

A P P E N D I X 4.2-2

Health Risk Assessment

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

Dear Mr. Manuel:

March 25, 2019

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.

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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 district¹, California Environmental Protection Agency (Cal/EPA), and United States Environmental Protection Agency (USEPA) risk assessment guidance. The analysis incorporates conservative (i.e., health protective)

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

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 PM₁₀ 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.

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.

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 factors¹⁰ 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**.

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 ($\mu\text{g}/\text{m}^3$) ^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 (PM₁₀) for both medium-heavy duty trucks (MHDT) and heavy-heavy duty trucks (HHDT) and a slight decrease in idling exhaust PM₁₀ 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.

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 million¹⁴, and this difference would not change the significance finding in the draft EIR.

6. Fraction at Home (FAH) Ratio

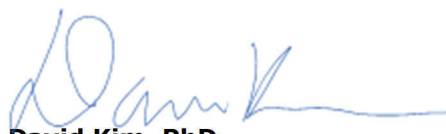
Ramboll conducted a screening analysis to evaluate the potential change in results if the fraction of time at home (FAH) assumption were changed. The HRA prepared by PlaceWorks uses a FAH for age groups less than 16 years of age that is less than one. As a more conservative approach, Ramboll performed 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/cmr/2015guidancemanual.pdf>.

FIGURE



OFFSITE TRUCK ROUTE

RIVER CROSSING MARKETPLACE SPECIFIC PLAN

REDDING, CALIFORNIA

FIGURE
1

DRAFTED BY:

DATE: 1/22/2019

PROJECT:

RAMBOLL

August 2017 | Health Risk Assessment

RIVER CROSSING MARKETPLACE SPECIFIC PLAN

City of Redding

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Table of Contents

Section	Page
1. INTRODUCTION.....	1
2. PROJECT DESCRIPTION.....	3
3. EMISSIONS INVENTORY	7
4. AIR DISPERSION MODELING	9
5. RISK CHARACTERIZATIONS	11
5.1 CARCINOGENIC CHEMICAL RISK.....	11
5.2 NON-CARCINOGENIC HAZARDS	13
6. CONCLUSIONS.....	15
7. REFERENCES.....	17

APPENDICES

Appendix A.	Emissions Inventory
Appendix B.	Graphical Representations of Emitting Sources
Appendix C.	Air Dispersion Model Output
Appendix D.	Risk Calculations

Table of Contents

List of Figures

Figure		Page
Figure 1	Site and Model Layout	5

List of Tables

Table		Page
Table 1	Emission Sources	7
Table 2	Compounds Emitted from Emission Sources	8
Table 3	HRA Results	15

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

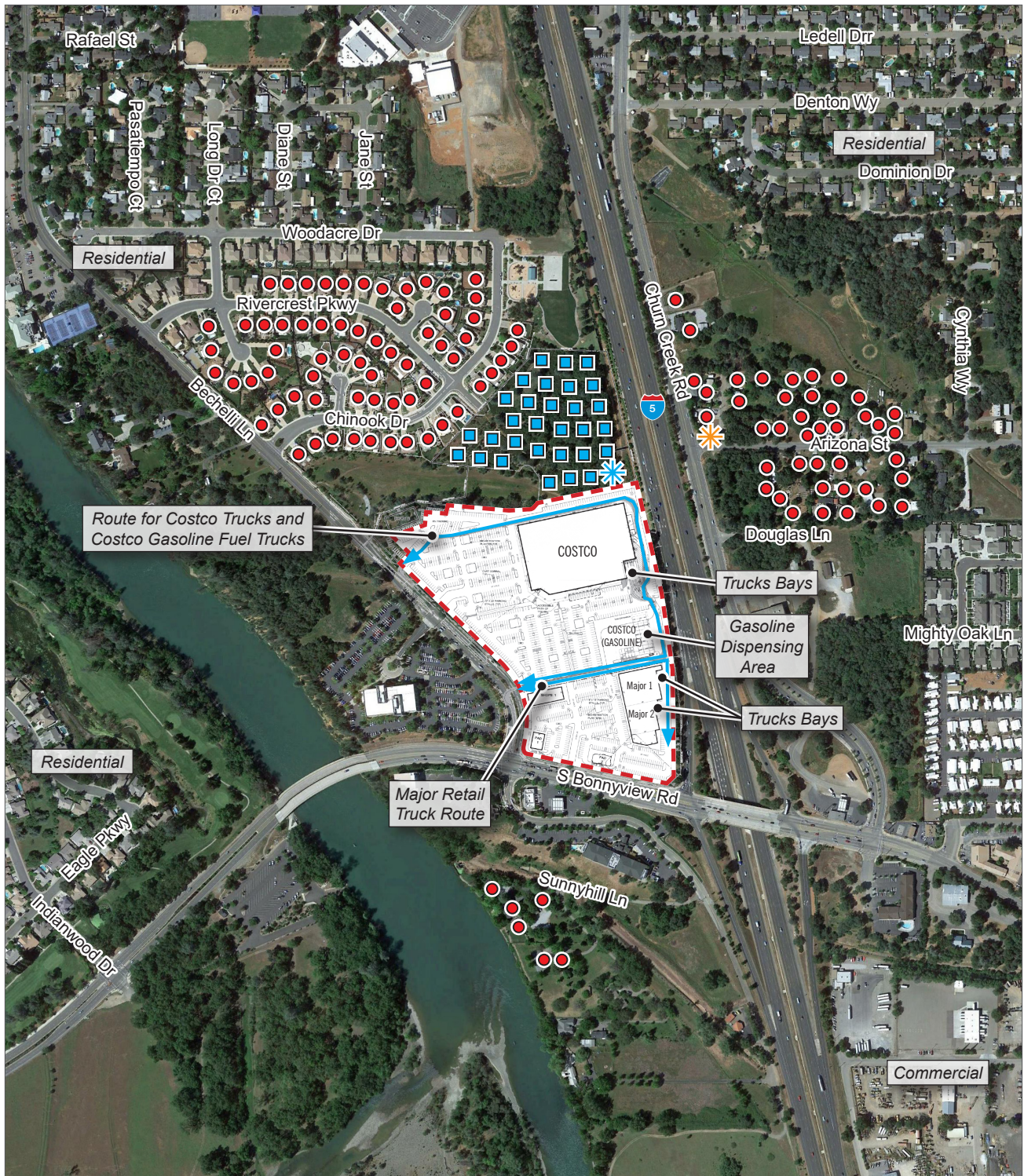
The approximately 25-acre project site is located at the northeast corner of S. Bonnyview Road and Bechelli Lane in the City of Redding, California. The project site is bounded by S. Bonnyview Road to the south, Bechelli Lane to the west, a conservation easement and vacant land to the north, and Interstate 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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0 700
Scale (Feet)



- Project Site Boundary
- ↔ Truck Routes
- ★ Maximum Exposed Receptor - Existing Residences
- Existing Residential Receptors
- ★ Maximum Exposed Receptor - Future Residences
- Future Residential Receptors

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 PM₁₀ 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 ($\mu\text{g}/\text{m}^3$) 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 ($\text{mg}/\text{kg}/\text{day}$)⁻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.

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

Where:

Dose_{AIR}	=	dose by inhalation ($\text{mg}/\text{kg}/\text{day}$), per age group
C_{air}	=	concentration of contaminant in air ($\mu\text{g}/\text{m}^3$)
EF	=	exposure frequency (0.96, 350 days/365 days)
BR/BW	=	daily breathing rate normalized to body weight ($\text{L}/\text{kg}/\text{day}$)
A	=	inhalation absorption factor (default = 1)
CF	=	conversion factor (1×10^{-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:

<u>Age Groups</u>	<u>BR/BW (L/kg-day)</u>	<u>ED</u>	<u>ASF</u>	<u>FAH</u>
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:

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

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 1x10⁶ (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. Risk Characterizations

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

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 Transportation 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

Temporal Profile:

hours	days	weeks
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 Association (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

Temporal Profile:	hours	days	weeks
	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

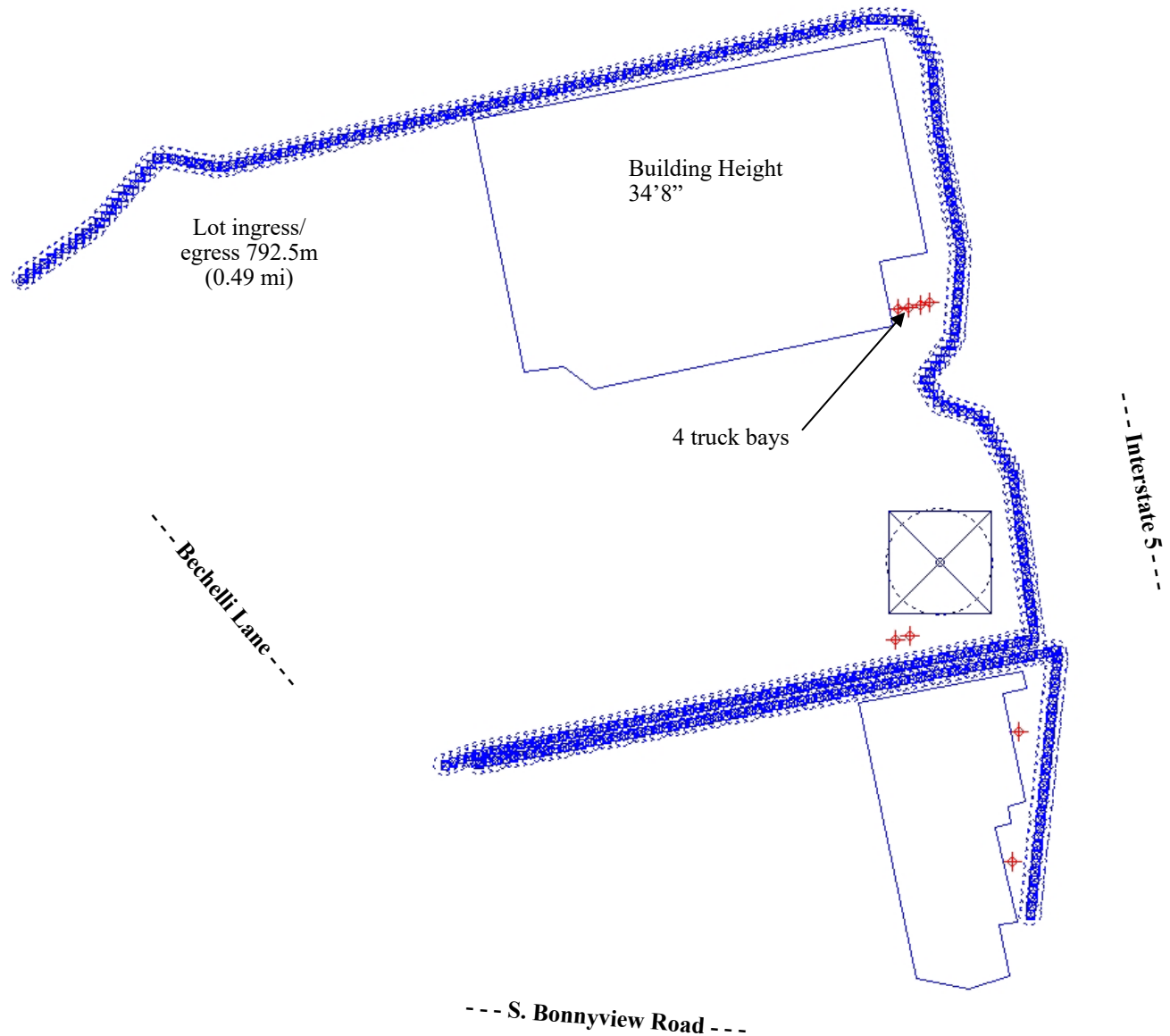
Redding, CA 96002

Sunday - Saturday: 2:00 AM - 10:00 AM (delivery hours)



Operations

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



- 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

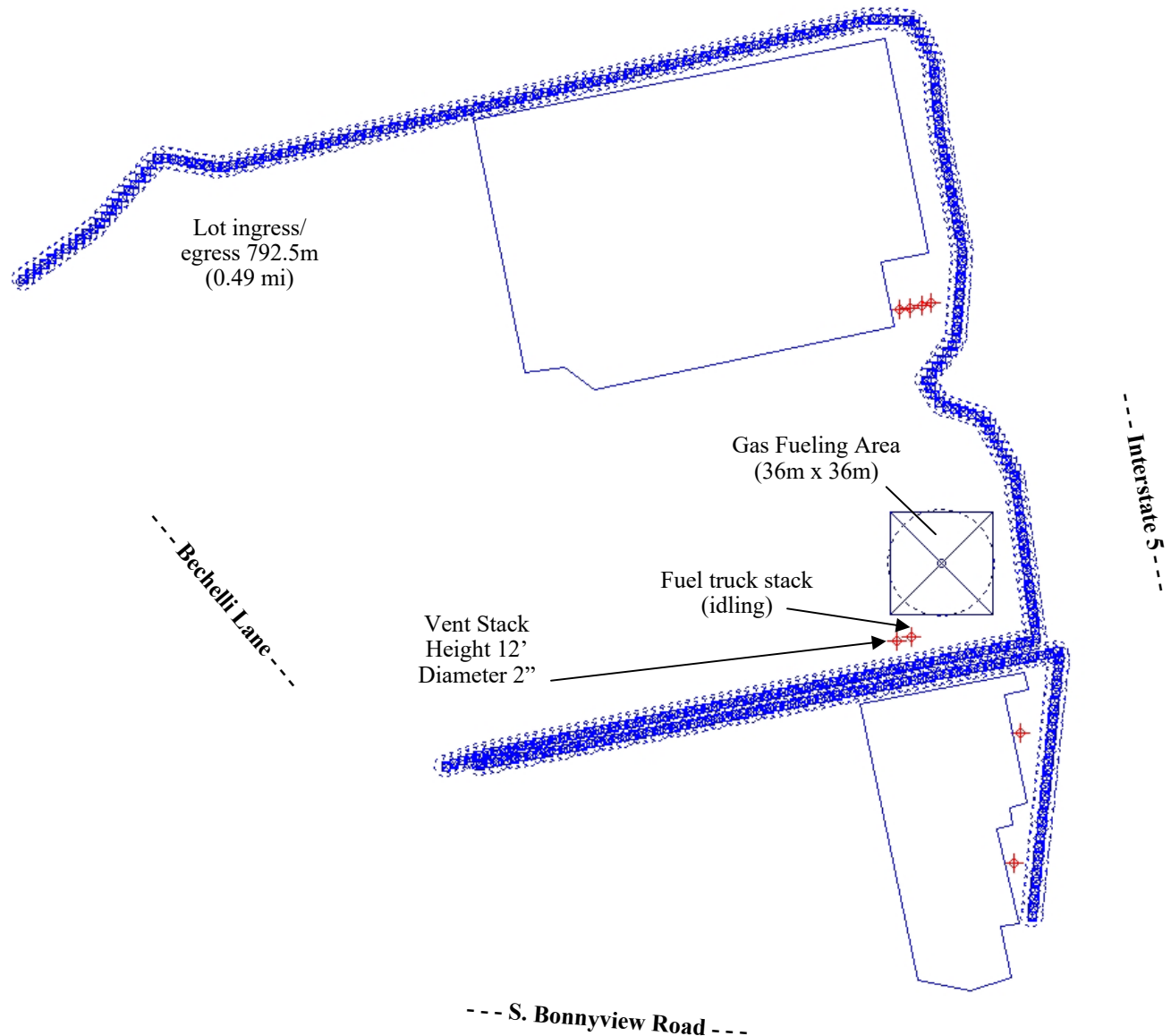
Sunday - Saturday: 5:00 AM - 10:00 PM (gasoline dispensing hours)



Operations

Gasoline Dispensing: 20 million gallons per year

Heavy-Heavy Duty Trucks: 3 trucks per day



- 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 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).

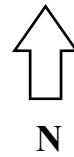
Source 3

Major Retail Buildings

S. Bonnyview Road and Bechelli Lane

Redding, CA 96002

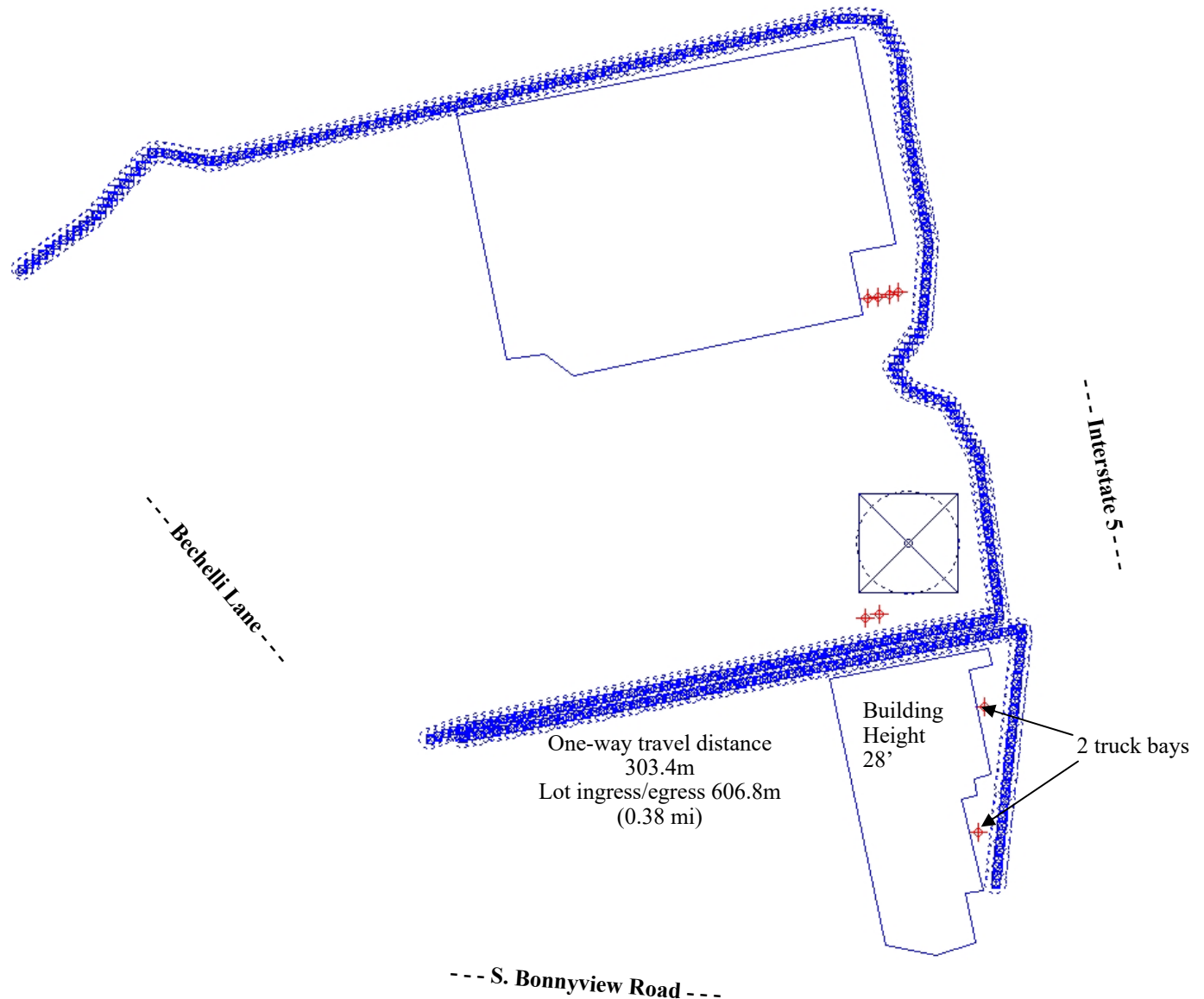
Sunday - Saturday: 6:00 AM - 12:00 AM



Operations

Heavy-Heavy Duty Trucks: 8 trucks per week

Medium-Heavy Duty Trucks: 8 trucks per week



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

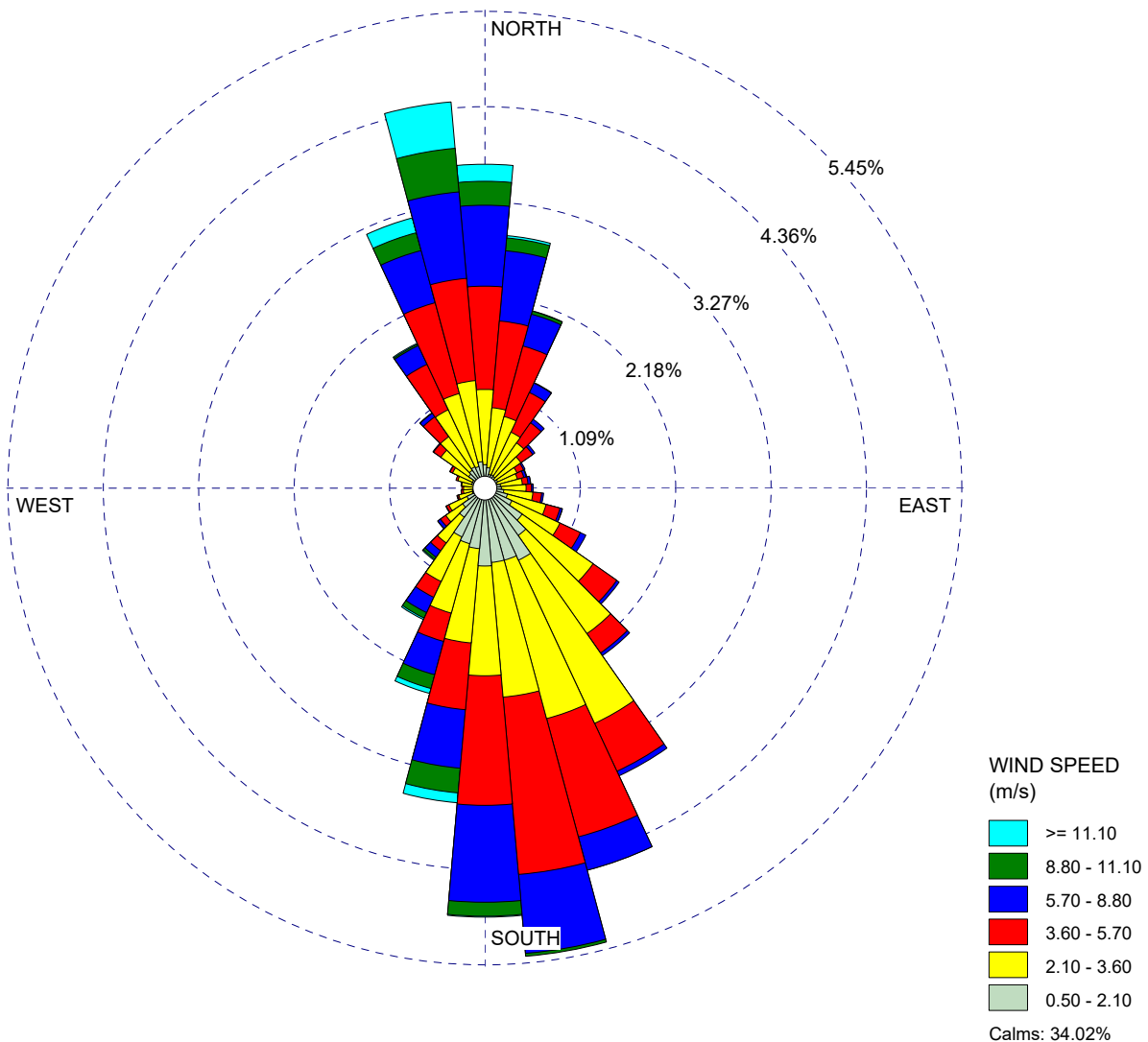
- Release height of 4.15 m and initial vertical dimension (δy) of 1.93 m is based upon California Air Resources Board's "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles" (2000).

WIND ROSE PLOT:

Redding Municipal Airport Meteorological Station
2009-2013

DISPLAY:

Wind Speed
Flow Vector (blowing to)



COMMENTS:

All Hours

DATA PERIOD:

Start Date: 1/1/2009 - 00:00
End Date: 1/2/2014 - 23:59

COMPANY NAME:

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

Appendix C. Air Dispersion Model Output

Appendix

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Output Summary Existing Residences

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	

Output Summary Existing Residences

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	

Output Summary Existing Residences

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	

Model Output

Existing Residences

```

*** 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 POINTH0R(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.
```


Model Output Existing Residences

**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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***
 *** MODELPTS: RegDFAULT CONC ELEV URBAN

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 2

*** 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	0.70900E-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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 3

*** 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
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

Model Output
Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 5

*** 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
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

Model Output Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 7

*** 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
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

Model Output
Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 9

*** 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
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

Model Output
Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 11

*** 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
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
L0000975	0	0.74620E-08	554761.6	4488143.9	158.2	4.15	1.42	1.93	YES	HROFDY
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

Model Output
Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 13

*** 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
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

Model Output Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA *** 08/28/17
 *** AERMET - VERSION 14134 *** *** Redding, CA *** 11:54:33
 *** MODELPTS: RegDFAULT CONC ELEV URBAN *** VOLUME SOURCE DATA *** PAGE 15

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
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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 16

*** 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	0.54500E-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

Model Output
Existing Residences

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** PAGE 18

*** 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
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

Model Output Existing Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA
*** AERMET - VERSION 14134 *** *** Redding, CA
*** MODELOPTs: RegDEFAULT CONC ELEV URBAN

*** 08/28/17
*** 11:54:33
 PAGE 19

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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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)

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***
*** MODELPTs: RegDFAULT CONC ELEV URBAN

*** Costco Wholesale HRA
*** Redding, CA

*** 08/28/17
*** 11:54:33
PAGE 28

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

URBAN ID	URBAN POP	SOURCE IDs
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Redding	91808.	All Sources (Volume and Point)
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Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 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,

Model Output Existing Residences

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

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 11:54:33
 *** 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,

Model Output Existing Residences

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,

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
*** Redding, CA

*** 08/28/17
*** 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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
*** Redding, CA

*** 08/28/17
*** 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

Model Output

Existing Residences

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*** AERMOD - VERSION 16216r ***    *** Costco Wholesale HRA
*** AERMET - VERSION 14134 ***    *** Redding, CA
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*** 08/28/17
*** 13:35:59
*** PAGE 165

*** MODELOPTs: RegDFault CONC ELEV URBAN

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

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[illegible]

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,

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA
 *** Redding, CA

*** 08/28/17
 *** 13:35:59
 *** PAGE 166

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN

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

Surface file: C:\MetData\Shasta County AQMD\725920\725920.SFC
 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
 Year: 2009

Name: MEDFORD/JACKSON_COUNTY_ARPT
 Year: 2009

Met Version: 14134

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)

Model Output Existing Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA *** 08/28/17
 *** AERMET - VERSION 14134 *** *** Redding, CA *** 11:54:33
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN *** PAGE 267

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

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

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

Model Output Existing Residences

	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 ***
*** AERMET - VERSION 14134 ***
*** MODELPTS: RegDFAULT CONC ELEV URBAN

*** Costco Wholesale HRA
*** Redding, CA

*** 08/28/17
*** 11:54:33
*** PAGE 269

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

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

**

GROUP ID	AVERAGE CONC			RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK 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,	4488225.75,	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	

MER Location

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

Model Output Existing Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***
*** MODEL_OPTS: RegDFAULT CONC ELEV URBAN

*** Costco Wholesale HRA
*** Redding, CA

*** 08/28/17
*** 11:54:33
*** PAGE 270

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

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

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK 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	
SPELL 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
*** AERMET - VERSION 14134 *** *** Redding, CA

*** 08/28/17
*** 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 ***

Output Summary Future Residences

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	

Model Output Future Residences

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

*** MODELOPTs: RegDEFAULT 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.

Model Output Future Residences

**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 ***
 *** AERMET - VERSION 14134 ***
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN

*** Costco Wholesale HRA - Future Residents
 *** Redding, CA

*** 08/29/17
 *** 08:27:05
 *** PAGE 2

*** 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

Model Output Future Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA - Future Residents
*** Redding, CA

*** 08/29/17
*** 08:27:05
PAGE 3

*** 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
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

Model Output Future Residences

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

Model Output Future Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA - Future Residents
 *** Redding, CA

*** 08/29/17
 *** 08:27:05
 *** PAGE 5

*** 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
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

Model Output Future Residences

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

Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents *** 08/29/17
 *** AERMET - VERSION 14134 *** *** Redding, CA *** 08:27:05
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN PAGE 7

*** 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	157.8	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

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

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA - Future Residents
*** Redding, CA

*** 08/29/17
*** 08:27:05
PAGE 9

*** 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
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

Model Output Future Residences

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

Model Output Future Residences

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*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***
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*** Costco Wholesale HRA - Future Residents
*** Redding, CA

*** 08/29/17
*** 08:27:05
PAGE 11

*** MODELOPTs: RegDFault CONC ELEV URBAN

*** VOLUME SOURCE DATA ***

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

Model Output Future Residences

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

Model Output Future Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA - Future Residents
*** Redding, CA

*** 08/29/17
*** 08:27:05
*** PAGE 13

*** 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
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

Model Output Future Residences

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

Model Output Future Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA - Future Residents
*** Redding, CA

*** 08/29/17
*** 08:27:05
PAGE 15

*** 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
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

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents *** 08/29/17
 *** AERMET - VERSION 14134 *** *** Redding, CA *** 08:27:05
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN PAGE 16

*** 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

Model Output Future Residences

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

Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents *** 08/29/17
 *** AERMET - VERSION 14134 *** *** Redding, CA *** 08:27:05
 *** MODELOPTs: RegDFAULT CONC ELEV URBAN PAGE 18

*** 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
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

Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents
*** AERMET - VERSION 14134 *** *** Redding, CA
*** MODELOPTs: RegDFault CONC ELEV URBAN

*** 08/29/17
*** 08:27:05
PAGE 19

*** 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)

Model Output Future Residences

*** AERMOD - VERSION 16216r ***
*** AERMET - VERSION 14134 ***
*** MODELOPTs: RegDFAULT CONC ELEV URBAN

*** Costco Wholesale HRA - Future Residents
*** Redding, CA

*** 08/29/17
*** 08:27:05
PAGE 28

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

URBAN ID	URBAN POP	SOURCE IDs
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Redding	91808.	All Sources (volume and point)
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Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents
*** AERMET - VERSION 14134 *** *** Redding, CA

*** 08/29/17
*** 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

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 Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents
*** AERMET - VERSION 14134 *** *** Redding, CA

*** 08/29/17
*** 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,

Model Output Future Residences

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,

Model Output Future Residences

*** AERMOD - VERSION 16216r ***
 *** AERMET - VERSION 14134 ***

*** Costco Wholesale HRA - Future Residents
 *** Redding, CA

*** 08/29/17
 *** 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

Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents
*** AERMET - VERSION 14134 *** *** Redding, CA

*** 08/29/17
*** 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

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 166
*** MODELOPTs:   RegDFAULT  CONC  ELEV  URBAN

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

[illegible]

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,

Model Output

Future Residences

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*** AERMOD - VERSION 16216r ***      *** Costco Wholesale HRA - Future Residents
*** AERMET - VERSION 14134 ***      *** Redding, CA
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*** 08/29/17
*** 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
Profile file:      C:\!MetData\Shasta County AQMD\725920\725920.PFL
Surface format:    FREE
Profile format:    FREE
Surface station no.: 24257                               Upper air station

```

Met Version: 14134

Name: REDDING/AAF
Year: 2009

Upper air station no.: 24225
Name: MEDFORD/JACKSON_COUNTY_ARPT
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</							

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)

Model Output Future Residences

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

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

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

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

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

Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents *** 08/29/17
*** AERMET - VERSION 14134 *** *** Redding, CA *** 08:27:05
*** MODELOPTS: RegDFAULT CONC ELEV URBAN *** PAGE 310

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

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

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

MER Location

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

Model Output Future Residences

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

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

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

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

Model Output Future Residences

*** AERMOD - VERSION 16216r *** *** Costco Wholesale HRA - Future Residents
*** AERMET - VERSION 14134 *** *** Redding, CA

*** 08/29/17
*** 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

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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	(e)	(f)	(g)	(h)	(i)	(i)	(k)	(l)	(m)	(n)	(o)	(p)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(i)	(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 (spillage)	Benzene	7.3E-02												3.90E-04
	(venting)	Benzene	4.3E-01												2.33E-03
		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.

	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

* 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

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 (OEHA, 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) Costco Trucks (idling)	Diesel Particulate Diesel Particulate												
2	Costco Gasoline (spillage) (venting)	Benzene			5.12E-03			5.12E-03						5.12E-03
		Benzene			3.65E-02			3.65E-02						3.65E-02
		Benzene			1.02E-02			1.02E-02						1.02E-02
3	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
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* Key to Toxicological Endpoints

CV Cardiovascular System

CNS Central Nervous System

IMMUN Immune System

KIDN Kidneys

GILV Gastrointestinal Tract and Liver/Alimentary Tract

REPRO Reproductive System

RESP

SKIN Skin irritation and/or other effects

EYE Eye irritation and/or other effects

BONE Bones and Teeth

ENDO Endocrine System

BLOOD Hematological System

**Table D3 - HARP2 Results for Cancer Risk and Chronic Hazards
Future 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
(a)	(b)	(c)	per million (d)	(e)	(f)	(g)	(h)	(i)	(i)	(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 (spillage) (venting)	Benzene	1.8E-01												9.87E-04
		Benzene	1.1E+00												6.01E-03
		Benzene	2.6E-01												1.38E-03
	Fuel Trucks (running)	Diesel Particulate	5.5E-02							1.60E-05					
3	Fuel Trucks (idling)	Diesel Particulate	6.8E-03							2.00E-06					
	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.

	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

* 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

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 (OEHA, 2015).

**Table D4 - HARP2 Results for Acute Hazards
Future 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) Costco Trucks (idling)	Diesel Particulate Diesel Particulate												
2	Costco Gasoline (spillage) (venting)	Benzene			6.69E-03			6.69E-03						6.69E-03
		Benzene			4.73E-02			4.73E-02						4.73E-02
		Benzene			1.35E-02			1.35E-02						1.35E-02
	Fuel Trucks (running) Fuel Trucks (idling)	Diesel Particulate Diesel Particulate												
	Major Buildings Major Buildings (idling)	Diesel Particulate 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
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* 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