Health Risk Assessment

Sierra View Shopping Center Project

Prepared for:
Warberg Partners, Inc.

June 2026

Prepared by

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1501 Sports Drive, Suite A, Sacramento, CA 95834

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INTRODUCTION

This Health Risk Assessment (HRA) has been prepared to address the potential health risks to sensitive receptors in the project area associated with implementation of the Sierra View Shopping Center Project (proposed project) related to operation of the proposed gas dispensing facility (GDF).

PROJECT SUMMARY

The project site is approximately 14.5 acres, located at 1875 Pleasant Grove Boulevard in the City of Roseville, California, and identified by Assessor's Parcel Numbers (APNs) 498-370-002 through -012 and 017-152-018 (see Figure 1 and Figure 2). The project site is undeveloped and relatively flat. Trees, part of existing frontage landscaping, line the site's northern border.

Approximately 13.9 acres of the project site consists of Sierra Vista Specific Plan (SVSP) Parcel JM-4. The site's northwest corner consists of West Roseville Specific Plan (WRSP) Parcel W-20. Both the SVSP and WRSP designate the site as Community Commercial (CC). The site is zoned Community Commercial/Special Overlay (CC/SA).

Surrounding land uses include residential uses to the north, across Pleasant Grove Boulevard; commercial uses to the northeast, across Fiddyment Road; residential uses to the south; and the planned Sierra View Apartments Project to the immediate west (see Figure 2).

The proposed project would include the development of 58,210 square feet (sf) of commercial uses including an anchor grocery store, two retail buildings, three fast food restaurants with drive-throughs, and a GDF (see Figure 3). A summary of the proposed uses is presented in Table 1. The proposed project would provide 327 off-street parking spaces and would be accessed by new driveways off of Pleasant Grove Boulevard, Fiddyment Road, and Upland Drive.

Table 1
Project Summary

Building	Proposed Use	Square Footage
1	Restaurant (Drive-through coffee)	3,000
2	Retail	16,742
3	Restaurant (Drive-through)	3,736
4	Retail	3,745
5	Fuel Station (GDF)	4,700
6	Restaurant (Drive-through)	3,015
7	Retail (Grocery)	23,272
	Total	**58,210**

The proposed GDF would be located immediately north of the Fiddyment Road driveway access. The GDF would include four dispensers (eight pumps) under a covered canopy, and a 4,700-sf convenience store (Building 5). The GDF would be open 24 hours a day.

Figure 1
Regional Project Location

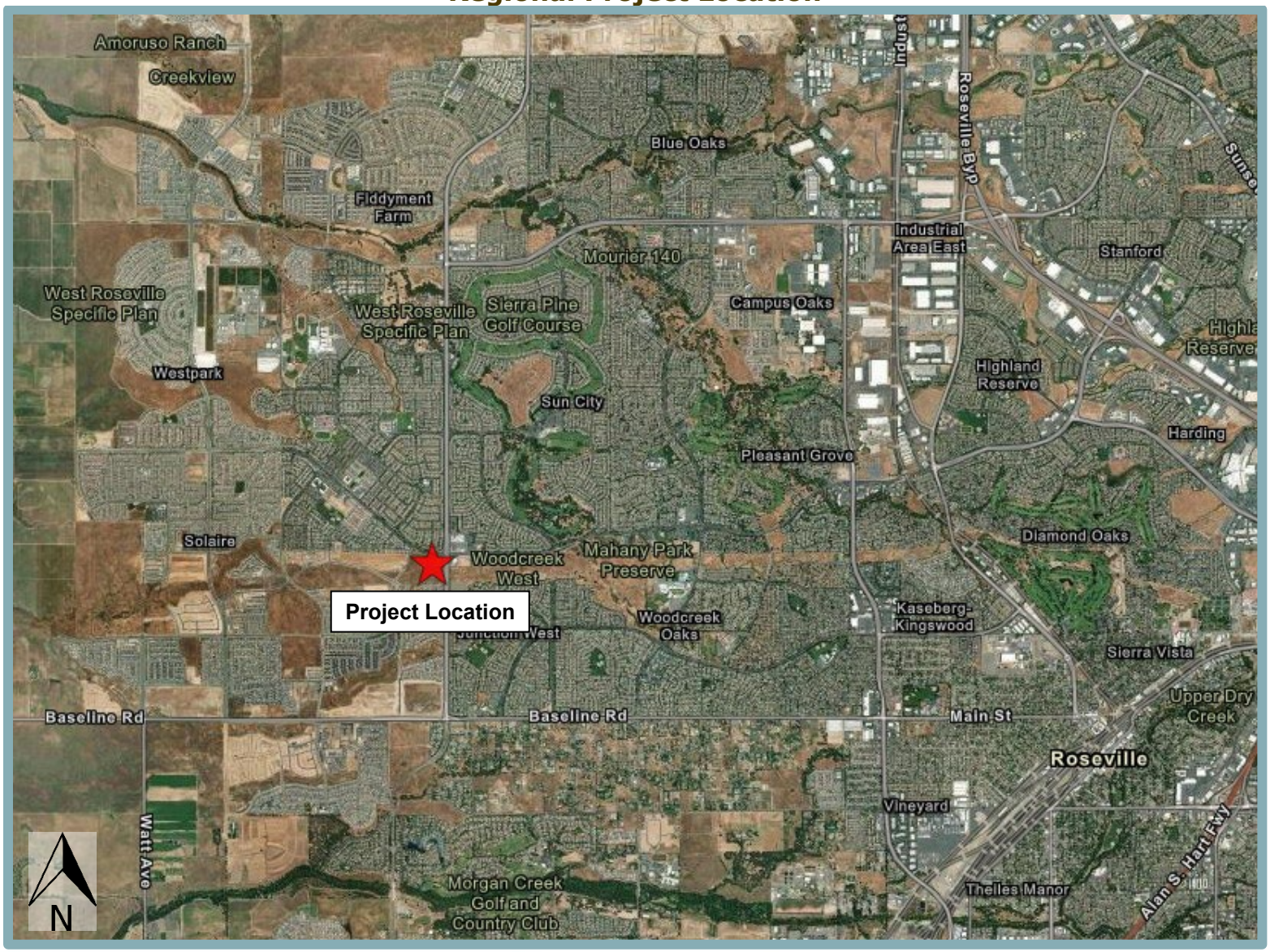
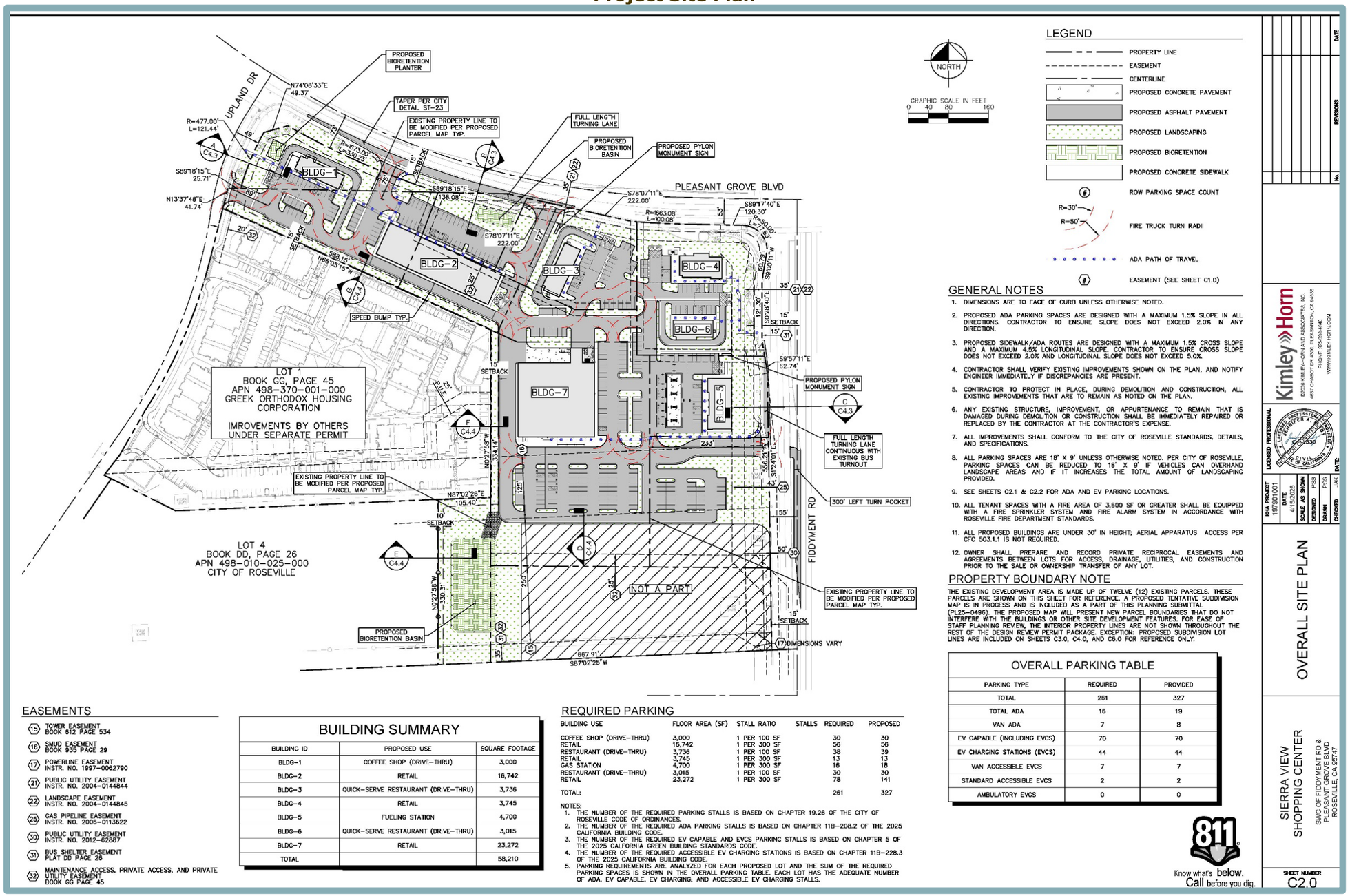


Figure 2
Project Site Boundaries

Figure 3
Project Site Plan



GENERAL NOTES

1. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. PROPOSED ADA PARKING SPACES ARE DESIGNED WITH A MAXIMUM 1.5% SLOPE IN ALL DIRECTIONS. CONTRACTOR TO ENSURE SLOPE DOES NOT EXCEED 2.0% IN ANY DIRECTION.
3. PROPOSED SIDEWALK/ADA ROUTES ARE DESIGNED WITH A MAXIMUM 1.5% CROSS SLOPE AND A MAXIMUM 4.5% LONGITUDINAL SLOPE. CONTRACTOR TO ENSURE CROSS SLOPE DOES NOT EXCEED 2.0% AND LONGITUDINAL SLOPE DOES NOT EXCEED 5.0%.
4. CONTRACTOR SHALL VERIFY EXISTING IMPROVEMENTS SHOWN ON THE PLAN, AND NOTIFY ENGINEER IMMEDIATELY IF DISCREPANCIES ARE PRESENT.
5. CONTRACTOR TO PROTECT IN PLACE, DURING DEMOLITION AND CONSTRUCTION, ALL EXISTING IMPROVEMENTS THAT ARE TO REMAIN AS NOTED ON THE PLAN.
6. ANY EXISTING STRUCTURE, IMPROVEMENT, OR APPURTENANCE TO REMAIN THAT IS DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
7. ALL IMPROVEMENTS SHALL CONFORM TO THE CITY OF ROSEVILLE STANDARDS, DETAILS, AND SPECIFICATIONS.
8. ALL PARKING SPACES ARE 18' X 9' UNLESS OTHERWISE NOTED. PER CITY OF ROSEVILLE, PARKING SPACES CAN BE REDUCED TO 16' X 9' IF VEHICLES CAN OVERHAND LANDSCAPE AREAS AND IF IT INCREASES THE TOTAL AMOUNT OF LANDSCAPING PROVIDED.
9. SEE SHEETS C2.1 & C2.2 FOR ADA AND EV PARKING LOCATIONS.
10. ALL TENANT SPACES WITH A FIRE AREA OF 3,600 SF OR GREATER SHALL BE EQUIPPED WITH A FIRE SPRINKLER SYSTEM AND FIRE ALARM SYSTEM IN ACCORDANCE WITH ROSEVILLE FIRE DEPARTMENT STANDARDS.
11. ALL PROPOSED BUILDINGS ARE UNDER 30' IN HEIGHT; AERIAL APPARATUS ACCESS PER CFC 503.1.1 IS NOT REQUIRED.
12. OWNER SHALL PREPARE AND RECORD PRIVATE RECIPROCAL EASEMENTS AND AGREEMENTS BETWEEN LOTS FOR ACCESS, DRAINAGE, UTILITIES, AND CONSTRUCTION PRIOR TO THE SALE OR OWNERSHIP TRANSFER OF ANY LOT.

PROPERTY BOUNDARY NOTE

THE EXISTING DEVELOPMENT AREA IS MADE UP OF TWELVE (12) EXISTING PARCELS. THESE PARCELS ARE SHOWN ON THIS SHEET FOR REFERENCE. A PROPOSED TENTATIVE SUBDIVISION MAP IS IN PROCESS AND IS INCLUDED AS A PART OF THIS PLANNING SUBMITTAL (PL25-0496). THE PROPOSED MAP WILL PRESENT NEW PARCEL BOUNDARIES THAT DO NOT INTERFERE WITH THE BUILDINGS OR OTHER SITE DEVELOPMENT FEATURES. FOR EASE OF STAFF PLANNING REVIEW, THE INTERIOR PROPERTY LINES ARE NOT SHOWN THROUGHOUT THE REST OF THE DESIGN REVIEW PERMIT PACKAGE. EXCEPTION: PROPOSED SUBDIVISION LOT LINES ARE INCLUDED ON SHEETS C3.0, C4.0, AND C6.0 FOR REFERENCE ONLY.

OVERALL PARKING TABLE

PARKING TYPE	REQUIRED	PROVIDED
TOTAL	261	327
TOTAL ADA	16	19
VAN ADA	7	8
EV CAPABLE (INCLUDING EVCS)	70	70
EV CHARGING STATIONS (EVCS)	44	44
VAN ACCESSIBLE EVCS	7	7
STANDARD ACCESSIBLE EVCS	2	2
AMBULATORY EVCS	0	0

EASEMENTS

- (15) TOWER EASEMENT BOOK 812 PAGE 534
- (16) SMUD EASEMENT BOOK 935 PAGE 29
- (17) POWERLINE EASEMENT INSTR. NO. 1997-0062790
- (21) PUBLIC UTILITY EASEMENT INSTR. NO. 2004-0144844
- (22) LANDSCAPE EASEMENT INSTR. NO. 2004-0144845
- (25) GAS PIPELINE EASEMENT INSTR. NO. 2005-0113622
- (30) PUBLIC UTILITY EASEMENT INSTR. NO. 2012-62887
- (31) BUS SHELTER EASEMENT PLAT DD PAGE 28
- (32) MAINTENANCE ACCESS, PRIVATE ACCESS, AND PRIVATE UTILITY EASEMENT BOOK GG PAGE 45

BUILDING SUMMARY

BUILDING ID	PROPOSED USE	SQUARE FOOTAGE
BLDG-1	COFFEE SHOP (DRIVE-THRU)	3,000
BLDG-2	RETAIL	16,742
BLDG-3	QUICK-SERVE RESTAURANT (DRIVE-THRU)	3,736
BLDG-4	RETAIL	3,745
BLDG-5	FUELING STATION	4,700
BLDG-6	QUICK-SERVE RESTAURANT (DRIVE-THRU)	3,015
BLDG-7	RETAIL	23,272
TOTAL		58,210

REQUIRED PARKING

BUILDING USE	FLOOR AREA (SF)	STALL RATIO	STALLS	REQUIRED	PROPOSED
COFFEE SHOP (DRIVE-THRU)	3,000	1 PER 100 SF	30	30	30
RETAIL	16,742	1 PER 300 SF	56	56	56
RESTAURANT (DRIVE-THRU)	3,736	1 PER 100 SF	38	38	39
RETAIL	3,745	1 PER 300 SF	13	13	13
GAS STATION	4,700	1 PER 300 SF	16	16	18
RESTAURANT (DRIVE-THRU)	3,015	1 PER 100 SF	30	30	30
RETAIL	23,272	1 PER 300 SF	78	141	
TOTAL:				261	327

NOTES:
1. THE NUMBER OF THE REQUIRED PARKING STALLS IS BASED ON CHAPTER 19.26 OF THE CITY OF ROSEVILLE CODE OF ORDINANCES.
2. THE NUMBER OF THE REQUIRED ADA PARKING STALLS IS BASED ON CHAPTER 11B-208.2 OF THE 2025 CALIFORNIA BUILDING CODE.
3. THE NUMBER OF THE REQUIRED EV CAPABLE AND EVCS PARKING STALLS IS BASED ON CHAPTER 5 OF THE 2025 CALIFORNIA GREEN BUILDING STANDARDS CODE.
4. THE NUMBER OF THE REQUIRED ACCESSIBLE EV CHARGING STATIONS IS BASED ON CHAPTER 11B-228.3 OF THE 2025 CALIFORNIA BUILDING CODE.
5. PARKING REQUIREMENTS ARE ANALYZED FOR EACH PROPOSED LOT AND THE SUM OF THE REQUIRED PARKING SPACES IS SHOWN IN THE OVERALL PARKING TABLE. EACH LOT HAS THE ADEQUATE NUMBER OF ADA, EV CAPABLE, EV CHARGING, AND ACCESSIBLE EV CHARGING STALLS.

811 Know what's below. Call before you dig.

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DATE | REVISIONS | No.

LICENSED PROFESSIONAL ENGINEER — JENNIFER A. SMITH — No. 30539 — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

KHA PROJECT	197901001
DATE	4/15/2026
SCALE AS SHOWN	
DESIGNED	PSS
DRAWN	PSS
CHECKED	JAK
DATE:	

OVERALL SITE PLAN

SIERRA VIEW SHOPPING CENTER
SWC OF FIDDYMENT RD & PLEASANT GROVE BLVD
ROSEVILLE, CA 95747

SHEET NUMBER C2.0

SOURCES

The following documents are referenced information sources used for the purposes of this HRA:

1. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective.* April 2005.
2. California Air Resources Board. *User Manual for the Hotspots Analysis and Reporting Program Health Risk Assessment Standalone Tool, Version 2.* March 17, 2015.
3. City of Roseville. *Sierra Vista Specific Plan.* May 2010.
4. Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments*. February 2015.
5. Placer County Air Pollution Control District. *CEQA Air Quality Handbook, Appendix G. Preparing a Health Risk Assessment for Land Use Projects.* November 21, 2017.
6. San Joaquin Valley Air Pollution Control District. *Guidance for Air Dispersion Modeling*. August 2006.
7. U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model – AERMOD*. September 2004.

PURPOSE OF THE HRA

Toxic air contaminants (TACs) are a category of environmental concern. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure, and are typically associated with long-term exposure and the associated risk of contracting cancer. Health effects of exposure to TACs other than cancer include birth defects, neurological damage, and death. Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level. TACs are regulated or evaluated on the basis of risk to human health rather than relative to an ambient air quality standard or emission-based threshold, as is done for criteria pollutants and greenhouse gas (GHG) emissions. In terms of health risks, the most volatile contaminants associated with GDFs are benzene, ethyl benzene, toluene, and xylenes.

The California Air Resources Board (CARB) evaluated sources of TACs and provided recommendations for siting new sensitive land uses near existing major sources of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, rail yards, and GDFs, in its Air Quality and Land Use Handbook: A Community Health Perspective (Handbook).[1] The CARB Handbook recommends that further study is conducted if sensitive land uses would be located within 50 feet of a typical GDF, or within 300 feet of a large GDF (i.e., a facility with a throughput of 3.6 million gallons per year or greater).

Elderly individuals, children, individuals with compromised immune systems, and pregnant women are the most susceptible to the adverse health effects of TAC exposure. Accordingly, land uses that are typically associated with the aforementioned susceptible groups, such as residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics, are considered to be sensitive receptors. Existing single-family residences in the surrounding area, as well as the Sierra Vista Apartments under construction west of the site, are considered sensitive receptors. In addition, Rex Fortune Elementary School and Coyote Ridge Elementary School are located approximately 2,000 feet to the southwest and southeast of the project site, respectively.

[1] California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.

The nearest sensitive receptor in the project area, identified as a single-family residence to the north of the project site, is located approximately 500 feet from the proposed GDF, and is therefore located outside of the CARB's recommended siting distance for GDFs. Nonetheless, the City of Roseville requested an HRA to determine the potential health risks to nearby sensitive receptors associated with TAC emissions related to the proposed GDF operations.

STANDARDS OF SIGNIFICANCE

The proposed project is located within the jurisdictional boundaries of the Placer County Air Pollution Control District (PCAPCD). The PCAPCD's cancer and non-cancer thresholds to assess health risk significance for CEQA are consistent with what are used for the Assembly Bill (AB) 2588 (i.e., the Air Toxics "Hot Spots" Information and Assessment Act of 1987) risk assessment procedures. The PCAPCD's adopted health risk thresholds of significance are presented in Table 2.

Table 2
PCAPCD Thresholds of Significance for Health Risks

Risk Factor	Threshold
Cancer	Increased cancer risk of >10.0 cases per million persons
Non-Cancer	Increased non-cancer risk of >1.0 Hazard Index (Chronic or Acute)

Source: Placer County Air Pollution Control District. CEQA Air Quality Handbook, Appendix G. Preparing a Health Risk Assessment for Land Use Projects. November 21, 2017.

METHOD OF ANALYSIS

Following the guidance within Appendix G of the PCAPCD's CEQA Handbook,[2] as well as guidance from other air districts within California such as the San Joaquin Valley Air Pollution Control District,[3] the concentrations of pollutants from operation of the GDF were calculated using the American Meteorological Society/Environmental Protection Agency (AMS/EPA) Regulatory Model (AERMOD) dispersion model. The associated cancer risk and non-cancer (chronic and acute) hazard index were calculated using the CARB's Hotspot Analysis and Reporting Program 2 Risk Assessment Standalone Tool (HARP 2 RAST),[4] which calculates the cancer and non-cancer health impacts using the risk assessment guidelines of the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual for Preparation of Health Risk Assessments.[5] In addition to the guidance provided by the PCAPCD, further modeling guidance was obtained through the California Air Pollution Control Officers Association's (CAPCOA) Guidance document, Gasoline Service Station Industrywide Risk Assessment Guidelines, as well as the U.S. Environmental Protection Agency's (USEPA's) User's Guide for the AMS/EPA Regulatory Model – AERMOD,[6] and the 2015 OEHHA Guidance Manual. Considering that GDFs result in the emission of various TACs, potential risks related to the exposure of receptors to benzene, ethyl benzene, toluene, and xylene were considered.

For the purpose of determining potential health risks to sensitive receptors, only the highest estimated pollutant concentrations were used in calculating cancer risk and hazard indices. Based

2 California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
3 San Joaquin Valley Air Pollution Control District. *Guidance for Air Dispersion Modeling*. August 2006.
4 California Air Resources Board. *User Manual for the Hotspots Analysis and Reporting Program Health Risk Assessment Standalone Tool, Version 2*. March 17, 2015.
5 Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments* [pg. 8-18]. February 2015.
6 U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model – AERMOD*. September 2004.

on the USEPA's User's Guide for AERMOD and the 2015 OEHHA Guidance Manual, the HRA assumed that sensitive receptors would be exposed for the lifetime of the project (assumed to be 30 years) and exposure would begin during the third trimester of pregnancy. The receptor experiencing the highest estimated pollutant concentrations was considered to be the maximally exposed receptor, and would experience the highest potential health risks.

Additionally, considering that both schools and residential units are proximate to the project site, the estimation of health risks conservatively assumed that nearby receptors would be continuously exposed to various pollutants from the GDF at the maximum estimated concentrations. This assumption would represent a scenario whereby a resident living nearby also attends one of the nearby schools and is therefore exposed to pollutants both at home and at school. In practice, concentrations of pollutants at nearby schools would be much less than the concentration of pollutants at the maximally exposed receptor location. Due to the difference in pollutant concentrations at the maximally exposed receptor location and nearby schools, a single receptor would not be anticipated to be continuously exposed to the maximum level of pollutant concentrations both at home and school.

By using the maximum estimated concentrations and assuming continuous exposure to pollutants, the estimated health risks are considered a worst-case estimate, and actual health risks to sensitive receptors in the project area would be lower than the levels presented within this analysis.

The resultant cancer and non-cancer health risks associated with GDF operations were then compared to the standards of significance discussed above in order to determine the associated level of impact. The AERMOD and HARP 2 RAST modeling results are included as an Appendix to this HRA.

HRA RESULTS

As presented in Table 2 above, based on the PCAPCD thresholds, a significant impact would result if sensitive receptors would experience an increased cancer risk of greater than or equal to 10 in one million people, or experience a chronic or acute hazard index of greater than or equal to 1.0.

Based on the foregoing methodology, the cancer risk and non-cancer hazard indices were estimated and are presented in Table 3. The cancer risks and non-cancer hazard indexes presented in Table 3 represent the risks over a 30-year exposure period.

Table 3
Maximum Unmitigated Cancer Risk and Hazard Index Associated with Proposed Project GDF

	Cancer Risk (per million persons)	Acute Hazard Index	Chronic Hazard Index
Health Risks Associated with Proposed Project GDF	1.12	0.03	0.004
Thresholds of Significance	10	1.0	1.0
Exceed Thresholds?	**NO**	**NO**	**NO**

Source: AERMOD and HARP 2 RAST, June 2026 (see Appendix).

As shown in Table 3 above, TAC emissions related to the operation of the proposed GDF would not result in health risks to the maximally exposed receptor in excess of the PCAPCD's thresholds for cancer risk and/or non-cancer hazard index. Thus, operation of the proposed GDF would not result in exposure of nearby receptors to substantial pollutant concentrations.

Appendix

AERMOD and HARP RAST Results

AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Sierra View Shopping Center
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	OTHER
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.SFC
ME	PROFFILE	Profile met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.PFL
ME	SURFDATA	Surf met data info.	93225 2014
ME	UAIRDATA	U-Air met data info.	23230 2014
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	8
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.	

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
ALORC000	POINT	LOAD	642552.9	4292006.4	0	1	(g/s)	3.66

Point Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Stack Height	Stack Temp	Stack Velocity	Stack Diameter
		East (m)	North (m)	(m)	(g/s)	(m)	(K)	(m/s)	(m)
ALORC000	LOAD	642552.9	4292006.4	0	1	3.66	291	0.00035	0.0508

BREEZE AERMOD Model Results

Max. Annual (4 YEARS) Results of Pollutant: OTHER (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	85.15661	642526.40	4292142.40	0.00	0.00	1.80	DC	
	2ND	85.09744	642521.40	4292142.40	0.00	0.00	1.80	DC	
	3RD	84.66809	642531.40	4292142.40	0.00	0.00	1.80	DC	
	4TH	84.49898	642516.40	4292142.40	0.00	0.00	1.80	DC	
	5TH	83.64276	642536.40	4292142.40	0.00	0.00	1.80	DC	
	6TH	83.38704	642511.40	4292142.40	0.00	0.00	1.80	DC	
	7TH	82.11138	642541.40	4292142.40	0.00	0.00	1.80	DC	
	8TH	81.80196	642506.40	4292142.40	0.00	0.00	1.80	DC	
	9TH	80.12321	642546.40	4292142.40	0.00	0.00	1.80	DC	
	10TH	79.98727	642521.40	4292147.40	0.00	0.00	1.80	DC	

Highest Results of Pollutant: OTHER

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	2295.37844	ug/m**3	16011409	642391.70	4292010.50	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
4	Warning Message(s)
996	Informational Message(s)
43680	Hours Were Processed
452	Calm Hours Identified
544	Missing Hours Identified (1.25 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description

WARNING	ME	W186	THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

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AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Sierra View Shopping Center
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	OTHER
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.SFC
ME	PROFFILE	Profile met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.PFL
ME	SURFDATA	Surf met data info.	93225 2014
ME	UAIRDATA	U-Air met data info.	23230 2014
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	8
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.	

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
ALORC001	POINT	BREATH	642552.9	4292007.3	0	1	(g/s)	3.66

Point Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Stack Height	Stack Temp	Stack Velocity	Stack Diameter
		East (m)	North (m)	(m)	(g/s)	(m)	(K)	(m/s)	(m)
ALORC001	BREATH	642552.9	4292007.3	0	1	3.66	289	0.000106	0.0508

BREEZE AERMOD Model Results

Max. Annual (4 YEARS) Results of Pollutant: OTHER (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	86.15009	642526.40	4292142.40	0.00	0.00	1.80	DC	
	2ND	86.06785	642521.40	4292142.40	0.00	0.00	1.80	DC	
	3RD	85.67093	642531.40	4292142.40	0.00	0.00	1.80	DC	
	4TH	85.43356	642516.40	4292142.40	0.00	0.00	1.80	DC	
	5TH	84.64100	642536.40	4292142.40	0.00	0.00	1.80	DC	
	6TH	84.27455	642511.40	4292142.40	0.00	0.00	1.80	DC	
	7TH	83.09152	642541.40	4292142.40	0.00	0.00	1.80	DC	
	8TH	82.63312	642506.40	4292142.40	0.00	0.00	1.80	DC	
	9TH	81.07295	642546.40	4292142.40	0.00	0.00	1.80	DC	
	10TH	80.87389	642521.40	4292147.40	0.00	0.00	1.80	DC	

Highest Results of Pollutant: OTHER

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	2289.17377	ug/m**3	16011409	642391.70	4292010.50	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
4	Warning Message(s)
996	Informational Message(s)
43680	Hours Were Processed
452	Calm Hours Identified
544	Missing Hours Identified (1.25 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description

WARNING	ME	W186	THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

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AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Sierra View Shopping Center
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	OTHER
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.SFC
ME	PROFFILE	Profile met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.PFL
ME	SURFDATA	Surf met data info.	93225 2014
ME	UAIRDATA	U-Air met data info.	23230 2014
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	8
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.	

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
ALORC002	VOLUME	REFUEL	642527.0	4291981.8	0	1	(g/s)	1

Volume Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Release Height	Init. Lat. Dim.	Init. Vert. Dim.
		East (m)	North (m)	(m)	(g/s)	(m)	(m)	(m)
ALORC002	REFUEL	642527.0	4291981.8	0	1	1	3.02	1.86

BREEZE AERMOD Model Results

Max. Annual (4 YEARS) Results of Pollutant: OTHER (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	66.37045	642491.40	4292142.40	0.00	0.00	1.80	DC	
	2ND	66.31213	642496.40	4292142.40	0.00	0.00	1.80	DC	
	3RD	66.12826	642486.40	4292142.40	0.00	0.00	1.80	DC	
	4TH	65.93699	642501.40	4292142.40	0.00	0.00	1.80	DC	
	5TH	65.60479	642481.40	4292142.40	0.00	0.00	1.80	DC	
	6TH	65.23546	642506.40	4292142.40	0.00	0.00	1.80	DC	
	7TH	64.81679	642476.40	4292142.40	0.00	0.00	1.80	DC	
	8TH	64.21017	642511.40	4292142.40	0.00	0.00	1.80	DC	
	9TH	63.78102	642471.40	4292142.40	0.00	0.00	1.80	DC	
	10TH	62.87983	642516.40	4292142.40	0.00	0.00	1.80	DC	

Highest Results of Pollutant: OTHER

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	4389.66363	ug/m**3	14010120	642399.20	4291961.00	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
4	Warning Message(s)
996	Informational Message(s)
43680	Hours Were Processed
452	Calm Hours Identified
544	Missing Hours Identified (1.25 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description

WARNING	ME	W186	THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

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AERMOD Model Options

Model Options

Pathway	Keyword	Description	Value
CO	TITLEONE	Project title 1	Sierra View Shopping Center
CO	TITLETWO	Project title 2	
CO	MODELOPT	Model options	DFAULT,CONC,NODRYDPLT,NOWETDPLT
CO	AVERTIME	Averaging times	1,ANNUAL
CO	URBANOPT	Urban options	
CO	POLLUTID	Pollutant ID	OTHER
CO	HALFLIFE	Half life	
CO	DCAYCOEF	Decay coefficient	
CO	FLAGPOLE	Flagpole receptor heights	1.8
CO	RUNORNOT	Run or Not	RUN
CO	EVENTFIL	Event file	F
CO	SAVEFILE	Save file	F
CO	INITFILE	Initialization file	
CO	MULTYEAR	Multiple year option	N/A
CO	DEBUGOPT	Debug options	N/A
CO	ERRORFIL	Error file	F
SO	ELEVUNIT	Elevation units	METERS
SO	EMISUNIT	Emission units	N/A
RE	ELEVUNIT	Elevation units	METERS
ME	SURFFILE	Surface met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.SFC
ME	PROFFILE	Profile met file	I:\Projects\Reference Material\Air Quality Assessment\2_HRA Guidance_2023 \Meteorological Data for AERMOD\Sac International Airport.PFL
ME	SURFDATA	Surf met data info.	93225 2014
ME	UAIRDATA	U-Air met data info.	23230 2014
ME	SITEDATA	On-site met data info.	
ME	PROFBASE	Elev. above MSL	8
ME	STARTEND	Start-end met dates	
ME	WDROTATE	Wind dir. rot. adjust.	
ME	WINDCATS	Wind speed cat. max.	
ME	SCIMBYHR	SCIM sample params	
EV	DAYTABLE	Print summary opt.	N/A
OU	EVENTOUT	Output info. level	N/A

OU	DAYTABLE	Print summary opt.	

Source Parameter Tables

All Sources

Source ID / Pollutant ID	Source Type	Description	UTM		Elev.	Emiss. Rate	Emiss. Units	Release Height
			East (m)	North (m)	(m)			(m)
ALORC003	VOLUME	SPILL	642527.5	4291982.2	0	1	(g/s)	0

Volume Sources

Source ID / Pollutant ID	Description	UTM		Elev.	Emiss. Rate	Release Height	Init. Lat. Dim.	Init. Vert. Dim.
		East (m)	North (m)	(m)	(g/s)	(m)	(m)	(m)
ALORC003	SPILL	642527.5	4291982.2	0	1	0	3.02	1.86

BREEZE AERMOD Model Results

Max. Annual (4 YEARS) Results of Pollutant: OTHER (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	67.26929	642496.40	4292142.40	0.00	0.00	1.80	DC	
	2ND	67.24984	642491.40	4292142.40	0.00	0.00	1.80	DC	
	3RD	66.96974	642501.40	4292142.40	0.00	0.00	1.80	DC	
	4TH	66.94701	642486.40	4292142.40	0.00	0.00	1.80	DC	
	5TH	66.38690	642481.40	4292142.40	0.00	0.00	1.80	DC	
	6TH	66.31556	642506.40	4292142.40	0.00	0.00	1.80	DC	
	7TH	65.58806	642476.40	4292142.40	0.00	0.00	1.80	DC	
	8TH	65.28547	642511.40	4292142.40	0.00	0.00	1.80	DC	
	9TH	64.56710	642471.40	4292142.40	0.00	0.00	1.80	DC	
	10TH	63.88335	642516.40	4292142.40	0.00	0.00	1.80	DC	

Highest Results of Pollutant: OTHER

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	5413.46403	ug/m**3	14010120	642399.20	4291961.00	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
4	Warning Message(s)
996	Informational Message(s)
43680	Hours Were Processed
452	Calm Hours Identified
544	Missing Hours Identified (1.25 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description

WARNING	ME	W186	THRESH_1MIN 1-min ASOS wind speed threshold used 0.50

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Gasoline Dispensing Facility Operations

Project Name:	Sierra View Shopping Center
Author:	Grace Olsen (Raney)
Date:	6/3/2026
Instructions:	Input project information into green cells

Inputs	
Throughput (gallons/year):	2,040,000

AERMOD Results		
	Average Concentration (ug/m^3)	Highest Hour (ug/m^3)
Loading	85.15661	2295.37844
Breathing	86.15009	2289.17377
Refueling	66.37045	4389.66363
Spillage	67.26929	5413.46403

Outputs	
VOC emissions (lbs/day)	5.304

Info for HARP		
Pollutant	Emission Source	Average Concentration (ug/m^3)
Benzene	Loading	0.000629663
	Breathing	0.000189586
	Refueling	0.002453772
	Spillage	0.008290011
Ethyl Benzene	Loading	0.0033582
	Breathing	0.001011125
	Refueling	0.013086785
	Spillage	0.013264017
Toluene	Loading	0.016791001
	Breathing	0.005055623
	Refueling	0.065433927
	Spillage	0.066320084
Xylenes	Loading	0.0050373
	Breathing	0.001516687
	Refueling	0.019630178
	Spillage	0.019896025

Highest Hour (ug/m^3)
0.016972421
0.005037661
0.162289617
0.667134642
0.090519577
0.026867527
0.865544622
1.067415427
0.452597883
0.134337637
4.327723111
5.337077136
0.135779365
0.040301291
1.298316933
1.601123141

*HARP - HRACalc v22118 6/3/2026 4:12:42 PM - Cancer Risk - Input File: C:\Users\GOlsen\Desktop\HARP

INDEX	GRP1	GRP2	POLID	POLABBRE'	CONC	RISK_SUM	SCENARIO	DETAILS
1			71432	Benzene	0.00063	4.95E-08	30YrCance	*
2			71432	Benzene	0.00019	1.49E-08	30YrCance	*
3			71432	Benzene	0.002454	1.93E-07	30YrCance	*
4			71432	Benzene	0.00829	6.52E-07	30YrCance	*
5			100414	Ethyl Benze	0.003358	2.30E-08	30YrCance	*
6			100414	Ethyl Benze	0.001011	6.92E-09	30YrCance	*
7			100414	Ethyl Benze	0.013087	8.96E-08	30YrCance	*
8			100414	Ethyl Benze	0.013264	9.08E-08	30YrCance	*
9			108883	Toluene	0.016791	0.00E+00	30YrCance	*
10			108883	Toluene	0.005056	0.00E+00	30YrCance	*
11			108883	Toluene	0.065434	0.00E+00	30YrCance	*
12			108883	Toluene	0.06632	0.00E+00	30YrCance	*
13			1330207	Xylenes	0.005037	0.00E+00	30YrCance	*
14			1330207	Xylenes	0.001517	0.00E+00	30YrCance	*
15			1330207	Xylenes	0.01963	0.00E+00	30YrCance	*
16			1330207	Xylenes	0.019896	0.00E+00	30YrCance	*

' Results\SierraViewShopping Center_HRAInput.hra

INH_RISK	SOIL_RISK	DERMAL_RI	MMILK_RIS	WATER_RIS	FISH_RISK	CROP_RISK	BEEF_RISK	DAIRY_RISK
4.95E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.49E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.93E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.52E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.30E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.92E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.96E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.12E-06								

PIG_RISK	CHICKEN_I	EGG_RISK	1ST_DRIVEI	2ND_DRIVE	PASTURE_C	FISH_CON(	WATER_CONC
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	NA	NA	0.00E+00	0.00E+00	0.00E+00

*HARP - HRACalc v22118 6/3/2026 4:12:42 PM - Acute Risk - Input File: C:\Users\GOlsen\Desktop\HARP F

INDEX	GRP1	GRP2	POLID	POLABBRE'	CONC	SCENARIO	CV	CNS
1			71432	Benzene	0.016972	NonCancer	0.00E+00	0.00E+00
2			71432	Benzene	0.005038	NonCancer	0.00E+00	0.00E+00
3			71432	Benzene	0.16229	NonCancer	0.00E+00	0.00E+00
4			71432	Benzene	0.667135	NonCancer	0.00E+00	0.00E+00
5			100414	Ethyl Benze	0.09052	NonCancer	0.00E+00	0.00E+00
6			100414	Ethyl Benze	0.026868	NonCancer	0.00E+00	0.00E+00
7			100414	Ethyl Benze	0.865545	NonCancer	0.00E+00	0.00E+00
8			100414	Ethyl Benze	1.067415	NonCancer	0.00E+00	0.00E+00
9			108883	Toluene	0.452598	NonCancer	0.00E+00	9.05E-05
10			108883	Toluene	0.134338	NonCancer	0.00E+00	2.69E-05
11			108883	Toluene	4.327723	NonCancer	0.00E+00	8.66E-04
12			108883	Toluene	5.337077	NonCancer	0.00E+00	1.07E-03
13			1330207	Xylenes	0.135779	NonCancer	0.00E+00	6.17E-06
14			1330207	Xylenes	0.040301	NonCancer	0.00E+00	1.83E-06
15			1330207	Xylenes	1.298317	NonCancer	0.00E+00	5.90E-05
16			1330207	Xylenes	1.601123	NonCancer	0.00E+00	7.28E-05
							0	0.00219
				Highest	0.031535			

\esults\SierraViewShopping Center_HRAInput.hra

IMMUN	KIDNEY	GILV	REPRO/DE\	RESP	SKIN	EYE	BONE/TEET	ENDO
6.29E-04	0.00E+00	0.00E+00	6.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1.87E-04	0.00E+00	0.00E+00	1.87E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.01E-03	0.00E+00	0.00E+00	6.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.47E-02	0.00E+00	0.00E+00	2.47E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.05E-05	0.00E+00	9.05E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.69E-05	0.00E+00	2.69E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E-04	0.00E+00	8.66E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-03	0.00E+00	1.07E-03	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.17E-06	0.00E+00	6.17E-06	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E-06	0.00E+00	1.83E-06	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.90E-05	0.00E+00	5.90E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-05	0.00E+00	7.28E-05	0.00E+00	0.00E+00
0.031535	0	0	0.031535	0.00219	0	0.00219	0	0

BLOOD	ODOR	GENERAL
6.29E-04	0.00E+00	0.00E+00
1.87E-04	0.00E+00	0.00E+00
6.01E-03	0.00E+00	0.00E+00
2.47E-02	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00
0.031535	0	0

*HARP - HRACalc v22118 6/3/2026 4:12:42 PM - Chronic Risk - Input File: C:\Users\GOlsen\Desktop\HARP

INDEX	GRP1	GRP2	POLID	POLABBRE'	CONC	SCENARIO	CV	CNS
1			71432	Benzene	0.00063	NonCancer	0.00E+00	0.00E+00
2			71432	Benzene	0.00019	NonCancer	0.00E+00	0.00E+00
3			71432	Benzene	0.002454	NonCancer	0.00E+00	0.00E+00
4			71432	Benzene	0.00829	NonCancer	0.00E+00	0.00E+00
5			100414	Ethyl Benze	0.003358	NonCancer	0.00E+00	0.00E+00
6			100414	Ethyl Benze	0.001011	NonCancer	0.00E+00	0.00E+00
7			100414	Ethyl Benze	0.013087	NonCancer	0.00E+00	0.00E+00
8			100414	Ethyl Benze	0.013264	NonCancer	0.00E+00	0.00E+00
9			108883	Toluene	0.016791	NonCancer	0.00E+00	0.00E+00
10			108883	Toluene	0.005056	NonCancer	0.00E+00	0.00E+00
11			108883	Toluene	0.065434	NonCancer	0.00E+00	0.00E+00
12			108883	Toluene	0.06632	NonCancer	0.00E+00	0.00E+00
13			1330207	Xylenes	0.005037	NonCancer	0.00E+00	7.20E-06
14			1330207	Xylenes	0.001517	NonCancer	0.00E+00	2.17E-06
15			1330207	Xylenes	0.01963	NonCancer	0.00E+00	2.80E-05
16			1330207	Xylenes	0.019896	NonCancer	0.00E+00	2.84E-05
							0	6.58E-05

Highest 0.003854

P Results\SierraViewShopping Center_HRAInput.hra

IMMUN	KIDNEY	GILV	REPRO/DEV	RESP	SKIN	EYE	BONE/TEET	ENDO
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	1.68E-06	1.68E-06	1.68E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E-06
0.00E+00	5.06E-07	5.06E-07	5.06E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-07
0.00E+00	6.54E-06	6.54E-06	6.54E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E-06
0.00E+00	6.63E-06	6.63E-06	6.63E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-06
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E-04	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.20E-06	0.00E+00	7.20E-06	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-06	0.00E+00	2.17E-06	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-05	0.00E+00	2.80E-05	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-05	0.00E+00	2.84E-05	0.00E+00	0.00E+00
0	1.54E-05	1.54E-05	1.54E-05	6.58E-05	0	0.000432	0	1.54E-05

BLOOD	ODOR	GENERAL	DETAILS	INH_CONC	SOIL_DOSE	DERMAL_D	MMILK_DO	WATER_DO
2.10E-04	0.00E+00	0.00E+00	*	6.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
6.32E-05	0.00E+00	0.00E+00	*	1.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.18E-04	0.00E+00	0.00E+00	*	2.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2.76E-03	0.00E+00	0.00E+00	*	8.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	3.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.31E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.33E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	5.06E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	6.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	6.63E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	5.04E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.52E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.96E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00	0.00E+00	*	1.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.003854	0	0						

FISH_DOSE	CROP_DOS	BEEF_DOSI	DAIRY_DOS	PIG_DOSE	CHICKEN_[	EGG_DOSE	1ST_DRIVEI	2ND_DRIVE
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA
0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	INHALATIO	NA

3RD_DRIVE	PASTURE_C	FISH_CON(	WATER_CONC
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00
NA	0.00E+00	0.00E+00	0.00E+00