.5, -128.8,   65.7,
  7   10.6,  119.4,  159.3, -135.2,   55.3,       8   10.6,  103.8,  149.8, -140.1,   43.0,
  9   10.6,  123.5,  160.5, -154.0,   33.1,      10   10.6,  139.4,  166.2, -163.2,   22.1,
 11   10.6,  153.8,  166.9, -167.4,    9.2,      12   10.6,  165.2,  165.0, -166.5,   -4.9,
 13   10.6,  171.5,  160.6, -160.6,  -18.8,      14   10.6,  172.7,  151.3, -149.8,  -32.2,
 15   10.6,  168.5,  137.4, -134.4,  -44.6,      16   10.6,  159.3,  119.4, -115.0,  -55.6,
 17   10.6,  149.8,  103.8,  -94.9,  -65.2,      18   10.6,  160.5,  123.5,  -94.8,  -73.7,
 19   10.6,  166.2,  139.4,  -91.8,  -80.0,      20   10.6,  166.9,  153.8,  -86.1,  -83.9,
 21   10.6,  165.0,  165.2,  -77.7,  -84.0,      22   10.6,  160.6,  171.5,  -66.9,  -80.3,
 23   10.6,  151.3,  172.7,  -54.1,  -74.1,      24   10.6,  137.4,  168.5,  -39.7,  -65.7,
 25   10.6,  119.4,  159.3,  -24.1,  -55.3,      26   10.6,  103.8,  149.8,   -9.7,  -43.0,
 27   10.6,  123.5,  160.5,   -6.5,  -33.1,      28   10.6,  139.4,  166.2,   -3.1,  -22.1,
 29   10.6,  153.8,  166.9,    0.5,   -9.2,      30   10.6,  165.2,  165.0,    1.5,    4.9,
 31   10.6,  171.5,  160.6,    0.0,   18.8,      32   10.6,  172.7,  151.3,   -1.5,   32.2,
 33   10.6,  168.5,  137.4,   -3.0,   44.6,      34   10.6,  159.3,  119.4,   -4.4,   55.6,
 35   10.6,  149.8,  103.8,   -8.9,   65.2,      36   10.6,  160.5,  123.5,  -28.6,   73.7,
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SOURCE ID: STCK3
 IFV    BH      BW      BL      XADJ    YADJ     IFV    BH      BW      BL      XADJ    YADJ
   1   10.6,  166.2,  139.4,  -48.9,   83.6,      2   10.6,  166.9,  153.8,  -69.7,   87.2,
   3   10.6,  165.0,  165.2,  -90.0,   86.9,      4   10.6,  160.6,  171.5, -107.6,   82.7,
   5   10.6,  151.3,  172.7, -121.9,   76.0,      6   10.6,  137.4,  168.5, -132.5,   67.0,
   7   10.6,  119.4,  159.3, -139.0,   55.9,      8   10.6,  103.8,  149.8, -144.0,   43.0,
   9   10.6,  123.5,  160.5, -157.8,   32.4,     10   10.6,  139.4,  166.2, -166.8,   20.8,
  11   10.6,  153.8,  166.9, -170.7,    7.2,     12   10.6,  165.2,  165.0, -169.4,   -7.4,
  13   10.6,  171.5,  160.6, -163.0,  -21.8,     14   10.6,  172.7,  151.3, -151.7,  -35.5,
  15   10.6,  168.5,  137.4, -135.7,  -48.2,     16   10.6,  159.3,  119.4, -115.6,  -59.4,
  17   10.6,  149.8,  103.8,  -94.9,  -69.0,     18   10.6,  160.5,  123.5,  -94.1,  -77.5,
  19   10.6,  166.2,  139.4,  -90.5,  -83.6,     20   10.6,  166.9,  153.8,  -84.1,  -87.2,
  21   10.6,  165.0,  165.2,  -75.1,  -86.9,     22   10.6,  160.6,  171.5,  -63.9,  -82.7,
  23   10.6,  151.3,  172.7,  -50.8,  -76.0,     24   10.6,  137.4,  168.5,  -36.1,  -67.0,
  25   10.6,  119.4,  159.3,  -20.3,  -55.9,     26   10.6,  103.8,  149.8,   -5.9,  -43.0,
  27   10.6,  123.5,  160.5,   -2.7,  -32.4,     28   10.6,  139.4,  166.2,    0.5,  -20.8,
  29   10.6,  153.8,  166.9,    3.8,   -7.2,     30   10.6,  165.2,  165.0,    4.4,    7.4,
  31   10.6,  171.5,  160.6,    2.4,   21.8,     32   10.6,  172.7,  151.3,    0.4,   35.5,
  33   10.6,  168.5,  137.4,   -1.7,   48.2,     34   10.6,  159.3,  119.4,   -3.8,   59.4,
  35   10.6,  149.8,  103.8,   -8.9,   69.0,     36   10.6,  160.5,  123.5,  -29.4,   77.5,


SOURCE ID: STCK4
 IFV    BH      BW      BL      XADJ    YADJ     IFV    BH      BW      BL      XADJ    YADJ
   1   10.6,  166.2,  139.4,  -50.4,   87.1,      2    0.0,    0.0,    0.0,    0.0,    0.0,
   3    0.0,    0.0,    0.0,    0.0,    0.0,      4   10.6,  160.6,  171.5, -110.6,   85.0,
   5   10.6,  151.3,  172.7, -125.2,   77.7,      6   10.6,  137.4,  168.5, -136.1,   68.0,
   7   10.6,  119.4,  159.3, -142.8,   56.3,      8   10.6,  103.8,  149.8, -147.7,   42.7,
   9   10.6,  123.5,  160.5, -161.4,   31.5,     10   10.6,  139.4,  166.2, -170.2,   19.3,
  11   10.6,  153.8,  166.9, -173.8,    5.1,     12   10.6,  165.2,  165.0, -172.1,  -10.0,
  13   10.6,  171.5,  160.6, -165.2,  -24.8,     14   10.6,  172.7,  151.3, -153.3,  -38.9,
  15   10.6,  168.5,  137.4, -136.8,  -51.8,     16   10.6,  159.3,  119.4, -116.0,  -63.1,
  17   10.6,  149.8,  103.8,  -94.6,  -72.8,     18   10.6,  160.5,  123.5,  -93.2,  -81.2,
  19   10.6,  166.2,  139.4,  -89.0,  -87.1,     20    0.0,    0.0,    0.0,    0.0,    0.0,
  21    0.0,    0.0,    0.0,    0.0,    0.0,     22   10.6,  160.6,  171.5,  -60.9,  -85.0,
  23   10.6,  151.3,  172.7,  -47.4,  -77.7,     24   10.6,  137.4,  168.5,  -32.5,  -68.0,
  25   10.6,  119.4,  159.3,  -16.6,  -56.3,     26   10.6,  103.8,  149.8,   -2.1,  -42.7,
  27   10.6,  123.5,  160.5,    0.9,  -31.5,     28   10.6,  139.4,  166.2,    4.0,  -19.3,
  29   10.6,  153.8,  166.9,    6.9,   -5.1,     30   10.6,  165.2,  165.0,    7.1,   10.0,
  31   10.6,  171.5,  160.6,    4.6,   24.8,     32   10.6,  172.7,  151.3,    2.0,   38.9,
  33   10.6,  168.5,  137.4,   -0.7,   51.8,     34   10.6,  159.3,  119.4,   -3.3,   63.1,
  35   10.6,  149.8,  103.8,   -9.2,   72.8,     36   10.6,  160.5,  123.5,  -30.2,   81.2,
```

Model Output
Existing Residences

```
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
```

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

```
SOURCE ID: VENTING
 IFV    BH      BW      BL      XADJ     YADJ    IFV    BH      BW      BL      XADJ     YADJ
  1    8.5,   69.0,  113.6,  -117.0,  -25.8,     2    8.5,   82.9,  114.4,  -109.7,  -37.1,
  3    8.5,   94.2,  112.4,   -99.8,  -47.2,     4    0.0,    0.0,    0.0,     0.0,    0.0,
  5    0.0,    0.0,    0.0,     0.0,    0.0,      6    0.0,    0.0,    0.0,     0.0,    0.0,
  7    0.0,    0.0,    0.0,     0.0,    0.0,      8    0.0,    0.0,    0.0,     0.0,    0.0,
  9    0.0,    0.0,    0.0,     0.0,    0.0,     10    8.5,  113.6,   69.0,    -8.7,  -60.2,
 11    8.5,  114.4,   82.9,    -4.4,  -52.5,    12    8.5,  112.4,   94.2,     0.1,  -43.5,
 13    8.5,  107.0,  102.7,     4.5,  -33.2,    14    8.5,   98.3,  108.1,     8.9,  -21.9,
 15    8.5,   86.6,  110.2,    12.9,   -9.9,    16    8.5,   72.3,  108.9,    16.6,    2.4,
 17    0.0,    0.0,    0.0,     0.0,    0.0,     18    8.5,   59.3,  112.0,    11.5,   16.9,
 19    8.5,   69.0,  113.6,     3.4,   25.8,    20    8.5,   82.9,  114.4,    -4.7,   37.1,
 21    8.5,   94.2,  112.4,   -12.7,   47.2,    22    0.0,    0.0,    0.0,     0.0,    0.0,
 23    0.0,    0.0,    0.0,     0.0,    0.0,     24    0.0,    0.0,    0.0,     0.0,    0.0,
 25    0.0,    0.0,    0.0,     0.0,    0.0,     26    0.0,    0.0,    0.0,     0.0,    0.0,
 27    0.0,    0.0,    0.0,     0.0,    0.0,     28    8.5,  113.6,   69.0,   -60.3,   60.2,
 29    8.5,  114.4,   82.9,   -78.5,   52.5,    30    8.5,  112.4,   94.2,   -94.3,   43.5,
 31    8.5,  107.0,  102.7,  -107.3,   33.2,    32    8.5,   98.3,  108.1,  -117.0,   21.9,
 33    8.5,   86.6,  110.2,  -123.1,    9.9,    34    8.5,   72.3,  108.9,  -125.5,   -2.4,
 35    8.5,   59.2,  107.0,  -126.1,  -13.2,    36    8.5,   59.3,  112.0,  -123.5,  -16.9,


SOURCE ID: FUELIDLE
 IFV    BH      BW      BL      XADJ     YADJ    IFV    BH      BW      BL      XADJ     YADJ
  1    8.5,   69.0,  113.6,  -119.2,  -20.9,     2    8.5,   82.9,  114.4,  -112.8,  -32.6,
  3    8.5,   94.2,  112.4,  -103.5,  -43.3,     4    8.5,  102.7,  107.0,   -91.1,  -52.7,
  5    0.0,    0.0,    0.0,     0.0,    0.0,      6    0.0,    0.0,    0.0,     0.0,    0.0,
  7    0.0,    0.0,    0.0,     0.0,    0.0,      8    0.0,    0.0,    0.0,     0.0,    0.0,
  9    0.0,    0.0,    0.0,     0.0,    0.0,     10    0.0,    0.0,    0.0,     0.0,    0.0,
 11    8.5,  114.4,   82.9,    -8.9,  -55.5,    12    8.5,  112.4,   94.2,    -3.8,  -47.3,
 13    8.5,  107.0,  102.7,     1.4,  -37.6,    14    8.5,   98.3,  108.1,     6.5,  -26.8,
 15    8.5,   86.6,  110.2,    11.4,  -15.1,    16    8.5,   72.3,  108.9,    16.0,   -3.0,
 17    0.0,    0.0,    0.0,     0.0,    0.0,     18    8.5,   59.3,  112.0,    12.8,   11.6,
 19    8.5,   69.0,  113.6,     5.6,   20.9,    20    8.5,   82.9,  114.4,    -1.7,   32.6,
 21    8.5,   94.2,  112.4,    -8.9,   43.3,    22    8.5,  102.7,  107.0,   -15.9,   52.7,
 23    0.0,    0.0,    0.0,     0.0,    0.0,     24    0.0,    0.0,    0.0,     0.0,    0.0,
 25    0.0,    0.0,    0.0,     0.0,    0.0,     26    0.0,    0.0,    0.0,     0.0,    0.0,
 27    0.0,    0.0,    0.0,     0.0,    0.0,     28    0.0,    0.0,    0.0,     0.0,    0.0,
 29    8.5,  114.4,   82.9,   -74.0,   55.5,    30    8.5,  112.4,   94.2,   -90.4,   47.3,
 31    8.5,  107.0,  102.7,  -104.1,   37.6,    32    8.5,   98.3,  108.1,  -114.6,   26.8,
 33    8.5,   86.6,  110.2,  -121.6,   15.1,    34    8.5,   72.3,  108.9,  -124.9,    3.0,
 35    8.5,   59.2,  107.0,  -126.5,   -7.8,    36    8.5,   59.3,  112.0,  -124.8,  -11.6,
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SOURCE ID: STCK5
 IFV    BH      BW      BL      XADJ    YADJ    IFV    BH      BW      BL      XADJ    YADJ
   1   8.5,   69.0,  113.6,  -92.7,   22.7,     2   8.5,   82.9,  114.4,  -94.2,   15.0,
   3   8.5,   94.2,  112.4,  -93.5,    6.7,     4   8.5,  102.7,  107.0,  -89.9,   -1.7,
   5   8.5,  108.1,   98.3,  -83.6,  -10.1,     6   8.5,  110.2,   86.6,  -74.8,  -18.1,
   7   8.5,  108.9,   72.3,  -63.6,  -25.7,     8   8.5,  107.0,   59.2,  -53.7,  -33.1,
   9   8.5,  112.0,   59.3,  -56.3,  -35.0,    10   8.5,  113.6,   69.0,  -57.2,  -35.9,
  11   8.5,  114.4,   82.9,  -56.4,  -37.0,    12   8.5,  112.4,   94.2,  -53.9,  -37.2,
  13   8.5,  107.0,  102.7,  -49.7,  -36.4,    14   8.5,   98.3,  108.1,  -44.0,  -34.4,
  15   8.5,   86.6,  110.2,  -37.0,  -31.4,    16   8.5,   72.3,  108.9,  -28.8,  -27.5,
  17   8.5,   59.2,  107.0,  -20.4,  -24.1,    18   8.5,   59.3,  112.0,  -21.0,  -26.7,
  19   8.5,   69.0,  113.6,  -20.9,  -22.7,    20   8.5,   82.9,  114.4,  -20.3,  -15.0,
  21   8.5,   94.2,  112.4,  -19.0,   -6.7,    22   8.5,  102.7,  107.0,  -17.1,    1.7,
  23   8.5,  108.1,   98.3,  -14.7,   10.1,    24   8.5,  110.2,   86.6,  -11.9,   18.1,
  25   8.5,  108.9,   72.3,   -8.7,   25.7,    26   8.5,  107.0,   59.2,   -5.5,   33.1,
  27   8.5,  112.0,   59.3,   -2.9,   35.0,    28   8.5,  113.6,   69.0,  -11.8,   35.9,
  29   8.5,  114.4,   82.9,  -26.5,   37.0,    30   8.5,  112.4,   94.2,  -40.4,   37.2,
  31   8.5,  107.0,  102.7,  -53.1,   36.4,    32   8.5,   98.3,  108.1,  -64.1,   34.4,
  33   8.5,   86.6,  110.2,  -73.2,   31.4,    34   8.5,   72.3,  108.9,  -80.1,   27.5,
  35   8.5,   59.2,  107.0,  -86.6,   24.1,    36   8.5,   59.3,  112.0,  -91.0,   26.7,


SOURCE ID: STCK6
 IFV    BH      BW      BL      XADJ    YADJ    IFV    BH      BW      BL      XADJ    YADJ
   1   8.5,   69.0,  113.6,  -47.1,   28.4,     2   8.5,   82.9,  114.4,  -50.3,   28.5,
   3   8.5,   94.2,  112.4,  -52.6,   27.7,     4   8.5,  102.7,  107.0,  -53.3,   26.0,
   5   8.5,  108.1,   98.3,  -52.4,   23.6,     6   8.5,  110.2,   86.6,  -49.8,   20.4,
   7   8.5,  108.9,   72.3,  -45.8,   16.6,     8   8.5,  107.0,   59.2,  -43.5,   11.6,
   9   8.5,  112.0,   59.3,  -54.0,   10.8,    10   8.5,  113.6,   69.0,  -62.9,    9.7,
  11   8.5,  114.4,   82.9,  -69.9,    6.9,    12   8.5,  112.4,   94.2,  -74.8,    3.6,
  13   8.5,  107.0,  102.7,  -77.4,    0.2,    14   8.5,   98.3,  108.1,  -77.6,   -3.2,
  15   8.5,   86.6,  110.2,  -75.5,   -6.5,    16   8.5,   72.3,  108.9,  -71.1,   -9.6,
  17   8.5,   59.2,  107.0,  -65.1,  -13.9,    18   8.5,   59.3,  112.0,  -66.8,  -24.4,
  19   8.5,   69.0,  113.6,  -66.5,  -28.4,    20   8.5,   82.9,  114.4,  -64.1,  -28.5,
  21   8.5,   94.2,  112.4,  -59.8,  -27.7,    22   8.5,  102.7,  107.0,  -53.7,  -26.0,
  23   8.5,  108.1,   98.3,  -46.0,  -23.6,    24   8.5,  110.2,   86.6,  -36.8,  -20.4,
  25   8.5,  108.9,   72.3,  -26.5,  -16.6,    26   8.5,  107.0,   59.2,  -15.7,  -11.6,
  27   8.5,  112.0,   59.3,   -5.2,  -10.8,    28   8.5,  113.6,   69.0,   -6.1,   -9.7,
  29   8.5,  114.4,   82.9,  -13.0,   -6.9,    30   8.5,  112.4,   94.2,  -19.4,   -3.6,
  31   8.5,  107.0,  102.7,  -25.4,   -0.2,    32   8.5,   98.3,  108.1,  -30.5,    3.2,
  33   8.5,   86.6,  110.2,  -34.7,    6.5,    34   8.5,   72.3,  108.9,  -37.8,    9.6,
  35   8.5,   59.2,  107.0,  -41.9,   13.9,    36   8.5,   59.3,  112.0,  -45.2,   24.4,
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                    ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                             ***        11:54:33
                                                                                                         PAGE  34
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                  * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

     HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SOURCE ID = L0000621 through L0000880    ; SOURCE TYPE = VOLUME   :
       1   .00000E+00      2   .00000E+00      3   .10000E+01      4   .10000E+01      5   .10000E+01      6   .10000E+01
       7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .00000E+00     12   .00000E+00
      13   .00000E+00     14   .00000E+00     15   .00000E+00     16   .00000E+00     17   .00000E+00     18   .00000E+00
      19   .00000E+00     20   .00000E+00     21   .00000E+00     22   .00000E+00     23   .00000E+00     24   .00000E+00


SOURCE ID = L0000881 through L0001140    ; SOURCE TYPE = VOLUME   :
       1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
       7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
      13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
      19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00


SOURCE ID = STCK1 through STCK4        ; SOURCE TYPE = POINT    :
       1   .00000E+00      2   .00000E+00      3   .10000E+01      4   .10000E+01      5   .10000E+01      6   .10000E+01
       7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .00000E+00     12   .00000E+00
      13   .00000E+00     14   .00000E+00     15   .00000E+00     16   .00000E+00     17   .00000E+00     18   .00000E+00
      19   .00000E+00     20   .00000E+00     21   .00000E+00     22   .00000E+00     23   .00000E+00     24   .00000E+00


SOURCE ID = REFUEL        ; SOURCE TYPE = VOLUME   :
       1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
       7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
      13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
      19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                    ***          08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                             ***          11:54:33
                                                                                                           PAGE 139
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

              * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

     HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR       HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SOURCE ID = SPILL       ; SOURCE TYPE = VOLUME   :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00


SOURCE ID = VENTING     ; SOURCE TYPE = POINT    :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00


SOURCE ID = FUELIDLE    ; SOURCE TYPE = POINT    :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00


SOURCE ID = L0001141 through L0001240   ; SOURCE TYPE = VOLUME   :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .00000E+00
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .10000E+01     24   .10000E+01


SOURCE ID = STCK5 and STCK6      ; SOURCE TYPE = POINT    :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .00000E+00
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .10000E+01     24   .10000E+01
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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA                                    ***           08/28/17
 *** AERMET - VERSION  14134 ***    *** Redding, CA                                             ***           13:35:59
                                                                                                              PAGE 165

 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                       (1=YES; 0=NO)

        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1    1 1 1 1 1 1 1 1 1 1
        1 1 1 1 1 1 1 1 1 1    1 1 1 1 1

          NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.



                        *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                              (METERS/SEC)

                          1.54,   3.09,   5.14,   8.23,  10.80,
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                                    ***         08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                             ***         13:35:59
                                                                                                          PAGE 166
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                            *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

   Surface file:   C:\!MetData\Shasta County AQMD\725920\725920.SFC                      Met Version:  14134
   Profile file:   C:\!MetData\Shasta County AQMD\725920\725920.PFL
   Surface format: FREE
   Profile format: FREE
   Surface station no.:   24257               Upper air station no.:    24225
                 Name: REDDING/AAF                      Name: MEDFORD/JACKSON_COUNTY_ARPT
                 Year:  2009                             Year:  2009

   First 24 hours of scalar data
   YR MO DY JDY HR    H0     U*     W*   DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS   WD    HT  REF TA    HT
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   09 01 01   1 01   -2.6   0.057 -9.000 -9.000 -999.   33.     6.4  0.02  0.87  1.00   1.76  151.  10.0  276.4   2.0
   09 01 01   1 02   -2.5   0.057 -9.000 -9.000 -999.   32.     6.4  0.02  0.87  1.00   1.76  188.  10.0  277.0   2.0
   09 01 01   1 03 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  277.0   2.0
   09 01 01   1 04 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  277.0   2.0
   09 01 01   1 05 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  277.0   2.0
   09 01 01   1 06 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  276.4   2.0
   09 01 01   1 07  -10.6  0.186 -9.000 -9.000 -999.  192.    54.1  0.16  0.87  1.00   2.36   35.  10.0  276.4   2.0
   09 01 01   1 08 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  277.0   2.0
   09 01 01   1 09 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  0.45   0.00    0.  10.0  277.0   2.0
   09 01 01   1 10    3.0  0.178  0.178  0.010   67.  179.  -164.9  0.16  0.87  0.30   1.76    1.  10.0  277.5   2.0
   09 01 01   1 11   11.1 -9.000 -9.000 -9.000  144. -999. -99999.0  0.05  0.87  0.25   0.00    0.  10.0  277.5   2.0
   09 01 01   1 12   15.9 -9.000 -9.000 -9.000  210. -999. -99999.0  0.05  0.87  0.23   0.00    0.  10.0  278.1   2.0
   09 01 01   1 13   16.7 -9.000 -9.000 -9.000  262. -999. -99999.0  0.05  0.87  0.22   0.00    0.  10.0  278.1   2.0
   09 01 01   1 14   13.7  0.170  0.486  0.012  298.  168.   -31.8  0.02  0.87  0.24   2.36  139.  10.0  278.8   2.0
   09 01 01   1 15    7.0  0.163  0.396  0.012  315.  158.   -55.2  0.02  0.87  0.27   2.36  192.  10.0  278.8   2.0
   09 01 01   1 16   -1.5  0.100 -9.000 -9.000 -999.   77.    59.6  0.02  0.87  0.37   1.76  154.  10.0  279.2   2.0
   09 01 01   1 17 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  0.63   0.00    0.  10.0  279.2   2.0
   09 01 01   1 18 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  278.8   2.0
   09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.05  0.87  1.00   0.00    0.  10.0  278.8   2.0
   09 01 01   1 20   -8.5  0.151 -9.000 -9.000 -999.  141.    36.2  0.02  0.87  1.00   2.86  167.  10.0  278.8   2.0
   09 01 01   1 21  -16.7  0.295 -9.000 -9.000 -999.  385.   137.1  0.02  0.87  1.00   4.86  180.  10.0  277.5   2.0
   09 01 01   1 22  -16.9  0.298 -9.000 -9.000 -999.  390.   139.4  0.02  0.87  1.00   4.86  172.  10.0  277.5   2.0
   09 01 01   1 23  -14.8  0.261 -9.000 -9.000 -999.  320.   107.0  0.02  0.87  1.00   4.36  190.  10.0  277.5   2.0
   09 01 01   1 24  -21.1  0.373 -9.000 -9.000 -999.  546.   218.3  0.02  0.87  1.00   5.96  170.  10.0  277.5   2.0


   First hour of profile data
   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
   09 01 01 01   10.0 1  151.    1.76  276.5   99.0  -99.00  -99.00


   F indicates top of profile (=1) or below (=0)
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 *** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                              ***        08/28/17
 *** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***        11:54:33
                                                                                                    PAGE 267
  *** MODELOPTs:   RegDFAULT  CONC  ELEV  URBAN

                              *** THE SUMMARY OF MAXIMUM PERIOD ( 43872 HRS) RESULTS ***


                        ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                            NETWORK
 GROUP ID                      AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 FUELHAUL  1ST HIGHEST VALUE IS       0.00002 AT (  554534.88,  4488210.28,   158.33,   158.33,    0.00)  DC
           2ND HIGHEST VALUE IS       0.00002 AT (  554554.88,  4488230.28,   158.65,   158.65,    0.00)  DC
           3RD HIGHEST VALUE IS       0.00002 AT (  554574.88,  4488250.28,   159.04,   159.04,    0.00)  DC
           4TH HIGHEST VALUE IS       0.00002 AT (  554514.88,  4488210.28,   158.33,   158.33,    0.00)  DC
           5TH HIGHEST VALUE IS       0.00002 AT (  554534.88,  4488230.28,   158.54,   158.54,    0.00)  DC
           6TH HIGHEST VALUE IS       0.00002 AT (  554594.88,  4488270.28,   159.11,   159.11,    0.00)  DC
           7TH HIGHEST VALUE IS       0.00002 AT (  554554.88,  4488250.28,   158.85,   158.85,    0.00)  DC
           8TH HIGHEST VALUE IS       0.00002 AT (  554614.88,  4488290.28,   159.15,   159.15,    0.00)  DC
           9TH HIGHEST VALUE IS       0.00002 AT (  554574.88,  4488270.28,   159.11,   159.11,    0.00)  DC
          10TH HIGHEST VALUE IS       0.00002 AT (  554514.88,  4488230.28,   158.54,   158.54,    0.00)  DC

 FUELIDLE  1ST HIGHEST VALUE IS       0.00000 AT (  554695.92,  4487615.83,   139.53,   158.50,    0.00)  DC
           2ND HIGHEST VALUE IS       0.00000 AT (  554715.92,  4487575.83,   137.99,   158.50,    0.00)  DC
           3RD HIGHEST VALUE IS       0.00000 AT (  554695.92,  4487595.83,   138.70,   158.50,    0.00)  DC
           4TH HIGHEST VALUE IS       0.00000 AT (  554675.92,  4487615.83,   139.11,   158.50,    0.00)  DC
           5TH HIGHEST VALUE IS       0.00000 AT (  554715.92,  4487555.83,   137.09,   158.50,    0.00)  DC
           6TH HIGHEST VALUE IS       0.00000 AT (  554695.92,  4487575.83,   137.87,   158.50,    0.00)  DC
           7TH HIGHEST VALUE IS       0.00000 AT (  554675.92,  4487595.83,   138.29,   158.50,    0.00)  DC
           8TH HIGHEST VALUE IS       0.00000 AT (  554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC
           9TH HIGHEST VALUE IS       0.00000 AT (  554695.92,  4487555.83,   136.95,   158.50,    0.00)  DC
          10TH HIGHEST VALUE IS       0.00000 AT (  554715.92,  4487535.83,   136.37,   157.28,    0.00)  DC

 MAJORTRU  1ST HIGHEST VALUE IS       0.00002 AT (  554695.92,  4487615.83,   139.53,   158.50,    0.00)  DC
           2ND HIGHEST VALUE IS       0.00001 AT (  554715.92,  4487575.83,   137.99,   158.50,    0.00)  DC
           3RD HIGHEST VALUE IS       0.00001 AT (  554695.92,  4487595.83,   138.70,   158.50,    0.00)  DC
           4TH HIGHEST VALUE IS       0.00001 AT (  554675.92,  4487615.83,   139.11,   158.50,    0.00)  DC
           5TH HIGHEST VALUE IS       0.00001 AT (  554715.92,  4487555.83,   137.09,   158.50,    0.00)  DC
           6TH HIGHEST VALUE IS       0.00001 AT (  554695.92,  4487575.83,   137.87,   158.50,    0.00)  DC
           7TH HIGHEST VALUE IS       0.00001 AT (  554675.92,  4487595.83,   138.29,   158.50,    0.00)  DC
           8TH HIGHEST VALUE IS       0.00001 AT (  554715.92,  4487535.83,   136.37,   157.28,    0.00)  DC
           9TH HIGHEST VALUE IS       0.00001 AT (  554695.92,  4487555.83,   136.95,   158.50,    0.00)  DC
          10TH HIGHEST VALUE IS       0.00001 AT (  554655.92,  4487615.83,   138.05,   158.50,    0.00)  DC

 REFUEL    1ST HIGHEST VALUE IS       0.39261 AT (  554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC
           2ND HIGHEST VALUE IS       0.39235 AT (  554911.90,  4488225.75,   158.27,   158.27,    0.00)  DC
           3RD HIGHEST VALUE IS       0.35525 AT (  554911.90,  4488245.75,   158.27,   158.27,    0.00)  DC
           4TH HIGHEST VALUE IS       0.35437 AT (  554891.90,  4488265.75,   158.28,   158.28,    0.00)  DC
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              5TH HIGHEST VALUE IS      0.34977 AT (   554931.90,   4488225.75,    158.47,    158.47,    0.00)  DC
              6TH HIGHEST VALUE IS      0.32300 AT (   554911.90,   4488265.75,    158.27,    158.27,    0.00)  DC
              7TH HIGHEST VALUE IS      0.32154 AT (   554891.90,   4488285.75,    158.19,    158.19,    0.00)  DC
              8TH HIGHEST VALUE IS      0.32009 AT (   554931.90,   4488245.75,    158.47,    158.47,    0.00)  DC
              9TH HIGHEST VALUE IS      0.30923 AT (   554951.90,   4488225.75,    158.50,    158.50,    0.00)  DC
             10TH HIGHEST VALUE IS      0.29487 AT (   554911.90,   4488285.75,    158.27,    158.27,    0.00)  DC

SPILL     1ST HIGHEST VALUE IS      0.69756 AT (   554911.90,   4488225.75,    158.27,    158.27,    0.00)  DC
          2ND HIGHEST VALUE IS      0.69596 AT (   554891.90,   4488245.75,    158.31,    158.31,    0.00)  DC
          3RD HIGHEST VALUE IS      0.63135 AT (   554911.90,   4488245.75,    158.27,    158.27,    0.00)  DC
          4TH HIGHEST VALUE IS      0.62788 AT (   554891.90,   4488265.75,    158.28,    158.28,    0.00)  DC
          5TH HIGHEST VALUE IS      0.62358 AT (   554931.90,   4488225.75,    158.47,    158.47,    0.00)  DC
          6TH HIGHEST VALUE IS      0.57389 AT (   554911.90,   4488265.75,    158.27,    158.27,    0.00)  DC
          7TH HIGHEST VALUE IS      0.57038 AT (   554931.90,   4488245.75,    158.47,    158.47,    0.00)  DC
          8TH HIGHEST VALUE IS      0.56940 AT (   554891.90,   4488285.75,    158.19,    158.19,    0.00)  DC
          9TH HIGHEST VALUE IS      0.55070 AT (   554951.90,   4488225.75,    158.50,    158.50,    0.00)  DC
         10TH HIGHEST VALUE IS      0.52379 AT (   554911.90,   4488285.75,    158.27,    158.27,    0.00)  DC

TRUCKHAU  1ST HIGHEST VALUE IS      0.00005 AT (   554534.88,   4488210.28,    158.33,    158.33,    0.00)  DC
          2ND HIGHEST VALUE IS      0.00005 AT (   554554.88,   4488230.28,    158.65,    158.65,    0.00)  DC
          3RD HIGHEST VALUE IS      0.00005 AT (   554574.88,   4488250.28,    159.04,    159.04,    0.00)  DC
          4TH HIGHEST VALUE IS      0.00004 AT (   554891.90,   4488245.75,    158.31,    158.31,    0.00)  DC
          5TH HIGHEST VALUE IS      0.00004 AT (   554514.88,   4488210.28,    158.33,    158.33,    0.00)  DC
          6TH HIGHEST VALUE IS      0.00004 AT (   554594.88,   4488270.28,    159.11,    159.11,    0.00)  DC
          7TH HIGHEST VALUE IS      0.00004 AT (   554534.88,   4488230.28,    158.54,    158.54,    0.00)  DC
          8TH HIGHEST VALUE IS      0.00004 AT (   554554.88,   4488250.28,    158.85,    158.85,    0.00)  DC
          9TH HIGHEST VALUE IS      0.00004 AT (   554911.90,   4488225.75,    158.27,    158.27,    0.00)  DC
         10TH HIGHEST VALUE IS      0.00004 AT (   554614.88,   4488290.28,    159.15,    159.15,    0.00)  DC

VENTING   1ST HIGHEST VALUE IS      0.55659 AT (   554891.90,   4488245.75,    158.31,    158.31,    0.00)  DC
          2ND HIGHEST VALUE IS      0.55609 AT (   554911.90,   4488225.75,    158.27,    158.27,    0.00)  DC
          3RD HIGHEST VALUE IS      0.51031 AT (   554911.90,   4488245.75,    158.27,    158.27,    0.00)  DC
          4TH HIGHEST VALUE IS      0.50588 AT (   554891.90,   4488265.75,    158.28,    158.28,    0.00)  DC
          5TH HIGHEST VALUE IS      0.49745 AT (   554931.90,   4488225.75,    158.47,    158.47,    0.00)  DC
          6TH HIGHEST VALUE IS      0.49431 AT (   554695.92,   4487615.83,    139.53,    158.50,    0.00)  DC
          7TH HIGHEST VALUE IS      0.46803 AT (   554911.90,   4488265.75,    158.27,    158.27,    0.00)  DC
          8TH HIGHEST VALUE IS      0.46515 AT (   554891.90,   4488285.75,    158.19,    158.19,    0.00)  DC
          9TH HIGHEST VALUE IS      0.46300 AT (   554931.90,   4488245.75,    158.47,    158.47,    0.00)  DC
         10TH HIGHEST VALUE IS      0.45730 AT (   554695.92,   4487595.83,    138.70,    158.50,    0.00)  DC

LOADDOCK  1ST HIGHEST VALUE IS      0.00004 AT (   554891.90,   4488245.75,    158.31,    158.31,    0.00)  DC
          2ND HIGHEST VALUE IS      0.00004 AT (   554891.90,   4488265.75,    158.28,    158.28,    0.00)  DC
          3RD HIGHEST VALUE IS      0.00004 AT (   554911.90,   4488225.75,    158.27,    158.27,    0.00)  DC
          4TH HIGHEST VALUE IS      0.00003 AT (   554911.90,   4488245.75,    158.27,    158.27,    0.00)  DC
          5TH HIGHEST VALUE IS      0.00003 AT (   554891.90,   4488285.75,    158.19,    158.19,    0.00)  DC
          6TH HIGHEST VALUE IS      0.00003 AT (   554911.90,   4488265.75,    158.27,    158.27,    0.00)  DC
          7TH HIGHEST VALUE IS      0.00003 AT (   554891.90,   4488305.75,    157.84,    157.84,    0.00)  DC
          8TH HIGHEST VALUE IS      0.00003 AT (   554871.90,   4488325.75,    158.21,    158.21,    0.00)  DC
          9TH HIGHEST VALUE IS      0.00003 AT (   554911.90,   4488285.75,    158.27,    158.27,    0.00)  DC
         10TH HIGHEST VALUE IS      0.00003 AT (   554931.90,   4488225.75,    158.47,    158.47,    0.00)  DC
```

Model Output
Existing Residences

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                          ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                   ***        11:54:33
                                                                                               PAGE 269
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                        *** THE SUMMARY OF MAXIMUM PERIOD ( 43872 HRS) RESULTS ***


                     ** CONC OF OTHER    IN MICROGRAMS/M**3                          **

                                                                                    NETWORK
GROUP ID                     AVERAGE CONC              RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

MJRDOCKS  1ST HIGHEST VALUE IS      0.00001 AT (   554715.92,  4487575.83,   137.99,   158.50,    0.00)  DC
          2ND HIGHEST VALUE IS      0.00001 AT (   554695.92,  4487615.83,   139.53,   158.50,    0.00)  DC
          3RD HIGHEST VALUE IS      0.00001 AT (   554715.92,  4487555.83,   137.09,   158.50,    0.00)  DC
          4TH HIGHEST VALUE IS      0.00001 AT (   554695.92,  4487595.83,   138.70,   158.50,    0.00)  DC
          5TH HIGHEST VALUE IS      0.00001 AT (   554715.92,  4487535.83,   136.37,   157.28,    0.00)  DC
          6TH HIGHEST VALUE IS      0.00001 AT (   554695.92,  4487575.83,   137.87,   158.50,    0.00)  DC
          7TH HIGHEST VALUE IS      0.00001 AT (   554715.92,  4487515.83,   135.71,   156.97,    0.00)  DC
          8TH HIGHEST VALUE IS      0.00001 AT (   554695.92,  4487555.83,   136.95,   158.50,    0.00)  DC
          9TH HIGHEST VALUE IS      0.00001 AT (   554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC
         10TH HIGHEST VALUE IS      0.00001 AT (   554911.90,  4488225.75,   158.27,   158.27,    0.00)  DC

ALL       1ST HIGHEST VALUE IS      1.64611 AT (   554911.90,  4488225.75,   158.27,   158.27,    0.00)  DC
          2ND HIGHEST VALUE IS      1.64527 AT (   554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC
          3RD HIGHEST VALUE IS      1.49701 AT (   554911.90,  4488245.75,   158.27,   158.27,    0.00)  DC
          4TH HIGHEST VALUE IS      1.48825 AT (   554891.90,  4488265.75,   158.28,   158.28,    0.00)  DC
          5TH HIGHEST VALUE IS      1.47090 AT (   554931.90,  4488245.75,   158.47,   158.47,    0.00)  DC
          6TH HIGHEST VALUE IS      1.36502 AT (   554911.90,  4488265.75,   158.27,   158.27,    0.00)  DC
          7TH HIGHEST VALUE IS      1.35619 AT (   554891.90,  4488285.75,   158.19,   158.19,    0.00)  DC
          8TH HIGHEST VALUE IS      1.35356 AT (   554931.90,  4488245.75,   158.47,   158.47,    0.00)  DC
          9TH HIGHEST VALUE IS      1.29246 AT (   554951.90,  4488225.75,   158.50,   158.50,    0.00)  DC
         10TH HIGHEST VALUE IS      1.24810 AT (   554911.90,  4488285.75,   158.27,   158.27,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

MER Location

Model Output
Existing Residences

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                         ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                  ***        11:54:33
                                                                                              PAGE 270
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                              *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***


                     ** CONC OF OTHER    IN MICROGRAMS/M**3                         **

                                         DATE                                                    NETWORK
GROUP ID                  AVERAGE CONC  (YYMMDDHH)          RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

FUELHAUL HIGH   1ST HIGH VALUE IS      0.00041  ON 10020221: AT (  554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC

FUELIDLE HIGH   1ST HIGH VALUE IS      0.00016  ON 10090322: AT (  554695.92,  4487615.83,   139.53,   158.50,    0.00)  DC

MAJORTRU HIGH   1ST HIGH VALUE IS      0.00053  ON 10121323: AT (  555011.90,  4488125.75,   158.15,   158.15,    0.00)  DC

REFUEL   HIGH   1ST HIGH VALUE IS     46.23116  ON 12013122: AT (  555011.90,  4488125.75,   158.15,   158.15,    0.00)  DC

SPILL    HIGH   1ST HIGH VALUE IS     98.45948  ON 12013122: AT (  555011.90,  4488125.75,   158.15,   158.15,    0.00)  DC

TRUCKHAU HIGH   1ST HIGH VALUE IS      0.00282  ON 11012903: AT (  554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC

VENTING  HIGH   1ST HIGH VALUE IS     91.82503  ON 12102806: AT (  554891.90,  4488245.75,   158.31,   158.31,    0.00)  DC

LOADDOCK HIGH   1ST HIGH VALUE IS      0.00490  ON 10111707: AT (  554634.88,  4488310.28,   159.35,   159.35,    0.00)  DC

MJRDOCKS HIGH   1ST HIGH VALUE IS      0.00064  ON 12070422: AT (  555031.90,  4488125.75,   158.07,   158.07,    0.00)  DC

ALL      HIGH   1ST HIGH VALUE IS    210.91015  ON 11021120: AT (  554931.90,  4488225.75,   158.47,   158.47,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

Model Output
Existing Residences

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA                          ***        08/28/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                   ***        11:54:33
                                                                                               PAGE 271

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            7 Warning Message(s)
A Total of        16697 Informational Message(s)

A Total of        43872 Hours Were Processed

A Total of        14924 Calm Hours Identified

A Total of         1773 Missing Hours Identified (  4.04 Percent)


    ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


    ********   WARNING MESSAGES   ********
SO W320    1280         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1281         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1282         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1283         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1287         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1390         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1391         PPARM: Input Parameter May Be Out-of-Range for Parameter          VS


    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

Results Summary

Costco Wholesale HRA - Future Residents
Redding, CA

Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.02550	ug/m^3	554787.63	4488169.28	158.23	0.00	158.23	

Future Residential MER

Concentration - Source Group: FUELHAUL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00008	ug/m^3	554758.61	4488162.38	158.16	0.00	158.16	

Concentration - Source Group: FUELIDLE

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00001	ug/m^3	554740.20	4488160.26	158.13	0.00	158.13	

Concentration - Source Group: LOADDOCK

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00013	ug/m^3	554787.63	4488169.28	158.23	0.00	158.23	

Results Summary

Costco Wholesale HRA - Future Residents
Redding, CA

Concentration - Source Group: MAJORTRU

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00002	ug/m^3	554695.92	4487615.83	139.53	0.00	158.50	

Concentration - Source Group: MJRDOCKS

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00002	ug/m^3	554740.20	4488160.26	158.13	0.00	158.13	

Concentration - Source Group: REFUEL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.18060	ug/m^3	554758.61	4488162.38	158.16	0.00	158.16	1/23/2009, 17
PERIOD		0.00296	ug/m^3	554787.63	4488169.28	158.23	0.00	158.23	

Concentration - Source Group: SPILL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	1.27673	ug/m^3	554758.61	4488162.38	158.16	0.00	158.16	1/23/2009, 17
PERIOD		0.01802	ug/m^3	554787.63	4488169.28	158.23	0.00	158.23	

Results Summary

Costco Wholesale HRA - Future Residents
Redding, CA

Concentration - Source Group: TRUCKHAU

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
PERIOD		0.00019	ug/m^3	554758.61	4488162.38	158.16	0.00	158.16	

Concentration - Source Group: VENTING

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.36485	ug/m^3	554787.63	4488169.28	158.23	0.00	158.23	11/7/2010, 18
PERIOD		0.00414	ug/m^3	554758.61	4488162.38	158.16	0.00	158.16	

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents          ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***        08:27:05
                                                                                                   PAGE   1
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

                                  ***     MODEL SETUP OPTIONS SUMMARY      ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

  -- DEPOSITION LOGIC  --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
**Model Uses NO WET DEPLETION.  WETDPLT  =  F

**Model Uses URBAN Dispersion Algorithm for the SBL for   630 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =      91808.0 ;  Urban Roughness Length =  1.000 m

**Model Uses Regulatory DEFAULT Options:
        1. Stack-tip Downwash.
        2. Model Accounts for ELEVated Terrain Effects.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Assumed.

**Other Options Specified:
        CCVR_Sub - Meteorological data includes CCVR substitutions
        TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of:  OTHER

**Model Calculates  1 Short Term Average(s) of:   1-HR
   and Calculates PERIOD Averages

**This Run Includes:   630 Source(s);      10 Source Group(s); and     497 Receptor(s)

                with:     8 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:    622 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


**Model Set To Continue RUNning After the Setup Testing.
```

```
**The AERMET Input Meteorological Data Version Date:  14134

**Output Options Selected:
        Model Outputs Tables of PERIOD Averages by Receptor
        Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
        Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
        Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                m for Missing Hours
                                                                b for Both Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   151.50 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units  = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     5.0 MB of RAM.

**Detailed Error/Message File:   RiverCrossing.err
**File for Summary of Results:   RiverCrossing.sum
```

Model Output
Future Residences

*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents   ***   08/29/17
*** AERMET - VERSION 14134 ***   *** Redding, CA   ***   08:27:05
                                                                                                                   PAGE   2

*** MODELOPTs: RegDFAULT CONC ELEV URBAN

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
STCK1	0	0.39400E-05	554806.1	4488049.5	157.6	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY
STCK2	0	0.39400E-05	554810.0	4488050.0	157.6	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY
STCK3	0	0.39400E-05	554813.8	4488050.7	157.6	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY
STCK4	0	0.39400E-05	554817.4	4488051.6	157.6	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY
VENTING	0	0.21300E-03	554805.0	4487932.9	157.2	3.66	288.71	0.01	0.05	YES	YES	NO	HROFDY
FUELIDLE	0	0.51200E-06	554810.3	4487934.2	157.3	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY
STCK5	0	0.10500E-05	554848.6	4487900.5	157.2	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY
STCK6	0	0.10500E-05	554846.3	4487854.7	156.2	4.15	366.00	51.70	0.10	YES	YES	NO	HROFDY

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents            ***      08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                         ***      08:27:05
                                                                                                   PAGE    3

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                       *** VOLUME SOURCE DATA ***


            NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.    URBAN   EMISSION RATE
  SOURCE    PART.  (GRAMS/SEC)      X        Y      ELEV.    HEIGHT     SY       SZ      SOURCE   SCALAR VARY
    ID      CATS.               (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


 L0000621      0   0.53080E-07  554497.4 4488060.1  156.2    4.15     1.42     1.93     YES     HROFDY
 L0000622      0   0.53080E-07  554499.9 4488061.9  156.2    4.15     1.42     1.93     YES     HROFDY
 L0000623      0   0.53080E-07  554502.4 4488063.6  156.2    4.15     1.42     1.93     YES     HROFDY
 L0000624      0   0.53080E-07  554504.9 4488065.4  156.3    4.15     1.42     1.93     YES     HROFDY
 L0000625      0   0.53080E-07  554507.4 4488067.1  156.3    4.15     1.42     1.93     YES     HROFDY
 L0000626      0   0.53080E-07  554509.8 4488068.9  156.3    4.15     1.42     1.93     YES     HROFDY
 L0000627      0   0.53080E-07  554512.3 4488070.7  156.4    4.15     1.42     1.93     YES     HROFDY
 L0000628      0   0.53080E-07  554514.8 4488072.4  156.4    4.15     1.42     1.93     YES     HROFDY
 L0000629      0   0.53080E-07  554517.3 4488074.2  156.5    4.15     1.42     1.93     YES     HROFDY
 L0000630      0   0.53080E-07  554519.8 4488075.9  156.5    4.15     1.42     1.93     YES     HROFDY
 L0000631      0   0.53080E-07  554522.3 4488077.7  156.5    4.15     1.42     1.93     YES     HROFDY
 L0000632      0   0.53080E-07  554524.4 4488079.9  156.6    4.15     1.42     1.93     YES     HROFDY
 L0000633      0   0.53080E-07  554526.4 4488082.2  156.7    4.15     1.42     1.93     YES     HROFDY
 L0000634      0   0.53080E-07  554528.5 4488084.4  156.7    4.15     1.42     1.93     YES     HROFDY
 L0000635      0   0.53080E-07  554530.5 4488086.7  156.8    4.15     1.42     1.93     YES     HROFDY
 L0000636      0   0.53080E-07  554532.5 4488089.0  156.9    4.15     1.42     1.93     YES     HROFDY
 L0000637      0   0.53080E-07  554534.6 4488091.2  156.9    4.15     1.42     1.93     YES     HROFDY
 L0000638      0   0.53080E-07  554536.6 4488093.5  157.0    4.15     1.42     1.93     YES     HROFDY
 L0000639      0   0.53080E-07  554538.6 4488095.8  157.1    4.15     1.42     1.93     YES     HROFDY
 L0000640      0   0.53080E-07  554540.7 4488098.0  157.1    4.15     1.42     1.93     YES     HROFDY
 L0000641      0   0.53080E-07  554542.7 4488100.3  157.2    4.15     1.42     1.93     YES     HROFDY
 L0000642      0   0.53080E-07  554544.8 4488102.6  157.2    4.15     1.42     1.93     YES     HROFDY
 L0000643      0   0.53080E-07  554547.5 4488102.8  157.3    4.15     1.42     1.93     YES     HROFDY
 L0000644      0   0.53080E-07  554550.5 4488102.2  157.3    4.15     1.42     1.93     YES     HROFDY
 L0000645      0   0.53080E-07  554553.5 4488101.7  157.3    4.15     1.42     1.93     YES     HROFDY
 L0000646      0   0.53080E-07  554556.5 4488101.1  157.4    4.15     1.42     1.93     YES     HROFDY
 L0000647      0   0.53080E-07  554559.5 4488100.6  157.4    4.15     1.42     1.93     YES     HROFDY
 L0000648      0   0.53080E-07  554562.5 4488100.1  157.4    4.15     1.42     1.93     YES     HROFDY
 L0000649      0   0.53080E-07  554565.5 4488099.5  157.4    4.15     1.42     1.93     YES     HROFDY
 L0000650      0   0.53080E-07  554568.5 4488099.7  157.5    4.15     1.42     1.93     YES     HROFDY
 L0000651      0   0.53080E-07  554571.4 4488100.4  157.5    4.15     1.42     1.93     YES     HROFDY
 L0000652      0   0.53080E-07  554574.4 4488101.1  157.5    4.15     1.42     1.93     YES     HROFDY
 L0000653      0   0.53080E-07  554577.4 4488101.8  157.5    4.15     1.42     1.93     YES     HROFDY
 L0000654      0   0.53080E-07  554580.3 4488102.5  157.5    4.15     1.42     1.93     YES     HROFDY
 L0000655      0   0.53080E-07  554583.3 4488103.2  157.6    4.15     1.42     1.93     YES     HROFDY
 L0000656      0   0.53080E-07  554586.3 4488103.9  157.6    4.15     1.42     1.93     YES     HROFDY
 L0000657      0   0.53080E-07  554589.2 4488104.6  157.6    4.15     1.42     1.93     YES     HROFDY
 L0000658      0   0.53080E-07  554592.2 4488105.2  157.6    4.15     1.42     1.93     YES     HROFDY
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L0000659        0   0.53080E-07   554595.2 4488105.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0000660        0   0.53080E-07   554598.2 4488106.6   157.6    4.15    1.42    1.93    YES    HROFDY
L0000661        0   0.53080E-07   554601.1 4488107.3   157.6    4.15    1.42    1.93    YES    HROFDY
L0000662        0   0.53080E-07   554604.1 4488108.0   157.6    4.15    1.42    1.93    YES    HROFDY
L0000663        0   0.53080E-07   554607.1 4488108.7   157.6    4.15    1.42    1.93    YES    HROFDY
L0000664        0   0.53080E-07   554610.0 4488109.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000665        0   0.53080E-07   554613.0 4488110.1   157.6    4.15    1.42    1.93    YES    HROFDY
L0000666        0   0.53080E-07   554616.0 4488110.8   157.6    4.15    1.42    1.93    YES    HROFDY
L0000667        0   0.53080E-07   554618.9 4488111.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000668        0   0.53080E-07   554621.9 4488112.1   157.6    4.15    1.42    1.93    YES    HROFDY
L0000669        0   0.53080E-07   554624.9 4488112.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000670        0   0.53080E-07   554627.8 4488113.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0000671        0   0.53080E-07   554630.8 4488114.2   157.7    4.15    1.42    1.93    YES    HROFDY
L0000672        0   0.53080E-07   554633.8 4488114.9   157.7    4.15    1.42    1.93    YES    HROFDY
L0000673        0   0.53080E-07   554636.8 4488115.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000674        0   0.53080E-07   554639.7 4488116.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000675        0   0.53080E-07   554642.7 4488117.0   157.7    4.15    1.42    1.93    YES    HROFDY
L0000676        0   0.53080E-07   554645.7 4488117.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000677        0   0.53080E-07   554648.6 4488118.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000678        0   0.53080E-07   554651.6 4488119.0   157.7    4.15    1.42    1.93    YES    HROFDY
L0000679        0   0.53080E-07   554654.6 4488119.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0000680        0   0.53080E-07   554657.5 4488120.4   157.7    4.15    1.42    1.93    YES    HROFDY
L0000681        0   0.53080E-07   554660.5 4488121.1   157.7    4.15    1.42    1.93    YES    HROFDY
L0000682        0   0.53080E-07   554663.5 4488121.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000683        0   0.53080E-07   554666.4 4488122.5   157.8    4.15    1.42    1.93    YES    HROFDY
L0000684        0   0.53080E-07   554669.4 4488123.2   157.8    4.15    1.42    1.93    YES    HROFDY
L0000685        0   0.53080E-07   554672.4 4488123.8   157.8    4.15    1.42    1.93    YES    HROFDY
L0000686        0   0.53080E-07   554675.4 4488124.5   157.8    4.15    1.42    1.93    YES    HROFDY
L0000687        0   0.53080E-07   554678.3 4488125.2   157.8    4.15    1.42    1.93    YES    HROFDY
L0000688        0   0.53080E-07   554681.3 4488125.9   157.8    4.15    1.42    1.93    YES    HROFDY
L0000689        0   0.53080E-07   554684.3 4488126.5   157.8    4.15    1.42    1.93    YES    HROFDY
L0000690        0   0.53080E-07   554687.2 4488127.2   157.8    4.15    1.42    1.93    YES    HROFDY
L0000691        0   0.53080E-07   554690.2 4488127.9   157.8    4.15    1.42    1.93    YES    HROFDY
L0000692        0   0.53080E-07   554693.2 4488128.5   157.8    4.15    1.42    1.93    YES    HROFDY
L0000693        0   0.53080E-07   554696.2 4488129.2   157.8    4.15    1.42    1.93    YES    HROFDY
L0000694        0   0.53080E-07   554699.1 4488129.9   157.8    4.15    1.42    1.93    YES    HROFDY
L0000695        0   0.53080E-07   554702.1 4488130.5   157.8    4.15    1.42    1.93    YES    HROFDY
L0000696        0   0.53080E-07   554705.1 4488131.2   157.9    4.15    1.42    1.93    YES    HROFDY
L0000697        0   0.53080E-07   554708.1 4488131.9   157.9    4.15    1.42    1.93    YES    HROFDY
L0000698        0   0.53080E-07   554711.0 4488132.6   157.9    4.15    1.42    1.93    YES    HROFDY
L0000699        0   0.53080E-07   554714.0 4488133.2   157.9    4.15    1.42    1.93    YES    HROFDY
L0000700        0   0.53080E-07   554717.0 4488133.9   157.9    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA - Future Residents              ***        08/29/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                          ***        08:27:05
                                                                                                       PAGE   5

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN



                                          *** VOLUME SOURCE DATA ***


          NUMBER EMISSION RATE               BASE    RELEASE   INIT.    INIT.   URBAN   EMISSION RATE
 SOURCE   PART.  (GRAMS/SEC)    X        Y    ELEV.   HEIGHT     SY       SZ    SOURCE   SCALAR VARY
   ID     CATS.             (METERS) (METERS)(METERS)(METERS) (METERS) (METERS)            BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


L0000701     0   0.53080E-07  554720.0 4488134.6   157.9    4.15     1.42     1.93    YES     HROFDY
L0000702     0   0.53080E-07  554722.9 4488135.2   157.9    4.15     1.42     1.93    YES     HROFDY
L0000703     0   0.53080E-07  554725.9 4488135.9   157.9    4.15     1.42     1.93    YES     HROFDY
L0000704     0   0.53080E-07  554728.9 4488136.6   157.9    4.15     1.42     1.93    YES     HROFDY
L0000705     0   0.53080E-07  554731.9 4488137.2   157.9    4.15     1.42     1.93    YES     HROFDY
L0000706     0   0.53080E-07  554734.8 4488137.9   157.9    4.15     1.42     1.93    YES     HROFDY
L0000707     0   0.53080E-07  554737.8 4488138.6   157.9    4.15     1.42     1.93    YES     HROFDY
L0000708     0   0.53080E-07  554740.8 4488139.2   157.9    4.15     1.42     1.93    YES     HROFDY
L0000709     0   0.53080E-07  554743.8 4488139.9   157.9    4.15     1.42     1.93    YES     HROFDY
L0000710     0   0.53080E-07  554746.7 4488140.6   157.9    4.15     1.42     1.93    YES     HROFDY
L0000711     0   0.53080E-07  554749.7 4488141.2   157.9    4.15     1.42     1.93    YES     HROFDY
L0000712     0   0.53080E-07  554752.7 4488141.9   157.9    4.15     1.42     1.93    YES     HROFDY
L0000713     0   0.53080E-07  554755.6 4488142.6   158.0    4.15     1.42     1.93    YES     HROFDY
L0000714     0   0.53080E-07  554758.6 4488143.2   158.0    4.15     1.42     1.93    YES     HROFDY
L0000715     0   0.53080E-07  554761.6 4488143.9   158.0    4.15     1.42     1.93    YES     HROFDY
L0000716     0   0.53080E-07  554764.6 4488144.6   158.1    4.15     1.42     1.93    YES     HROFDY
L0000717     0   0.53080E-07  554767.5 4488145.2   158.1    4.15     1.42     1.93    YES     HROFDY
L0000718     0   0.53080E-07  554770.5 4488145.9   158.1    4.15     1.42     1.93    YES     HROFDY
L0000719     0   0.53080E-07  554773.5 4488146.6   158.1    4.15     1.42     1.93    YES     HROFDY
L0000720     0   0.53080E-07  554776.5 4488147.2   158.1    4.15     1.42     1.93    YES     HROFDY
L0000721     0   0.53080E-07  554779.4 4488147.9   158.2    4.15     1.42     1.93    YES     HROFDY
L0000722     0   0.53080E-07  554782.4 4488148.6   158.2    4.15     1.42     1.93    YES     HROFDY
L0000723     0   0.53080E-07  554785.4 4488149.3   158.2    4.15     1.42     1.93    YES     HROFDY
L0000724     0   0.53080E-07  554788.4 4488149.9   158.2    4.15     1.42     1.93    YES     HROFDY
L0000725     0   0.53080E-07  554791.3 4488150.6   158.3    4.15     1.42     1.93    YES     HROFDY
L0000726     0   0.53080E-07  554794.3 4488151.3   158.3    4.15     1.42     1.93    YES     HROFDY
L0000727     0   0.53080E-07  554797.3 4488151.6   158.3    4.15     1.42     1.93    YES     HROFDY
L0000728     0   0.53080E-07  554800.4 4488151.5   158.4    4.15     1.42     1.93    YES     HROFDY
L0000729     0   0.53080E-07  554803.4 4488151.4   158.4    4.15     1.42     1.93    YES     HROFDY
L0000730     0   0.53080E-07  554806.4 4488151.2   158.4    4.15     1.42     1.93    YES     HROFDY
L0000731     0   0.53080E-07  554809.5 4488151.1   158.5    4.15     1.42     1.93    YES     HROFDY
L0000732     0   0.53080E-07  554811.7 4488149.7   158.5    4.15     1.42     1.93    YES     HROFDY
L0000733     0   0.53080E-07  554813.1 4488146.9   158.5    4.15     1.42     1.93    YES     HROFDY
L0000734     0   0.53080E-07  554814.4 4488144.2   158.5    4.15     1.42     1.93    YES     HROFDY
L0000735     0   0.53080E-07  554815.8 4488141.5   158.5    4.15     1.42     1.93    YES     HROFDY
L0000736     0   0.53080E-07  554817.1 4488138.8   158.5    4.15     1.42     1.93    YES     HROFDY
L0000737     0   0.53080E-07  554818.2 4488135.9   158.5    4.15     1.42     1.93    YES     HROFDY
L0000738     0   0.53080E-07  554818.4 4488132.9   158.4    4.15     1.42     1.93    YES     HROFDY
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L0000739      0    0.53080E-07   554818.7 4488129.9   158.4    4.15    1.42    1.93    YES    HROFDY
L0000740      0    0.53080E-07   554818.9 4488126.8   158.3    4.15    1.42    1.93    YES    HROFDY
L0000741      0    0.53080E-07   554819.2 4488123.8   158.3    4.15    1.42    1.93    YES    HROFDY
L0000742      0    0.53080E-07   554819.4 4488120.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0000743      0    0.53080E-07   554819.7 4488117.7   158.2    4.15    1.42    1.93    YES    HROFDY
L0000744      0    0.53080E-07   554819.9 4488114.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0000745      0    0.53080E-07   554820.3 4488111.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0000746      0    0.53080E-07   554820.9 4488108.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0000747      0    0.53080E-07   554821.5 4488105.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0000748      0    0.53080E-07   554822.0 4488102.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0000749      0    0.53080E-07   554822.6 4488099.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0000750      0    0.53080E-07   554823.2 4488096.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0000751      0    0.53080E-07   554823.8 4488093.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0000752      0    0.53080E-07   554824.4 4488090.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0000753      0    0.53080E-07   554824.9 4488087.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0000754      0    0.53080E-07   554825.5 4488084.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0000755      0    0.53080E-07   554826.1 4488081.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0000756      0    0.53080E-07   554826.7 4488078.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0000757      0    0.53080E-07   554827.3 4488075.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000758      0    0.53080E-07   554827.9 4488072.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000759      0    0.53080E-07   554828.4 4488069.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000760      0    0.53080E-07   554828.2 4488066.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0000761      0    0.53080E-07   554828.0 4488063.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0000762      0    0.53080E-07   554827.7 4488060.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0000763      0    0.53080E-07   554827.5 4488057.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000764      0    0.53080E-07   554827.2 4488054.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000765      0    0.53080E-07   554827.0 4488051.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0000766      0    0.53080E-07   554826.7 4488048.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0000767      0    0.53080E-07   554826.5 4488045.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0000768      0    0.53080E-07   554826.2 4488042.4   157.7    4.15    1.42    1.93    YES    HROFDY
L0000769      0    0.53080E-07   554826.0 4488039.4   157.7    4.15    1.42    1.93    YES    HROFDY
L0000770      0    0.53080E-07   554824.6 4488036.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000771      0    0.53080E-07   554822.8 4488034.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000772      0    0.53080E-07   554821.0 4488031.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000773      0    0.53080E-07   554819.2 4488029.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000774      0    0.53080E-07   554817.4 4488026.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0000775      0    0.53080E-07   554815.6 4488024.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000776      0    0.53080E-07   554817.0 4488021.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0000777      0    0.53080E-07   554818.6 4488019.3   157.6    4.15    1.42    1.93    YES    HROFDY
L0000778      0    0.53080E-07   554820.2 4488016.7   157.6    4.15    1.42    1.93    YES    HROFDY
L0000779      0    0.53080E-07   554822.8 4488015.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000780      0    0.53080E-07   554825.7 4488014.4   157.7    4.15    1.42    1.93    YES    HROFDY
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Model Output
Future Residences

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents        ***      08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                     ***      08:27:05
                                                                                               PAGE   7
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                            *** VOLUME SOURCE DATA ***
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SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000781	0	0.53080E-07	554828.6	4488013.5	157.7	4.15	1.42	1.93	YES	HROFDY
L0000782	0	0.53080E-07	554831.5	4488012.6	157.8	4.15	1.42	1.93	YES	HROFDY
L0000783	0	0.53080E-07	554834.4	4488011.7	157.8	4.15	1.42	1.93	YES	HROFDY
L0000784	0	0.53080E-07	554836.5	4488009.8	157.9	4.15	1.42	1.93	YES	HROFDY
L0000785	0	0.53080E-07	554837.9	4488007.1	157.9	4.15	1.42	1.93	YES	HROFDY
L0000786	0	0.53080E-07	554839.4	4488004.4	157.9	4.15	1.42	1.93	YES	HROFDY
L0000787	0	0.53080E-07	554840.9	4488001.7	158.0	4.15	1.42	1.93	YES	HROFDY
L0000788	0	0.53080E-07	554842.3	4487999.1	158.0	4.15	1.42	1.93	YES	HROFDY
L0000789	0	0.53080E-07	554843.8	4487996.4	158.1	4.15	1.42	1.93	YES	HROFDY
L0000790	0	0.53080E-07	554845.3	4487993.7	158.1	4.15	1.42	1.93	YES	HROFDY
L0000791	0	0.53080E-07	554846.6	4487991.0	158.2	4.15	1.42	1.93	YES	HROFDY
L0000792	0	0.53080E-07	554847.0	4487988.0	158.2	4.15	1.42	1.93	YES	HROFDY
L0000793	0	0.53080E-07	554847.4	4487985.0	158.2	4.15	1.42	1.93	YES	HROFDY
L0000794	0	0.53080E-07	554847.8	4487981.9	158.2	4.15	1.42	1.93	YES	HROFDY
L0000795	0	0.53080E-07	554848.2	4487978.9	158.2	4.15	1.42	1.93	YES	HROFDY
L0000796	0	0.53080E-07	554848.6	4487975.9	158.2	4.15	1.42	1.93	YES	HROFDY
L0000797	0	0.53080E-07	554849.0	4487972.9	158.2	4.15	1.42	1.93	YES	HROFDY
L0000798	0	0.53080E-07	554849.4	4487969.9	158.2	4.15	1.42	1.93	YES	HROFDY
L0000799	0	0.53080E-07	554849.8	4487966.8	158.2	4.15	1.42	1.93	YES	HROFDY
L0000800	0	0.53080E-07	554850.2	4487963.8	158.2	4.15	1.42	1.93	YES	HROFDY
L0000801	0	0.53080E-07	554850.6	4487960.8	158.3	4.15	1.42	1.93	YES	HROFDY
L0000802	0	0.53080E-07	554851.0	4487957.8	158.3	4.15	1.42	1.93	YES	HROFDY
L0000803	0	0.53080E-07	554851.5	4487954.8	158.2	4.15	1.42	1.93	YES	HROFDY
L0000804	0	0.53080E-07	554851.9	4487951.7	158.2	4.15	1.42	1.93	YES	HROFDY
L0000805	0	0.53080E-07	554852.3	4487948.7	158.1	4.15	1.42	1.93	YES	HROFDY
L0000806	0	0.53080E-07	554852.7	4487945.7	158.1	4.15	1.42	1.93	YES	HROFDY
L0000807	0	0.53080E-07	554853.1	4487942.7	158.1	4.15	1.42	1.93	YES	HROFDY
L0000808	0	0.53080E-07	554853.5	4487939.6	158.0	4.15	1.42	1.93	YES	HROFDY
L0000809	0	0.53080E-07	554853.9	4487936.6	158.0	4.15	1.42	1.93	YES	HROFDY
L0000810	0	0.53080E-07	554854.3	4487933.6	157.9	4.15	1.42	1.93	YES	HROFDY
L0000811	0	0.53080E-07	554851.8	4487932.6	157.9	4.15	1.42	1.93	YES	HROFDY
L0000812	0	0.53080E-07	554848.8	4487932.0	157.8	4.15	1.42	1.93	YES	HROFDY
L0000813	0	0.53080E-07	554845.8	4487931.4	157.7	4.15	1.42	1.93	YES	HROFDY
L0000814	0	0.53080E-07	554842.8	4487930.8	157.7	4.15	1.42	1.93	YES	HROFDY
L0000815	0	0.53080E-07	554839.9	4487930.2	157.6	4.15	1.42	1.93	YES	HROFDY
L0000816	0	0.53080E-07	554836.9	4487929.5	157.6	4.15	1.42	1.93	YES	HROFDY
L0000817	0	0.53080E-07	554833.9	4487928.9	157.5	4.15	1.42	1.93	YES	HROFDY
L0000818	0	0.53080E-07	554830.9	4487928.3	157.5	4.15	1.42	1.93	YES	HROFDY

Model Output
Future Residences

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L0000819     0    0.53080E-07   554827.9 4487927.7   157.4     4.15     1.42     1.93     YES    HROFDY
L0000820     0    0.53080E-07   554824.9 4487927.1   157.4     4.15     1.42     1.93     YES    HROFDY
L0000821     0    0.53080E-07   554821.9 4487926.5   157.4     4.15     1.42     1.93     YES    HROFDY
L0000822     0    0.53080E-07   554819.0 4487925.8   157.3     4.15     1.42     1.93     YES    HROFDY
L0000823     0    0.53080E-07   554816.0 4487925.2   157.3     4.15     1.42     1.93     YES    HROFDY
L0000824     0    0.53080E-07   554813.0 4487924.6   157.2     4.15     1.42     1.93     YES    HROFDY
L0000825     0    0.53080E-07   554810.0 4487924.0   157.2     4.15     1.42     1.93     YES    HROFDY
L0000826     0    0.53080E-07   554807.0 4487923.4   157.2     4.15     1.42     1.93     YES    HROFDY
L0000827     0    0.53080E-07   554804.0 4487922.8   157.1     4.15     1.42     1.93     YES    HROFDY
L0000828     0    0.53080E-07   554801.1 4487922.1   157.1     4.15     1.42     1.93     YES    HROFDY
L0000829     0    0.53080E-07   554798.1 4487921.5   157.0     4.15     1.42     1.93     YES    HROFDY
L0000830     0    0.53080E-07   554795.1 4487920.9   157.0     4.15     1.42     1.93     YES    HROFDY
L0000831     0    0.53080E-07   554792.1 4487920.3   157.0     4.15     1.42     1.93     YES    HROFDY
L0000832     0    0.53080E-07   554789.1 4487919.7   156.9     4.15     1.42     1.93     YES    HROFDY
L0000833     0    0.53080E-07   554786.1 4487919.1   156.9     4.15     1.42     1.93     YES    HROFDY
L0000834     0    0.53080E-07   554783.1 4487918.4   156.9     4.15     1.42     1.93     YES    HROFDY
L0000835     0    0.53080E-07   554780.2 4487917.8   156.9     4.15     1.42     1.93     YES    HROFDY
L0000836     0    0.53080E-07   554777.2 4487917.2   156.8     4.15     1.42     1.93     YES    HROFDY
L0000837     0    0.53080E-07   554774.2 4487916.6   156.8     4.15     1.42     1.93     YES    HROFDY
L0000838     0    0.53080E-07   554771.2 4487916.0   156.7     4.15     1.42     1.93     YES    HROFDY
L0000839     0    0.53080E-07   554768.2 4487915.4   156.7     4.15     1.42     1.93     YES    HROFDY
L0000840     0    0.53080E-07   554765.2 4487914.7   156.7     4.15     1.42     1.93     YES    HROFDY
L0000841     0    0.53080E-07   554762.2 4487914.1   156.6     4.15     1.42     1.93     YES    HROFDY
L0000842     0    0.53080E-07   554759.3 4487913.5   156.6     4.15     1.42     1.93     YES    HROFDY
L0000843     0    0.53080E-07   554756.3 4487912.9   156.6     4.15     1.42     1.93     YES    HROFDY
L0000844     0    0.53080E-07   554753.3 4487912.3   156.5     4.15     1.42     1.93     YES    HROFDY
L0000845     0    0.53080E-07   554750.3 4487911.7   156.5     4.15     1.42     1.93     YES    HROFDY
L0000846     0    0.53080E-07   554747.3 4487911.0   156.5     4.15     1.42     1.93     YES    HROFDY
L0000847     0    0.53080E-07   554744.3 4487910.4   156.5     4.15     1.42     1.93     YES    HROFDY
L0000848     0    0.53080E-07   554741.4 4487909.8   156.5     4.15     1.42     1.93     YES    HROFDY
L0000849     0    0.53080E-07   554738.4 4487909.2   156.5     4.15     1.42     1.93     YES    HROFDY
L0000850     0    0.53080E-07   554735.4 4487908.6   156.5     4.15     1.42     1.93     YES    HROFDY
L0000851     0    0.53080E-07   554732.4 4487908.0   156.5     4.15     1.42     1.93     YES    HROFDY
L0000852     0    0.53080E-07   554729.4 4487907.3   156.5     4.15     1.42     1.93     YES    HROFDY
L0000853     0    0.53080E-07   554726.4 4487906.7   156.5     4.15     1.42     1.93     YES    HROFDY
L0000854     0    0.53080E-07   554723.4 4487906.1   156.5     4.15     1.42     1.93     YES    HROFDY
L0000855     0    0.53080E-07   554720.5 4487905.5   156.5     4.15     1.42     1.93     YES    HROFDY
L0000856     0    0.53080E-07   554717.5 4487904.9   156.5     4.15     1.42     1.93     YES    HROFDY
L0000857     0    0.53080E-07   554714.5 4487904.3   156.4     4.15     1.42     1.93     YES    HROFDY
L0000858     0    0.53080E-07   554711.5 4487903.6   156.4     4.15     1.42     1.93     YES    HROFDY
L0000859     0    0.53080E-07   554708.5 4487903.0   156.4     4.15     1.42     1.93     YES    HROFDY
L0000860     0    0.53080E-07   554705.5 4487902.4   156.4     4.15     1.42     1.93     YES    HROFDY
```

Model Output
Future Residences

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents           ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***        08:27:05
                                                                                                    PAGE   9

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                                    *** VOLUME SOURCE DATA ***


                NUMBER EMISSION RATE              BASE    RELEASE    INIT.    INIT.   URBAN   EMISSION RATE
        SOURCE   PART.  (GRAMS/SEC)    X       Y   ELEV.   HEIGHT     SY       SZ    SOURCE   SCALAR VARY
          ID    CATS.            (METERS) (METERS) (METERS)(METERS) (METERS) (METERS)            BY
        - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


        L0000861    0   0.53080E-07  554702.5 4487901.8  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000862    0   0.53080E-07  554699.6 4487901.2  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000863    0   0.53080E-07  554696.6 4487900.6  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000864    0   0.53080E-07  554693.6 4487899.9  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000865    0   0.53080E-07  554690.6 4487899.3  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000866    0   0.53080E-07  554687.6 4487898.7  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000867    0   0.53080E-07  554684.6 4487898.1  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000868    0   0.53080E-07  554681.7 4487897.5  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000869    0   0.53080E-07  554678.7 4487896.9  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000870    0   0.53080E-07  554675.7 4487896.2  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000871    0   0.53080E-07  554672.7 4487895.6  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000872    0   0.53080E-07  554669.7 4487895.0  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000873    0   0.53080E-07  554666.7 4487894.4  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000874    0   0.53080E-07  554663.7 4487893.8  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000875    0   0.53080E-07  554660.8 4487893.2  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000876    0   0.53080E-07  554657.8 4487892.5  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000877    0   0.53080E-07  554654.9 4487891.6  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000878    0   0.53080E-07  554652.0 4487890.5  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000879    0   0.53080E-07  554649.2 4487889.5  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000880    0   0.53080E-07  554646.3 4487888.4  156.4    4.15     1.42     1.93     YES    HROFDY

        L0000881    0   0.74620E-08  554497.4 4488060.1  156.2    4.15     1.42     1.93     YES    HROFDY
        L0000882    0   0.74620E-08  554499.9 4488061.9  156.2    4.15     1.42     1.93     YES    HROFDY
        L0000883    0   0.74620E-08  554502.4 4488063.6  156.2    4.15     1.42     1.93     YES    HROFDY
        L0000884    0   0.74620E-08  554504.9 4488065.4  156.3    4.15     1.42     1.93     YES    HROFDY
        L0000885    0   0.74620E-08  554507.4 4488067.1  156.3    4.15     1.42     1.93     YES    HROFDY
        L0000886    0   0.74620E-08  554509.8 4488068.9  156.3    4.15     1.42     1.93     YES    HROFDY
        L0000887    0   0.74620E-08  554512.3 4488070.7  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000888    0   0.74620E-08  554514.8 4488072.4  156.4    4.15     1.42     1.93     YES    HROFDY
        L0000889    0   0.74620E-08  554517.3 4488074.2  156.5    4.15     1.42     1.93     YES    HROFDY
        L0000890    0   0.74620E-08  554519.8 4488075.9  156.5    4.15     1.42     1.93     YES    HROFDY
        L0000891    0   0.74620E-08  554522.3 4488077.7  156.5    4.15     1.42     1.93     YES    HROFDY
        L0000892    0   0.74620E-08  554524.4 4488079.9  156.6    4.15     1.42     1.93     YES    HROFDY
        L0000893    0   0.74620E-08  554526.4 4488082.2  156.7    4.15     1.42     1.93     YES    HROFDY
        L0000894    0   0.74620E-08  554528.5 4488084.4  156.7    4.15     1.42     1.93     YES    HROFDY
        L0000895    0   0.74620E-08  554530.5 4488086.7  156.8    4.15     1.42     1.93     YES    HROFDY
        L0000896    0   0.74620E-08  554532.5 4488089.0  156.9    4.15     1.42     1.93     YES    HROFDY
        L0000897    0   0.74620E-08  554534.6 4488091.2  156.9    4.15     1.42     1.93     YES    HROFDY
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L0000898        0    0.74620E-08   554536.6 4488093.5   157.0    4.15    1.42    1.93    YES    HROFDY
L0000899        0    0.74620E-08   554538.6 4488095.8   157.1    4.15    1.42    1.93    YES    HROFDY
L0000900        0    0.74620E-08   554540.7 4488098.0   157.1    4.15    1.42    1.93    YES    HROFDY
L0000901        0    0.74620E-08   554542.7 4488100.3   157.2    4.15    1.42    1.93    YES    HROFDY
L0000902        0    0.74620E-08   554544.8 4488102.6   157.2    4.15    1.42    1.93    YES    HROFDY
L0000903        0    0.74620E-08   554547.5 4488102.8   157.3    4.15    1.42    1.93    YES    HROFDY
L0000904        0    0.74620E-08   554550.5 4488102.2   157.3    4.15    1.42    1.93    YES    HROFDY
L0000905        0    0.74620E-08   554553.5 4488101.7   157.3    4.15    1.42    1.93    YES    HROFDY
L0000906        0    0.74620E-08   554556.5 4488101.1   157.4    4.15    1.42    1.93    YES    HROFDY
L0000907        0    0.74620E-08   554559.5 4488100.6   157.4    4.15    1.42    1.93    YES    HROFDY
L0000908        0    0.74620E-08   554562.5 4488100.1   157.4    4.15    1.42    1.93    YES    HROFDY
L0000909        0    0.74620E-08   554565.5 4488099.5   157.4    4.15    1.42    1.93    YES    HROFDY
L0000910        0    0.74620E-08   554568.5 4488099.7   157.5    4.15    1.42    1.93    YES    HROFDY
L0000911        0    0.74620E-08   554571.4 4488100.4   157.5    4.15    1.42    1.93    YES    HROFDY
L0000912        0    0.74620E-08   554574.4 4488101.1   157.5    4.15    1.42    1.93    YES    HROFDY
L0000913        0    0.74620E-08   554577.4 4488101.8   157.5    4.15    1.42    1.93    YES    HROFDY
L0000914        0    0.74620E-08   554580.3 4488102.5   157.5    4.15    1.42    1.93    YES    HROFDY
L0000915        0    0.74620E-08   554583.3 4488103.2   157.6    4.15    1.42    1.93    YES    HROFDY
L0000916        0    0.74620E-08   554586.3 4488103.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0000917        0    0.74620E-08   554589.2 4488104.6   157.6    4.15    1.42    1.93    YES    HROFDY
L0000918        0    0.74620E-08   554592.2 4488105.2   157.6    4.15    1.42    1.93    YES    HROFDY
L0000919        0    0.74620E-08   554595.2 4488105.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0000920        0    0.74620E-08   554598.2 4488106.6   157.6    4.15    1.42    1.93    YES    HROFDY
L0000921        0    0.74620E-08   554601.1 4488107.3   157.6    4.15    1.42    1.93    YES    HROFDY
L0000922        0    0.74620E-08   554604.1 4488108.0   157.6    4.15    1.42    1.93    YES    HROFDY
L0000923        0    0.74620E-08   554607.1 4488108.7   157.6    4.15    1.42    1.93    YES    HROFDY
L0000924        0    0.74620E-08   554610.0 4488109.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000925        0    0.74620E-08   554613.0 4488110.1   157.6    4.15    1.42    1.93    YES    HROFDY
L0000926        0    0.74620E-08   554616.0 4488110.8   157.6    4.15    1.42    1.93    YES    HROFDY
L0000927        0    0.74620E-08   554618.9 4488111.4   157.6    4.15    1.42    1.93    YES    HROFDY
L0000928        0    0.74620E-08   554621.9 4488112.1   157.6    4.15    1.42    1.93    YES    HROFDY
L0000929        0    0.74620E-08   554624.9 4488112.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0000930        0    0.74620E-08   554627.8 4488113.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0000931        0    0.74620E-08   554630.8 4488114.2   157.7    4.15    1.42    1.93    YES    HROFDY
L0000932        0    0.74620E-08   554633.8 4488114.9   157.7    4.15    1.42    1.93    YES    HROFDY
L0000933        0    0.74620E-08   554636.8 4488115.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000934        0    0.74620E-08   554639.7 4488116.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000935        0    0.74620E-08   554642.7 4488117.0   157.7    4.15    1.42    1.93    YES    HROFDY
L0000936        0    0.74620E-08   554645.7 4488117.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0000937        0    0.74620E-08   554648.6 4488118.3   157.7    4.15    1.42    1.93    YES    HROFDY
L0000938        0    0.74620E-08   554651.6 4488119.0   157.7    4.15    1.42    1.93    YES    HROFDY
L0000939        0    0.74620E-08   554654.6 4488119.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0000940        0    0.74620E-08   554657.5 4488120.4   157.7    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents              ***    08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                           ***    08:27:05
                                                                                                   PAGE  11

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                       *** VOLUME SOURCE DATA ***


            NUMBER EMISSION RATE              BASE   RELEASE   INIT.   INIT.   URBAN  EMISSION RATE
  SOURCE    PART.  (GRAMS/SEC)    X       Y   ELEV.  HEIGHT     SY      SZ    SOURCE  SCALAR VARY
    ID      CATS.             (METERS) (METERS)(METERS)(METERS)(METERS)(METERS)             BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


 L0000941      0  0.74620E-08  554660.5 4488121.1   157.7   4.15    1.42    1.93    YES   HROFDY
 L0000942      0  0.74620E-08  554663.5 4488121.8   157.7   4.15    1.42    1.93    YES   HROFDY
 L0000943      0  0.74620E-08  554666.4 4488122.5   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000944      0  0.74620E-08  554669.4 4488123.2   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000945      0  0.74620E-08  554672.4 4488123.8   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000946      0  0.74620E-08  554675.4 4488124.5   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000947      0  0.74620E-08  554678.3 4488125.2   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000948      0  0.74620E-08  554681.3 4488125.9   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000949      0  0.74620E-08  554684.3 4488126.5   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000950      0  0.74620E-08  554687.2 4488127.2   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000951      0  0.74620E-08  554690.2 4488127.9   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000952      0  0.74620E-08  554693.2 4488128.5   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000953      0  0.74620E-08  554696.2 4488129.2   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000954      0  0.74620E-08  554699.1 4488129.9   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000955      0  0.74620E-08  554702.1 4488130.5   157.8   4.15    1.42    1.93    YES   HROFDY
 L0000956      0  0.74620E-08  554705.1 4488131.2   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000957      0  0.74620E-08  554708.1 4488131.9   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000958      0  0.74620E-08  554711.0 4488132.6   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000959      0  0.74620E-08  554714.0 4488133.2   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000960      0  0.74620E-08  554717.0 4488133.9   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000961      0  0.74620E-08  554720.0 4488134.6   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000962      0  0.74620E-08  554722.9 4488135.2   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000963      0  0.74620E-08  554725.9 4488135.9   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000964      0  0.74620E-08  554728.9 4488136.6   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000965      0  0.74620E-08  554731.9 4488137.2   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000966      0  0.74620E-08  554734.8 4488137.9   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000967      0  0.74620E-08  554737.8 4488138.6   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000968      0  0.74620E-08  554740.8 4488139.2   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000969      0  0.74620E-08  554743.8 4488139.9   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000970      0  0.74620E-08  554746.7 4488140.6   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000971      0  0.74620E-08  554749.7 4488141.2   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000972      0  0.74620E-08  554752.7 4488141.9   157.9   4.15    1.42    1.93    YES   HROFDY
 L0000973      0  0.74620E-08  554755.6 4488142.6   158.0   4.15    1.42    1.93    YES   HROFDY
 L0000974      0  0.74620E-08  554758.6 4488143.2   158.0   4.15    1.42    1.93    YES   HROFDY
 L0000975      0  0.74620E-08  554761.6 4488143.9   158.0   4.15    1.42    1.93    YES   HROFDY
 L0000976      0  0.74620E-08  554764.6 4488144.6   158.1   4.15    1.42    1.93    YES   HROFDY
 L0000977      0  0.74620E-08  554767.5 4488145.2   158.1   4.15    1.42    1.93    YES   HROFDY
 L0000978      0  0.74620E-08  554770.5 4488145.9   158.1   4.15    1.42    1.93    YES   HROFDY
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L0000979      0    0.74620E-08   554773.5 4488146.6   158.1    4.15    1.42    1.93    YES    HROFDY
L0000980      0    0.74620E-08   554776.5 4488147.2   158.1    4.15    1.42    1.93    YES    HROFDY
L0000981      0    0.74620E-08   554779.4 4488147.9   158.2    4.15    1.42    1.93    YES    HROFDY
L0000982      0    0.74620E-08   554782.4 4488148.6   158.2    4.15    1.42    1.93    YES    HROFDY
L0000983      0    0.74620E-08   554785.4 4488149.3   158.2    4.15    1.42    1.93    YES    HROFDY
L0000984      0    0.74620E-08   554788.4 4488149.9   158.2    4.15    1.42    1.93    YES    HROFDY
L0000985      0    0.74620E-08   554791.3 4488150.6   158.3    4.15    1.42    1.93    YES    HROFDY
L0000986      0    0.74620E-08   554794.3 4488151.3   158.3    4.15    1.42    1.93    YES    HROFDY
L0000987      0    0.74620E-08   554797.3 4488151.6   158.3    4.15    1.42    1.93    YES    HROFDY
L0000988      0    0.74620E-08   554800.4 4488151.5   158.4    4.15    1.42    1.93    YES    HROFDY
L0000989      0    0.74620E-08   554803.4 4488151.4   158.4    4.15    1.42    1.93    YES    HROFDY
L0000990      0    0.74620E-08   554806.4 4488151.2   158.4    4.15    1.42    1.93    YES    HROFDY
L0000991      0    0.74620E-08   554809.5 4488151.1   158.5    4.15    1.42    1.93    YES    HROFDY
L0000992      0    0.74620E-08   554811.7 4488149.7   158.5    4.15    1.42    1.93    YES    HROFDY
L0000993      0    0.74620E-08   554813.1 4488146.9   158.5    4.15    1.42    1.93    YES    HROFDY
L0000994      0    0.74620E-08   554814.4 4488144.2   158.5    4.15    1.42    1.93    YES    HROFDY
L0000995      0    0.74620E-08   554815.8 4488141.5   158.5    4.15    1.42    1.93    YES    HROFDY
L0000996      0    0.74620E-08   554817.1 4488138.8   158.5    4.15    1.42    1.93    YES    HROFDY
L0000997      0    0.74620E-08   554818.2 4488135.9   158.5    4.15    1.42    1.93    YES    HROFDY
L0000998      0    0.74620E-08   554818.4 4488132.9   158.4    4.15    1.42    1.93    YES    HROFDY
L0000999      0    0.74620E-08   554818.7 4488129.9   158.4    4.15    1.42    1.93    YES    HROFDY
L0001000      0    0.74620E-08   554818.9 4488126.8   158.3    4.15    1.42    1.93    YES    HROFDY
L0001001      0    0.74620E-08   554819.2 4488123.8   158.3    4.15    1.42    1.93    YES    HROFDY
L0001002      0    0.74620E-08   554819.4 4488120.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0001003      0    0.74620E-08   554819.7 4488117.7   158.2    4.15    1.42    1.93    YES    HROFDY
L0001004      0    0.74620E-08   554819.9 4488114.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0001005      0    0.74620E-08   554820.3 4488111.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0001006      0    0.74620E-08   554820.9 4488108.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0001007      0    0.74620E-08   554821.5 4488105.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0001008      0    0.74620E-08   554822.0 4488102.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001009      0    0.74620E-08   554822.6 4488099.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001010      0    0.74620E-08   554823.2 4488096.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001011      0    0.74620E-08   554823.8 4488093.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001012      0    0.74620E-08   554824.4 4488090.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001013      0    0.74620E-08   554824.9 4488087.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001014      0    0.74620E-08   554825.5 4488084.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001015      0    0.74620E-08   554826.1 4488081.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001016      0    0.74620E-08   554826.7 4488078.7   157.7    4.15    1.42    1.93    YES    HROFDY
L0001017      0    0.74620E-08   554827.3 4488075.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001018      0    0.74620E-08   554827.9 4488072.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001019      0    0.74620E-08   554828.4 4488069.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001020      0    0.74620E-08   554828.2 4488066.7   157.7    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents           ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                        ***        08:27:05
                                                                                                    PAGE  13
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                                   *** VOLUME SOURCE DATA ***


              NUMBER EMISSION RATE                  BASE     RELEASE    INIT.     INIT.    URBAN   EMISSION RATE
     SOURCE   PART.  (GRAMS/SEC)    X        Y      ELEV.    HEIGHT     SY        SZ       SOURCE  SCALAR VARY
       ID     CATS.              (METERS) (METERS) (METERS) (METERS)  (METERS)  (METERS)             BY
     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


     L0001021    0   0.74620E-08  554828.0 4488063.7  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001022    0   0.74620E-08  554827.7 4488060.7  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001023    0   0.74620E-08  554827.5 4488057.6  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001024    0   0.74620E-08  554827.2 4488054.6  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001025    0   0.74620E-08  554827.0 4488051.5  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001026    0   0.74620E-08  554826.7 4488048.5  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001027    0   0.74620E-08  554826.5 4488045.5  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001028    0   0.74620E-08  554826.2 4488042.4  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001029    0   0.74620E-08  554826.0 4488039.4  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001030    0   0.74620E-08  554824.6 4488036.8  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001031    0   0.74620E-08  554822.8 4488034.3  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001032    0   0.74620E-08  554821.0 4488031.8  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001033    0   0.74620E-08  554819.2 4488029.4  157.6    4.15     1.42      1.93      YES     HROFDY
     L0001034    0   0.74620E-08  554817.4 4488026.9  157.6    4.15     1.42      1.93      YES     HROFDY
     L0001035    0   0.74620E-08  554815.6 4488024.4  157.6    4.15     1.42      1.93      YES     HROFDY
     L0001036    0   0.74620E-08  554817.0 4488021.9  157.6    4.15     1.42      1.93      YES     HROFDY
     L0001037    0   0.74620E-08  554818.6 4488019.3  157.6    4.15     1.42      1.93      YES     HROFDY
     L0001038    0   0.74620E-08  554820.2 4488016.7  157.6    4.15     1.42      1.93      YES     HROFDY
     L0001039    0   0.74620E-08  554822.8 4488015.3  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001040    0   0.74620E-08  554825.7 4488014.4  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001041    0   0.74620E-08  554828.6 4488013.5  157.7    4.15     1.42      1.93      YES     HROFDY
     L0001042    0   0.74620E-08  554831.5 4488012.6  157.8    4.15     1.42      1.93      YES     HROFDY
     L0001043    0   0.74620E-08  554834.4 4488011.7  157.8    4.15     1.42      1.93      YES     HROFDY
     L0001044    0   0.74620E-08  554836.5 4488009.8  157.9    4.15     1.42      1.93      YES     HROFDY
     L0001045    0   0.74620E-08  554837.9 4488007.1  157.9    4.15     1.42      1.93      YES     HROFDY
     L0001046    0   0.74620E-08  554839.4 4488004.4  157.9    4.15     1.42      1.93      YES     HROFDY
     L0001047    0   0.74620E-08  554840.9 4488001.7  158.0    4.15     1.42      1.93      YES     HROFDY
     L0001048    0   0.74620E-08  554842.3 4487999.1  158.0    4.15     1.42      1.93      YES     HROFDY
     L0001049    0   0.74620E-08  554843.8 4487996.4  158.1    4.15     1.42      1.93      YES     HROFDY
     L0001050    0   0.74620E-08  554845.3 4487993.7  158.1    4.15     1.42      1.93      YES     HROFDY
     L0001051    0   0.74620E-08  554846.6 4487991.0  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001052    0   0.74620E-08  554847.0 4487988.0  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001053    0   0.74620E-08  554847.4 4487985.0  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001054    0   0.74620E-08  554847.8 4487981.9  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001055    0   0.74620E-08  554848.2 4487978.9  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001056    0   0.74620E-08  554848.6 4487975.9  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001057    0   0.74620E-08  554849.0 4487972.9  158.2    4.15     1.42      1.93      YES     HROFDY
     L0001058    0   0.74620E-08  554849.4 4487969.9  158.2    4.15     1.42      1.93      YES     HROFDY
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L0001059      0    0.74620E-08   554849.8 4487966.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0001060      0    0.74620E-08   554850.2 4487963.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0001061      0    0.74620E-08   554850.6 4487960.8   158.3    4.15    1.42    1.93    YES    HROFDY
L0001062      0    0.74620E-08   554851.0 4487957.8   158.3    4.15    1.42    1.93    YES    HROFDY
L0001063      0    0.74620E-08   554851.5 4487954.8   158.2    4.15    1.42    1.93    YES    HROFDY
L0001064      0    0.74620E-08   554851.9 4487951.7   158.2    4.15    1.42    1.93    YES    HROFDY
L0001065      0    0.74620E-08   554852.3 4487948.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0001066      0    0.74620E-08   554852.7 4487945.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0001067      0    0.74620E-08   554853.1 4487942.7   158.1    4.15    1.42    1.93    YES    HROFDY
L0001068      0    0.74620E-08   554853.5 4487939.6   158.0    4.15    1.42    1.93    YES    HROFDY
L0001069      0    0.74620E-08   554853.9 4487936.6   158.0    4.15    1.42    1.93    YES    HROFDY
L0001070      0    0.74620E-08   554854.3 4487933.6   157.9    4.15    1.42    1.93    YES    HROFDY
L0001071      0    0.74620E-08   554851.8 4487932.6   157.9    4.15    1.42    1.93    YES    HROFDY
L0001072      0    0.74620E-08   554848.8 4487932.0   157.8    4.15    1.42    1.93    YES    HROFDY
L0001073      0    0.74620E-08   554845.8 4487931.4   157.7    4.15    1.42    1.93    YES    HROFDY
L0001074      0    0.74620E-08   554842.8 4487930.8   157.7    4.15    1.42    1.93    YES    HROFDY
L0001075      0    0.74620E-08   554839.9 4487930.2   157.6    4.15    1.42    1.93    YES    HROFDY
L0001076      0    0.74620E-08   554836.9 4487929.5   157.6    4.15    1.42    1.93    YES    HROFDY
L0001077      0    0.74620E-08   554833.9 4487928.9   157.5    4.15    1.42    1.93    YES    HROFDY
L0001078      0    0.74620E-08   554830.9 4487928.3   157.5    4.15    1.42    1.93    YES    HROFDY
L0001079      0    0.74620E-08   554827.9 4487927.7   157.4    4.15    1.42    1.93    YES    HROFDY
L0001080      0    0.74620E-08   554824.9 4487927.1   157.4    4.15    1.42    1.93    YES    HROFDY
L0001081      0    0.74620E-08   554821.9 4487926.5   157.4    4.15    1.42    1.93    YES    HROFDY
L0001082      0    0.74620E-08   554819.0 4487925.8   157.3    4.15    1.42    1.93    YES    HROFDY
L0001083      0    0.74620E-08   554816.0 4487925.2   157.3    4.15    1.42    1.93    YES    HROFDY
L0001084      0    0.74620E-08   554813.0 4487924.6   157.2    4.15    1.42    1.93    YES    HROFDY
L0001085      0    0.74620E-08   554810.0 4487924.0   157.2    4.15    1.42    1.93    YES    HROFDY
L0001086      0    0.74620E-08   554807.0 4487923.4   157.2    4.15    1.42    1.93    YES    HROFDY
L0001087      0    0.74620E-08   554804.0 4487922.8   157.1    4.15    1.42    1.93    YES    HROFDY
L0001088      0    0.74620E-08   554801.1 4487922.1   157.1    4.15    1.42    1.93    YES    HROFDY
L0001089      0    0.74620E-08   554798.1 4487921.5   157.0    4.15    1.42    1.93    YES    HROFDY
L0001090      0    0.74620E-08   554795.1 4487920.9   157.0    4.15    1.42    1.93    YES    HROFDY
L0001091      0    0.74620E-08   554792.1 4487920.3   157.0    4.15    1.42    1.93    YES    HROFDY
L0001092      0    0.74620E-08   554789.1 4487919.7   156.9    4.15    1.42    1.93    YES    HROFDY
L0001093      0    0.74620E-08   554786.1 4487919.1   156.9    4.15    1.42    1.93    YES    HROFDY
L0001094      0    0.74620E-08   554783.1 4487918.4   156.9    4.15    1.42    1.93    YES    HROFDY
L0001095      0    0.74620E-08   554780.2 4487917.8   156.9    4.15    1.42    1.93    YES    HROFDY
L0001096      0    0.74620E-08   554777.2 4487917.2   156.8    4.15    1.42    1.93    YES    HROFDY
L0001097      0    0.74620E-08   554774.2 4487916.6   156.8    4.15    1.42    1.93    YES    HROFDY
L0001098      0    0.74620E-08   554771.2 4487916.0   156.7    4.15    1.42    1.93    YES    HROFDY
L0001099      0    0.74620E-08   554768.2 4487915.4   156.7    4.15    1.42    1.93    YES    HROFDY
L0001100      0    0.74620E-08   554765.2 4487914.7   156.7    4.15    1.42    1.93    YES    HROFDY
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Model Output
Future Residences

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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA - Future Residents              ***        08/29/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                          ***        08:27:05
                                                                                                       PAGE  15
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                                         *** VOLUME SOURCE DATA ***


             NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.    URBAN   EMISSION RATE
  SOURCE     PART.  (GRAMS/SEC)      X        Y       ELEV.   HEIGHT     SY       SZ       SOURCE  SCALAR VARY
    ID       CATS.              (METERS) (METERS) (METERS) (METERS) (METERS) (METERS)               BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 L0001101      0    0.74620E-08  554762.2 4487914.1   156.6    4.15     1.42     1.93      YES     HROFDY
 L0001102      0    0.74620E-08  554759.3 4487913.5   156.6    4.15     1.42     1.93      YES     HROFDY
 L0001103      0    0.74620E-08  554756.3 4487912.9   156.6    4.15     1.42     1.93      YES     HROFDY
 L0001104      0    0.74620E-08  554753.3 4487912.3   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001105      0    0.74620E-08  554750.3 4487911.7   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001106      0    0.74620E-08  554747.3 4487911.0   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001107      0    0.74620E-08  554744.3 4487910.4   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001108      0    0.74620E-08  554741.4 4487909.8   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001109      0    0.74620E-08  554738.4 4487909.2   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001110      0    0.74620E-08  554735.4 4487908.6   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001111      0    0.74620E-08  554732.4 4487908.0   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001112      0    0.74620E-08  554729.4 4487907.3   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001113      0    0.74620E-08  554726.4 4487906.7   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001114      0    0.74620E-08  554723.4 4487906.1   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001115      0    0.74620E-08  554720.5 4487905.5   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001116      0    0.74620E-08  554717.5 4487904.9   156.5    4.15     1.42     1.93      YES     HROFDY
 L0001117      0    0.74620E-08  554714.5 4487904.3   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001118      0    0.74620E-08  554711.5 4487903.6   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001119      0    0.74620E-08  554708.5 4487903.0   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001120      0    0.74620E-08  554705.5 4487902.4   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001121      0    0.74620E-08  554702.5 4487901.8   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001122      0    0.74620E-08  554699.6 4487901.2   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001123      0    0.74620E-08  554696.6 4487900.6   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001124      0    0.74620E-08  554693.6 4487899.9   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001125      0    0.74620E-08  554690.6 4487899.3   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001126      0    0.74620E-08  554687.6 4487898.7   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001127      0    0.74620E-08  554684.6 4487898.1   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001128      0    0.74620E-08  554681.7 4487897.5   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001129      0    0.74620E-08  554678.7 4487896.9   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001130      0    0.74620E-08  554675.7 4487896.2   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001131      0    0.74620E-08  554672.7 4487895.6   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001132      0    0.74620E-08  554669.7 4487895.0   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001133      0    0.74620E-08  554666.7 4487894.4   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001134      0    0.74620E-08  554663.7 4487893.8   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001135      0    0.74620E-08  554660.8 4487893.2   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001136      0    0.74620E-08  554657.8 4487892.5   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001137      0    0.74620E-08  554654.9 4487891.6   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001138      0    0.74620E-08  554652.0 4487890.5   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001139      0    0.74620E-08  554649.2 4487889.5   156.4    4.15     1.42     1.93      YES     HROFDY
 L0001140      0    0.74620E-08  554646.3 4487888.4   156.4    4.15     1.42     1.93      YES     HROFDY
```

Model Output
Future Residences

*** MODELOPTs: RegDFAULT CONC ELEV URBAN

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
REFUEL	0	0.16300E-03	554820.9	4487960.0	157.7	1.00	8.37	0.93	YES	HROFDY
SPILL	0	0.97700E-03	554820.9	4487960.0	157.7	0.00	8.37	1.86	YES	HROFDY
L0001141	0	0.21300E-07	554658.5	4487889.0	156.4	4.15	1.42	1.93	YES	HROFDY
L0001142	0	0.21300E-07	554661.5	4487889.6	156.4	4.15	1.42	1.93	YES	HROFDY
L0001143	0	0.21300E-07	554664.5	4487890.2	156.4	4.15	1.42	1.93	YES	HROFDY
L0001144	0	0.21300E-07	554667.5	4487890.8	156.4	4.15	1.42	1.93	YES	HROFDY
L0001145	0	0.21300E-07	554670.5	4487891.4	156.4	4.15	1.42	1.93	YES	HROFDY
L0001146	0	0.21300E-07	554673.5	4487891.9	156.4	4.15	1.42	1.93	YES	HROFDY
L0001147	0	0.21300E-07	554676.4	4487892.5	156.4	4.15	1.42	1.93	YES	HROFDY
L0001148	0	0.21300E-07	554679.4	4487893.1	156.4	4.15	1.42	1.93	YES	HROFDY
L0001149	0	0.21300E-07	554682.4	4487893.7	156.4	4.15	1.42	1.93	YES	HROFDY
L0001150	0	0.21300E-07	554685.4	4487894.3	156.4	4.15	1.42	1.93	YES	HROFDY
L0001151	0	0.21300E-07	554688.4	4487894.9	156.4	4.15	1.42	1.93	YES	HROFDY
L0001152	0	0.21300E-07	554691.4	4487895.5	156.4	4.15	1.42	1.93	YES	HROFDY
L0001153	0	0.21300E-07	554694.4	4487896.0	156.4	4.15	1.42	1.93	YES	HROFDY
L0001154	0	0.21300E-07	554697.4	4487896.6	156.4	4.15	1.42	1.93	YES	HROFDY
L0001155	0	0.21300E-07	554700.4	4487897.2	156.4	4.15	1.42	1.93	YES	HROFDY
L0001156	0	0.21300E-07	554703.4	4487897.8	156.4	4.15	1.42	1.93	YES	HROFDY
L0001157	0	0.21300E-07	554706.4	4487898.4	156.4	4.15	1.42	1.93	YES	HROFDY
L0001158	0	0.21300E-07	554709.3	4487899.0	156.4	4.15	1.42	1.93	YES	HROFDY
L0001159	0	0.21300E-07	554712.3	4487899.6	156.4	4.15	1.42	1.93	YES	HROFDY
L0001160	0	0.21300E-07	554715.3	4487900.1	156.4	4.15	1.42	1.93	YES	HROFDY
L0001161	0	0.21300E-07	554718.3	4487900.7	156.4	4.15	1.42	1.93	YES	HROFDY
L0001162	0	0.21300E-07	554721.3	4487901.3	156.4	4.15	1.42	1.93	YES	HROFDY
L0001163	0	0.21300E-07	554724.3	4487901.9	156.4	4.15	1.42	1.93	YES	HROFDY
L0001164	0	0.21300E-07	554727.3	4487902.5	156.4	4.15	1.42	1.93	YES	HROFDY
L0001165	0	0.21300E-07	554730.3	4487903.1	156.4	4.15	1.42	1.93	YES	HROFDY
L0001166	0	0.21300E-07	554733.3	4487903.7	156.4	4.15	1.42	1.93	YES	HROFDY
L0001167	0	0.21300E-07	554736.3	4487904.2	156.4	4.15	1.42	1.93	YES	HROFDY
L0001168	0	0.21300E-07	554739.3	4487904.8	156.5	4.15	1.42	1.93	YES	HROFDY
L0001169	0	0.21300E-07	554742.2	4487905.4	156.5	4.15	1.42	1.93	YES	HROFDY
L0001170	0	0.21300E-07	554745.2	4487906.0	156.5	4.15	1.42	1.93	YES	HROFDY
L0001171	0	0.21300E-07	554748.2	4487906.6	156.5	4.15	1.42	1.93	YES	HROFDY
L0001172	0	0.21300E-07	554751.2	4487907.2	156.5	4.15	1.42	1.93	YES	HROFDY
L0001173	0	0.21300E-07	554754.2	4487907.8	156.5	4.15	1.42	1.93	YES	HROFDY
L0001174	0	0.21300E-07	554757.2	4487908.3	156.5	4.15	1.42	1.93	YES	HROFDY
L0001175	0	0.21300E-07	554760.2	4487908.9	156.6	4.15	1.42	1.93	YES	HROFDY

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L0001176      0    0.21300E-07  554763.2 4487909.5   156.6    4.15    1.42    1.93    YES    HROFDY
L0001177      0    0.21300E-07  554766.2 4487910.1   156.6    4.15    1.42    1.93    YES    HROFDY
L0001178      0    0.21300E-07  554769.2 4487910.7   156.7    4.15    1.42    1.93    YES    HROFDY
L0001179      0    0.21300E-07  554772.2 4487911.3   156.7    4.15    1.42    1.93    YES    HROFDY
L0001180      0    0.21300E-07  554775.2 4487911.9   156.7    4.15    1.42    1.93    YES    HROFDY
L0001181      0    0.21300E-07  554778.1 4487912.4   156.8    4.15    1.42    1.93    YES    HROFDY
L0001182      0    0.21300E-07  554781.1 4487913.0   156.8    4.15    1.42    1.93    YES    HROFDY
L0001183      0    0.21300E-07  554784.1 4487913.6   156.8    4.15    1.42    1.93    YES    HROFDY
L0001184      0    0.21300E-07  554787.1 4487914.2   156.9    4.15    1.42    1.93    YES    HROFDY
L0001185      0    0.21300E-07  554790.1 4487914.8   156.9    4.15    1.42    1.93    YES    HROFDY
L0001186      0    0.21300E-07  554793.1 4487915.4   156.9    4.15    1.42    1.93    YES    HROFDY
L0001187      0    0.21300E-07  554796.1 4487916.0   157.0    4.15    1.42    1.93    YES    HROFDY
L0001188      0    0.21300E-07  554799.1 4487916.5   157.0    4.15    1.42    1.93    YES    HROFDY
L0001189      0    0.21300E-07  554802.1 4487917.1   157.0    4.15    1.42    1.93    YES    HROFDY
L0001190      0    0.21300E-07  554805.1 4487917.7   157.0    4.15    1.42    1.93    YES    HROFDY
L0001191      0    0.21300E-07  554808.1 4487918.3   157.1    4.15    1.42    1.93    YES    HROFDY
L0001192      0    0.21300E-07  554811.0 4487918.9   157.1    4.15    1.42    1.93    YES    HROFDY
L0001193      0    0.21300E-07  554814.0 4487919.5   157.1    4.15    1.42    1.93    YES    HROFDY
L0001194      0    0.21300E-07  554817.0 4487920.1   157.2    4.15    1.42    1.93    YES    HROFDY
L0001195      0    0.21300E-07  554820.0 4487920.6   157.2    4.15    1.42    1.93    YES    HROFDY
L0001196      0    0.21300E-07  554823.0 4487921.2   157.3    4.15    1.42    1.93    YES    HROFDY
L0001197      0    0.21300E-07  554826.0 4487921.8   157.3    4.15    1.42    1.93    YES    HROFDY
L0001198      0    0.21300E-07  554829.0 4487922.4   157.4    4.15    1.42    1.93    YES    HROFDY
L0001199      0    0.21300E-07  554832.0 4487923.0   157.4    4.15    1.42    1.93    YES    HROFDY
L0001200      0    0.21300E-07  554835.0 4487923.6   157.4    4.15    1.42    1.93    YES    HROFDY
L0001201      0    0.21300E-07  554838.0 4487924.2   157.5    4.15    1.42    1.93    YES    HROFDY
L0001202      0    0.21300E-07  554841.0 4487924.8   157.5    4.15    1.42    1.93    YES    HROFDY
L0001203      0    0.21300E-07  554843.9 4487925.3   157.6    4.15    1.42    1.93    YES    HROFDY
L0001204      0    0.21300E-07  554846.9 4487925.9   157.6    4.15    1.42    1.93    YES    HROFDY
L0001205      0    0.21300E-07  554849.9 4487926.5   157.7    4.15    1.42    1.93    YES    HROFDY
L0001206      0    0.21300E-07  554852.9 4487927.1   157.8    4.15    1.42    1.93    YES    HROFDY
L0001207      0    0.21300E-07  554855.9 4487927.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001208      0    0.21300E-07  554858.9 4487928.3   157.9    4.15    1.42    1.93    YES    HROFDY
L0001209      0    0.21300E-07  554861.9 4487928.8   158.0    4.15    1.42    1.93    YES    HROFDY
L0001210      0    0.21300E-07  554862.4 4487926.7   158.0    4.15    1.42    1.93    YES    HROFDY
L0001211      0    0.21300E-07  554862.1 4487923.7   157.9    4.15    1.42    1.93    YES    HROFDY
L0001212      0    0.21300E-07  554861.8 4487920.7   157.8    4.15    1.42    1.93    YES    HROFDY
L0001213      0    0.21300E-07  554861.5 4487917.6   157.8    4.15    1.42    1.93    YES    HROFDY
L0001214      0    0.21300E-07  554861.1 4487914.6   157.7    4.15    1.42    1.93    YES    HROFDY
L0001215      0    0.21300E-07  554860.8 4487911.6   157.6    4.15    1.42    1.93    YES    HROFDY
L0001216      0    0.21300E-07  554860.5 4487908.6   157.6    4.15    1.42    1.93    YES    HROFDY
L0001217      0    0.21300E-07  554860.2 4487905.5   157.5    4.15    1.42    1.93    YES    HROFDY
L0001218      0    0.21300E-07  554859.9 4487902.5   157.4    4.15    1.42    1.93    YES    HROFDY
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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA - Future Residents          ***         08/29/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                       ***         08:27:05
                                                                                                     PAGE  18
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN
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                              *** VOLUME SOURCE DATA ***


                  NUMBER EMISSION RATE              BASE    RELEASE    INIT.    INIT.   URBAN   EMISSION RATE
        SOURCE    PART.   (GRAMS/SEC)    X       Y   ELEV.   HEIGHT     SY       SZ     SOURCE   SCALAR VARY
          ID      CATS.              (METERS) (METERS)(METERS)(METERS) (METERS) (METERS)            BY
        - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


        L0001219    0    0.21300E-07  554859.6 4487899.5  157.4    4.15     1.42     1.93    YES    HROFDY
        L0001220    0    0.21300E-07  554859.2 4487896.4  157.3    4.15     1.42     1.93    YES    HROFDY
        L0001221    0    0.21300E-07  554858.9 4487893.4  157.2    4.15     1.42     1.93    YES    HROFDY
        L0001222    0    0.21300E-07  554858.6 4487890.4  157.1    4.15     1.42     1.93    YES    HROFDY
        L0001223    0    0.21300E-07  554858.3 4487887.3  157.0    4.15     1.42     1.93    YES    HROFDY
        L0001224    0    0.21300E-07  554858.0 4487884.3  157.0    4.15     1.42     1.93    YES    HROFDY
        L0001225    0    0.21300E-07  554857.6 4487881.3  156.9    4.15     1.42     1.93    YES    HROFDY
        L0001226    0    0.21300E-07  554857.3 4487878.2  156.8    4.15     1.42     1.93    YES    HROFDY
        L0001227    0    0.21300E-07  554857.0 4487875.2  156.7    4.15     1.42     1.93    YES    HROFDY
        L0001228    0    0.21300E-07  554856.7 4487872.2  156.6    4.15     1.42     1.93    YES    HROFDY
        L0001229    0    0.21300E-07  554856.4 4487869.1  156.6    4.15     1.42     1.93    YES    HROFDY
        L0001230    0    0.21300E-07  554856.0 4487866.1  156.5    4.15     1.42     1.93    YES    HROFDY
        L0001231    0    0.21300E-07  554855.7 4487863.1  156.4    4.15     1.42     1.93    YES    HROFDY
        L0001232    0    0.21300E-07  554855.4 4487860.1  156.4    4.15     1.42     1.93    YES    HROFDY
        L0001233    0    0.21300E-07  554855.1 4487857.0  156.3    4.15     1.42     1.93    YES    HROFDY
        L0001234    0    0.21300E-07  554854.8 4487854.0  156.2    4.15     1.42     1.93    YES    HROFDY
        L0001235    0    0.21300E-07  554854.4 4487851.0  156.2    4.15     1.42     1.93    YES    HROFDY
        L0001236    0    0.21300E-07  554854.1 4487847.9  156.1    4.15     1.42     1.93    YES    HROFDY
        L0001237    0    0.21300E-07  554853.8 4487844.9  156.0    4.15     1.42     1.93    YES    HROFDY
        L0001238    0    0.21300E-07  554853.5 4487841.9  156.0    4.15     1.42     1.93    YES    HROFDY
        L0001239    0    0.21300E-07  554853.2 4487838.8  155.9    4.15     1.42     1.93    YES    HROFDY
        L0001240    0    0.21300E-07  554852.9 4487835.8  155.8    4.15     1.42     1.93    YES    HROFDY
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Model Output
Future Residences

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                         *** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID                            SOURCE IDs
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 FUELHAUL    L0000881 through 1140     ,

 FUELIDLE    FUELIDLE     ,

 MAJORTRU    L0001141 through 1240     ,

 REFUEL      REFUEL       ,

 SPILL       SPILL        ,

 TRUCKHAU    L0000621 through 880      ,

 VENTING     VENTING      ,

 LOADDOCK    STCK1        , STCK2          , STCK3          , STCK4          ,

 MJRDOCKS    STCK5        , STCK6          ,

 ALL         All Sources (volume and point)
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents            ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                        ***        08:27:05
                                                                                                     PAGE  28
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                                  *** SOURCE IDs DEFINED AS URBAN SOURCES ***

  URBAN ID   URBAN POP                                SOURCE IDs
  --------   ---------                                ----------


  Redding     91808.   All Sources (volume and point)
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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA - Future Residents              ***        08/29/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                          ***        08:27:05
                                                                                                       PAGE  32

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                              *** DIRECTION SPECIFIC BUILDING DIMENSIONS ***


SOURCE ID: STCK1
  IFV     BH      BW      BL      XADJ     YADJ     IFV     BH      BW      BL      XADJ     YADJ
   1    10.6,  166.2,  139.4,   -46.4,    76.2,     2    10.6,  166.9,  153.8,   -66.0,    80.4,
   3    10.6,  165.0,  165.2,   -85.2,    80.8,     4    10.6,  160.6,  171.5,  -101.7,    77.6,
   5    10.6,  151.3,  172.7,  -115.2,    71.9,     6    10.6,  137.4,  168.5,  -125.2,    64.1,
   7    10.6,  119.4,  159.3,  -131.4,    54.4,     8    10.6,  103.8,  149.8,  -136.2,    42.8,
   9    10.6,  123.5,  160.5,  -150.0,    33.5,    10    10.6,  139.4,  166.2,  -159.4,    23.3,
  11    10.6,  153.8,  166.9,  -163.8,    10.9,    12    10.6,  165.2,  165.0,  -163.3,    -2.6,
  13    10.6,  171.5,  160.6,  -157.9,   -16.0,    14    10.6,  172.7,  151.3,  -147.6,   -28.9,
  15    10.6,  168.5,  137.4,  -132.8,   -40.9,    16    10.6,  159.3,  119.4,  -114.1,   -51.7,
  17    10.6,  149.8,  103.8,   -94.7,   -61.2,    18    10.6,  160.5,  123.5,   -95.3,   -69.8,
  19    10.6,  166.2,  139.4,   -93.0,   -76.2,    20    10.6,  166.9,  153.8,   -87.8,   -80.4,
  21    10.6,  165.0,  165.2,   -80.0,   -80.8,    22    10.6,  160.6,  171.5,   -69.8,   -77.6,
  23    10.6,  151.3,  172.7,   -57.4,   -71.9,    24    10.6,  137.4,  168.5,   -43.3,   -64.1,
  25    10.6,  119.4,  159.3,   -27.9,   -54.4,    26    10.6,  103.8,  149.8,   -13.7,   -42.8,
  27    10.6,  123.5,  160.5,   -10.4,   -33.5,    28    10.6,  139.4,  166.2,    -6.9,   -23.3,
  29    10.6,  153.8,  166.9,    -3.1,   -10.9,    30    10.6,  165.2,  165.0,    -1.7,     2.6,
  31    10.6,  171.5,  160.6,    -2.7,    16.0,    32    10.6,  172.7,  151.3,    -3.7,    28.9,
  33    10.6,  168.5,  137.4,    -4.6,    40.9,    34    10.6,  159.3,  119.4,    -5.3,    51.7,
  35    10.6,  149.8,  103.8,    -9.1,    61.2,    36    10.6,  160.5,  123.5,   -28.2,    69.8,


SOURCE ID: STCK2
  IFV     BH      BW      BL      XADJ     YADJ     IFV     BH      BW      BL      XADJ     YADJ
   1    10.6,  166.2,  139.4,   -47.5,    80.0,     2    10.6,  166.9,  153.8,   -67.8,    83.9,
   3    10.6,  165.0,  165.2,   -87.5,    84.0,     4    10.6,  160.6,  171.5,  -104.6,    80.3,
   5    10.6,  151.3,  172.7,  -118.5,    74.1,     6    10.6,  137.4,  168.5,  -128.8,    65.7,
   7    10.6,  119.4,  159.3,  -135.2,    55.3,     8    10.6,  103.8,  149.8,  -140.1,    43.0,
   9    10.6,  123.5,  160.5,  -154.0,    33.1,    10    10.6,  139.4,  166.2,  -163.2,    22.1,
  11    10.6,  153.8,  166.9,  -167.4,     9.2,    12    10.6,  165.2,  165.0,  -166.5,    -4.9,
  13    10.6,  171.5,  160.6,  -160.6,   -18.8,    14    10.6,  172.7,  151.3,  -149.8,   -32.2,
  15    10.6,  168.5,  137.4,  -134.4,   -44.6,    16    10.6,  159.3,  119.4,  -115.0,   -55.6,
  17    10.6,  149.8,  103.8,   -94.9,   -65.2,    18    10.6,  160.5,  123.5,   -94.8,   -73.7,
  19    10.6,  166.2,  139.4,   -91.8,   -80.0,    20    10.6,  166.9,  153.8,   -86.1,   -83.9,
  21    10.6,  165.0,  165.2,   -77.7,   -84.0,    22    10.6,  160.6,  171.5,   -66.9,   -80.3,
  23    10.6,  151.3,  172.7,   -54.1,   -74.1,    24    10.6,  137.4,  168.5,   -39.7,   -65.7,
  25    10.6,  119.4,  159.3,   -24.1,   -55.3,    26    10.6,  103.8,  149.8,    -9.7,   -43.0,
  27    10.6,  123.5,  160.5,    -6.5,   -33.1,    28    10.6,  139.4,  166.2,    -3.1,   -22.1,
  29    10.6,  153.8,  166.9,     0.5,    -9.2,    30    10.6,  165.2,  165.0,     1.5,     4.9,
  31    10.6,  171.5,  160.6,     0.0,    18.8,    32    10.6,  172.7,  151.3,    -1.5,    32.2,
  33    10.6,  168.5,  137.4,    -3.0,    44.6,    34    10.6,  159.3,  119.4,    -4.4,    55.6,
  35    10.6,  149.8,  103.8,    -8.9,    65.2,    36    10.6,  160.5,  123.5,   -28.6,    73.7,
```

Model Output
Future Residences

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SOURCE ID: STCK3
  IFV    BH      BW      BL      XADJ     YADJ     IFV    BH      BW      BL      XADJ     YADJ
   1   10.6,  166.2,  139.4,  -48.9,    83.6,     2    10.6,  166.9,  153.8,  -69.7,    87.2,
   3   10.6,  165.0,  165.2,  -90.0,    86.9,     4    10.6,  160.6,  171.5, -107.6,    82.7,
   5   10.6,  151.3,  172.7, -121.9,    76.0,     6    10.6,  137.4,  168.5, -132.5,    67.0,
   7   10.6,  119.4,  159.3, -139.0,    55.9,     8    10.6,  103.8,  149.8, -144.0,    43.0,
   9   10.6,  123.5,  160.5, -157.8,    32.4,    10    10.6,  139.4,  166.2, -166.8,    20.8,
  11   10.6,  153.8,  166.9, -170.7,     7.2,    12    10.6,  165.2,  165.0, -169.4,    -7.4,
  13   10.6,  171.5,  160.6, -163.0,   -21.8,    14    10.6,  172.7,  151.3, -151.7,   -35.5,
  15   10.6,  168.5,  137.4, -135.7,   -48.2,    16    10.6,  159.3,  119.4, -115.6,   -59.4,
  17   10.6,  149.8,  103.8,  -94.9,   -69.0,    18    10.6,  160.5,  123.5,  -94.1,   -77.5,
  19   10.6,  166.2,  139.4,  -90.5,   -83.6,    20    10.6,  166.9,  153.8,  -84.1,   -87.2,
  21   10.6,  165.0,  165.2,  -75.1,   -86.9,    22    10.6,  160.6,  171.5,  -63.9,   -82.7,
  23   10.6,  151.3,  172.7,  -50.8,   -76.0,    24    10.6,  137.4,  168.5,  -36.1,   -67.0,
  25   10.6,  119.4,  159.3,  -20.3,   -55.9,    26    10.6,  103.8,  149.8,   -5.9,   -43.0,
  27   10.6,  123.5,  160.5,   -2.7,   -32.4,    28    10.6,  139.4,  166.2,    0.5,   -20.8,
  29   10.6,  153.8,  166.9,    3.8,    -7.2,    30    10.6,  165.2,  165.0,    4.4,     7.4,
  31   10.6,  171.5,  160.6,    2.4,    21.8,    32    10.6,  172.7,  151.3,    0.4,    35.5,
  33   10.6,  168.5,  137.4,   -1.7,    48.2,    34    10.6,  159.3,  119.4,   -3.8,    59.4,
  35   10.6,  149.8,  103.8,   -8.9,    69.0,    36    10.6,  160.5,  123.5,  -29.4,    77.5,


SOURCE ID: STCK4
  IFV    BH      BW      BL      XADJ     YADJ     IFV    BH      BW      BL      XADJ     YADJ
   1   10.6,  166.2,  139.4,  -50.4,    87.1,     2     0.0,    0.0,    0.0,    0.0,     0.0,
   3    0.0,    0.0,    0.0,    0.0,     0.0,     4    10.6,  160.6,  171.5, -110.6,    85.0,
   5   10.6,  151.3,  172.7, -125.2,    77.7,     6    10.6,  137.4,  168.5, -136.1,    68.0,
   7   10.6,  119.4,  159.3, -142.8,    56.3,     8    10.6,  103.8,  149.8, -147.7,    42.7,
   9   10.6,  123.5,  160.5, -161.4,    31.5,    10    10.6,  139.4,  166.2, -170.2,    19.3,
  11   10.6,  153.8,  166.9, -173.8,     5.1,    12    10.6,  165.2,  165.0, -172.1,   -10.0,
  13   10.6,  171.5,  160.6, -165.2,   -24.8,    14    10.6,  172.7,  151.3, -153.3,   -38.9,
  15   10.6,  168.5,  137.4, -136.8,   -51.8,    16    10.6,  159.3,  119.4, -116.0,   -63.1,
  17   10.6,  149.8,  103.8,  -94.6,   -72.8,    18    10.6,  160.5,  123.5,  -93.2,   -81.2,
  19   10.6,  166.2,  139.4,  -89.0,   -87.1,    20     0.0,    0.0,    0.0,    0.0,     0.0,
  21    0.0,    0.0,    0.0,    0.0,     0.0,    22    10.6,  160.6,  171.5,  -60.9,   -85.0,
  23   10.6,  151.3,  172.7,  -47.4,   -77.7,    24    10.6,  137.4,  168.5,  -32.5,   -68.0,
  25   10.6,  119.4,  159.3,  -16.6,   -56.3,    26    10.6,  103.8,  149.8,   -2.1,   -42.7,
  27   10.6,  123.5,  160.5,    0.9,   -31.5,    28    10.6,  139.4,  166.2,    4.0,   -19.3,
  29   10.6,  153.8,  166.9,    6.9,    -5.1,    30    10.6,  165.2,  165.0,    7.1,    10.0,
  31   10.6,  171.5,  160.6,    4.6,    24.8,    32    10.6,  172.7,  151.3,    2.0,    38.9,
  33   10.6,  168.5,  137.4,   -0.7,    51.8,    34    10.6,  159.3,  119.4,   -3.3,    63.1,
  35   10.6,  149.8,  103.8,   -9.2,    72.8,    36    10.6,  160.5,  123.5,  -30.2,    81.2,
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents        ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                     ***        08:27:05
                                                                                                 PAGE  33

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                        *** DIRECTION SPECIFIC BUILDING DIMENSIONS ***


 SOURCE ID: VENTING
  IFV    BH      BW      BL      XADJ    YADJ    IFV    BH      BW      BL      XADJ    YADJ
   1    8.5,   69.0,  113.6,  -117.0,  -25.8,    2    8.5,   82.9,  114.4, -109.7,  -37.1,
   3    8.5,   94.2,  112.4,   -99.8,  -47.2,    4    0.0,    0.0,    0.0,    0.0,    0.0,
   5    0.0,    0.0,    0.0,    0.0,    0.0,     6    0.0,    0.0,    0.0,    0.0,    0.0,
   7    0.0,    0.0,    0.0,    0.0,    0.0,     8    0.0,    0.0,    0.0,    0.0,    0.0,
   9    0.0,    0.0,    0.0,    0.0,    0.0,    10    8.5,  113.6,   69.0,   -8.7,  -60.2,
  11    8.5,  114.4,   82.9,   -4.4,  -52.5,    12    8.5,  112.4,   94.2,    0.1,  -43.5,
  13    8.5,  107.0,  102.7,    4.5,  -33.2,    14    8.5,   98.3,  108.1,    8.9,  -21.9,
  15    8.5,   86.6,  110.2,   12.9,   -9.9,    16    8.5,   72.3,  108.9,   16.6,    2.4,
  17    0.0,    0.0,    0.0,    0.0,    0.0,    18    8.5,   59.3,  112.0,   11.5,   16.9,
  19    8.5,   69.0,  113.6,    3.4,   25.8,    20    8.5,   82.9,  114.4,   -4.7,   37.1,
  21    8.5,   94.2,  112.4,  -12.7,   47.2,    22    0.0,    0.0,    0.0,    0.0,    0.0,
  23    0.0,    0.0,    0.0,    0.0,    0.0,    24    0.0,    0.0,    0.0,    0.0,    0.0,
  25    0.0,    0.0,    0.0,    0.0,    0.0,    26    0.0,    0.0,    0.0,    0.0,    0.0,
  27    0.0,    0.0,    0.0,    0.0,    0.0,    28    8.5,  113.6,   69.0,  -60.3,   60.2,
  29    8.5,  114.4,   82.9,  -78.5,   52.5,    30    8.5,  112.4,   94.2,  -94.3,   43.5,
  31    8.5,  107.0,  102.7, -107.3,   33.2,    32    8.5,   98.3,  108.1, -117.0,   21.9,
  33    8.5,   86.6,  110.2, -123.1,    9.9,    34    8.5,   72.3,  108.9, -125.5,   -2.4,
  35    8.5,   59.2,  107.0, -126.1,  -13.2,    36    8.5,   59.3,  112.0, -123.5,  -16.9,


 SOURCE ID: FUELIDLE
  IFV    BH      BW      BL      XADJ    YADJ    IFV    BH      BW      BL      XADJ    YADJ
   1    8.5,   69.0,  113.6,  -119.2,  -20.9,    2    8.5,   82.9,  114.4, -112.8,  -32.6,
   3    8.5,   94.2,  112.4,  -103.5,  -43.3,    4    8.5,  102.7,  107.0,  -91.1,  -52.7,
   5    0.0,    0.0,    0.0,    0.0,    0.0,     6    0.0,    0.0,    0.0,    0.0,    0.0,
   7    0.0,    0.0,    0.0,    0.0,    0.0,     8    0.0,    0.0,    0.0,    0.0,    0.0,
   9    0.0,    0.0,    0.0,    0.0,    0.0,    10    0.0,    0.0,    0.0,    0.0,    0.0,
  11    8.5,  114.4,   82.9,   -8.9,  -55.5,    12    8.5,  112.4,   94.2,   -3.8,  -47.3,
  13    8.5,  107.0,  102.7,    1.4,  -37.6,    14    8.5,   98.3,  108.1,    6.5,  -26.8,
  15    8.5,   86.6,  110.2,   11.4,  -15.1,    16    8.5,   72.3,  108.9,   16.0,   -3.0,
  17    0.0,    0.0,    0.0,    0.0,    0.0,    18    8.5,   59.3,  112.0,   12.8,   11.6,
  19    8.5,   69.0,  113.6,    5.6,   20.9,    20    8.5,   82.9,  114.4,   -1.7,   32.6,
  21    8.5,   94.2,  112.4,   -8.9,   43.3,    22    8.5,  102.7,  107.0,  -15.9,   52.7,
  23    0.0,    0.0,    0.0,    0.0,    0.0,    24    0.0,    0.0,    0.0,    0.0,    0.0,
  25    0.0,    0.0,    0.0,    0.0,    0.0,    26    0.0,    0.0,    0.0,    0.0,    0.0,
  27    0.0,    0.0,    0.0,    0.0,    0.0,    28    0.0,    0.0,    0.0,    0.0,    0.0,
  29    8.5,  114.4,   82.9,  -74.0,   55.5,    30    8.5,  112.4,   94.2,  -90.4,   47.3,
  31    8.5,  107.0,  102.7, -104.1,   37.6,    32    8.5,   98.3,  108.1, -114.6,   26.8,
  33    8.5,   86.6,  110.2, -121.6,   15.1,    34    8.5,   72.3,  108.9, -124.9,    3.0,
  35    8.5,   59.2,  107.0, -126.5,   -7.8,    36    8.5,   59.3,  112.0, -124.8,  -11.6,
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SOURCE ID: STCK5
  IFV    BH      BW      BL     XADJ     YADJ     IFV    BH      BW      BL     XADJ     YADJ
    1   8.5,   69.0,  113.6,  -92.7,   22.7,      2   8.5,   82.9,  114.4,  -94.2,   15.0,
    3   8.5,   94.2,  112.4,  -93.5,    6.7,      4   8.5,  102.7,  107.0,  -89.9,   -1.7,
    5   8.5,  108.1,   98.3,  -83.6,  -10.1,      6   8.5,  110.2,   86.6,  -74.8,  -18.1,
    7   8.5,  108.9,   72.3,  -63.6,  -25.7,      8   8.5,  107.0,   59.2,  -53.7,  -33.1,
    9   8.5,  112.0,   59.3,  -56.3,  -35.0,     10   8.5,  113.6,   69.0,  -57.2,  -35.9,
   11   8.5,  114.4,   82.9,  -56.4,  -37.0,     12   8.5,  112.4,   94.2,  -53.9,  -37.2,
   13   8.5,  107.0,  102.7,  -49.7,  -36.4,     14   8.5,   98.3,  108.1,  -44.0,  -34.4,
   15   8.5,   86.6,  110.2,  -37.0,  -31.4,     16   8.5,   72.3,  108.9,  -28.8,  -27.5,
   17   8.5,   59.2,  107.0,  -20.4,  -24.1,     18   8.5,   59.3,  112.0,  -21.0,  -26.7,
   19   8.5,   69.0,  113.6,  -20.9,  -22.7,     20   8.5,   82.9,  114.4,  -20.3,  -15.0,
   21   8.5,   94.2,  112.4,  -19.0,   -6.7,     22   8.5,  102.7,  107.0,  -17.1,    1.7,
   23   8.5,  108.1,   98.3,  -14.7,   10.1,     24   8.5,  110.2,   86.6,  -11.9,   18.1,
   25   8.5,  108.9,   72.3,   -8.7,   25.7,     26   8.5,  107.0,   59.2,   -5.5,   33.1,
   27   8.5,  112.0,   59.3,   -2.9,   35.0,     28   8.5,  113.6,   69.0,  -11.8,   35.9,
   29   8.5,  114.4,   82.9,  -26.5,   37.0,     30   8.5,  112.4,   94.2,  -40.4,   37.2,
   31   8.5,  107.0,  102.7,  -53.1,   36.4,     32   8.5,   98.3,  108.1,  -64.1,   34.4,
   33   8.5,   86.6,  110.2,  -73.2,   31.4,     34   8.5,   72.3,  108.9,  -80.1,   27.5,
   35   8.5,   59.2,  107.0,  -86.6,   24.1,     36   8.5,   59.3,  112.0,  -91.0,   26.7,


SOURCE ID: STCK6
  IFV    BH      BW      BL     XADJ     YADJ     IFV    BH      BW      BL     XADJ     YADJ
    1   8.5,   69.0,  113.6,  -47.1,   28.4,      2   8.5,   82.9,  114.4,  -50.3,   28.5,
    3   8.5,   94.2,  112.4,  -52.6,   27.7,      4   8.5,  102.7,  107.0,  -53.3,   26.0,
    5   8.5,  108.1,   98.3,  -52.4,   23.6,      6   8.5,  110.2,   86.6,  -49.8,   20.4,
    7   8.5,  108.9,   72.3,  -45.8,   16.6,      8   8.5,  107.0,   59.2,  -43.5,   11.6,
    9   8.5,  112.0,   59.3,  -54.0,   10.8,     10   8.5,  113.6,   69.0,  -62.9,    9.7,
   11   8.5,  114.4,   82.9,  -69.9,    6.9,     12   8.5,  112.4,   94.2,  -74.8,    3.6,
   13   8.5,  107.0,  102.7,  -77.4,    0.2,     14   8.5,   98.3,  108.1,  -77.6,   -3.2,
   15   8.5,   86.6,  110.2,  -75.5,   -6.5,     16   8.5,   72.3,  108.9,  -71.1,   -9.6,
   17   8.5,   59.2,  107.0,  -65.1,  -13.9,     18   8.5,   59.3,  112.0,  -66.8,  -24.4,
   19   8.5,   69.0,  113.6,  -66.5,  -28.4,     20   8.5,   82.9,  114.4,  -64.1,  -28.5,
   21   8.5,   94.2,  112.4,  -59.8,  -27.7,     22   8.5,  102.7,  107.0,  -53.7,  -26.0,
   23   8.5,  108.1,   98.3,  -46.0,  -23.6,     24   8.5,  110.2,   86.6,  -36.8,  -20.4,
   25   8.5,  108.9,   72.3,  -26.5,  -16.6,     26   8.5,  107.0,   59.2,  -15.7,  -11.6,
   27   8.5,  112.0,   59.3,   -5.2,  -10.8,     28   8.5,  113.6,   69.0,   -6.1,   -9.7,
   29   8.5,  114.4,   82.9,  -13.0,   -6.9,     30   8.5,  112.4,   94.2,  -19.4,   -3.6,
   31   8.5,  107.0,  102.7,  -25.4,   -0.2,     32   8.5,   98.3,  108.1,  -30.5,    3.2,
   33   8.5,   86.6,  110.2,  -34.7,    6.5,     34   8.5,   72.3,  108.9,  -37.8,    9.6,
   35   8.5,   59.2,  107.0,  -41.9,   13.9,     36   8.5,   59.3,  112.0,  -45.2,   24.4,
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents            ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                        ***        08:27:05
                                                                                                     PAGE  34
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

               * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

      HOUR    SCALAR     HOUR     SCALAR     HOUR     SCALAR     HOUR     SCALAR     HOUR     SCALAR     HOUR     SCALAR
  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SOURCE ID = L0000621 through L0000880     ; SOURCE TYPE = VOLUME   :
      1   .00000E+00      2   .00000E+00      3   .10000E+01      4   .10000E+01      5   .10000E+01      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .00000E+00     12   .00000E+00
     13   .00000E+00     14   .00000E+00     15   .00000E+00     16   .00000E+00     17   .00000E+00     18   .00000E+00
     19   .00000E+00     20   .00000E+00     21   .00000E+00     22   .00000E+00     23   .00000E+00     24   .00000E+00


SOURCE ID = L0000881 through L0001140     ; SOURCE TYPE = VOLUME   :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00


SOURCE ID = STCK1 through STCK4         ; SOURCE TYPE = POINT   :
      1   .00000E+00      2   .00000E+00      3   .10000E+01      4   .10000E+01      5   .10000E+01      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .00000E+00     12   .00000E+00
     13   .00000E+00     14   .00000E+00     15   .00000E+00     16   .00000E+00     17   .00000E+00     18   .00000E+00
     19   .00000E+00     20   .00000E+00     21   .00000E+00     22   .00000E+00     23   .00000E+00     24   .00000E+00


SOURCE ID = REFUEL       ; SOURCE TYPE = VOLUME   :
      1   .00000E+00      2   .00000E+00      3   .00000E+00      4   .00000E+00      5   .00000E+00      6   .10000E+01
      7   .10000E+01      8   .10000E+01      9   .10000E+01     10   .10000E+01     11   .10000E+01     12   .10000E+01
     13   .10000E+01     14   .10000E+01     15   .10000E+01     16   .10000E+01     17   .10000E+01     18   .10000E+01
     19   .10000E+01     20   .10000E+01     21   .10000E+01     22   .10000E+01     23   .00000E+00     24   .00000E+00
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Model Output
Future Residences

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents            ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                         ***        08:27:05
                                                                                                     PAGE 139
*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN

          * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

    HOUR    SCALAR     HOUR    SCALAR     HOUR    SCALAR     HOUR    SCALAR     HOUR    SCALAR     HOUR    SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


SOURCE ID = SPILL        ; SOURCE TYPE = VOLUME   :
     1   .00000E+00     2   .00000E+00     3   .00000E+00     4   .00000E+00     5   .00000E+00     6   .10000E+01
     7   .10000E+01     8   .10000E+01     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    17   .10000E+01    18   .10000E+01
    19   .10000E+01    20   .10000E+01    21   .10000E+01    22   .10000E+01    23   .00000E+00    24   .00000E+00


SOURCE ID = VENTING      ; SOURCE TYPE = POINT    :
     1   .00000E+00     2   .00000E+00     3   .00000E+00     4   .00000E+00     5   .00000E+00     6   .10000E+01
     7   .10000E+01     8   .10000E+01     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    17   .10000E+01    18   .10000E+01
    19   .10000E+01    20   .10000E+01    21   .10000E+01    22   .10000E+01    23   .00000E+00    24   .00000E+00


SOURCE ID = FUELIDLE     ; SOURCE TYPE = POINT    :
     1   .00000E+00     2   .00000E+00     3   .00000E+00     4   .00000E+00     5   .00000E+00     6   .10000E+01
     7   .10000E+01     8   .10000E+01     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    17   .10000E+01    18   .10000E+01
    19   .10000E+01    20   .10000E+01    21   .10000E+01    22   .10000E+01    23   .00000E+00    24   .00000E+00


SOURCE ID = L0001141 through L0001240    ; SOURCE TYPE = VOLUME   :
     1   .00000E+00     2   .00000E+00     3   .00000E+00     4   .00000E+00     5   .00000E+00     6   .00000E+00
     7   .10000E+01     8   .10000E+01     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    17   .10000E+01    18   .10000E+01
    19   .10000E+01    20   .10000E+01    21   .10000E+01    22   .10000E+01    23   .10000E+01    24   .10000E+01


SOURCE ID = STCK5 and STCK6       ; SOURCE TYPE = POINT    :
     1   .00000E+00     2   .00000E+00     3   .00000E+00     4   .00000E+00     5   .00000E+00     6   .00000E+00
     7   .10000E+01     8   .10000E+01     9   .10000E+01    10   .10000E+01    11   .10000E+01    12   .10000E+01
    13   .10000E+01    14   .10000E+01    15   .10000E+01    16   .10000E+01    17   .10000E+01    18   .10000E+01
    19   .10000E+01    20   .10000E+01    21   .10000E+01    22   .10000E+01    23   .10000E+01    24   .10000E+01
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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA - Future Residents              ***        08/29/17
*** AERMET - VERSION  14134 ***    *** Redding, CA                                          ***        08:27:05
                                                                                                       PAGE 166
*** MODELOPTs:     RegDFAULT  CONC  ELEV  URBAN


                           *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                       (1=YES; 0=NO)


    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
    1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

        NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.



                        *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                        (METERS/SEC)

                          1.54,   3.09,   5.14,   8.23,  10.80,
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents                    ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                                ***        08:27:05
                                                                                                            PAGE 167

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                             *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

   Surface file:   C:\!MetData\Shasta County AQMD\725920\725920.SFC                           Met Version:  14134
   Profile file:   C:\!MetData\Shasta County AQMD\725920\725920.PFL
   Surface format: FREE
   Profile format: FREE
   Surface station no.:   24257                    Upper air station no.:    24225
                    Name: REDDING/AAF                              Name: MEDFORD/JACKSON_COUNTY_ARPT
                    Year:  2009                                    Year:   2009

   First 24 hours of scalar data
   YR MO DY JDY HR      H0      U*      W*    DT/DZ ZICNV ZIMCH   M-O LEN     Z0  BOWEN ALBEDO  REF WS    WD     HT  REF TA    HT
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   09 01 01   1 01    -2.6  0.057 -9.000 -9.000 -999.   33.      6.4   0.02   0.87   1.00    1.76  151.   10.0  276.4    2.0
   09 01 01   1 02    -2.5  0.057 -9.000 -9.000 -999.   32.      6.4   0.02   0.87   1.00    1.76  188.   10.0  277.0    2.0
   09 01 01   1 03  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  277.0    2.0
   09 01 01   1 04  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  277.0    2.0
   09 01 01   1 05  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  277.0    2.0
   09 01 01   1 06  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  276.4    2.0
   09 01 01   1 07   -10.6  0.186 -9.000 -9.000 -999.  192.     54.1   0.16   0.87   1.00    2.36   35.   10.0  276.4    2.0
   09 01 01   1 08  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  277.0    2.0
   09 01 01   1 09  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   0.45    0.00    0.   10.0  277.0    2.0
   09 01 01   1 10     3.0  0.178  0.178  0.010   67.  179.   -164.9   0.16   0.87   0.30    1.76    1.   10.0  277.5    2.0
   09 01 01   1 11    11.1 -9.000 -9.000 -9.000  144. -999. -99999.0   0.05   0.87   0.25    0.00    0.   10.0  277.5    2.0
   09 01 01   1 12    15.9 -9.000 -9.000 -9.000  210. -999. -99999.0   0.05   0.87   0.23    0.00    0.   10.0  278.1    2.0
   09 01 01   1 13    16.7 -9.000 -9.000 -9.000  262. -999. -99999.0   0.05   0.87   0.22    0.00    0.   10.0  278.1    2.0
   09 01 01   1 14    13.7  0.170  0.486  0.012  298.  168.    -31.8   0.02   0.87   0.24    2.36  139.   10.0  278.8    2.0
   09 01 01   1 15     7.0  0.163  0.396  0.012  315.  158.    -55.2   0.02   0.87   0.27    2.36  192.   10.0  278.8    2.0
   09 01 01   1 16    -1.5  0.100 -9.000 -9.000 -999.   77.     59.6   0.02   0.87   0.37    1.76  154.   10.0  279.2    2.0
   09 01 01   1 17  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   0.63    0.00    0.   10.0  279.2    2.0
   09 01 01   1 18  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  278.8    2.0
   09 01 01   1 19  -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0   0.05   0.87   1.00    0.00    0.   10.0  278.8    2.0
   09 01 01   1 20    -8.5  0.151 -9.000 -9.000 -999.  141.     36.2   0.02   0.87   1.00    2.86  167.   10.0  278.8    2.0
   09 01 01   1 21   -16.7  0.295 -9.000 -9.000 -999.  385.    137.1   0.02   0.87   1.00    4.86  180.   10.0  277.5    2.0
   09 01 01   1 22   -16.9  0.298 -9.000 -9.000 -999.  390.    139.4   0.02   0.87   1.00    4.86  172.   10.0  277.5    2.0
   09 01 01   1 23   -14.8  0.261 -9.000 -9.000 -999.  320.    107.0   0.02   0.87   1.00    4.36  190.   10.0  277.5    2.0
   09 01 01   1 24   -21.1  0.373 -9.000 -9.000 -999.  546.    218.3   0.02   0.87   1.00    5.96  170.   10.0  277.5    2.0


   First hour of profile data
   YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
   09 01 01 01   10.0 1 151.    1.76   276.5   99.0  -99.00  -99.00


   F indicates top of profile (=1) or below (=0)
```

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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents              ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                          ***        08:27:05
                                                                                                      PAGE 308
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                           *** THE SUMMARY OF MAXIMUM PERIOD ( 43872 HRS) RESULTS ***


                        ** CONC OF OTHER    IN MICROGRAMS/M**3                              **


                                                                                          NETWORK
 GROUP ID                      AVERAGE CONC               RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


 FUELHAUL  1ST HIGHEST VALUE IS        0.00008 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
           2ND HIGHEST VALUE IS        0.00008 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
           3RD HIGHEST VALUE IS        0.00008 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
           4TH HIGHEST VALUE IS        0.00007 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           5TH HIGHEST VALUE IS        0.00007 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
           6TH HIGHEST VALUE IS        0.00007 AT (  554719.14,  4488154.95,   158.08,   158.08,    0.00)  DC
           7TH HIGHEST VALUE IS        0.00007 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           8TH HIGHEST VALUE IS        0.00007 AT (  554699.14,  4488154.95,   158.08,   158.08,    0.00)  DC
           9TH HIGHEST VALUE IS        0.00007 AT (  554687.63,  4488152.83,   158.05,   158.05,    0.00)  DC
          10TH HIGHEST VALUE IS        0.00007 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC

 FUELIDLE  1ST HIGHEST VALUE IS        0.00001 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
           2ND HIGHEST VALUE IS        0.00001 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
           3RD HIGHEST VALUE IS        0.00001 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           4TH HIGHEST VALUE IS        0.00001 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
           5TH HIGHEST VALUE IS        0.00001 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           6TH HIGHEST VALUE IS        0.00001 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
           7TH HIGHEST VALUE IS        0.00000 AT (  554739.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           8TH HIGHEST VALUE IS        0.00000 AT (  554779.14,  4488194.95,   158.19,   158.19,    0.00)  DC
           9TH HIGHEST VALUE IS        0.00000 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC
          10TH HIGHEST VALUE IS        0.00000 AT (  554759.14,  4488194.95,   158.19,   158.19,    0.00)  DC

 MAJORTRU  1ST HIGHEST VALUE IS        0.00002 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
           2ND HIGHEST VALUE IS        0.00002 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
           3RD HIGHEST VALUE IS        0.00002 AT (  554719.14,  4488154.95,   158.08,   158.08,    0.00)  DC
           4TH HIGHEST VALUE IS        0.00002 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
           5TH HIGHEST VALUE IS        0.00002 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           6TH HIGHEST VALUE IS        0.00002 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
           7TH HIGHEST VALUE IS        0.00002 AT (  554699.14,  4488154.95,   158.08,   158.08,    0.00)  DC
           8TH HIGHEST VALUE IS        0.00002 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
           9TH HIGHEST VALUE IS        0.00002 AT (  554739.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          10TH HIGHEST VALUE IS        0.00002 AT (  554687.63,  4488152.83,   158.05,   158.05,    0.00)  DC

 REFUEL    1ST HIGHEST VALUE IS        0.00296 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
           2ND HIGHEST VALUE IS        0.00283 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
           3RD HIGHEST VALUE IS        0.00280 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
           4TH HIGHEST VALUE IS        0.00278 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
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Model Output
Future Residences

```
          5TH HIGHEST VALUE IS     0.00271 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC
          6TH HIGHEST VALUE IS     0.00257 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          7TH HIGHEST VALUE IS     0.00253 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
          8TH HIGHEST VALUE IS     0.00241 AT (  554799.14,  4488194.95,   158.34,   158.34,    0.00)  DC
          9TH HIGHEST VALUE IS     0.00239 AT (  554779.14,  4488194.95,   158.19,   158.19,    0.00)  DC
         10TH HIGHEST VALUE IS     0.00230 AT (  554739.14,  4488174.95,   158.19,   158.19,    0.00)  DC

SPILL     1ST HIGHEST VALUE IS     0.01802 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
          2ND HIGHEST VALUE IS     0.01722 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
          3RD HIGHEST VALUE IS     0.01693 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
          4TH HIGHEST VALUE IS     0.01692 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          5TH HIGHEST VALUE IS     0.01637 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC
          6TH HIGHEST VALUE IS     0.01556 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          7TH HIGHEST VALUE IS     0.01516 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
          8TH HIGHEST VALUE IS     0.01465 AT (  554799.14,  4488194.95,   158.34,   158.34,    0.00)  DC
          9TH HIGHEST VALUE IS     0.01455 AT (  554779.14,  4488194.95,   158.19,   158.19,    0.00)  DC
         10TH HIGHEST VALUE IS     0.01377 AT (  554739.14,  4488174.95,   158.19,   158.19,    0.00)  DC

TRUCKHAU  1ST HIGHEST VALUE IS     0.00019 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
          2ND HIGHEST VALUE IS     0.00019 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
          3RD HIGHEST VALUE IS     0.00018 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
          4TH HIGHEST VALUE IS     0.00018 AT (  554719.14,  4488154.95,   158.08,   158.08,    0.00)  DC
          5TH HIGHEST VALUE IS     0.00018 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
          6TH HIGHEST VALUE IS     0.00017 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          7TH HIGHEST VALUE IS     0.00017 AT (  554699.14,  4488154.95,   158.08,   158.08,    0.00)  DC
          8TH HIGHEST VALUE IS     0.00017 AT (  554687.63,  4488152.83,   158.05,   158.05,    0.00)  DC
          9TH HIGHEST VALUE IS     0.00016 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
         10TH HIGHEST VALUE IS     0.00016 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC

VENTING   1ST HIGHEST VALUE IS     0.00414 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
          2ND HIGHEST VALUE IS     0.00406 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
          3RD HIGHEST VALUE IS     0.00394 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
          4TH HIGHEST VALUE IS     0.00389 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
          5TH HIGHEST VALUE IS     0.00388 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          6TH HIGHEST VALUE IS     0.00375 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          7TH HIGHEST VALUE IS     0.00364 AT (  554739.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          8TH HIGHEST VALUE IS     0.00363 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC
          9TH HIGHEST VALUE IS     0.00353 AT (  554719.14,  4488154.95,   158.08,   158.08,    0.00)  DC
         10TH HIGHEST VALUE IS     0.00337 AT (  554779.14,  4488194.95,   158.19,   158.19,    0.00)  DC

LOADDOCK  1ST HIGHEST VALUE IS     0.00013 AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC
          2ND HIGHEST VALUE IS     0.00013 AT (  554779.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          3RD HIGHEST VALUE IS     0.00012 AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC
          4TH HIGHEST VALUE IS     0.00011 AT (  554759.14,  4488174.95,   158.19,   158.19,    0.00)  DC
          5TH HIGHEST VALUE IS     0.00010 AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC
          6TH HIGHEST VALUE IS     0.00010 AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC
          7TH HIGHEST VALUE IS     0.00009 AT (  554759.14,  4488194.95,   158.19,   158.19,    0.00)  DC
          8TH HIGHEST VALUE IS     0.00009 AT (  554779.14,  4488194.95,   158.19,   158.19,    0.00)  DC
          9TH HIGHEST VALUE IS     0.00008 AT (  554739.14,  4488194.95,   158.19,   158.19,    0.00)  DC
         10TH HIGHEST VALUE IS     0.00008 AT (  554740.20,  4488160.26,   158.13,   158.13,    0.00)  DC
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*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents          ***        08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***        08:27:05
                                                                                                   PAGE 310
 *** MODELOPTs:   RegDFAULT  CONC  ELEV  URBAN

                          *** THE SUMMARY OF MAXIMUM PERIOD ( 43872 HRS) RESULTS ***


                      ** CONC OF OTHER    IN MICROGRAMS/M**3                           **


                                                                                          NETWORK
GROUP ID                  AVERAGE CONC             RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

MJRDOCKS  1ST HIGHEST VALUE IS        0.00002 AT (  554787.63,  4488169.28,    158.23,    158.23,    0.00)  DC
          2ND HIGHEST VALUE IS        0.00002 AT (  554799.14,  4488174.95,    158.34,    158.34,    0.00)  DC
          3RD HIGHEST VALUE IS        0.00002 AT (  554819.14,  4488174.95,    158.50,    158.50,    0.00)  DC
          4TH HIGHEST VALUE IS        0.00002 AT (  554779.14,  4488174.95,    158.19,    158.19,    0.00)  DC
          5TH HIGHEST VALUE IS        0.00002 AT (  554758.61,  4488162.38,    158.16,    158.16,    0.00)  DC
          6TH HIGHEST VALUE IS        0.00002 AT (  554759.14,  4488174.95,    158.19,    158.19,    0.00)  DC
          7TH HIGHEST VALUE IS        0.00002 AT (  554799.14,  4488194.95,    158.34,    158.34,    0.00)  DC
          8TH HIGHEST VALUE IS        0.00002 AT (  554779.14,  4488194.95,    158.19,    158.19,    0.00)  DC
          9TH HIGHEST VALUE IS        0.00002 AT (  554740.20,  4488160.26,    158.13,    158.13,    0.00)  DC
         10TH HIGHEST VALUE IS        0.00002 AT (  554759.14,  4488194.95,    158.19,    158.19,    0.00)  DC

ALL       1ST HIGHEST VALUE IS        0.02550 AT (  554787.63,  4488169.28,    158.23,    158.23,    0.00)  DC
          2ND HIGHEST VALUE IS        0.02442 AT (  554799.14,  4488174.95,    158.34,    158.34,    0.00)  DC
          3RD HIGHEST VALUE IS        0.02429 AT (  554758.61,  4488162.38,    158.16,    158.16,    0.00)  DC
          4TH HIGHEST VALUE IS        0.02400 AT (  554779.14,  4488174.95,    158.19,    158.19,    0.00)  DC
          5TH HIGHEST VALUE IS        0.02309 AT (  554819.14,  4488174.95,    158.50,    158.50,    0.00)  DC
          6TH HIGHEST VALUE IS        0.02227 AT (  554759.14,  4488174.95,    158.19,    158.19,    0.00)  DC
          7TH HIGHEST VALUE IS        0.02196 AT (  554740.20,  4488160.26,    158.13,    158.13,    0.00)  DC
          8TH HIGHEST VALUE IS        0.02072 AT (  554799.14,  4488194.95,    158.34,    158.34,    0.00)  DC
          9TH HIGHEST VALUE IS        0.02063 AT (  554779.14,  4488194.95,    158.19,    158.19,    0.00)  DC
         10TH HIGHEST VALUE IS        0.02003 AT (  554739.14,  4488174.95,    158.19,    158.19,    0.00)  DC


  *** RECEPTOR TYPES:  GC = GRIDCART
                       GP = GRIDPOLR
                       DC = DISCCART
                       DP = DISCPOLR
```
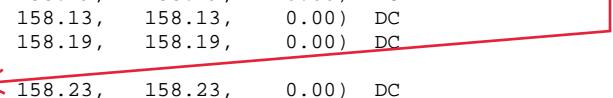
MER Location

Model Output
Future Residences

```
 *** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents        ***        08/29/17
 *** AERMET - VERSION  14134 ***   *** Redding, CA                                     ***        08:27:05
                                                                                                  PAGE 311
  *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


                               *** THE SUMMARY OF HIGHEST  1-HR RESULTS ***


                         ** CONC OF OTHER    IN MICROGRAMS/M**3                         **

                                        DATE                                                      NETWORK
 GROUP ID                  AVERAGE CONC  (YYMMDDHH)         RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)  OF TYPE  GRID-ID
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 FUELHAUL HIGH   1ST HIGH VALUE IS      0.00116  ON 13120518: AT (  554799.14,  4488174.95,   158.34,   158.34,    0.00)  DC

 FUELIDLE HIGH   1ST HIGH VALUE IS      0.00021  ON 09010718: AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC

 MAJORTRU HIGH   1ST HIGH VALUE IS      0.00058  ON 09012317: AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC

 REFUEL   HIGH   1ST HIGH VALUE IS      0.18060  ON 09012317: AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC

 SPILL    HIGH   1ST HIGH VALUE IS      1.27673  ON 09012317: AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC

 TRUCKHAU HIGH   1ST HIGH VALUE IS      0.00816  ON 12021303: AT (  554819.14,  4488174.95,   158.50,   158.50,    0.00)  DC

 VENTING  HIGH   1ST HIGH VALUE IS      0.36485  ON 10110718: AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC

 LOADDOCK HIGH   1ST HIGH VALUE IS      0.01249  ON 11050705: AT (  554739.14,  4488194.95,   158.19,   158.19,    0.00)  DC

 MJRDOCKS HIGH   1ST HIGH VALUE IS      0.00072  ON 09100120: AT (  554758.61,  4488162.38,   158.16,   158.16,    0.00)  DC

 ALL      HIGH   1ST HIGH VALUE IS      1.65052  ON 13021619: AT (  554787.63,  4488169.28,   158.23,   158.23,    0.00)  DC


  *** RECEPTOR TYPES:  GC = GRIDCART
                       GP = GRIDPOLR
                       DC = DISCCART
                       DP = DISCPOLR
```

```
*** AERMOD - VERSION 16216r ***   *** Costco Wholesale HRA - Future Residents          ***      08/29/17
*** AERMET - VERSION  14134 ***   *** Redding, CA                                       ***      08:27:05
                                                                                                 PAGE 312

*** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN


*** Message Summary : AERMOD Model Execution ***


 --------- Summary of Total Messages --------


A Total of            0 Fatal Error Message(s)
A Total of            7 Warning Message(s)
A Total of        16697 Informational Message(s)


A Total of        43872 Hours Were Processed


A Total of        14924 Calm Hours Identified


A Total of         1773 Missing Hours Identified (  4.04 Percent)



    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***



    ********   WARNING MESSAGES   ********
SO W320    1280        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1281        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1282        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1283        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1287        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1390        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS
SO W320    1391        PPARM: Input Parameter May Be Out-of-Range for Parameter          VS


    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

Appendix D. Risk Calculations

Appendix

PlaceWorks

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Table D1 - HARP2 Results for Cancer Risk and Chronic Hazards
Existing Residential Receptors

No.	Source	Contaminant	Carcinogenic Risks	Chronic Non-Cancer Risks - Toxicological Endpoints*											
			Residential 30-year [1]	CV	CNS	IMMUN	KIDNEY	GILV	REPRO	RESP	SKIN	EYE	BONE	ENDO	BLOOD
			per million												
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1	Costco Trucks (running)	Diesel Particulate	3.4E-02							1.00E-05					
	Costco Trucks (idling)	Diesel Particulate	2.7E-02							8.00E-06					
2	Costco Gasoline	Benzene	7.3E-02												3.90E-04
	(spillage)	Benzene	4.3E-01												2.33E-03
	(venting)	Benzene	1.0E-01												5.57E-04
	Fuel Trucks (running)	Diesel Particulate	1.4E-02							4.00E-06					
	Fuel Trucks (idling)	Diesel Particulate	3.4E-03							1.00E-06					
3	Major Buildings	Diesel Particulate	1.4E-02							4.00E-06					
	Major Buildings (idling)	Diesel Particulate	6.8E-03							2.00E-06					
	Total - All Sources		**0.71**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**3.27E-03**

Note: Health risks calculated using HARP2, Risk Assessment Standalone Tool, version 17023 (CARB, 2017).
Maximum Exposed Receptor (MER) location UTM 554911.90, 4488225.75.

Total Cancer Risk	**0.71**	per million	
Maximum Chronic Hazard Index	**0.003**	**Blood**	

* Key to Toxicological Endpoints
CV — Cardiovascular System
CNS — Central Nervous System
IMMUN — Immune System
KIDN — Kidneys
GILV — Gastrointestinal Tract and Liver/Alimentary Tract
RESP — Respiratory System
REPRO — Reproductive System
SKIN — Skin irritation and/or other effects
EYE — Eye irritation and/or other effects
BONE — Bones and Teeth
ENDO — Endocrine System
BLOOD — Hematological System

	3rd Trimester	0 < 2 years	2 < 16 years	16 < 30 years	age bin
Dose Exposure Factors:	350	350	350	350	exposure frequency (days/year)
	361	1090	745	335	inhalation rate (L/kg-day) [2]
	1	1	1	1	inhalation absorption factor
Risk Calculation Factors:	10	10	3	1	age sensitivity factor
	0.25	2	14	14	exposure duration (years)
	70	70	70	70	averaging time (years)
	0.85	0.85	0.72	0.73	fraction of time at home

[1] For informational purposes, the 70-year and 9-year cancer risks are 0.83 and 0.51 in a million, respectively.

[2] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

Table D2 - HARP2 Results for Acute Hazards
Existing Residential Receptors

No.	Source	Contaminant	Acute Non-Cancer Risks - Toxicological Endpoints*										
			CV	CNS	IMMUN	KIDNEY	GILV	REPRO	RESP	SKIN	EYE	BONE	ENDO	BLOOD
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	Costco Trucks (running)	Diesel Particulate												
	Costco Trucks (idling)	Diesel Particulate												
2	Costco Gasoline	Benzene			5.12E-03			5.12E-03						5.12E-03
	(spillage)	Benzene			3.65E-02			3.65E-02						3.65E-02
	(venting)	Benzene			1.02E-02			1.02E-02						1.02E-02
	Fuel Trucks (running)	Diesel Particulate												
	Fuel Trucks (idling)	Diesel Particulate												
3	Major Buildings	Diesel Particulate												
	Major Buildings (idling)	Diesel Particulate												
		Total - All Sources	0.00E+00	0.00E+00	**5.18E-02**	0.00E+00	0.00E+00	**5.18E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**5.18E-02**

Note: Health risks calculated using HARP2, Risk Assessment
Standalone Tool, version 17023 (CARB, 2017).
Maximum Exposed Receptor (MER) location UTM 554911.90, 4488225.75.

Maximum Acute Hazard Index　**0.052**　**Repro/Immun/Blood**

* Key to Toxicological Endpoints

CV	Cardiovascular System	RESP	Respiratory System
CNS	Central Nervous System	SKIN	Skin irritation and/or other effects
IMMUN	Immune System	EYE	Eye irritation and/or other effects
KIDN	Kidneys	BONE	Bones and Teeth
GILV	Gastrointestinal Tract and Liver/Alimentary Tract	ENDO	Endocrine System
REPRO	Reproductive System	BLOOD	Hematological System

Table D3 - HARP2 Results for Cancer Risk and Chronic Hazards
Future Residential Receptors

No.	Source	Contaminant	Carcinogenic Risks Residential 30-year [1] per million	Chronic Non-Cancer Risks - Toxicological Endpoints*												
				CV	CNS	IMMUN	KIDNEY	GILV	REPRO	RESP	SKIN	EYE	BONE	ENDO	BLOOD
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1	Costco Trucks (running)	Diesel Particulate	1.3E-01							3.80E-05					
	Costco Trucks (idling)	Diesel Particulate	8.9E-02							2.60E-05					
2	Costco Gasoline	Benzene	1.8E-01												9.87E-04
	(spillage)	Benzene	1.1E+00												6.01E-03
	(venting)	Benzene	2.6E-01												1.38E-03
	Fuel Trucks (running)	Diesel Particulate	5.5E-02							1.60E-05					
	Fuel Trucks (idling)	Diesel Particulate	6.8E-03							2.00E-06					
3	Major Buildings	Diesel Particulate	1.4E-02							4.00E-06					
	Major Buildings (idling)	Diesel Particulate	1.4E-02							4.00E-06					
	Total - All Sources		**1.9**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**8.37E-03**

Note: Health risks calculated using HARP2, Risk Assessment Standalone Tool, version 17023 (CARB, 2017).
Maximum Exposed Receptor (MER) location UTM 554787.63, 4488169.28.

Total Cancer Risk	**1.9**	per million
Maximum Chronic Hazard Index	**0.008**	**Blood**

* Key to Toxicological Endpoints
CV — Cardiovascular System
CNS — Central Nervous System
IMMUN — Immune System
KIDN — Kidneys
GILV — Gastrointestinal Tract and Liver/Alimentary Tract
RESP — Respiratory System
REPRO — Reproductive System
SKIN — Skin irritation and/or other effects
EYE — Eye irritation and/or other effects
BONE — Bones and Teeth
ENDO — Endocrine System
BLOOD — Hematological System

	3rd Trimester	0 < 2 years	2 < 16 years	16 < 30 years	age bin
Dose Exposure Factors:	350	350	350	350	exposure frequency (days/year)
	361	1090	745	335	inhalation rate (L/kg-day) [2]
	1	1	1	1	inhalation absorption factor
Risk Calculation Factors:	10	10	3	1	age sensitivity factor
	0.25	2	14	14	exposure duration (years)
	70	70	70	70	averaging time (years)
	0.85	0.85	0.72	0.73	fraction of time at home

[1] For informational purposes, the 70-year and 9-year cancer risks are 2.2 and 1.3 in a million, respectively.

[2] Inhalation rate taken as the 95th percentile breathing rates (OEHHA, 2015).

No.	Source	Contaminant	Acute Non-Cancer Risks - Toxicological Endpoints*											
			CV	CNS	**IMMUN**	KIDNEY	GILV	**REPRO**	RESP	SKIN	EYE	BONE	ENDO	**BLOOD**
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	Costco Trucks (running)	Diesel Particulate												
	Costco Trucks (idling)	Diesel Particulate												
2	Costco Gasoline	Benzene			6.69E-03			6.69E-03						6.69E-03
	(spillage)	Benzene			4.73E-02			4.73E-02						4.73E-02
	(venting)	Benzene			1.35E-02			1.35E-02						1.35E-02
	Fuel Trucks (running)	Diesel Particulate												
	Fuel Trucks (idling)	Diesel Particulate												
3	Major Buildings	Diesel Particulate												
	Major Buildings (idling)	Diesel Particulate												
		Total - All Sources	0.00E+00	0.00E+00	**6.75E-02**	0.00E+00	0.00E+00	**6.75E-02**	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	**6.75E-02**

Note: Health risks calculated using HARP2, Risk Assessment
Standalone Tool, version 17023 (CARB, 2017).
Maximum Exposed Receptor (MER) location UTM 554787.63, 4488169.28.

Maximum Acute Hazard Index   **0.067**   **Repro/Immun/Blood**

* Key to Toxicological Endpoints

CV	Cardiovascular System	RESP	Respiratory System
CNS	Central Nervous System	SKIN	Skin irritation and/or other effects
IMMUN	Immune System	EYE	Eye irritation and/or other effects
KIDN	Kidneys	BONE	Bones and Teeth
GILV	Gastrointestinal Tract and Liver/Alimentary Tract	ENDO	Endocrine System
REPRO	Reproductive System	BLOOD	Hematological System