Rule 1200 Health Risk Assessment

Facility Name:	O'Reilly Auto Enterprises, LLC
Facility ID:	APCD2025-SITE-04787
Application:	APCD2025-APP-008693
Project Engineer:	Hawzhin Muhamed
Modeler:	Bill Reeve
Toxics Risk Analyst:	Andrew Bernabe
Date Completed by Toxics:	5/13/2025
HRA Tools Used:	Lakes-AERMOD (Version 24142)/HARP RAST (v22118)

The following estimated risks are valid only for the input data provided by the Project Engineer.

Estimated worker risk does not exceed the residential risk. Therefore, only residential risk is presented in the following results.

Estimated Risk Levels:

Maximum Individual Cancer Risk (Resident)	= 0.85 in one million
Chronic Noncancer Health Hazard Index (Resident)	= 2.28E-04
8-Hour Noncancer Health Hazard Index (Worker)	= N/A*
Acute Health Hazard Index (**PMI)	= 5.97E-02

*8-Hour Non-Cancer Health Hazard Index is only applicable when calculating worker risk
**Point of Maximum Impact

The proposed application is for a stationary diesel emergency engine. The ARB Air Toxics Control Measure (ATCM) limits non-emergency operations to 50 hours per year.

Input Data Provided by Project Engineer:

Type of Source: Emergency Diesel IC Engine.
Controls Description: None.

Worst-Case TAC Emissions Increase:

Toxic Air Contaminant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lb/yr)
DIESEL PARTICULATE	N/A	1.34E+00
ACETALDEHYDE	3.90E-03	1.95E-01
ACROLEIN	1.69E-04	8.44E-03
ARSENIC COMPOUNDS	7.97E-06	3.98E-04
BENZENE	9.28E-04	4.64E-02
BUTADIENE, 1,3-	1.08E-03	5.40E-02
CADMIUM AND COMPOUNDS	7.47E-06	3.74E-04
CHLOROBENZENE	9.96E-07	4.98E-05
CHROMIUM (HEXAVALENT)	4.98E-07	2.49E-05
COPPER AND COMPOUNDS	2.04E-05	1.02E-03
ETHYL BENZENE	5.43E-05	2.71E-03
FORMALDEHYDE	8.60E-03	4.30E-01
HEXANE-N	1.34E-04	6.70E-03
HYDROCHLORIC ACID	9.28E-04	4.64E-02
LEAD & COMPOUNDS	4.13E-05	2.07E-03
MANGANESE AND COMPOUNDS	1.54E-05	7.72E-04
MERCURY AND COMPOUNDS	9.96E-06	4.98E-04
NAPHTHALENE	9.81E-05	4.91E-03
NICKEL AND NICKEL COMPOUNDS	1.94E-05	9.71E-04
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for HRA]	1.80E-04	9.01E-03
PROPYLENE	2.33E-03	1.16E-01
SELENIUM AND COMPOUNDS	1.10E-05	5.48E-04
TOLUENE	5.25E-04	2.62E-02
XYLENES	2.11E-04	1.06E-02

Source: Acute TACs – Ventura County, 5/17/01.

Diesel particulate exhaust is a surrogate for all toxic air contaminant annual emissions from diesel-fueled engines when determining the potential cancer risk and noncancer chronic hazard index. Speciated toxic air contaminant hourly emissions are used when determining the potential noncancer acute hazard index.

Process Data:

Operation Parameter	Value
Diesel particulate emission factor (g/hp-hr)	0.13
Engine horsepower (bhp)	95.7
Fuel Consumption (gal/hr)	4.98
Annual hours of operation	50

Release Parameters:

Stack Height (ft)	6.8
Stack Diameter (ft)	0.2
Temperature deg F	1191
Exhaust Flow Rate (acfm)	512

Discussion

The HRA was conducted in accordance with EPA and OEHHA guidance and District standard procedures. A point source was modeled with refined air dispersion modeling using EPA's AERMOD model, AERMET (Version 24142) processed Chula Vista 2018/2020 ustar updated meteorology data, AERMAP terrain processing, and rural dispersion coefficients. Building downwash effects were calculated using the EPA BPIP-Prime model. The receptor grid was sufficiently dense to identify maximum impacts.

These risk results are based on the risk scenario calculations and health data at the time of the review, and should not be scaled with revised emissions rates without consulting with the Toxics Section.

Cancer Risk

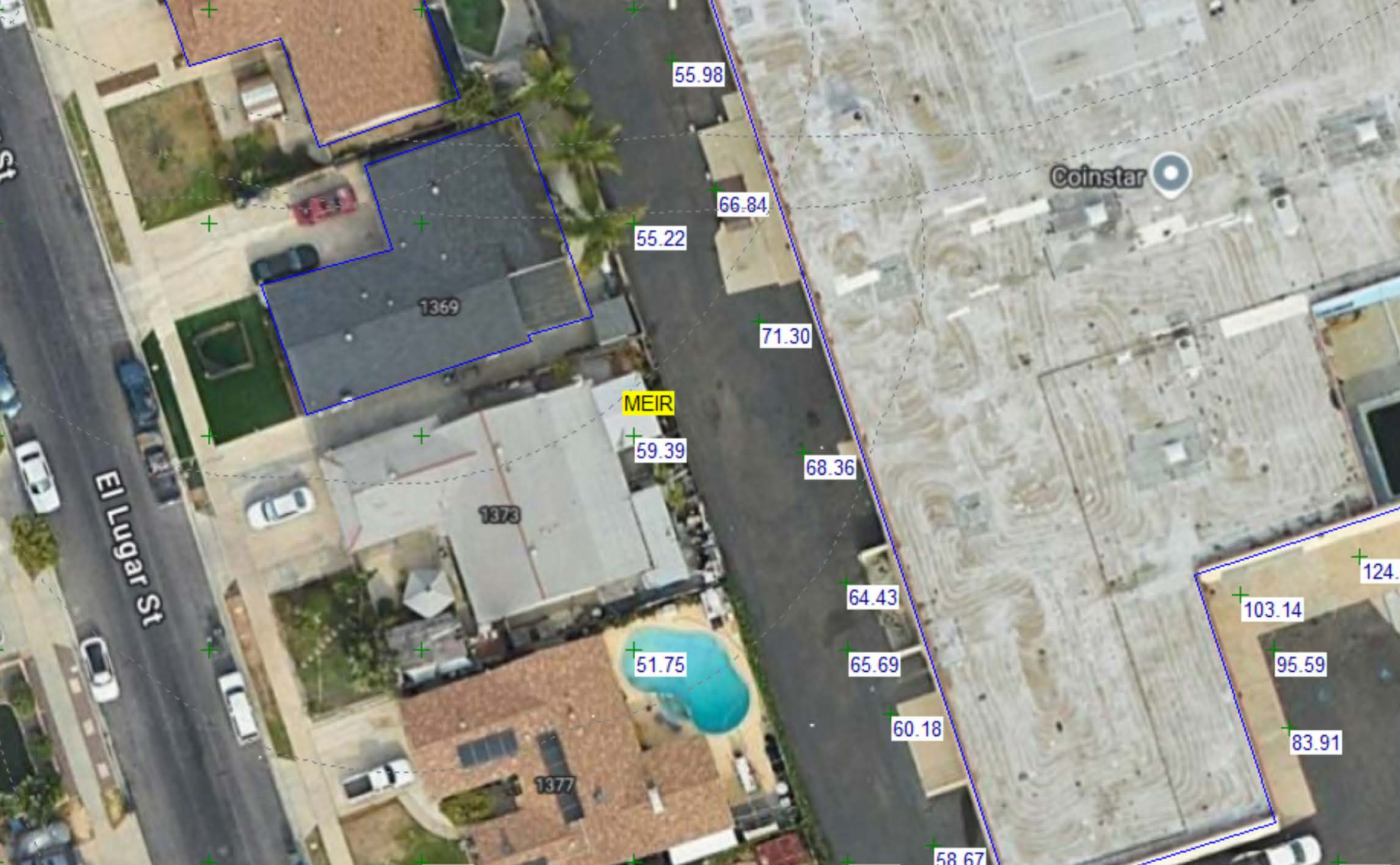
INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	RISK_SUM	SCENARIO	DETAILS	INH_RISK
1	Engine		9901	DieselExhP	0.00114	8.48E-07	30YrCance	*	8.48E-07

Chronic Risk

INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	SCENARIO	RESP
1	Engine		9901	DieselExhP	0.00114	NonCancei	2.28E-04

Acute Risk

INDEX	GRP1	GRP2	POLID	POLABBRE	CONC	SCENARIO	EYE
1	Engine		9901	DieselExhP	0	NonCancei	0.00E+00
2	Engine		75070	Acetaldehy	1.41	NonCancei	3.00E-03
4	Engine		7440382	Arsenic	0.00288	NonCancei	0.00E+00
5	Engine		71432	Benzene	0.336	NonCancei	0.00E+00
6	Engine		106990	1,3-Butadi	0.391	NonCancei	0.00E+00
7	Engine		7440439	Cadmium	0.0027	NonCancei	0.00E+00
8	Engine		108907	Chloroben	0.00036	NonCancei	0.00E+00
9	Engine		18540299	Cr(VI)	0.00018	NonCancei	0.00E+00
10	Engine		7440508	Copper	0.00739	NonCancei	0.00E+00
11	Engine		100414	Ethyl Benz	0.0196	NonCancei	0.00E+00
12	Engine		50000	Formaldeh	3.11	NonCancei	5.65E-02
13	Engine		110543	Hexane	0.0485	NonCancei	0.00E+00
14	Engine		7647010	HCl	0.336	NonCancei	1.60E-04
15	Engine		7439921	Lead	0.015	NonCancei	0.00E+00
16	Engine		7439965	Manganes	0.00559	NonCancei	0.00E+00
17	Engine		7439976	Mercury	0.0036	NonCancei	0.00E+00
18	Engine		91203	Naphthale	0.0355	NonCancei	0.00E+00
19	Engine		7440020	Nickel	0.00703	NonCancei	0.00E+00
20	Engine		1151	PAHs-w/o	0.0652	NonCancei	0.00E+00
21	Engine		115071	Propylene	0.841	NonCancei	0.00E+00
22	Engine		7782492	Selenium	0.00396	NonCancei	0.00E+00
23	Engine		108883	Toluene	0.19	NonCancei	3.80E-05
24	Engine		7664417	NH3	0	NonCancei	0.00E+00
25	Engine		1330207	Xylenes	0.0764	NonCancei	3.47E-06
							5.97E-02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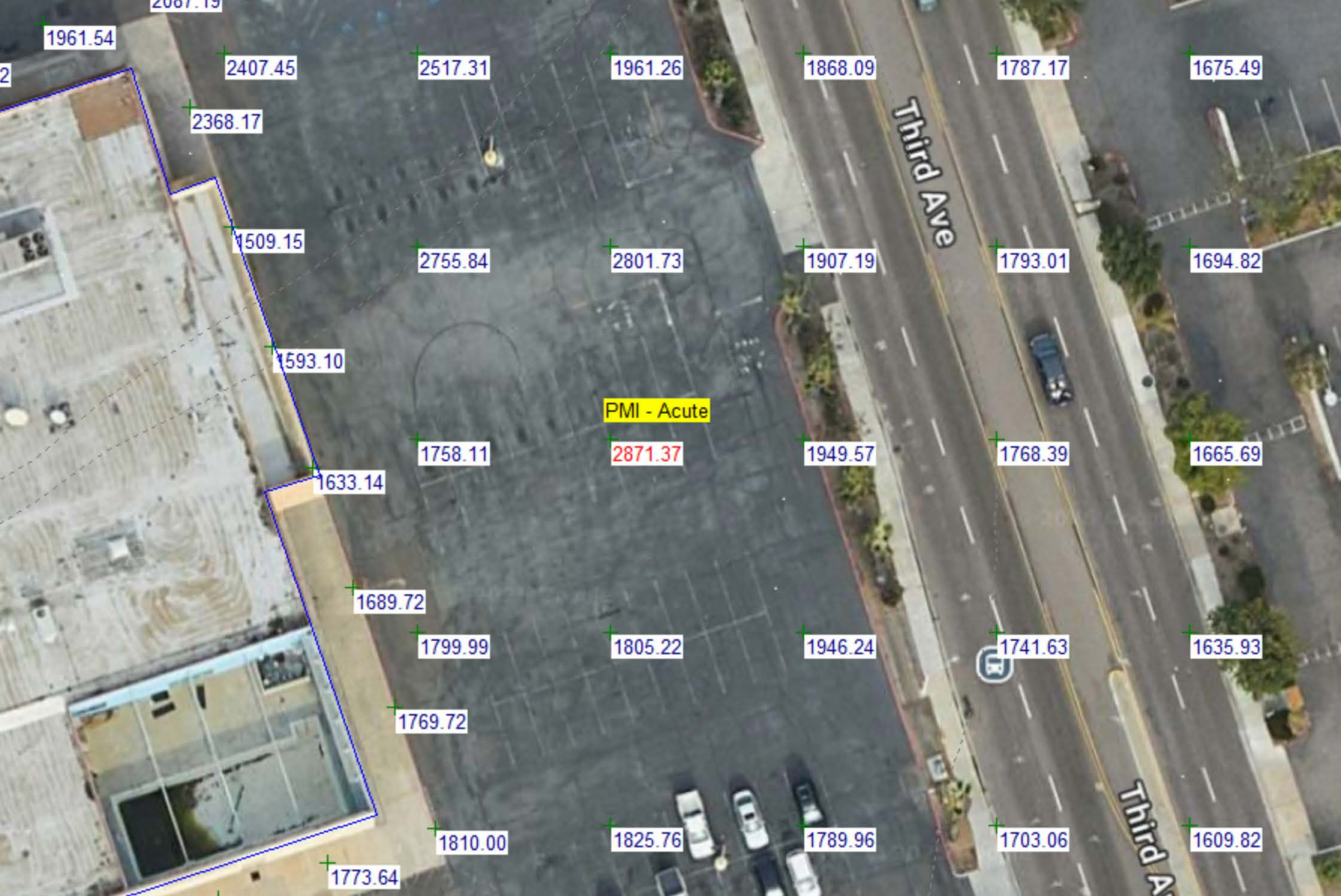
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FACILITY NAME: O'Reilly Auto Enterprises, LLC

Fuel Consumption (gal/hr):	4.98
Diesel Particulate Emission Factor (g/hp-hr):	0.12682
Brake Horsepower (hp):	95.7
Annual Hours of Operation (hrs):	50
FACILITY ID:	APCD2025-SITE-04787
APPLICATION NO.:	APCD2025-APP-008693
ENGINEER:	**Hawzhin Muhamed**

RISK ANALYST ONLY

DISPERSION MODELING DATA

Annual Receptor Type: Resident

ANNUAL DISPERSION FACTOR (µg/m3)/(g/s): **59.4**

Distance (m):

Hourly Receptor Type: PMI

HOURLY DISPERSION FACTOR (µg/m3)/(g/s): **2871.4**

Distance (m):

CHEMICAL NAME	Emission Factor lb/1000 gal	Acute Emission Rate lb/hr	Annual Emission Rate lb/yr	Acute Emissions Rate g/s	Annual Emission Rate g/s	Hourly GLC µg/m³	Annual GLC µg/m³
DIESEL PARTICULATE			1.34E+00		1.92E-05		1.14E-03
ACETALDEHYDE	7.83E-01	3.90E-03	1.95E-01	4.91E-04		1.41E+00	
ACROLEIN*	3.39E-02	1.69E-04	8.44E-03	2.13E-05		6.11E-02	
ARSENIC COMPOUNDS	1.60E-03	7.97E-06	3.98E-04	1.00E-06		2.88E-03	
BENZENE	1.86E-01	9.28E-04	4.64E-02	1.17E-04		3.36E-01	
BUTADIENE, 1,3-	2.17E-01	1.08E-03	5.40E-02	1.36E-04		0.390978	
CADMIUM AND COMPOUNDS	1.50E-03	7.47E-06	3.74E-04	9.41E-07		2.70E-03	
CHLOROBENZENE	2.00E-04	9.96E-07	4.98E-05	1.25E-07		3.60E-04	
CHROMIUM (HEXAVALENT)	1.00E-04	4.98E-07	2.49E-05	6.27E-08		1.80E-04	
COPPER AND COMPOUNDS	4.10E-03	2.04E-05	1.02E-03	2.57E-06		7.39E-03	
ETHYL BENZENE	1.09E-02	5.43E-05	2.71E-03	6.84E-06		1.96E-02	
FORMALDEHYDE	1.73E+00	8.60E-03	4.30E-01	1.08E-03		3.11E+00	
HEXANE-N	2.69E-02	1.34E-04	6.70E-03	1.69E-05		4.85E-02	
HYDROCHLORIC ACID	1.86E-01	9.28E-04	4.64E-02	1.17E-04		3.36E-01	
LEAD & COMPOUNDS	8.30E-03	4.13E-05	2.07E-03	5.21E-06		1.50E-02	
MANGANESE AND COMPOUNDS	3.10E-03	1.54E-05	7.72E-04	1.95E-06		5.59E-03	
MERCURY AND COMPOUNDS (INORGANIC)	2.00E-03	9.96E-06	4.98E-04	1.25E-06		3.60E-03	
NAPHTHALENE	1.97E-02	9.81E-05	4.91E-03	1.24E-05		3.55E-02	
NICKEL AND NICKEL COMPOUNDS	3.90E-03	1.94E-05	9.71E-04	2.45E-06		7.03E-03	
POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for	3.62E-02	1.80E-04	9.01E-03	2.27E-05		6.52E-02	
PROPYLENE	4.67E-01	2.33E-03	1.16E-01	2.93E-04		8.41E-01	
SELENIUM AND COMPOUNDS	2.20E-03	1.10E-05	5.48E-04	1.38E-06		3.96E-03	
TOLUENE	1.05E-01	5.25E-04	2.62E-02	6.61E-05		1.90E-01	
AMMONIA (only if SCR)	N/A						
XYLENES	4.24E-02	2.11E-04	1.06E-02	2.66E-05		7.64E-02	

Facility Name:	O'Reilly Auto Enterprises, LLC		
Application Number:	APCD2025-APP-008693		
Site ID Number:	APCD2025-SITE-04787		
Equipment Address:	1376 Third Avenue	1376 Third Avenue Chula Vista, CA 91911	
	Chula Vista, CA 91911		
Contact Name:	Patrick Tam	Shawn Strong	
Contact Title:	Director		
Contact Affiliation:	O'Reilly Auto Enterprises, LLC		
Contact Number:	714 893-7900	417-829-5804	
Contact E-Mail:	tam@proehs.com	sstrong5@oreillyauto.com	
Project Engineer:	Hawzhin Muhamed		

Make:	Perkins				
Model:	1104D-E44TG1				
S/N:					
Fuel Type:	Diesel				
BHP Rating:	95.7				
Model Year:	2025				
Tier Level:	3				
Engine Family Number:	SPKXL04.4NP1				
Device Driven:	60 kW				
NOx, g/BHP-hr:	3.11	4.17	g/kW-hr	NOx, g/BHP-hr:	-
CO, g/BHP-hr:	1.04	1.40	g/kW-hr		
NMHC, g/BHP-hr:	0.19	0.26	g/kW-hr		
PM10, g/BHP-hr:	0.13	0.17	g/kW-hr		
NH3 Slip from SCR (yes/no)	no	0	ppm (default 10 ppm if applicable)		
Fuel Usage, gal/hr:	4.98				
Operating Schedule, hrs/day:	24				
Operating Schedule, hrs/yr:	50				

CLARKE Powered Solutions

Perkins

Engine Model:	1104D-E44TG1
Engine Family	SPKXL04.4NP1
Certificate #	SPKXL04.4NP1-027
Issue Date	17-Oct-2024
Commerce Introduction Date	1-Oct-2024
Carryover Engine Family Name	RPKXL04.4NP1
Power Category	5 = 56<=kW<75
Application Regulation	4 = Part 60 only certified to the requirements of part 89
Applicable Tier	3 = Tier 3
Applicable Compliance Standard	N = Not Applicable
Fuel	L = 300-500 ppm Low Sulfur Diesel, U = 7-15 ppm Ultra Low Sulfur Diesel, O = Perkins Specification for distillate diesel fuel
Fuel Meter System	D = Direct Diesel Injection, D = Direct Diesel Injection, D = Direct Diesel Injection
Useful Life of Engine Family	C = 10 years / 8,000 hrs
Engine Combustion Cycle	A = 4 Stroke Compression Ignition
Non Aftertreatment Device Type	Y = Electronic Control, X = Engine Design Modification
NMHC (g/kW-hr)	0.26
Nox (g/kW-hr)	4.17
NMHC+Nox (g/kW-hr)	4.4
CO (g/kW-hr)	1.4
PM (g/kW-hr)	0.17
CO2 (g/kW-hr)	833.71
Displacement	4.399
Certification Fuel	U = 7-15 ppm Ultra Low Sulfur Diesel
Engine Operation	C = Constant Speed
Test Procedure	2 = Steady-State 5-Mode Cycle
Test Type	DMT = Discrete-Modal Testing

Exhaust Flow Rate, cfm:	512				
Exhaust Temperature, °F:	1191				
Stack Height above ground, ft:	6.79				
Stack Diameter, ft:	0.2	2.40			
Nearest School, ft:	557				
Residential Receptor, m:	25.00	32	ft		
Occupational Receptor, m:	25.00	80	ft	School Notification Required	
Acute Receptor, m:	25.00	32	ft	MAAC Community Charter School	
Vertical Exhaust? (yes/no):	yes				
Flapper Valve? (flapper/raincap):	flapper				
Plot Plan? (yes/no):	yes				
Flow Obstructions:	no				

Certification Level Steady-State Discrete Modal Test Results (g/kW-h

Model	Engine Family	Manufacturer	Certificate #	Carryover Engine	Power Ca	Applica	NMHC	NOx	NMHC+NOx	CO	PM	CO2
2025	SPKXL04.4NP1	Perkins Engines Co Ltd	SPKXL04.4NP1-027	RPKXL04.4NP1	56<=kW<75	Tier 3	0.26	4.17	4.4	1.4	0.17	833.7
2025	SPKXL04.4NP1	Perkins Engines Co Ltd	SPKXL04.4NP1-027	RPKXL04.4NP1	56<=kW<75	Tier 3	0.22	3.81	4	1.3	0.2	813.1

San Diego Air Pollution Control District
Supplemental Application Information
Rule 1200 Toxics Evaluation

(ALL REQUESTED INFORMATION IS IMPORTANT - PLEASE FILL BLUE CELLS)

Facility Name: O'Reilly Auto Enterprises, LLC
Equipment Location: 1376 Third Avenue Chula Vista, CA 91911

Project Description: Emergency Diesel Engine
Control Equipment: None
Operating Schedule: Hours per Day: 24 Weeks per Year: 50
Days per Week: 7 Days per Year: 50

RELEASE POINT DATA

How are the emissions from this project released into the outdoor air? (Check all that apply)

Point Source	Non-Point Source		
☑ Exhaust Stack or Duct	☐ Passive Ventilation	☐ Released through windows and/or roll-up doors	☐ Fugitive Emissions

Point Source

Parameter	Point Source #1	Point Source #2	Point Source #3
Height of release above ground (ft)	6.8		
Stack Diameter (or length x width) (ft)	0.20		
Exhaust Gas Temperature (°F)[1]	1191		
Exhaust Gas Flow (ACFM)	512		
Direction of Flow[2]	vertical		
Flow Obstruction[3]	no		
Distance to Nearest Property Line (+/- 10ft)	32.00		

[1] Use “70 °F” or “Ambient” if unknown
[2] if "other" describe:
[3] if "other" describe:

AERIAL MAP AND FACILITY PLOT PLAN must be attached and labeled with **Release Point(s) and Building(s)**
(includes facility and neighboring buildings within 5x the release height of a point source(s)).

Parameter	Building A	Building B	Building C
Point Source(s)			
Point Source Location			
Building Length (ft) (optional)			
Building Width (ft) (optional)			
Building Height above ground (ft)			

San Diego APCD Use Only

Additional Rule 1200 Submittal Information

Submittal Date:		Site ID:	APCD2025-SITE-04787
Project Engineer:	Hawzhin Muhamed	Appl. Number(s):	APCD2025-APP-008693
Fees Collected:		PTO No. (if existing):	

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↑ *** AERMOD - VERSION 24142  ***   *** D:\Modeling Projects\8693_OReilly\8693_OReilly.isc
 ***        05/05/25
 *** AERMET - VERSION  24142 ***   ***
***        16:38:48

           PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - -
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION STCK1        POINT      493748.240  3607401.230       27.790
** Source Parameters **
   SRCPARAM STCK1              1.0     2.073   917.039 82.7910501393338   0.06096

** Building Downwash **
   BUILDHGT STCK1            6.10     6.10     6.10     6.10     6.10     6.10
   BUILDHGT STCK1            6.10     6.10     6.10     6.10     6.10     6.10
   BUILDHGT STCK1            6.10     6.10     6.10     6.10     6.10     6.10
   BUILDHGT STCK1            6.10     6.10     6.10     6.10     6.10     6.10
   BUILDHGT STCK1            6.10     6.10     6.10     6.10     6.10     6.10
   BUILDHGT STCK1            6.10     6.10     6.10     6.10     6.10     6.10

   BUILDWID STCK1           76.43    80.25    81.63    80.53    81.25    81.97
   BUILDWID STCK1           80.21    85.83    91.75    94.88    95.14    92.50
   BUILDWID STCK1           87.05    78.95    69.90    59.13    62.22    70.29
   BUILDWID STCK1           76.43    80.25    81.63    80.53    81.25    81.97
   BUILDWID STCK1           80.21    85.83    91.75    94.88    95.14    92.50
   BUILDWID STCK1           87.05    78.95    69.90    59.13    62.22    70.29

   BUILDLEN STCK1           94.88    95.14    92.50    87.05    78.95    69.90
   BUILDLEN STCK1           59.13    62.22    70.29    76.43    80.25    81.63
   BUILDLEN STCK1           80.53    81.25    81.97    80.21    85.83    91.75
   BUILDLEN STCK1           94.88    95.14    92.50    87.05    78.95    69.90
   BUILDLEN STCK1           59.13    62.22    70.29    76.43    80.25    81.63
   BUILDLEN STCK1           80.53    81.25    81.97    80.21    85.83    91.75
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   XBADJ    STCK1          -61.51   -54.47   -45.78   -35.70   -24.53   -12.62
   XBADJ    STCK1           -0.32     0.30    -1.20    -2.66    -4.05    -5.31
   XBADJ    STCK1           -6.41    -7.31    -8.00    -8.44   -16.01   -25.07
   XBADJ    STCK1          -33.37   -40.66   -46.72   -51.35   -54.42   -57.28
   XBADJ    STCK1          -58.82   -62.52   -69.09   -73.77   -76.20   -76.32
   XBADJ    STCK1          -74.12   -73.93   -73.98   -71.78   -69.82   -66.68

   YBADJ    STCK1          -35.55   -36.08   -35.50   -33.86   -33.31   -32.99
   YBADJ    STCK1          -31.67   -26.91   -20.80   -14.07    -6.91     0.47
   YBADJ    STCK1            7.83    14.95    22.33    29.25    31.41    33.95
   YBADJ    STCK1           35.55    36.08    35.50    33.86    33.31    32.99
   YBADJ    STCK1           31.67    26.91    20.80    14.07     6.91    -0.47
   YBADJ    STCK1           -7.83   -14.95   -22.33   -29.25   -31.41   -33.95

   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for     1 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =    274333.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * NOTURBST - Meteorological data Ignore turbulence - stable hours
      * Model Assumes No FLAGPOLE Receptor Heights.
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     * 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:      1 Source(s);       1 Source Group(s); and   17977 Receptor(s)

               with:       1 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                and:       0 VOLUME source(s)
                and:       0 AREA type source(s)
                and:       0 LINE source(s)
                and:       0 RLINE/RLINEXT source(s)
                and:       0 OPENPIT source(s)
                and:       0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:       0 SWPOINT source(s)


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

 **The AERMET Input Meteorological Data Version Date:  24142

 **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) =    53.00 ;  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 =      5.5 MB of RAM.
```

```
 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   8693_OReilly.err

 **File for Summary of Results:   8693_OReilly.sum

↑ *** AERMOD - VERSION 24142  ***   *** D:\Modeling Projects\8693_OReilly\8693_OReilly.isc
 ***        05/05/25
 *** AERMET - VERSION  24142 ***   ***
***        16:38:48

           PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

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

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

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

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

Surface file: C:\Users\breeve\OneDrive - County of San Diego\Meteorology Documents\AERMET File Met Version: 24142
Profile file: C:\Users\breeve\OneDrive - County of San Diego\Meteorology Documents\AERMET File
Surface format: FREE

Profile format: FREE

Surface station no.: 23188 Upper air station no.: 3190
Name: SAN_DIEGO/LINDBERGH_FIELD Name: UNKNOWN

Year: 2018 Year: 2018

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
18	01	01	1	01	-0.9	0.032	-9.000	-9.000	-999.	13.	3.2	0.18	0.94	1.00	0.63	99.	10.0	282.8	10.0
18	01	01	1	02	-1.4	0.040	-9.000	-9.000	-999.	19.	4.1	0.18	0.94	1.00	0.80	103.	10.0	282.9	10.0
18	01	01	1	03	-2.4	0.052	-9.000	-9.000	-999.	28.	5.3	0.18	0.94	1.00	1.03	101.	10.0		

```
282.1   10.0
 18 01 01   1 04   -1.6  0.043 -9.000 -9.000 -999.   21.      4.4  0.18   0.94   1.00    0.85  112.   10.0
281.8   10.0
 18 01 01   1 05   -0.7  0.033 -9.000 -9.000 -999.   15.      4.7  0.18   0.94   1.00    0.67   69.   10.0
281.0   10.0
 18 01 01   1 06 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.13   0.94   1.00    0.00    0.   10.0
281.0   10.0
 18 01 01   1 07 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.13   0.94   1.00    0.00    0.   10.0
280.3   10.0
 18 01 01   1 08 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.13   0.94   0.48    0.00    0.   10.0
280.8   10.0
 18 01 01   1 09    5.1 -9.000 -9.000 -9.000   18. -999. -99999.0  0.13   0.94   0.29    0.00    0.   10.0
283.0   10.0
 18 01 01   1 10   17.7  0.110  0.279  0.019   44.   88.     -6.8  0.13   0.94   0.22    0.85  356.   10.0
285.8   10.0
 18 01 01   1 11   97.7  0.150  0.772  0.015  170.  140.     -3.1  0.12   0.94   0.20    1.03  292.   10.0
288.5   10.0
 18 01 01   1 12  110.0  0.204  0.927  0.013  263.  220.     -6.9  0.15   0.94   0.19    1.52  269.   10.0
289.8   10.0
 18 01 01   1 13  108.3  0.236  0.989  0.011  323.  275.    -10.9  0.15   0.94   0.19    1.88  254.   10.0
290.5   10.0
 18 01 01   1 14   92.9  0.240  0.996  0.009  384.  282.    -13.4  0.15   0.94   0.20    1.97  261.   10.0
291.0   10.0
 18 01 01   1 15   64.2  0.256  0.923  0.008  442.  310.    -23.5  0.15   0.94   0.23    2.24  259.   10.0
290.8   10.0
 18 01 01   1 16   20.0  0.212  0.633  0.008  456.  235.    -42.9  0.15   0.94   0.32    1.97  262.   10.0
289.5   10.0
 18 01 01   1 17   -2.5  0.059 -9.000 -9.000 -999.   67.      7.4  0.15   0.94   0.59    1.25  245.   10.0
289.0   10.0
 18 01 01   1 18   -0.7  0.029 -9.000 -9.000 -999.   14.      3.2  0.13   0.94   1.00    0.63  212.   10.0
287.8   10.0
 18 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.13   0.94   1.00    0.00    0.   10.0
287.0   10.0
 18 01 01   1 20 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.13   0.94   1.00    0.00    0.   10.0
286.5   10.0
 18 01 01   1 21   -0.7  0.029 -9.000 -9.000 -999.   12.      3.1  0.09   0.94   1.00    0.67  120.   10.0
286.2   10.0
 18 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0  0.13   0.94   1.00    0.00    0.   10.0
286.2   10.0
```

```
 18 01 01   1 23   -1.8  0.054 -9.000 -9.000 -999.   30.      7.6  0.18   0.94   1.00    1.07  101.   10.0
286.1   10.0
 18 01 01   1 24   -2.1  0.058 -9.000 -9.000 -999.   34.      8.3  0.18   0.94   1.00    1.16  101.   10.0
285.9   10.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 18 01 01 01   10.0 1   99.    0.63   282.9   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 24142  ***   *** D:\Modeling Projects\8693_OReilly\8693_OReilly.isc
 ***        05/05/25
 *** AERMET - VERSION  24142 ***   ***
***        16:38:48

           PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

                                      *** THE SUMMARY OF MAXIMUM PERIOD ( 26304 HRS) RESULTS ***


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


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

ALL       1ST HIGHEST VALUE IS     358.40778 AT (  493835.50,  3607412.50,    28.79,    28.79,    0.00)  DC

          2ND HIGHEST VALUE IS     356.60793 AT (  493820.50,  3607412.50,    28.51,    28.51,    0.00)  DC

          3RD HIGHEST VALUE IS     356.44951 AT (  493820.50,  3607427.50,    28.67,    28.67,    0.00)  DC

          4TH HIGHEST VALUE IS     345.55567 AT (  493809.15,  3607404.68,    28.31,    28.31,    0.00)  DC
```

```
          5TH HIGHEST VALUE IS     345.55567 AT (  493809.15,  3607404.68,    28.31,    28.31,    0.00)  DC

          6TH HIGHEST VALUE IS     342.83555 AT (  493812.33,  3607395.33,    28.31,    28.31,    0.00)  DC

          7TH HIGHEST VALUE IS     341.48594 AT (  493820.50,  3607397.50,    28.27,    28.27,    0.00)  DC

          8TH HIGHEST VALUE IS     329.46069 AT (  493835.50,  3607397.50,    28.63,    28.63,    0.00)  DC

          9TH HIGHEST VALUE IS     305.81512 AT (  493805.50,  3607427.50,    28.55,    28.55,    0.00)  DC

         10TH HIGHEST VALUE IS     298.79479 AT (  493815.50,  3607385.99,    28.28,    28.28,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 24142  ***   *** D:\Modeling Projects\8693_OReilly\8693_OReilly.isc
 ***        05/05/25
 *** AERMET - VERSION  24142 ***   ***
***        16:38:48

           PAGE   5
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

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


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

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

ALL      HIGH   1ST HIGH VALUE IS    2871.37106  ON 19092920: AT (  493835.50,  3607397.50,    28.63,
```

```
28.63,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 24142  ***   *** D:\Modeling Projects\8693_OReilly\8693_OReilly.isc
 ***        05/05/25
 *** AERMET - VERSION  24142 ***   ***
***        16:38:48

           PAGE   6
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  SigA Data

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of           11 Warning Message(s)
 A Total of        15252 Informational Message(s)

 A Total of        26304 Hours Were Processed

 A Total of         2838 Calm Hours Identified

 A Total of          314 Missing Hours Identified (  1.19 Percent)


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


    ********   WARNING MESSAGES   ********
 SO W320      38        PPARM: Input Parameter May Be Out-of-Range for Parameter            VS
 MX W403     102       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
 MX W403       1       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
 MX W403       2       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
```

```
MX W403       3       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       4       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       5       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       6       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       7       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       8       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
MX W403       9       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA Data
```

HARP2 - HRACalc (dated 22118) 5/13/2025 11:59:09 AM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 30

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 14
16 to 70 Years Bin: 0

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: False

Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: RMP

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Warm

****
TIER 2 SETTINGS
Tier2 not used.

****

Calculating cancer risk
Cancer risk saved to: C:\Users\abernabe\Desktop\8693 OReilly\Risk\MEIRCancerRisk.csv
Calculating chronic risk
Chronic risk saved to: C:\Users\abernabe\Desktop\8693 OReilly\Risk\MEIRNCChronicRisk.csv
Calculating acute risk
Acute risk saved to: C:\Users\abernabe\Desktop\8693 OReilly\Risk\MEIRNCAcuteRisk.csv
HRA ran successfully


N
Property Line
The House of Cuban Flavor
Generator Location
1376 Third Ave
Coinstar
El Lugar St
El Lugar St
Third Ave
O'Reilly Auto Parts
270' L x 180' W x 11' H