APPENDIX II-C

OPERATIONAL CRITERIA POLLUTANT AIR QUALITY IMPACTS ANALYSIS

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CRITERIA POLLUTANT AIR QUALITY IMPACT ANALYSIS FOR THE ENVIRONMENTAL IMPACT REPORT

FOR THE

SHELL CARSON FACILITY ETHANOL (E10) PROJECT

CARSON, CALIFORNIA

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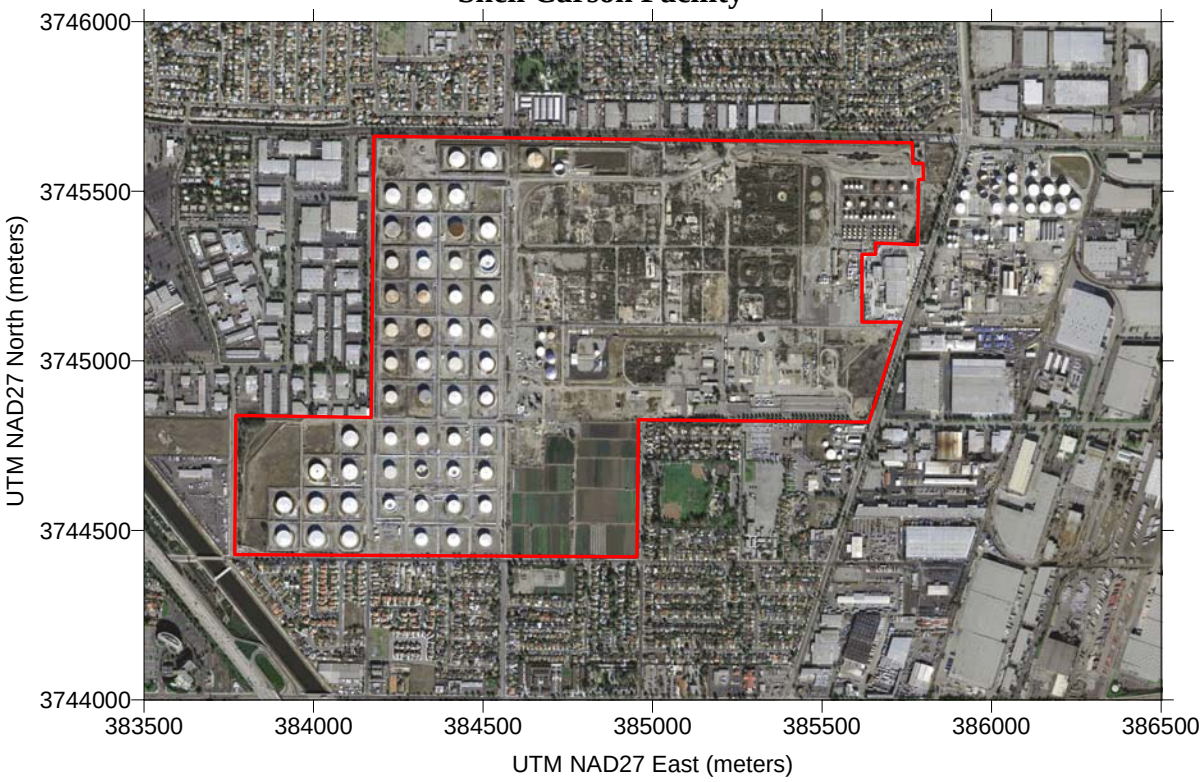
1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION OVERVIEW

The Shell Carson Facility Ethanol (E10) Project will occur at the Shell Oil Products US (Shell) Carson Distribution Facility, shown in Figure 1. The purpose of the proposed project is to increase the facility's capacity to deliver denatured ethanol by tanker trucks to the southern California market. The increase in denatured ethanol delivery capacity is in response to an increase in the amount of ethanol required to be blended into gasoline to comply with the 2007 amendments to the California Air Resources Board (CARB) Phase 3 Reformulated Gasoline (RFG) requirements. The proposed project includes the following changes to the Carson Distribution Facility: 1) increase the ethanol throughput at an existing two-lane tanker truck loading rack; 2) convert up to four existing storage tanks from gasoline to ethanol service; 3) install one new ethanol tanker truck loading lane and associated ethanol loading rack; 4) expand the existing ethanol loading rack operations building; and 5) install one new gasoline storage tank to replace gasoline storage capacity that will be transferred to ethanol service.

Figure 1
Shell Carson Facility



1.2 PURPOSE OF ANALYSES

This criteria pollutant modeling was conducted to support the Environmental Impact Report (EIR) of the proposed project as required by the California Environmental Quality Act (CEQA). The purpose of the analysis is to determine if project emissions pose a threat to ambient air quality standards. The approach used in this analyses is described later in this report and are based on written SCAQMD guidelines (SCAQMD 2009a) and discussions with SCAQMD staff.

1.3 SIGNIFICANCE CRITERIA

The criteria pollutants of concern in the SCAQMD (2009b) are:

- Nitrogen Dioxide (NO_2)
- Carbon Monoxide (CO)
- Respirable Particulate Matter (PM10)
- Fine Particulate Matter (PM2.5)

Table 1 shows the basis upon which the significance of modeled criteria pollutant impacts are judged. If the pollutant is in attainment of ambient air quality standards (AAQS), then the maximum impact is added to a representative maximum background concentration derived from ambient monitoring, and the total concentration is compared to the most stringent AAQS. A total concentration greater than the AAQS is a significant impact. If the pollutant is not in attainment (i.e, PM10 and PM2.5), then the impact is significant if the modeled impact is greater than the SCAQMD Significant Change in Concentration value.

Table 1
SCAQMD Air Quality Significance Thresholds

Pollutant	Averaging Period	SCAQMD Significant Change ($\mu g/m^3$)	Most Stringent Ambient Air Quality Standard ($\mu g/m^3$)
NO_2	1-hour	--*	339 (California) 189 (Federal)
	Annual	--*	57
CO	1-hour	--*	23,000
	8-hour	--*	10,000
PM10	24-hour	2.5	50‡
	Annual	1.0	20‡
PM2.5	24-hour	2.5	35‡

*SCAQMD is in attainment for these pollutants and averaging periods.
‡SCAQMD is not in attainment of these standards.

2.0 MODELING APPROACH

2.1 EMISSIONS ASSESSMENT

2.1.1 Project Emission Sources

The following components of the proposed project have been identified as having criteria pollutant emissions that should be included in this air quality impact assessment (AQIA):

- Increased use of the existing thermal oxidizer control system near the ethanol loading racks
- Diesel engine exhaust from additional heavy duty trucks that will visit the facility

The emissions from these sources can occur 24 hours a day, 365 days a year. On a daily basis, there will be an increase of up to 144 truck trips to the ethanol loading racks relative to baseline. On an average basis, however, there will be an increase of 113 trucks per day. These trips are assumed to be made by heavy-heavy-duty diesel trucks (HHDT-DSL, diesel trucks with greater than 33,001 gross vehicle weight).

2.1.2 Emission Calculation Approach

The emissions for the project-related sources were estimated using SCAQMD-approved methods. Operational emission rates from the thermal oxidizer were calculated for the project based on its rating of 18 MMBTU/hr. However, the number of hours of assumed operation for each averaging period in Table 1 is the expected increase over baseline usage. Because the thermal oxidizer is currently operated for periods of at least 2 hours nonstop, there is no increase in maximum one-hour emissions. Emissions from the thermal oxidizer for longer averaging periods (8 hours to annual) were calculated with an assumption of 24 hours a day post-project usage; therefore, project incremental emissions were calculated based on 24 hours a day operation minus the average daily usage. Details regarding the calculated emission rates for the thermal oxidizer are presented in Attachment A.

The emission rates for project diesel-fueled trucks were developed using CARB's EMFAC2007 emission factor model (CARB 2007). The following parameters were selected in EMFAC2007 to generate the necessary NOx, CO, and PM10 emission rates:

- Year 2012
- Heavy-heavy-duty diesel trucks (HHDT-DSL)
- Los Angeles County
- Winter Conditions
- Applicable traveling speeds:
    - 5 mph within the ethanol loading facility

- 15 mph on other Carson Terminal roads
- 30 mph on Wilmington Ave.
- 35 mph on Del Amo Blvd. and Alameda St.

Truck PM2.5 emissions were calculated as 92% of the PM10 emissions (SCAQMD 2008a).

SCAQMD policy recommends that an air quality analysis for a project in which a site is visited by heavy heavy-duty trucks include 15 minutes of idling time, generally comprising five minutes of idling before entering the facility and 10 minutes of idling onsite to account for the activity and any onsite idling that may occur immediately before or after the activity. However, Shell has established strictly enforced requirements prohibiting on-site idling. No on-site idling violations were observed in 2009 or 2010. Therefore, the analysis includes five minutes per visit of heavy heavy-duty truck idling at the entrance gate to the facility. More details of the truck-related emission calculations are presented in Attachment A.

2.1.3 Construction Emissions

Because construction and initial operational activities would overlap, ambient air quality impacts of both construction and operational emissions during the overlap period have been analyzed. It has been assume that the maximum daily on-site construction emissions are occurring along with the full operational emissions, which is conservative because full operational emissions will not occur until construction is complete on the new loading lane. The sources of construction emissions are exhaust from diesel construction equipment and fugitive dust emissions from activities on exposed ground surfaces. The construction emission calculations are documented Appendix II-A.

2.2 AIR DISPERSION MODEL

The AMS/EPA Regulatory Model (AERMOD, v11353) (U.S. EPA 2004, 2011a), the air dispersion model currently preferred by U.S. EPA and approved by the SCAQMD, was used for this analysis. AERMOD, like its predecessor ISCST3, simulates the atmospheric transport and dilution of emissions from project sources. This mathematical model estimates dilution of emissions by diffusion and turbulent mixing with ambient air as the emissions travel downwind from a source. AERMOD can predict the resulting concentrations at specified locations of interest (commonly referred to as receptors). The model is capable of predicting impacts from any combination of point, area, and volume sources in terrain ranging from flat to complex.

2.2.1 Operational Source Release Parameters

Project sources identified in Section 2.1.1 were modeled using the parameters summarized in Tables 2 and 3. Table 2 shows the parameters for the thermal oxidizer, the lone stationary point source, and an idling truck. The locations for these point sources are shown in Figure 2.

Project-related trucks will enter the Carson Terminal from Wilmington Avenue via the existing Dominguez Avenue entrance road and follow the route shown in Figure 3 to the ethanol terminal. The trucks will take the same basic route back to Wilmington Avenue. Truck emissions traveling along roads within the facility are represented in the modeling by a series of volume sources consistent with SCAQMD guidance. With the exception of the coordinates, the source parameters specified for the modeling are the same for each on-site volume source because the sources are equally spaced along the route. The parameters that are the same for each on-site source are specified in Table 3. Because a large number of volume sources was required to cover the on-site routes, the full set of release parameters, including coordinates, are provided in Attachment B.

Off-site truck emissions were also included in the analyses for travel along affected streets from the facility to the freeway onramps. Trucks leaving the facility will travel north on Wilmington Avenue to Del Amo Blvd, and turn right (east). All trucks will stay on Del Amo Blvd. until they reach Alameda Street. At that point, the trucks will either:

1. Continue on Del Amo Blvd to the I-710 freeway,
2. Turn north on Alameda St. to the SR-91 freeway, or
3. Turn south on Alameda St. to the I-405 freeway.

It has been assumed that an equal number of trucks will travel to each of the three listed freeways as described above. These routes are plotted in Figure 4, and the volume source parameters common to each off-site source are shown in Table 3. The full set of release parameters for off-site truck travel sources, including coordinates, are provided in Attachment B.

2.2.2 Construction-Related Release Parameters

The SCAQMD's approach for modeling construction emissions has been to treat construction equipment exhaust emissions as volume sources and fugitive dust emissions as area sources (e.g., SCAQMD 2008b). Construction activities will be limited to the 10-hour period between 7 a.m. and 5 p.m. each day. For this analysis, three areas were assumed to undergo concurrent construction. The three areas are shown in Figure 5. The release parameters for the exhaust emissions and the fugitive dust emissions are provided in Tables 4 and 5, respectively. The complete list of volume sources and their coordinates are provided in Attachment C.

Table 2
Project Stationary Point Source Release Parameters

Source Description	Stack ID	Stack Height		Stack Gas Exit Temperature		Stack Gas Exit Velocity		Stack Diameter		UTM Coordinates (NAD27) Easting/Northing	
		(ft)	(m)	(°F)	(K)	(ft/s)	(m/s)	(ft)	(m)	(m)	(m)
Thermal Oxidizer	FTHOX	35.0	10.7	1250.	949.8	13.5	4.1	5.7	1.7	384850	3745060
Idling Trucks	ETIDLEIN	12.0	3.7	200	366	0.3	0.1	0.3	0.1	385511	3744921

Table 3
Release Parameters for Volume Sources Representing Trucks in Transit

Source Description	Height Above Ground*		Spacing Between Sources		Horizontal Dimension (σ_{yo})		Vertical Dimension (σ_{zo})*	
	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)
On-site Trucks in Transit	13.62	4.15	24	7.32	11.16	3.4025	4.56	1.39
Off-site Trucks in Transit	13.62	4.15	48	14.63	22.33	6.805	4.56	1.39

* Height Above Ground and Vertical Dimension are from CARB (2000), Appendix VII.

Figure 2
Modeled Point Source Locations

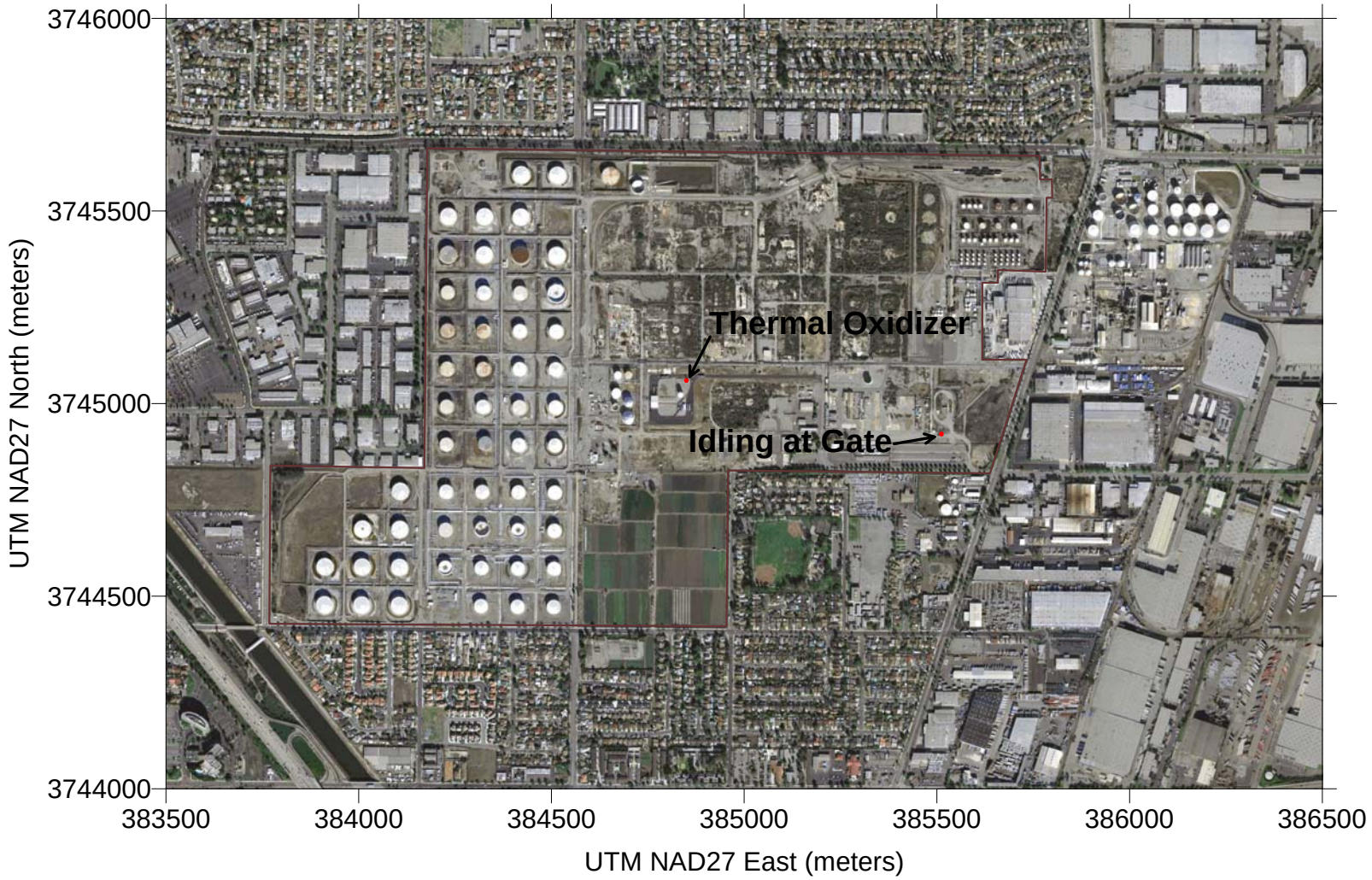


Figure 3
Modeled On-site Volume Source Locations for Project Truck Emissions

Figure 4
All Modeled Volume Sources for Project Truck Emissions

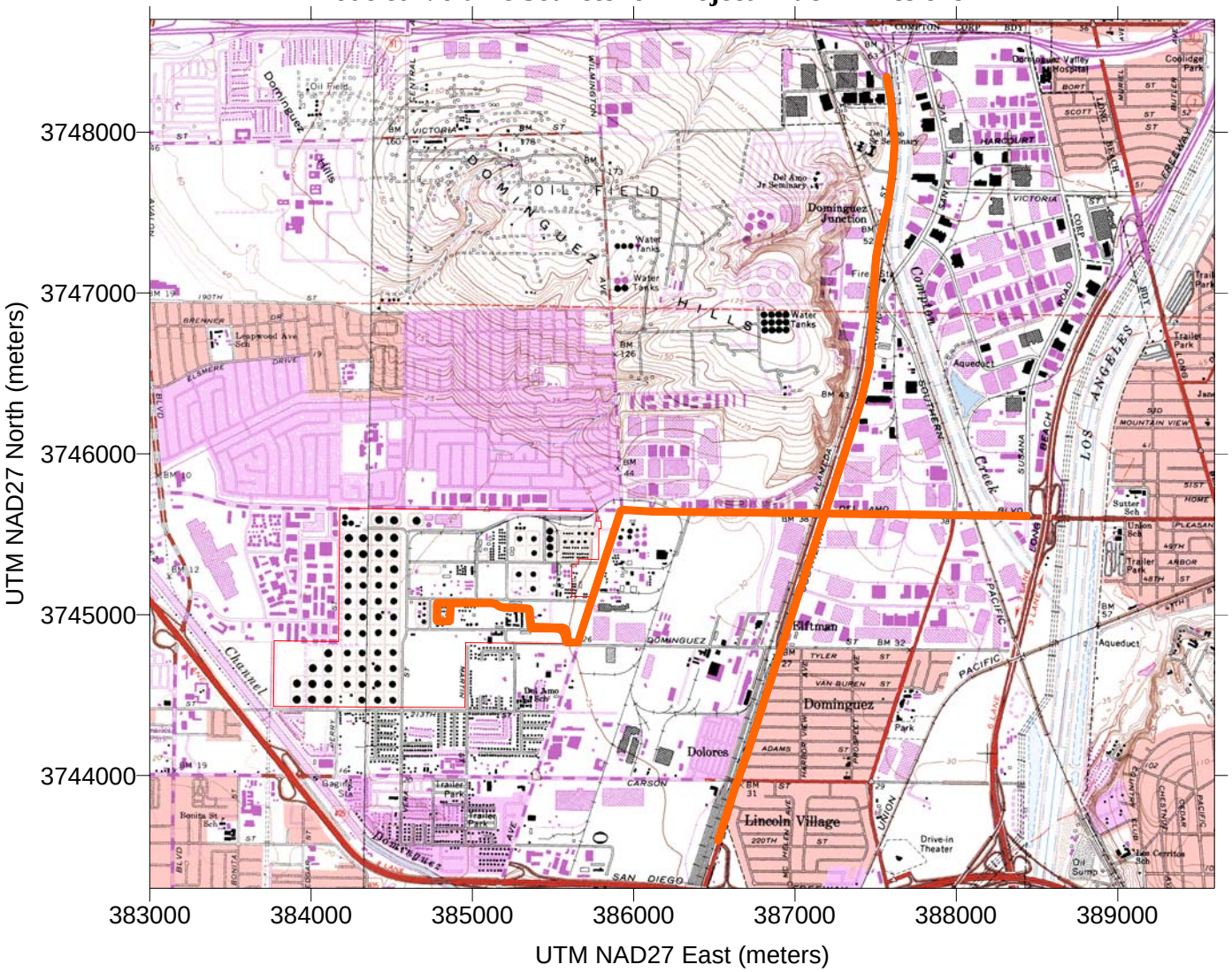


Figure 5
Construction Areas Included in the Analysis

Table 4
Construction Equipment Exhaust Volume Source Parameters*

Source Description	Height Above Ground		Spacing Between Sources		Horizontal Dimension (σ_{yo})		Vertical Dimension (σ_{zo})	
	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)
Construction Equipment Exhaust	16.4	5.	32.8	10.	15.3	4.65	4.6	1.4

* Values are from SCAQMD (2008).

Table 5
Construction Fugitive Dust Area Source Parameters*

Construction Area Description	Height Above Ground		Easterly Length		Northerly Length		Vertical Dimension (σ_{zo})	
	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)
New Tank	0.	0.	295.	90.	325.	99.	3.3	1.0
Converted Tanks (two)	0.	0.	630.	192.	325.	99.	3.3	1.0
Loading Racks	0.	0.	377.	115.	456.	139.	3.3	1.0

* Values are from SCAQMD (2008).

2.2.3 Terrain Characterization

AERMOD requires that each source in the analysis be categorized as being in either a rural or an urban setting. SCAQMD guidelines specify that all sources be designated as urban.

The AERMOD terrain processor (AERMAP) was used to calculate terrain elevations for each source and receptor from U.S. Geological Survey (USGS) 7.5 minute Digital Elevation Model (DEM) data. DEM data sets used for this analysis represent the Torrance, Long Beach, Inglewood, and Southgate quadrangles.

2.2.4 Building Downwash

When sources are located near or on buildings or structures, the dispersion of the plume can be influenced. The wake produced on the lee side of the structure can cause the plume to be pulled toward the ground near the structure resulting in higher concentrations. This is called building downwash. Stack heights that minimize downwash effects are designated good engineering practice (GEP) stack heights.

The effects of building downwash have been examined in this modeling analysis. AERMOD uses the EPA-approved Building Profile Input Program with Plume Rise Model Enhancements (BPIP-PRIME) to provide input for the downwash analysis. This program calculates the GEP formula stack heights and direction-specific building dimensions for input to the dispersion calculations. BPIP-PRIME requires the input of building coordinates and heights, and stack coordinates. The thermal oxidizer is the only project stationary point source. The building downwash effects for the thermal oxidizer stack were determined based on the dimensions of the nearby bladder tank.

2.2.5 Meteorological Data

The AERMOD-ready meteorological data sets for years 2005, 2006, and 2007 for the SCAQMD's Long Beach monitoring station were used for the analysis. These data sets were generated using AERMET, the AERMOD meteorological data preprocessor. The data were developed by SCAQMD and downloaded from their Meteorological Data webpage (SCAQMD, 2009c).

2.2.6 NOx to NO_2 Conversion

For this analysis, the Ozone Limiting Method (OLM) was used in conjunction with hourly background ozone data to calculate the conversion of the NO component of the NOx emissions to NO_2 for comparison to one-hour NO_2 standards. The hourly ozone data files for 2005, 2006, and 2007 for the AQMD's Long Beach monitoring station were downloaded from the AQMD's website (SCAQMD, 2009d) for use in this analysis. Additionally, the following values were used for key OLM parameters:

- In-stack NO_2/NOx ratio: 20% (CAPCOA 2011)

- Ambient equilibrium NO_2/NOx ratio: 90% (U.S. EPA 2011a,b)

For the annual NO_2 calculations, the default ambient NO_2/NOx ratio of 0.8 was used.

2.2.7 Fugitive Dust Treatment

Fugitive dust emissions were modeled for construction activities to determine potential impacts on PM10 and PM2.5 concentrations. As part of this modeling, dust-plume depletion due to dry deposition was taken into account. Consistent with past AQMD analyses (SCAQMD 2008), the AERMOD Method 1 dry deposition algorithms were used to calculate plume depletion. The key particle parameters for PM10 are as follows:

- Size categories: 0 to 1 micron (µm), 1 to 2.5 µm, and 2.5 to 10 µm
- Weight fractions by respective size category: 7.87%, 12,92% and 79.22%
- Particle density , all categories: 2.3 g/cm^3

For PM2.5, the following values, consistent with the PM10 distribution above, were used:

- Size categories: 0 to 1 µm and 1 to 2.5 µm
- Weight fractions by respective size category: 37.85% and 62.15%
- Particle density: 2.3 g/cm^3

2.2.8 Receptors

Two different receptor sets were used to analyze project impacts. For 24 hour and annual standards, the receptor set was limited to nearby locations where it is feasible to assume exposure for 24 hours or longer, such as houses, plus sensitive receptor locations, such as schools and day care facilities. This set of receptors is shown in Figure 6.

For averaging periods of less than 24 hours, all of the receptors used in the 24-hour and annual modeling were used, plus a receptor set comprising the following:

- Nearby business locations
- Off-site, grid-based receptors with 50-meter spacing that extend 100 meters from the western-, eastern-, southern-, and northern-most boundary points
- Additional grid-based receptors with 100-meter spacing that extend 1.9 kilometers beyond the 50-meter grid-based receptors.

A plot of these receptors is shown in Figure 7. A total of 4,094 receptors were included in the analysis.

Figure 6
Receptors Used for Modeling Relative to 24-hour and Annual Standards

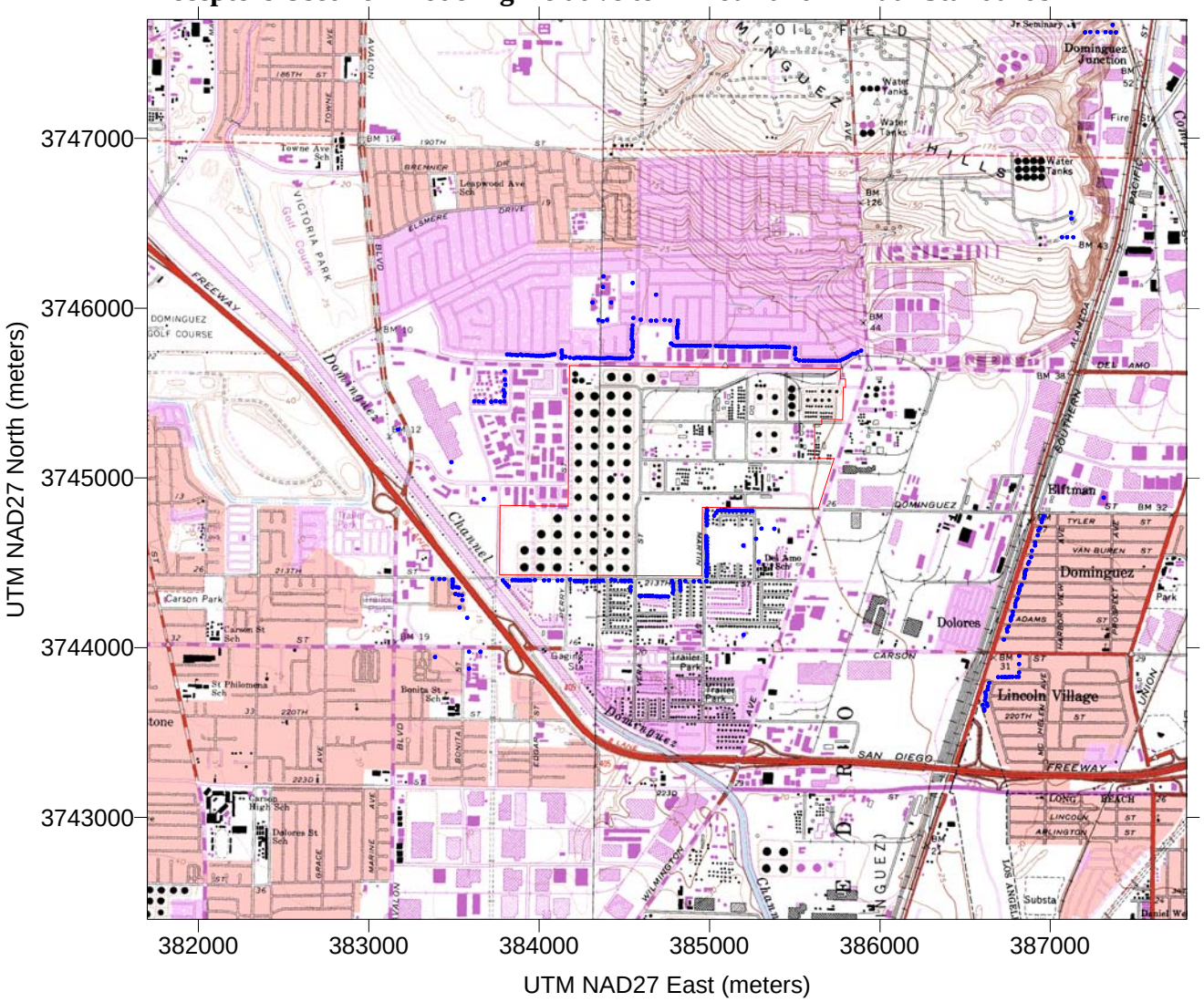
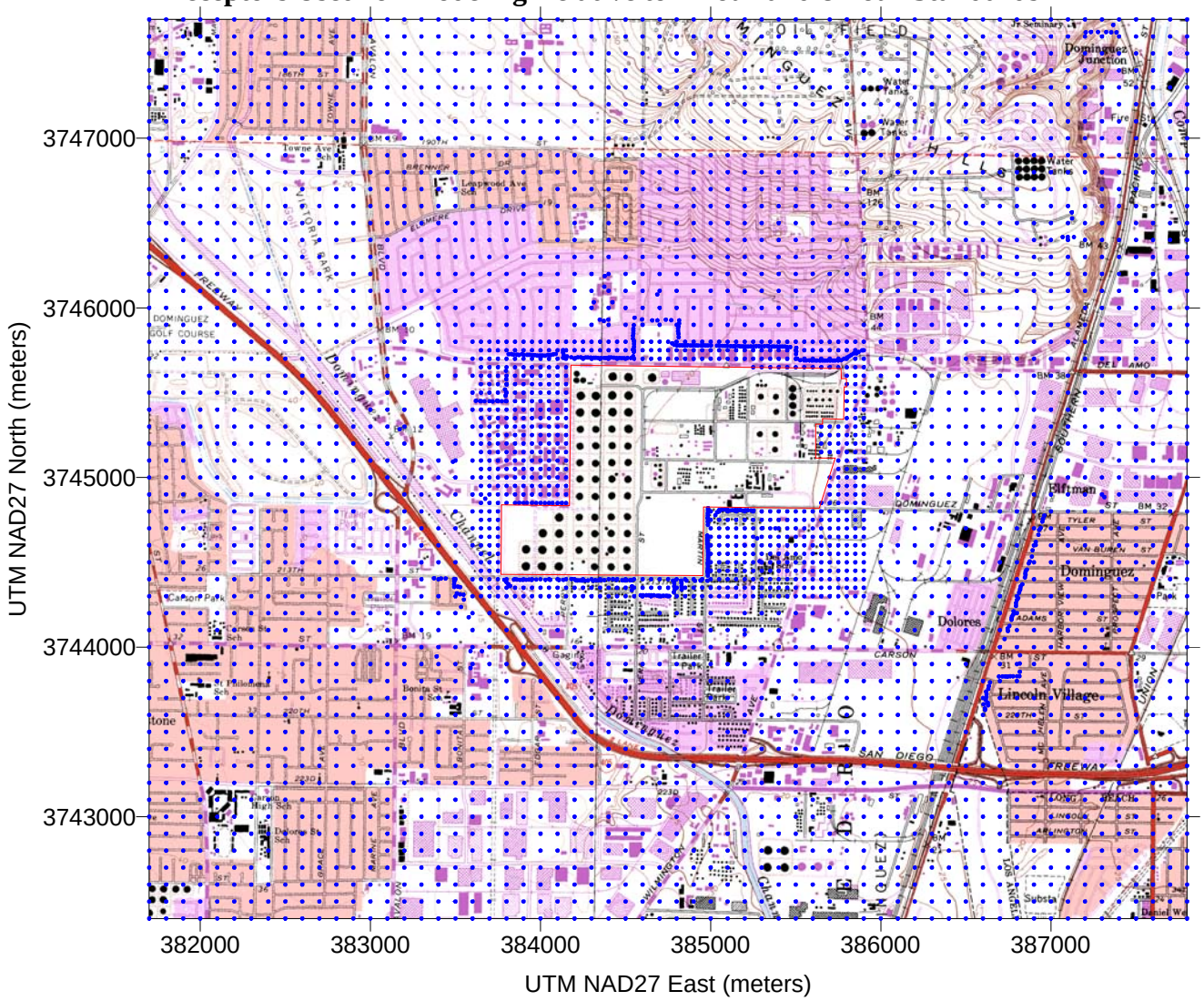


Figure 7
Receptors Used for Modeling Relative to 1-hour and 8-hour Standards



3.0 MODELING RESULTS

The modeling results are shown in Tables 6 through 11. The impacts from operational emissions, construction emissions, and concurrent operational and construction emissions are compared to applicable AAQS in Tables, 6, 8, and 10, respectively. These same source groupings are compared to the SCAQMD's Significant Change in Concentration thresholds, in Tables 7, 9, and 11, respectively. The results for the three source groupings are discussed separately below.

3.1 OPERATION EMISSIONS

As discussed in Section 1.3, a project's impact on attainment pollutants (NO_2 and CO) is determined by adding the maximum modeled increase to the highest representative background concentration and comparing to the AAQS (see Table 1). Applying the AQMD's conservative interim method, the highest 1-hour modeled NO_2 concentration is used to demonstrate compliance with the Federal 1-hour NO_2 standard. As shown in Table 6, the maximum total concentrations (modeled impacts plus background) are less than the most stringent ambient air quality standards (AAQS) for NO_2 and CO. Therefore, the modeled increases due to operational emissions are not expected to create exceedances of AAQS.

In the case of particulate matter impacts, the comparisons made in Table 7 demonstrate that modeled PM10 and PM2.5 impacts are less than the Significance Thresholds. The PM10 and PM2.5 impacts of operational emissions are therefore also considered to be acceptable.

The locations of the maximum calculated operation-related impacts for 1-hour and 8-hour averaging periods are shown in Figure 8. These locations are due south of the entrance gate. For the maximum 24-hour and annual impacts, the locations are in the residential area to the west-southwest of the entrance gate, as shown in Figure 9.

3.2 CONSTRUCTION EMISSIONS

The results on Table 8 indicate that the construction emissions have the potential to create an exceedance of the California one-hour NO_2 standard[1] when the construction impacts are added to the maximum background NO_2 concentration. The Table 9 results show that construction related PM emissions have the potential to contribute significantly to existing exceedances of AAQS for PM10 and PM2.5.

Notably, the annual average construction emissions were modeled based on 7 days per week of construction, whereas the construction is expected to occur no more than 6 days per week. Therefore, the annual PM10 and PM2.5 concentrations in Table 9 are approximately 17% higher than if construction were limited to 6 days per week.

[1] The Federal 1-hour NO_2 standard is not being applied in this case because the construction emissions are relatively short lived and the standard is based on the 3-year average of the 98th percentile of the maximum daily 1-hour average.

The calculated maximum 1-hour and 8-hour impacts from construction-related emissions were in a business area directly north of the location for the new tank, as shown in Figure 8. The calculated maximum 24-hour and annual impacts are in a residential area directly south of the areas in which existing tanks will be converted to ethanol service, as shown in Figure 9.

3.3 CONCURRENT OPERATION AND CONSTRUCTION EMISSIONS

The results for operation and construction activities (Tables 10 and 11) are virtually identical to those for construction activities alone, indicating that construction-related emissions are the dominant contributor to the maximum impacts. Therefore, the discussion in Section 3.2 is applicable to these results; i.e., the calculate maximum total NO_2 concentration when added to background creates a potential exceedance of the State 1-hour AAQS, and PM10 and PM2.5 impacts have the potential to contribute significantly to existing exceedances of AAQS.

The AERMOD input and output files are in Attachment D, provided on CDROM.

Table 6
E10 Project Operation Total NO_2 and CO Concentrations Compared to AAQS

Pollutant	Averaging Period	Concentrations (µg/m^3)			
		Modeled Impact	Background*	Total	AAQS
NO_2**	1 Hour – State	18.9	244	263	339
	1 Hour – Federal	18.9	147	166	189
	Annual‡	0.64	40.4	41.0	57
CO	1 Hour	12.2	4,600	4,612	23,000
	8 Hour	4.4	3,900	3,904	10,000

*Except as applies to the Federal 1-hour NO_2 standard, background values are 2006-2008 measured maxima at AQMD's Long Beach monitoring site. For Federal 1-hour NO_2, background "design value" is the 2006-2008 average of 98th percentile concentrations for Long Beach.

**For 1-hour NO_2, Ozone Limiting Method was used to determine NO-to-NO_2 conversion.

‡Annual NO_2 concentration assumes 80% conversion of the emitted NOx

Table 7
E10 Project Operation Particulate Matter Modeled Impacts

Pollutant	Averaging Period	Concentrations (µg/m^3)	
		Modeled Impact	Significance Thresholds*
PM10	24 Hour	0.07	2.5
	Annual	0.036	1
PM2.5	24 Hour	0.07	2.5

*AQMD Significant Increase in Concentration

Table 8
E10 Project Construction Total NO_2 and CO Concentrations Compared to AAQS

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)			
		Modeled Impact	Background*	Total	AAQS
NO_2**	1 Hour – State	273	244	517	339
	1 Hour – Federal	Not applicable	Not applicable	Not applicable	Not applicable
	Annual‡	7.7	40.4	48.1	57
CO	1 Hour	385.	4,600	4,985	23,000
	8 Hour	156.	3,900	4,056	10,000

*Except as applies to the Federal 1-hour NO_2 standard, background values are 2006-2008 measured maxima at AQMD's Long Beach monitoring site.

**For 1-hour NO_2, the Ozone Limiting Method was used to determine NO-to-NO_2 conversion.

‡Annual NO_2 concentration assumes 80% conversion of the emitted NOx

Table 9
E10 Project Construction Particulate Matter Modeled Impacts

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)	
		Modeled Impact	Significance Thresholds*
PM10	24 Hour	14.0	2.5
	Annual	1.49	1
PM2.5	24 Hour	3.5	2.5

*AQMD Significant Increase in Concentration

Table 10
E10 Project Operation + Construction Total NO_2 and CO Concentrations Compared to AAQS

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)			
		Modeled Impact	Background*	Total	AAQS
NO_2**	1 Hour – State	273	244	517	339
	1 Hour – Federal	Not applicable	Not applicable	Not applicable	Not applicable
	Annual‡	7.8	40.4	48.2	57
CO	1 Hour	385.	4,600	4,985	23,000
	8 Hour	156.	3,900	4,056	10,000

*Except as applies to the Federal 1-hour NO_2 standard, background values are 2006-2008 measured maxima at AQMD's Long Beach monitoring site.

**For 1-hour NO_2, the Ozone Limiting Method was used to determine NO-to-NO_2 conversion.

‡Annual NO_2 concentration assumes 80% conversion of the emitted NOx

Table 11
E10 Project Operation + Construction Particulate Matter Modeled Impacts

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)	
		Modeled Impact	Significance Thresholds*
PM10	24 Hour	14.0	2.5
	Annual	1.49	1
PM2.5	24 Hour	3.5	2.5

*AQMD Significant Increase in Concentration

Figure 8
Location of Maximum Modeled 1- and 8-Hour Impacts

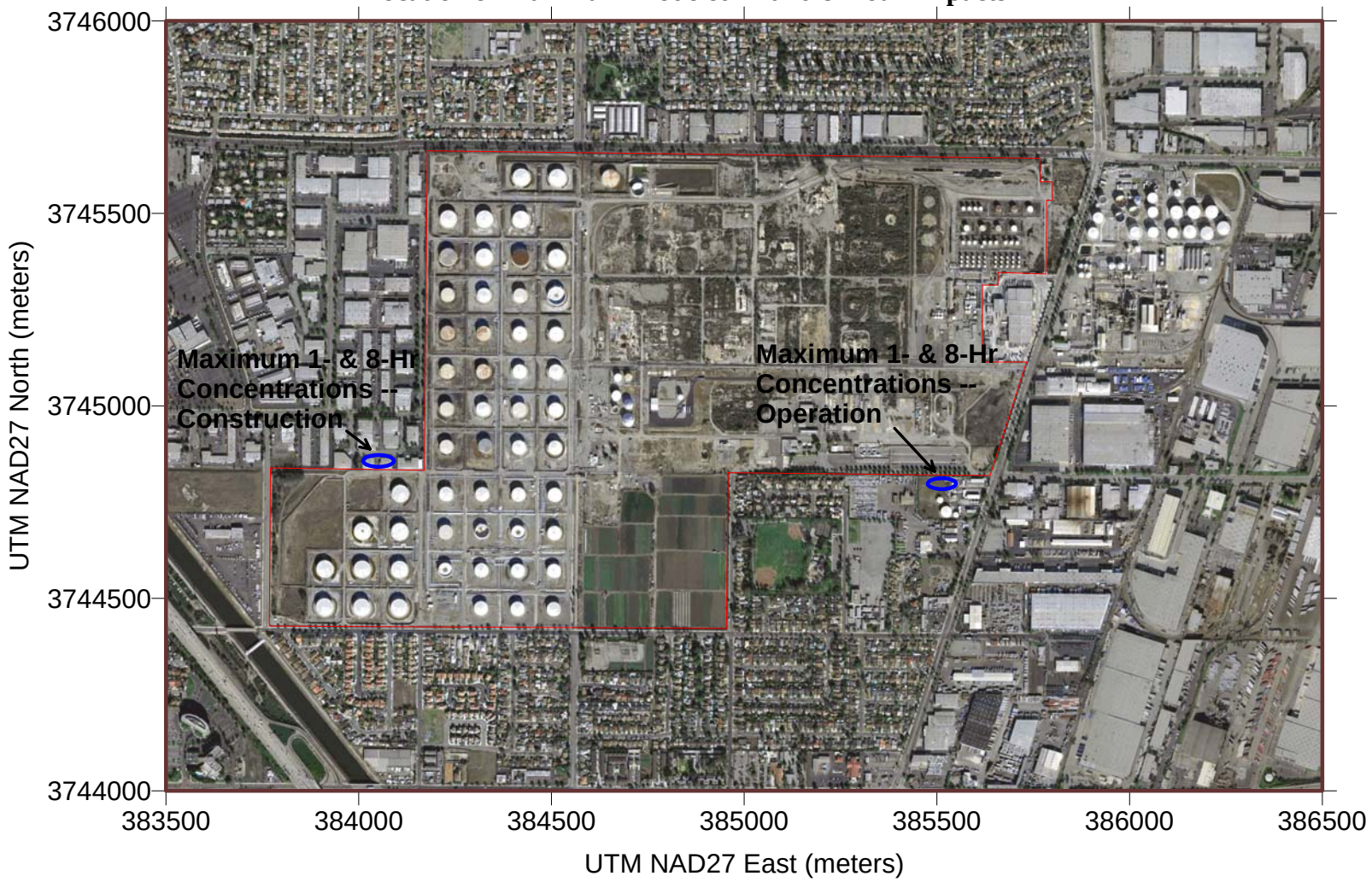
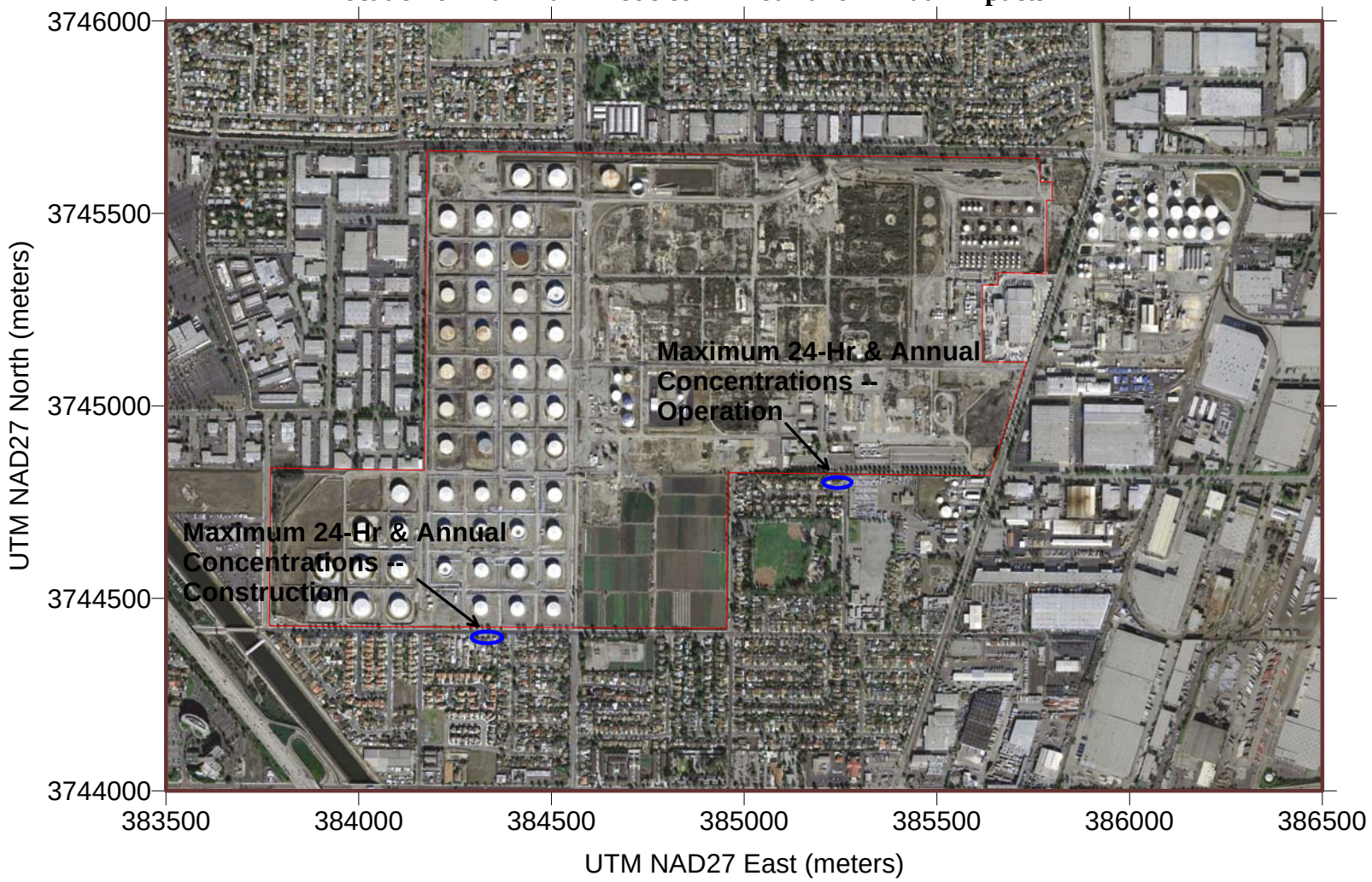


Figure 9
Location of Maximum Modeled 24-Hour and Annual Impacts



4.0 ALTERNATIVES

Two alternatives for the new storage tank have been identified for analysis. They are discussed below.

4.1 ALTERNATIVE 1: DIFFERENT LOCATION FOR NEW TANK

Shell has proposed a potential alternative location for the new gasoline tank. This alternative area, shown in Figure 10, is in a more central location. Because the preferred tank location has produced or contributed to potentially significant impacts for NO_2, PM10 and PM2.5 from construction activities, the impacts of construction emissions from the alternative tank site were evaluated. Except for the locations of the construction-related sources, the release parameters at the alternative location are the same as indicated in Tables 4 and 5. However, the emissions for the alternative site are higher due to additional site preparation requirements. These emissions are summarized in Appendix II-A. The other construction emissions are unaffected, and there is no impact on the operation emissions.

The results of the construction-related impacts incorporating the alternative tank location are summarized in Tables 12 and 13. Notably, when compared to the corresponding value in Table 8, the modeled impact for maximum 1-hour NO_2 represents a reduction of about 48% relative to the preferred site. For 24-hour PM10 and PM2.5, there are increases in modeled impacts of about 17% and 11%, respectively, relative to the preferred site (Table 9); for particulate matter, the increases in emissions out weigh the effect of moving the emissions farther from the houses south of the converted tank areas. The locations of the maximum calculated concentrations are shown in Figure 11; as compared to Figures 8 and 9, the maximum 1-hour, 8-hour, and 24-hour concentrations are in the same area, south of the converted tanks.

4.2 ALTERNATIVE 2: NO NEW TANK

A second potential alternative is that the E10 project not include a new storage tank. This eliminates the construction emissions associated with the new tank but has no impact on the operation emissions for criteria pollutants.

The results of the construction-related impacts for the no new tank alternative are summarized in Tables 14 and 15. When compared to the corresponding values in Tables 8, the modeled impacts for maximum 1-hour NO_2 represents a reduction of about 50%; however, the calculated total concentration remains above the State standard. For the 24-hour PM10 and PM2.5, there are decreases of about 1% and 3%, respectively. The locations of the maximum calculated concentrations are the same as shown in Figure 11.

Figure 10
Alternative Construction Area for New Tank

Table 12
Alternative 1 Construction Total NO_2 and CO Concentrations Compared to AAQS

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)			
		Modeled Impact	Background*	Total	AAQS
NO_2**	1 Hour – State	143	244	387	339
	1 Hour – Federal	Not applicable	Not applicable	Not applicable	Not applicable
	Annual‡	7.5	40.4	47.9	57
CO	1 Hour	206	4,600	4,806	23,000
	8 Hour	44.5	3,900	4,045	10,000

*Except as applies to the Federal 1-hour NO_2 standard, background values are 2006-2008 measured maxima at AQMD's Long Beach monitoring site.

**For 1-hour NO_2, the Ozone Limiting Method was used to determine NO-to-NO_2 conversion.

‡Annual NO_2 concentration assumes 80% conversion of the emitted NOx

Table 13
Alternative 1 Construction Particulate Matter Modeled Impacts

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)	
		Modeled Impact	Significance Thresholds*
PM10	24 Hour	16.4	2.5
	Annual	1.59	1
PM2.5	24 Hour	3.9	2.5

*AQMD Significant Increase in Concentration

Figure 11
Location of Maximum Modeled Construction Impacts with Alternative Tank Site

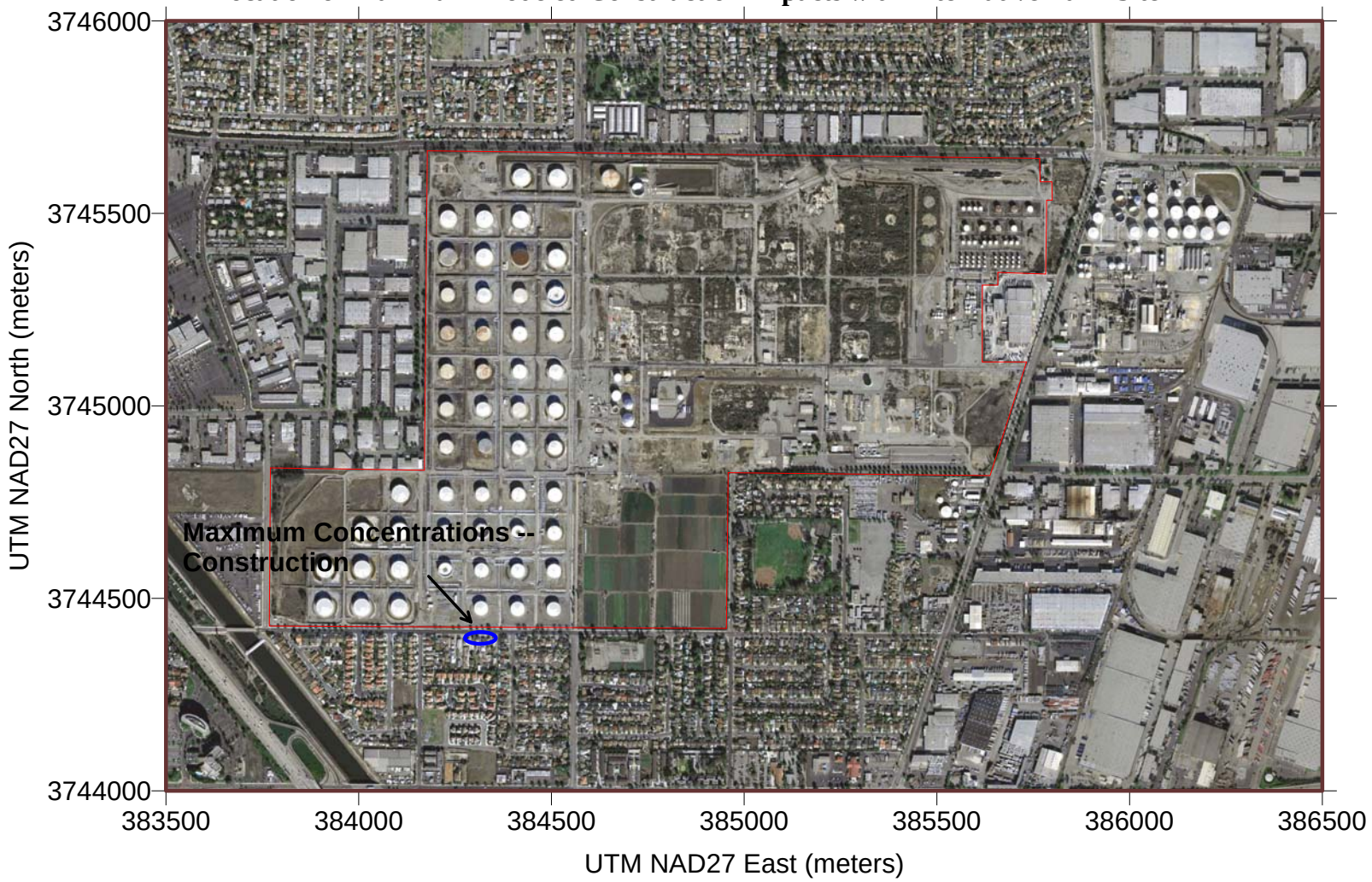


Table 14
Alternative 2 Construction Total NO_2 and CO Concentrations Compared to AAQS

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)			
		Modeled Impact	Background*	Total	AAQS
NO_2**	1 Hour – State	135	244	379	339
	1 Hour – Federal	Not applicable	Not applicable	Not applicable	Not applicable
	Annual‡	6.3	40.4	46.7	57
CO	1 Hour	194	4,600	4,794	23,000
	8 Hour	42.7	3,900	4,043	10,000

*Except as applies to the Federal 1-hour NO_2 standard, background values are 2006-2008 measured maxima at AQMD's Long Beach monitoring site.

**For 1-hour NO_2, the Ozone Limiting Method was used to determine NO-to-NO_2 conversion.

‡Annual NO_2 concentration assumes 80% conversion of the emitted NOx

Table 15
Alternative 2 Construction Particulate Matter Modeled Impacts

Pollutant	Averaging Period	Concentrations ($\mu g/m^3$)	
		Modeled Impact	Significance Thresholds*
PM10	24 Hour	13.9	2.5
	Annual	1.46	1
PM2.5	24 Hour	3.4	2.5

*AQMD Significant Increase in Concentration

5.0 CONCLUSIONS

A detailed air dispersion modeling analysis was performed using AERMOD. Analyses were performed for operation emissions alone, construction emissions alone, and emissions from concurrent operation and construction activities. The results demonstrate that the potential increases in concentrations of NO_2, CO, PM10, and PM2.5 for operation are less than the AQMD's CEQA significance thresholds. However, construction emissions alone have the potential to create significant impacts relative to the State AAQS for 1-hour NO_2, and relative to significant increase thresholds for 24-hour PM10 and PM2.5, and annual PM10.

When an alternative location for the new gasoline tank was analyzed, the maximum 1-hour NO_2 modeled impact for construction activities was reduced by about 48%, but the maximum calculated PM10 and PM2.5 concentrations increased by about 17% and 11%, respectively. For an alternative that eliminates the new tank (and its construction emissions), the maximum 1-hour NO_2 modeled impact for construction activities was reduced by about 50% relative to preferred project, but PM10 and PM2.5 impacts were only reduced slightly. For both alternatives, there is still potential for exceedance of the State AAQS for 1-hour NO_2.

6.0 REFERENCES

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SHELL OIL PRODUCTS US CARSON, CA TERMINAL
ETHANOL LOAD RACK THERMAL OXIDIZER COMBUSTION EMISSIONS *"INCREASE"* CALCULATIONS

		Basis
NOx EF (lbs/mmbtu)	0.15000	- vendor guarantee
SOx EF (1) (lbs/mmbtu):	0.00081	- 0.83 lbs/mmscf, RECLAIM EF listed in the permit, converted to lbs/mmbtu
SOx EF (2) (lbs/mmbbl loaded):	0.66000	- proposed EF based on sulfur content of vapors in tank truck headspace
CO EF (lbs/mmbtu)	0.08235	- 84 lbs/mmscf, SCAQMD EF for Ext. Combustion-NG Other, converted to lbs/mmbtu
PM EF (lbs/mmbtu)	0.00745	- 7.6 lbs/mmscf, SCAQMD EF for Ext. Combustion-NG Other, converted to lbs/mmbtu

Burner Capacity (mmbtu):	18.00	- manufacturer rated capacity of the unit
Proposed Max. Load Rate Increase (bbl/day)	27,156	- provided by AECOM (actual to future potential)
Proposed Max. Load Rate Increase (bbl/year)	7,721,940	- provided by AECOM (actual to future potential)

Pre-Project Average Daily ThermOx Operating Hours:	6.0	hrs/day	(based on actual thermal oxidizer operating hours during January 15 to April 14)
Post-Project Estimated Maximum Daily Operating Hours	24.0	hrs/day	(maximum rated capacity)

Estimated Run Times

	1-Hr*	3-Hr**	8-Hr	24-Hr	Annual
Historic Run Time (Hours):	**1**	**2**	**2.0**	**6.0**	**2207**
Projected Run Time (Hours):	**1**	**3**	**8.0**	**24.0**	**8760**
Calculated Run Time Increase (Hours):	-	1.0	6.0	18.0	6,553

* Thermal oxidizer currently operates for periods exceeding 1-hour; therefore, the 1-hour increase in operating time is zero.

Proposed Emissions Increase (lbs)

	1-Hr	3-Hr	8-Hr	24-Hr	Annual
NOx Emissions:	-	2.7000	16.1575	48.4724	17,692.4260
SOx Emissions (1):	-	0.0146	0.0877	0.2630	95.9785
SOx Emissions (2)*:	-	0.0007	0.0045	0.0179	5.0965
SOx Emissions (Total):	**-**	**0.0154**	0.0921	**0.2809**	**101.0750**
CO Emissions:	-	1.4824	8.8708	26.6123	9,713.4888
PM Emissions:	-	0.1341	0.8026	2.4078	878.8395

* Annual emissions estimated based on the residual sulfur in gasoline. 1, 3 and 8 hour emissions based on the 24-hour emissions, divided by 24 and multiplied by the hourly increase per time interval.

Modeling Inputs

	1-Hr	3-Hr	8-Hr	24-Hr	Annual
	(lbs/hr)	(lbs/hr)	(lbs/hr)	(lbs/hr)	(tons/year)
NOx Emissions:	-	0.9000	2.0197	2.0197	8.8462
SOx Emissions (1):	-	0.0049	0.0110	0.0110	0.0480
SOx Emissions (2):	-	0.0002	0.0006	0.0007	0.0025
SOx Emissions (Total):	**-**	**0.0051**	**0.0115**	**0.0117**	**0.0505**
CO Emissions:	-	0.4941	1.1088	1.1088	4.8567
PM Emissions:	-	0.0447	0.1003	0.1003	0.4394

Calculation Methodology

Proposed Emissions: =(burner capacity)*(criteria pollutant EF)

Proposed Emissions [SOx (2)]: =(proposed maximum load rate)/(42 gallons per barrel)/(1,000,000 barrels per million barrel)*(SOx (2) EF)

Criteria Pollutant EF: =default SCAQMD emission factors for NG divided by 1020 mmbtu/mmscf

Date: 2/28/2012

Truck emissions are represented in the dispersion model by a series of volume sources situated along the various on-site and off-site roads traveled by the trucks. The emission rate for each volume source is a function of the number of trucks per unit of time that passes over the road segment represented by the volume source, the length of this road segment, and the emission factor in mass per unit of length. For trucks traveling on site, the spacing between volume sources is 24 feet. For travel via off-site surface streets, which are much wider than the on-site roads, the spacing between volume sources was set to 48 feet. As an example, the on-site volume-source PM10 emission rate corresponding to 144 daily truck trips (with one pass per trip over the road segment represented by the source) is computed below using a 2010 emission factor for a heavy-heavy duty diesel truck (HHDDT) traveling at 15 mph.

ER_{source} = 1.232 g/mi x 144 trucks/day x day/24 hr x hr/3600 sec x mi/5280 ft x 24 ft/truck-source

= 9.333×10^{-6} g/sec (per source)

	Emission Factors (HHDDT - EMFAC2007)			Units/Notes	
Idle	107.8180	64.5680	1.7750	**g/hr**	
@5 mph	33.1260	17.1940	2.0870	g/mi	
@15 mph	16.6670	8.679	0.935	g/mi	
Onsite "Length"	0.004545455	0.004545455	0.004545455	mi/pass/source	
@30 mph	12.893	4.741	0.478	g/mi	
@35 mph	12.467	4.101	0.432	g/mi	
Offsite "Length"	0.009090909	0.009090909	0.009090909	mi/pass/source	
Ethanol Trucks	**144**	**144**	**144**	trips/day	
Year	2012	2012	2012		
	NOx	**CO**	**PM10**		
Source ID	g/sec	g/sec	g/sec	pass/trip	
EIN_0001	2.525E-04	1.315E-04	1.417E-05	2x	
EIN_0006	2.525E-04	1.315E-04	1.417E-05	2x	
EIN_0007	1.263E-04	6.575E-05	7.083E-06	1x	
EIN_0048	1.263E-04	6.575E-05	7.083E-06	1x	
OUT_0001	1.263E-04	6.575E-05	7.083E-06	1x	
OUT_0042	1.263E-04	6.575E-05	7.083E-06	1x	
E2W_0001	2.525E-04	1.315E-04	1.417E-05	2x	
E2W_0082	2.525E-04	1.315E-04	1.417E-05	2x	
E2W_0083	2.510E-04	1.303E-04	1.581E-05	1x	loop
E2W_0136	2.510E-04	1.303E-04	1.581E-05	1x	loop
WIL_0001	3.907E-04	1.437E-04	1.448E-05	2x	
WIL_0060	3.907E-04	1.437E-04	1.448E-05	2x	
DAC_0001	3.778E-04	1.243E-04	1.309E-05	2x	
DAC_0086	3.778E-04	1.243E-04	1.309E-05	2x	
DAE_0001	1.259E-04	4.142E-05	4.364E-06	2x/3	
DAE_0086	1.259E-04	4.142E-05	4.364E-06	2x/3	
ALS_0001	1.259E-04	4.142E-05	4.364E-06	2x/3	
ALS_0146	1.259E-04	4.142E-05	4.364E-06	2x/3	
ALN_0001	1.259E-04	4.142E-05	4.364E-06	2x/3	
ALN_0189	1.259E-04	4.142E-05	4.364E-06	2x/3	
ETIDLEIN	1.497E-02	8.968E-03	2.465E-04	NA	

	Emission Factors (HHDDT - EMFAC2007)			Units/Notes	
Idle	107.8180	64.5680	1.7750	**g/hr**	
@5 mph	33.1260	17.1940	2.0870	g/mi	
@15 mph	16.6670	8.679	0.935	g/mi	
Onsite "Length"	0.004545455	0.004545455	0.004545455	mi/pass/source	
@30 mph	12.893	4.741	0.478	g/mi	
@35 mph	12.467	4.101	0.432	g/mi	
Offsite "Length"	0.009090909	0.009090909	0.009090909	mi/pass/source	
Ethanol Trucks	**113**	**113**	**113**	trips/day	
Year	2012	2012	2012		
	NOx	**CO**	**PM10**		
Source ID	g/sec	g/sec	g/sec	pass/trip	
EIN_0001	1.982E-04	1.032E-04	1.112E-05	2x	
EIN_0006	1.982E-04	1.032E-04	1.112E-05	2x	
EIN_0007	9.908E-05	5.160E-05	5.558E-06	1x	
EIN_0048	9.908E-05	5.160E-05	5.558E-06	1x	
OUT_0001	9.908E-05	5.160E-05	5.558E-06	1x	
OUT_0042	9.908E-05	5.160E-05	5.558E-06	1x	
E2W_0001	1.982E-04	1.032E-04	1.112E-05	2x	
E2W_0082	1.982E-04	1.032E-04	1.112E-05	2x	
E2W_0083	1.969E-04	1.022E-04	1.241E-05	1x	loop
E2W_0136	1.969E-04	1.022E-04	1.241E-05	1x	loop
WIL_0001	3.066E-04	1.127E-04	1.137E-05	2x	
WIL_0060	3.066E-04	1.127E-04	1.137E-05	2x	
DAC_0001	2.965E-04	9.752E-05	1.027E-05	2x	
DAC_0086	2.965E-04	9.752E-05	1.027E-05	2x	
DAE_0001	9.882E-05	3.251E-05	3.424E-06	2x/3	
DAE_0086	9.882E-05	3.251E-05	3.424E-06	2x/3	
ALS_0001	9.882E-05	3.251E-05	3.424E-06	2x/3	
ALS_0146	9.882E-05	3.251E-05	3.424E-06	2x/3	
ALN_0001	9.882E-05	3.251E-05	3.424E-06	2x/3	
ALN_0189	9.882E-05	3.251E-05	3.424E-06	2x/3	
ETIDLEIN	1.175E-02	7.037E-03	1.935E-04	NA	

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
EIN_0001	385640.4	3744827.2	7.62	4.15	3.4025	1.39	0.0045455
EIN_0002	385633.1	3744827.3	7.62	4.15	3.4025	1.39	0.0045455
EIN_0003	385625.8	3744827.3	7.62	4.15	3.4025	1.39	0.0045455
EIN_0004	385618.5	3744827.3	7.62	4.15	3.4025	1.39	0.0045455
EIN_0005	385611.2	3744827.4	7.62	4.15	3.4025	1.39	0.0045455
EIN_0006	385604.0	3744827.7	7.62	4.15	3.4025	1.39	0.0045455
EIN_0007	385599.6	3744833.6	7.62	4.15	3.4025	1.39	0.0045455
EIN_0008	385595.3	3744839.4	7.62	4.15	3.4025	1.39	0.0045455
EIN_0009	385592.0	3744845.7	7.62	4.15	3.4025	1.39	0.0045455
EIN_0010	385590.9	3744853.0	7.62	4.15	3.4025	1.39	0.0045455
EIN_0011	385589.9	3744860.2	7.62	4.15	3.4025	1.39	0.0045455
EIN_0012	385588.8	3744867.5	7.62	4.15	3.4025	1.39	0.0045455
EIN_0013	385587.8	3744874.7	7.62	4.15	3.4025	1.39	0.0045455
EIN_0014	385586.7	3744881.9	7.62	4.15	3.4025	1.39	0.0045455
EIN_0015	385585.8	3744889.2	7.62	4.15	3.4025	1.39	0.0045455
EIN_0016	385584.8	3744896.4	7.62	4.15	3.4025	1.39	0.0045455
EIN_0017	385582.7	3744903.1	7.62	4.15	3.4025	1.39	0.0045455
EIN_0018	385577.7	3744908.4	7.62	4.15	3.4025	1.39	0.0045455
EIN_0019	385572.6	3744913.7	7.62	4.15	3.4025	1.39	0.0045455
EIN_0020	385566.0	3744916.7	7.62	4.15	3.4025	1.39	0.0045455
EIN_0021	385559.2	3744919.5	7.62	4.15	3.4025	1.39	0.0045455
EIN_0022	385552.1	3744920.7	7.62	4.15	3.4025	1.39	0.0045455
EIN_0023	385544.8	3744920.8	7.62	4.15	3.4025	1.39	0.0045455
EIN_0024	385537.5	3744920.8	7.62	4.15	3.4025	1.39	0.0045455
EIN_0025	385530.2	3744920.9	7.62	4.15	3.4025	1.39	0.0045455
EIN_0026	385522.9	3744920.9	7.62	4.15	3.4025	1.39	0.0045455
EIN_0027	385515.6	3744921.0	7.48	4.15	3.4025	1.39	0.0045455
EIN_0028	385508.3	3744921.1	7.32	4.15	3.4025	1.39	0.0045455
EIN_0029	385500.9	3744921.3	7.32	4.15	3.4025	1.39	0.0045455
EIN_0030	385493.6	3744921.4	7.32	4.15	3.4025	1.39	0.0045455
EIN_0031	385486.3	3744921.5	7.32	4.15	3.4025	1.39	0.0045455
EIN_0032	385479.0	3744921.6	7.32	4.15	3.4025	1.39	0.0045455
EIN_0033	385471.7	3744921.7	7.32	4.15	3.4025	1.39	0.0045455
EIN_0034	385464.4	3744921.8	7.32	4.15	3.4025	1.39	0.0045455
EIN_0035	385457.1	3744922.0	7.32	4.15	3.4025	1.39	0.0045455
EIN_0036	385449.7	3744922.1	7.32	4.15	3.4025	1.39	0.0045455
EIN_0037	385442.4	3744922.2	7.32	4.15	3.4025	1.39	0.0045455
EIN_0038	385435.1	3744922.3	7.32	4.15	3.4025	1.39	0.0045455
EIN_0039	385427.8	3744922.4	7.32	4.15	3.4025	1.39	0.0045455
EIN_0040	385420.5	3744922.5	7.32	4.15	3.4025	1.39	0.0045455
EIN_0041	385413.2	3744922.7	7.32	4.15	3.4025	1.39	0.0045455
EIN_0042	385405.9	3744922.8	7.32	4.15	3.4025	1.39	0.0045455
EIN_0043	385398.5	3744922.9	7.32	4.15	3.4025	1.39	0.0045455
EIN_0044	385391.2	3744923.0	7.32	4.15	3.4025	1.39	0.0045455
EIN_0045	385383.9	3744923.1	7.32	4.15	3.4025	1.39	0.0045455

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
EIN_0046	385376.6	3744923.3	7.32	4.15	3.4025	1.39	0.0045455
EIN_0047	385369.3	3744923.4	7.32	4.15	3.4025	1.39	0.0045455
EIN_0048	385362.6	3744923.5	7.32	4.15	3.4025	1.39	0.0045455
OUT_0001	385363.0	3744922.9	7.32	4.15	3.4025	1.39	0.0045455
OUT_0002	385363.0	3744915.5	7.32	4.15	3.4025	1.39	0.0045455
OUT_0003	385369.8	3744915.0	7.32	4.15	3.4025	1.39	0.0045455
OUT_0004	385377.1	3744914.9	7.32	4.15	3.4025	1.39	0.0045455
OUT_0005	385384.4	3744914.8	7.32	4.15	3.4025	1.39	0.0045455
OUT_0006	385391.7	3744914.8	7.32	4.15	3.4025	1.39	0.0045455
OUT_0007	385399.0	3744914.7	7.32	4.15	3.4025	1.39	0.0045455
OUT_0008	385406.3	3744914.6	7.32	4.15	3.4025	1.39	0.0045455
OUT_0009	385413.6	3744914.6	7.32	4.15	3.4025	1.39	0.0045455
OUT_0010	385421.0	3744914.5	7.32	4.15	3.4025	1.39	0.0045455
OUT_0011	385428.3	3744914.4	7.32	4.15	3.4025	1.39	0.0045455
OUT_0012	385435.6	3744914.4	7.32	4.15	3.4025	1.39	0.0045455
OUT_0013	385442.9	3744914.3	7.32	4.15	3.4025	1.39	0.0045455
OUT_0014	385450.2	3744914.2	7.32	4.15	3.4025	1.39	0.0045455
OUT_0015	385457.5	3744914.2	7.32	4.15	3.4025	1.39	0.0045455
OUT_0016	385464.8	3744914.1	7.32	4.15	3.4025	1.39	0.0045455
OUT_0017	385472.2	3744914.0	7.32	4.15	3.4025	1.39	0.0045455
OUT_0018	385479.5	3744914.0	7.32	4.15	3.4025	1.39	0.0045455
OUT_0019	385486.8	3744913.9	7.32	4.15	3.4025	1.39	0.0045455
OUT_0020	385494.1	3744913.8	7.32	4.15	3.4025	1.39	0.0045455
OUT_0021	385501.4	3744913.8	7.34	4.15	3.4025	1.39	0.0045455
OUT_0022	385508.7	3744913.7	7.48	4.15	3.4025	1.39	0.0045455
OUT_0023	385516.1	3744913.6	7.58	4.15	3.4025	1.39	0.0045455
OUT_0024	385523.4	3744913.6	7.62	4.15	3.4025	1.39	0.0045455
OUT_0025	385530.7	3744913.5	7.62	4.15	3.4025	1.39	0.0045455
OUT_0026	385537.6	3744911.9	7.62	4.15	3.4025	1.39	0.0045455
OUT_0027	385544.0	3744908.3	7.62	4.15	3.4025	1.39	0.0045455
OUT_0028	385550.4	3744904.8	7.62	4.15	3.4025	1.39	0.0045455
OUT_0029	385556.0	3744900.4	7.62	4.15	3.4025	1.39	0.0045455
OUT_0030	385560.3	3744894.4	7.62	4.15	3.4025	1.39	0.0045455
OUT_0031	385564.5	3744888.5	7.62	4.15	3.4025	1.39	0.0045455
OUT_0032	385568.1	3744882.2	7.62	4.15	3.4025	1.39	0.0045455
OUT_0033	385570.3	3744875.2	7.62	4.15	3.4025	1.39	0.0045455
OUT_0034	385572.5	3744868.2	7.62	4.15	3.4025	1.39	0.0045455
OUT_0035	385574.7	3744861.3	7.62	4.15	3.4025	1.39	0.0045455
OUT_0036	385577.0	3744854.3	7.62	4.15	3.4025	1.39	0.0045455
OUT_0037	385578.9	3744847.3	7.62	4.15	3.4025	1.39	0.0045455
OUT_0038	385580.2	3744840.1	7.62	4.15	3.4025	1.39	0.0045455
OUT_0039	385581.5	3744832.9	7.62	4.15	3.4025	1.39	0.0045455
OUT_0040	385584.7	3744827.9	7.62	4.15	3.4025	1.39	0.0045455
OUT_0041	385592.0	3744827.5	7.62	4.15	3.4025	1.39	0.0045455
OUT_0042	385599.3	3744827.1	7.62	4.15	3.4025	1.39	0.0045455

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
E2W_0001	385363.0	3744929.1	7.32	4.15	3.4025	1.39	0.0045455
E2W_0002	385363.3	3744936.4	7.32	4.15	3.4025	1.39	0.0045455
E2W_0003	385363.5	3744943.7	7.32	4.15	3.4025	1.39	0.0045455
E2W_0004	385360.7	3744950.4	7.32	4.15	3.4025	1.39	0.0045455
E2W_0005	385357.5	3744957.0	7.24	4.15	3.4025	1.39	0.0045455
E2W_0006	385356.2	3744964.0	7.2	4.15	3.4025	1.39	0.0045455
E2W_0007	385356.0	3744971.3	7.19	4.15	3.4025	1.39	0.0045455
E2W_0008	385355.8	3744978.6	7.19	4.15	3.4025	1.39	0.0045455
E2W_0009	385355.6	3744986.0	7.18	4.15	3.4025	1.39	0.0045455
E2W_0010	385355.4	3744993.3	7.18	4.15	3.4025	1.39	0.0045455
E2W_0011	385355.2	3745000.6	7.17	4.15	3.4025	1.39	0.0045455
E2W_0012	385355.0	3745007.9	7.16	4.15	3.4025	1.39	0.0045455
E2W_0013	385354.8	3745015.2	7.16	4.15	3.4025	1.39	0.0045455
E2W_0014	385354.6	3745022.5	7.15	4.15	3.4025	1.39	0.0045455
E2W_0015	385354.4	3745029.8	7.15	4.15	3.4025	1.39	0.0045455
E2W_0016	385351.6	3745035.3	7.06	4.15	3.4025	1.39	0.0045455
E2W_0017	385344.7	3745037.8	7.01	4.15	3.4025	1.39	0.0045455
E2W_0018	385337.4	3745038.0	7.01	4.15	3.4025	1.39	0.0045455
E2W_0019	385330.1	3745038.2	7.01	4.15	3.4025	1.39	0.0045455
E2W_0020	385322.8	3745038.5	7.01	4.15	3.4025	1.39	0.0045455
E2W_0021	385315.5	3745038.7	7.01	4.15	3.4025	1.39	0.0045455
E2W_0022	385308.1	3745038.9	7.01	4.15	3.4025	1.39	0.0045455
E2W_0023	385300.8	3745039.2	7.01	4.15	3.4025	1.39	0.0045455
E2W_0024	385293.5	3745039.4	7.01	4.15	3.4025	1.39	0.0045455
E2W_0025	385286.2	3745039.6	7.01	4.15	3.4025	1.39	0.0045455
E2W_0026	385278.9	3745039.9	7.01	4.15	3.4025	1.39	0.0045455
E2W_0027	385271.6	3745040.1	7.01	4.15	3.4025	1.39	0.0045455
E2W_0028	385264.3	3745040.3	7.01	4.15	3.4025	1.39	0.0045455
E2W_0029	385257.0	3745040.6	7.01	4.15	3.4025	1.39	0.0045455
E2W_0030	385249.7	3745040.8	7.01	4.15	3.4025	1.39	0.0045455
E2W_0031	385242.3	3745041.0	7.01	4.15	3.4025	1.39	0.0045455
E2W_0032	385235.2	3745042.5	7.01	4.15	3.4025	1.39	0.0045455
E2W_0033	385228.0	3745043.9	7.01	4.15	3.4025	1.39	0.0045455
E2W_0034	385220.7	3745044.3	7.01	4.15	3.4025	1.39	0.0045455
E2W_0035	385213.4	3745044.3	7.01	4.15	3.4025	1.39	0.0045455
E2W_0036	385206.1	3745044.3	7.01	4.15	3.4025	1.39	0.0045455
E2W_0037	385198.8	3745044.3	6.97	4.15	3.4025	1.39	0.0045455
E2W_0038	385191.5	3745044.3	6.75	4.15	3.4025	1.39	0.0045455
E2W_0039	385184.3	3745045.6	6.71	4.15	3.4025	1.39	0.0045455
E2W_0040	385177.3	3745047.7	6.71	4.15	3.4025	1.39	0.0045455
E2W_0041	385170.3	3745049.9	6.71	4.15	3.4025	1.39	0.0045455
E2W_0042	385163.8	3745052.9	6.71	4.15	3.4025	1.39	0.0045455
E2W_0043	385157.7	3745057.0	6.71	4.15	3.4025	1.39	0.0045455
E2W_0044	385151.7	3745061.1	6.71	4.15	3.4025	1.39	0.0045455
E2W_0045	385145.6	3745065.2	6.71	4.15	3.4025	1.39	0.0045455

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
E2W_0046	385138.6	3745067.4	6.71	4.15	3.4025	1.39	0.0045455
E2W_0047	385131.7	3745069.6	6.71	4.15	3.4025	1.39	0.0045455
E2W_0048	385124.7	3745071.8	6.71	4.15	3.4025	1.39	0.0045455
E2W_0049	385117.4	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0050	385110.1	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0051	385102.8	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0052	385095.5	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0053	385088.2	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0054	385080.9	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0055	385073.5	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0056	385066.2	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0057	385058.9	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0058	385051.6	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0059	385044.3	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0060	385037.0	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0061	385029.7	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0062	385022.3	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0063	385015.0	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0064	385007.7	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0065	385000.4	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0066	384993.1	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0067	384985.8	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0068	384978.4	3745072.2	6.71	4.15	3.4025	1.39	0.0045455
E2W_0069	384971.1	3745072.1	6.71	4.15	3.4025	1.39	0.0045455
E2W_0070	384963.8	3745072.1	6.52	4.15	3.4025	1.39	0.0045455
E2W_0071	384956.5	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0072	384949.2	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0073	384941.9	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0074	384934.6	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0075	384927.2	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0076	384919.9	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0077	384912.6	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0078	384905.3	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0079	384898.0	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0080	384890.7	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0081	384883.3	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0082	384876.0	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0083	384868.7	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0084	384861.4	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0085	384854.1	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0086	384846.8	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0087	384839.5	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0088	384832.1	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0089	384824.8	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0090	384817.5	3745072.1	6.4	4.15	3.4025	1.39	0.0045455

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
E2W_0091	384810.2	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0092	384802.9	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0093	384795.6	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0094	384788.3	3745072.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0095	384781.3	3745071.7	6.4	4.15	3.4025	1.39	0.0045455
E2W_0096	384781.2	3745064.4	6.4	4.15	3.4025	1.39	0.0045455
E2W_0097	384781.2	3745057.0	6.4	4.15	3.4025	1.39	0.0045455
E2W_0098	384781.1	3745049.7	6.4	4.15	3.4025	1.39	0.0045455
E2W_0099	384781.0	3745042.4	6.4	4.15	3.4025	1.39	0.0045455
E2W_0100	384780.9	3745035.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0101	384780.8	3745027.8	6.4	4.15	3.4025	1.39	0.0045455
E2W_0102	384780.8	3745020.5	6.4	4.15	3.4025	1.39	0.0045455
E2W_0103	384780.7	3745013.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0104	384780.6	3745005.8	6.4	4.15	3.4025	1.39	0.0045455
E2W_0105	384780.5	3744998.5	6.4	4.15	3.4025	1.39	0.0045455
E2W_0106	384780.4	3744991.2	6.4	4.15	3.4025	1.39	0.0045455
E2W_0107	384780.4	3744983.9	6.4	4.15	3.4025	1.39	0.0045455
E2W_0108	384780.3	3744976.6	6.4	4.15	3.4025	1.39	0.0045455
E2W_0109	384780.2	3744969.3	6.4	4.15	3.4025	1.39	0.0045455
E2W_0110	384780.1	3744961.9	6.4	4.15	3.4025	1.39	0.0045455
E2W_0111	384785.1	3744959.6	6.4	4.15	3.4025	1.39	0.0045455
E2W_0112	384792.4	3744959.6	6.4	4.15	3.4025	1.39	0.0045455
E2W_0113	384799.7	3744959.5	6.4	4.15	3.4025	1.39	0.0045455
E2W_0114	384807.1	3744959.4	6.4	4.15	3.4025	1.39	0.0045455
E2W_0115	384814.4	3744959.4	6.4	4.15	3.4025	1.39	0.0045455
E2W_0116	384821.7	3744959.3	6.4	4.15	3.4025	1.39	0.0045455
E2W_0117	384829.0	3744959.3	6.4	4.15	3.4025	1.39	0.0045455
E2W_0118	384836.3	3744959.2	6.4	4.15	3.4025	1.39	0.0045455
E2W_0119	384843.6	3744959.2	6.4	4.15	3.4025	1.39	0.0045455
E2W_0120	384851.0	3744959.1	6.4	4.15	3.4025	1.39	0.0045455
E2W_0121	384858.3	3744959.0	6.4	4.15	3.4025	1.39	0.0045455
E2W_0122	384860.4	3744964.4	6.4	4.15	3.4025	1.39	0.0045455
E2W_0123	384860.7	3744971.7	6.4	4.15	3.4025	1.39	0.0045455
E2W_0124	384861.1	3744979.0	6.4	4.15	3.4025	1.39	0.0045455
E2W_0125	384861.4	3744986.3	6.4	4.15	3.4025	1.39	0.0045455
E2W_0126	384861.7	3744993.6	6.4	4.15	3.4025	1.39	0.0045455
E2W_0127	384862.0	3745001.0	6.4	4.15	3.4025	1.39	0.0045455
E2W_0128	384862.3	3745008.3	6.4	4.15	3.4025	1.39	0.0045455
E2W_0129	384862.6	3745015.6	6.4	4.15	3.4025	1.39	0.0045455
E2W_0130	384862.9	3745022.9	6.4	4.15	3.4025	1.39	0.0045455
E2W_0131	384863.2	3745030.2	6.4	4.15	3.4025	1.39	0.0045455
E2W_0132	384864.3	3745037.4	6.4	4.15	3.4025	1.39	0.0045455
E2W_0133	384865.5	3745044.6	6.4	4.15	3.4025	1.39	0.0045455
E2W_0134	384866.8	3745051.8	6.4	4.15	3.4025	1.39	0.0045455
E2W_0135	384868.0	3745059.1	6.4	4.15	3.4025	1.39	0.0045455

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
E2W_0136	384869.2	3745066.3	6.4	4.15	3.4025	1.39	0.0045455
WIL_0001	385918.5	3745643.9	8.53	4.15	6.805	1.39	0.0090909
WIL_0002	385914.0	3745630.0	8.35	4.15	6.805	1.39	0.0090909
WIL_0003	385909.5	3745616.0	8.23	4.15	6.805	1.39	0.0090909
WIL_0004	385905.0	3745602.1	8.23	4.15	6.805	1.39	0.0090909
WIL_0005	385900.5	3745588.2	8.23	4.15	6.805	1.39	0.0090909
WIL_0006	385896.0	3745574.3	8.23	4.15	6.805	1.39	0.0090909
WIL_0007	385891.5	3745560.4	7.98	4.15	6.805	1.39	0.0090909
WIL_0008	385887.0	3745546.5	8	4.15	6.805	1.39	0.0090909
WIL_0009	385882.5	3745532.5	7.94	4.15	6.805	1.39	0.0090909
WIL_0010	385878.0	3745518.6	7.92	4.15	6.805	1.39	0.0090909
WIL_0011	385873.5	3745504.7	7.92	4.15	6.805	1.39	0.0090909
WIL_0012	385868.9	3745490.8	7.92	4.15	6.805	1.39	0.0090909
WIL_0013	385864.4	3745476.9	7.92	4.15	6.805	1.39	0.0090909
WIL_0014	385859.9	3745462.9	7.92	4.15	6.805	1.39	0.0090909
WIL_0015	385855.4	3745449.0	7.92	4.15	6.805	1.39	0.0090909
WIL_0016	385850.9	3745435.1	7.92	4.15	6.805	1.39	0.0090909
WIL_0017	385846.4	3745421.2	7.92	4.15	6.805	1.39	0.0090909
WIL_0018	385841.9	3745407.3	7.92	4.15	6.805	1.39	0.0090909
WIL_0019	385837.4	3745393.4	7.92	4.15	6.805	1.39	0.0090909
WIL_0020	385832.9	3745379.4	7.92	4.15	6.805	1.39	0.0090909
WIL_0021	385828.4	3745365.5	7.92	4.15	6.805	1.39	0.0090909
WIL_0022	385823.8	3745351.6	7.92	4.15	6.805	1.39	0.0090909
WIL_0023	385819.3	3745337.7	7.92	4.15	6.805	1.39	0.0090909
WIL_0024	385814.8	3745323.8	7.92	4.15	6.805	1.39	0.0090909
WIL_0025	385810.3	3745309.8	7.92	4.15	6.805	1.39	0.0090909
WIL_0026	385805.8	3745295.9	7.85	4.15	6.805	1.39	0.0090909
WIL_0027	385801.3	3745282.0	7.92	4.15	6.805	1.39	0.0090909
WIL_0028	385796.8	3745268.1	7.83	4.15	6.805	1.39	0.0090909
WIL_0029	385792.3	3745254.2	7.69	4.15	6.805	1.39	0.0090909
WIL_0030	385787.8	3745240.3	7.85	4.15	6.805	1.39	0.0090909
WIL_0031	385783.3	3745226.3	7.72	4.15	6.805	1.39	0.0090909
WIL_0032	385778.8	3745212.4	7.82	4.15	6.805	1.39	0.0090909
WIL_0033	385774.2	3745198.5	7.78	4.15	6.805	1.39	0.0090909
WIL_0034	385769.7	3745184.6	7.92	4.15	6.805	1.39	0.0090909
WIL_0035	385765.2	3745170.7	7.92	4.15	6.805	1.39	0.0090909
WIL_0036	385760.7	3745156.7	7.92	4.15	6.805	1.39	0.0090909
WIL_0037	385756.2	3745142.8	7.92	4.15	6.805	1.39	0.0090909
WIL_0038	385751.7	3745128.9	7.92	4.15	6.805	1.39	0.0090909
WIL_0039	385747.2	3745115.0	7.92	4.15	6.805	1.39	0.0090909
WIL_0040	385742.7	3745101.1	7.92	4.15	6.805	1.39	0.0090909
WIL_0041	385738.2	3745087.2	7.92	4.15	6.805	1.39	0.0090909
WIL_0042	385733.7	3745073.2	7.92	4.15	6.805	1.39	0.0090909
WIL_0043	385729.1	3745059.3	7.92	4.15	6.805	1.39	0.0090909
WIL_0044	385724.6	3745045.4	7.92	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
WIL_0045	385720.1	3745031.5	7.92	4.15	6.805	1.39	0.0090909
WIL_0046	385715.6	3745017.6	7.82	4.15	6.805	1.39	0.0090909
WIL_0047	385711.1	3745003.6	7.92	4.15	6.805	1.39	0.0090909
WIL_0048	385706.6	3744989.7	7.82	4.15	6.805	1.39	0.0090909
WIL_0049	385702.1	3744975.8	7.68	4.15	6.805	1.39	0.0090909
WIL_0050	385697.6	3744961.9	7.62	4.15	6.805	1.39	0.0090909
WIL_0051	385693.1	3744948.0	7.62	4.15	6.805	1.39	0.0090909
WIL_0052	385688.6	3744934.1	7.62	4.15	6.805	1.39	0.0090909
WIL_0053	385684.1	3744920.1	7.62	4.15	6.805	1.39	0.0090909
WIL_0054	385679.5	3744906.2	7.62	4.15	6.805	1.39	0.0090909
WIL_0055	385675.0	3744892.3	7.62	4.15	6.805	1.39	0.0090909
WIL_0056	385670.5	3744878.4	7.62	4.15	6.805	1.39	0.0090909
WIL_0057	385666.0	3744864.5	7.62	4.15	6.805	1.39	0.0090909
WIL_0058	385661.5	3744850.5	7.62	4.15	6.805	1.39	0.0090909
WIL_0059	385657.0	3744836.6	7.62	4.15	6.805	1.39	0.0090909
WIL_0060	385654.0	3744827.5	7.62	4.15	6.805	1.39	0.0090909
DAC_0001	387174.0	3745629.1	10.67	4.15	6.805	1.39	0.0090909
DAC_0002	387159.4	3745629.2	10.67	4.15	6.805	1.39	0.0090909
DAC_0003	387144.8	3745629.4	10.82	4.15	6.805	1.39	0.0090909
DAC_0004	387130.2	3745629.6	11.27	4.15	6.805	1.39	0.0090909
DAC_0005	387115.5	3745629.7	12.02	4.15	6.805	1.39	0.0090909
DAC_0006	387100.9	3745629.9	12.19	4.15	6.805	1.39	0.0090909
DAC_0007	387086.3	3745630.1	12.08	4.15	6.805	1.39	0.0090909
DAC_0008	387071.6	3745630.2	11.89	4.15	6.805	1.39	0.0090909
DAC_0009	387057.0	3745630.4	11.58	4.15	6.805	1.39	0.0090909
DAC_0010	387042.4	3745630.6	11.58	4.15	6.805	1.39	0.0090909
DAC_0011	387027.8	3745630.7	11.28	4.15	6.805	1.39	0.0090909
DAC_0012	387013.1	3745630.9	11.26	4.15	6.805	1.39	0.0090909
DAC_0013	386998.5	3745631.1	10.97	4.15	6.805	1.39	0.0090909
DAC_0014	386983.9	3745631.2	10.97	4.15	6.805	1.39	0.0090909
DAC_0015	386969.2	3745631.4	10.97	4.15	6.805	1.39	0.0090909
DAC_0016	386954.6	3745631.6	10.97	4.15	6.805	1.39	0.0090909
DAC_0017	386940.0	3745631.8	10.67	4.15	6.805	1.39	0.0090909
DAC_0018	386925.3	3745631.9	10.67	4.15	6.805	1.39	0.0090909
DAC_0019	386910.7	3745632.1	10.67	4.15	6.805	1.39	0.0090909
DAC_0020	386896.1	3745632.3	10.43	4.15	6.805	1.39	0.0090909
DAC_0021	386881.5	3745632.4	10.37	4.15	6.805	1.39	0.0090909
DAC_0022	386866.8	3745632.6	10.36	4.15	6.805	1.39	0.0090909
DAC_0023	386852.2	3745632.8	10.36	4.15	6.805	1.39	0.0090909
DAC_0024	386837.6	3745632.9	10.36	4.15	6.805	1.39	0.0090909
DAC_0025	386822.9	3745633.1	10.36	4.15	6.805	1.39	0.0090909
DAC_0026	386808.3	3745633.3	10.36	4.15	6.805	1.39	0.0090909
DAC_0027	386793.7	3745633.4	10.36	4.15	6.805	1.39	0.0090909
DAC_0028	386779.1	3745633.6	10.17	4.15	6.805	1.39	0.0090909
DAC_0029	386764.4	3745633.8	10.17	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
DAC_0030	386749.8	3745633.9	10.18	4.15	6.805	1.39	0.0090909
DAC_0031	386735.2	3745634.1	10.36	4.15	6.805	1.39	0.0090909
DAC_0032	386720.5	3745634.3	10.65	4.15	6.805	1.39	0.0090909
DAC_0033	386705.9	3745634.4	10.79	4.15	6.805	1.39	0.0090909
DAC_0034	386691.3	3745634.6	11.1	4.15	6.805	1.39	0.0090909
DAC_0035	386676.6	3745634.8	11.42	4.15	6.805	1.39	0.0090909
DAC_0036	386662.0	3745635.0	11.55	4.15	6.805	1.39	0.0090909
DAC_0037	386647.4	3745635.1	11.78	4.15	6.805	1.39	0.0090909
DAC_0038	386632.8	3745635.3	11.89	4.15	6.805	1.39	0.0090909
DAC_0039	386618.1	3745635.5	11.89	4.15	6.805	1.39	0.0090909
DAC_0040	386603.5	3745635.6	12.09	4.15	6.805	1.39	0.0090909
DAC_0041	386588.9	3745635.8	12.19	4.15	6.805	1.39	0.0090909
DAC_0042	386574.2	3745636.0	12.12	4.15	6.805	1.39	0.0090909
DAC_0043	386559.6	3745636.1	11.88	4.15	6.805	1.39	0.0090909
DAC_0044	386545.0	3745636.3	11.68	4.15	6.805	1.39	0.0090909
DAC_0045	386530.4	3745636.5	11.48	4.15	6.805	1.39	0.0090909
DAC_0046	386515.7	3745636.6	11.04	4.15	6.805	1.39	0.0090909
DAC_0047	386501.1	3745636.8	10.33	4.15	6.805	1.39	0.0090909
DAC_0048	386486.5	3745637.0	9.97	4.15	6.805	1.39	0.0090909
DAC_0049	386471.8	3745637.1	9.97	4.15	6.805	1.39	0.0090909
DAC_0050	386457.2	3745637.3	9.67	4.15	6.805	1.39	0.0090909
DAC_0051	386442.6	3745637.5	9.9	4.15	6.805	1.39	0.0090909
DAC_0052	386427.9	3745637.6	10	4.15	6.805	1.39	0.0090909
DAC_0053	386413.3	3745637.8	10.22	4.15	6.805	1.39	0.0090909
DAC_0054	386398.7	3745638.0	10.31	4.15	6.805	1.39	0.0090909
DAC_0055	386384.1	3745638.2	10.36	4.15	6.805	1.39	0.0090909
DAC_0056	386369.4	3745638.3	10.67	4.15	6.805	1.39	0.0090909
DAC_0057	386354.8	3745638.5	10.49	4.15	6.805	1.39	0.0090909
DAC_0058	386340.2	3745638.7	10.36	4.15	6.805	1.39	0.0090909
DAC_0059	386325.5	3745638.8	10.33	4.15	6.805	1.39	0.0090909
DAC_0060	386310.9	3745639.0	10.33	4.15	6.805	1.39	0.0090909
DAC_0061	386296.3	3745639.2	10.03	4.15	6.805	1.39	0.0090909
DAC_0062	386281.6	3745639.3	9.8	4.15	6.805	1.39	0.0090909
DAC_0063	386267.0	3745639.5	9.74	4.15	6.805	1.39	0.0090909
DAC_0064	386252.4	3745639.7	9.51	4.15	6.805	1.39	0.0090909
DAC_0065	386237.8	3745639.8	9.38	4.15	6.805	1.39	0.0090909
DAC_0066	386223.1	3745640.0	9.14	4.15	6.805	1.39	0.0090909
DAC_0067	386208.5	3745640.2	9.14	4.15	6.805	1.39	0.0090909
DAC_0068	386193.9	3745640.3	9.14	4.15	6.805	1.39	0.0090909
DAC_0069	386179.2	3745640.5	9.12	4.15	6.805	1.39	0.0090909
DAC_0070	386164.6	3745640.7	8.86	4.15	6.805	1.39	0.0090909
DAC_0071	386150.0	3745640.8	8.84	4.15	6.805	1.39	0.0090909
DAC_0072	386135.4	3745641.0	8.84	4.15	6.805	1.39	0.0090909
DAC_0073	386120.7	3745641.2	8.84	4.15	6.805	1.39	0.0090909
DAC_0074	386106.1	3745641.4	8.84	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
DAC_0075	386091.5	3745642.2	8.84	4.15	6.805	1.39	0.0090909
DAC_0076	386076.9	3745643.1	8.84	4.15	6.805	1.39	0.0090909
DAC_0077	386062.3	3745644.1	8.84	4.15	6.805	1.39	0.0090909
DAC_0078	386047.7	3745645.0	8.84	4.15	6.805	1.39	0.0090909
DAC_0079	386033.1	3745645.9	8.84	4.15	6.805	1.39	0.0090909
DAC_0080	386018.5	3745646.8	8.84	4.15	6.805	1.39	0.0090909
DAC_0081	386003.9	3745647.8	8.84	4.15	6.805	1.39	0.0090909
DAC_0082	385989.3	3745648.7	8.84	4.15	6.805	1.39	0.0090909
DAC_0083	385974.7	3745649.6	8.83	4.15	6.805	1.39	0.0090909
DAC_0084	385960.1	3745650.6	8.54	4.15	6.805	1.39	0.0090909
DAC_0085	385945.5	3745651.5	8.53	4.15	6.805	1.39	0.0090909
DAC_0086	385930.9	3745652.4	8.53	4.15	6.805	1.39	0.0090909
DAE_0001	388436.7	3745614.2	13.41	4.15	6.805	1.39	0.0090909
DAE_0002	388422.1	3745614.4	13.41	4.15	6.805	1.39	0.0090909
DAE_0003	388407.4	3745614.6	13.11	4.15	6.805	1.39	0.0090909
DAE_0004	388392.8	3745614.8	13.11	4.15	6.805	1.39	0.0090909
DAE_0005	388378.2	3745614.9	12.92	4.15	6.805	1.39	0.0090909
DAE_0006	388363.5	3745615.1	12.8	4.15	6.805	1.39	0.0090909
DAE_0007	388348.9	3745615.3	12.46	4.15	6.805	1.39	0.0090909
DAE_0008	388334.3	3745615.4	12.11	4.15	6.805	1.39	0.0090909
DAE_0009	388319.6	3745615.6	11.74	4.15	6.805	1.39	0.0090909
DAE_0010	388305.0	3745615.8	11.15	4.15	6.805	1.39	0.0090909
DAE_0011	388290.4	3745615.9	10.02	4.15	6.805	1.39	0.0090909
DAE_0012	388275.8	3745616.1	8.59	4.15	6.805	1.39	0.0090909
DAE_0013	388261.1	3745616.3	7.47	4.15	6.805	1.39	0.0090909
DAE_0014	388246.5	3745616.5	7.4	4.15	6.805	1.39	0.0090909
DAE_0015	388231.9	3745616.6	7.5	4.15	6.805	1.39	0.0090909
DAE_0016	388217.2	3745616.8	8.09	4.15	6.805	1.39	0.0090909
DAE_0017	388202.6	3745617.0	8.83	4.15	6.805	1.39	0.0090909
DAE_0018	388188.0	3745617.1	9.68	4.15	6.805	1.39	0.0090909
DAE_0019	388173.4	3745617.3	11.03	4.15	6.805	1.39	0.0090909
DAE_0020	388158.7	3745617.5	11.99	4.15	6.805	1.39	0.0090909
DAE_0021	388144.1	3745617.7	12.19	4.15	6.805	1.39	0.0090909
DAE_0022	388129.5	3745617.8	12.19	4.15	6.805	1.39	0.0090909
DAE_0023	388114.8	3745618.0	12.19	4.15	6.805	1.39	0.0090909
DAE_0024	388100.2	3745618.2	12.19	4.15	6.805	1.39	0.0090909
DAE_0025	388085.6	3745618.3	12.06	4.15	6.805	1.39	0.0090909
DAE_0026	388070.9	3745618.5	12.4	4.15	6.805	1.39	0.0090909
DAE_0027	388056.3	3745618.7	13.52	4.15	6.805	1.39	0.0090909
DAE_0028	388041.7	3745618.9	13.72	4.15	6.805	1.39	0.0090909
DAE_0029	388027.1	3745619.0	13.41	4.15	6.805	1.39	0.0090909
DAE_0030	388012.4	3745619.2	13.41	4.15	6.805	1.39	0.0090909
DAE_0031	387997.8	3745619.4	13.41	4.15	6.805	1.39	0.0090909
DAE_0032	387983.2	3745619.5	13.41	4.15	6.805	1.39	0.0090909
DAE_0033	387968.5	3745619.7	13.36	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
DAE_0034	387953.9	3745619.9	13.11	4.15	6.805	1.39	0.0090909
DAE_0035	387939.3	3745620.0	13.11	4.15	6.805	1.39	0.0090909
DAE_0036	387924.7	3745620.2	13.11	4.15	6.805	1.39	0.0090909
DAE_0037	387910.0	3745620.4	13.11	4.15	6.805	1.39	0.0090909
DAE_0038	387895.4	3745620.6	12.81	4.15	6.805	1.39	0.0090909
DAE_0039	387880.8	3745620.7	12.8	4.15	6.805	1.39	0.0090909
DAE_0040	387866.1	3745620.9	12.8	4.15	6.805	1.39	0.0090909
DAE_0041	387851.5	3745621.1	12.8	4.15	6.805	1.39	0.0090909
DAE_0042	387836.9	3745621.2	12.71	4.15	6.805	1.39	0.0090909
DAE_0043	387822.3	3745621.4	12.5	4.15	6.805	1.39	0.0090909
DAE_0044	387807.6	3745621.6	12.5	4.15	6.805	1.39	0.0090909
DAE_0045	387793.0	3745621.8	12.5	4.15	6.805	1.39	0.0090909
DAE_0046	387778.4	3745621.9	12.5	4.15	6.805	1.39	0.0090909
DAE_0047	387763.7	3745622.1	12.5	4.15	6.805	1.39	0.0090909
DAE_0048	387749.1	3745622.3	12.25	4.15	6.805	1.39	0.0090909
DAE_0049	387734.5	3745622.4	12.19	4.15	6.805	1.39	0.0090909
DAE_0050	387719.8	3745622.6	12.19	4.15	6.805	1.39	0.0090909
DAE_0051	387705.2	3745622.8	12.19	4.15	6.805	1.39	0.0090909
DAE_0052	387690.6	3745623.0	11.9	4.15	6.805	1.39	0.0090909
DAE_0053	387676.0	3745623.1	11.89	4.15	6.805	1.39	0.0090909
DAE_0054	387661.3	3745623.3	11.89	4.15	6.805	1.39	0.0090909
DAE_0055	387646.7	3745623.5	11.89	4.15	6.805	1.39	0.0090909
DAE_0056	387632.1	3745623.6	11.89	4.15	6.805	1.39	0.0090909
DAE_0057	387617.4	3745623.8	11.89	4.15	6.805	1.39	0.0090909
DAE_0058	387602.8	3745624.0	11.89	4.15	6.805	1.39	0.0090909
DAE_0059	387588.2	3745624.1	11.89	4.15	6.805	1.39	0.0090909
DAE_0060	387573.6	3745624.3	11.78	4.15	6.805	1.39	0.0090909
DAE_0061	387558.9	3745624.5	11.58	4.15	6.805	1.39	0.0090909
DAE_0062	387544.3	3745624.7	11.58	4.15	6.805	1.39	0.0090909
DAE_0063	387529.7	3745624.8	11.58	4.15	6.805	1.39	0.0090909
DAE_0064	387515.0	3745625.0	11.58	4.15	6.805	1.39	0.0090909
DAE_0065	387500.4	3745625.2	11.58	4.15	6.805	1.39	0.0090909
DAE_0066	387485.8	3745625.3	11.58	4.15	6.805	1.39	0.0090909
DAE_0067	387471.1	3745625.5	11.58	4.15	6.805	1.39	0.0090909
DAE_0068	387456.5	3745625.7	11.36	4.15	6.805	1.39	0.0090909
DAE_0069	387441.9	3745625.9	11.28	4.15	6.805	1.39	0.0090909
DAE_0070	387427.3	3745626.0	11.28	4.15	6.805	1.39	0.0090909
DAE_0071	387412.6	3745626.2	11.28	4.15	6.805	1.39	0.0090909
DAE_0072	387398.0	3745626.4	11.26	4.15	6.805	1.39	0.0090909
DAE_0073	387383.4	3745626.5	11.04	4.15	6.805	1.39	0.0090909
DAE_0074	387368.7	3745626.7	10.97	4.15	6.805	1.39	0.0090909
DAE_0075	387354.1	3745626.9	10.97	4.15	6.805	1.39	0.0090909
DAE_0076	387339.5	3745627.1	10.97	4.15	6.805	1.39	0.0090909
DAE_0077	387324.9	3745627.2	10.93	4.15	6.805	1.39	0.0090909
DAE_0078	387310.2	3745627.4	10.67	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
DAE_0079	387295.6	3745627.6	10.67	4.15	6.805	1.39	0.0090909
DAE_0080	387281.0	3745627.7	10.67	4.15	6.805	1.39	0.0090909
DAE_0081	387266.3	3745627.9	10.67	4.15	6.805	1.39	0.0090909
DAE_0082	387251.7	3745628.1	10.67	4.15	6.805	1.39	0.0090909
DAE_0083	387237.1	3745628.2	10.67	4.15	6.805	1.39	0.0090909
DAE_0084	387222.4	3745628.4	10.67	4.15	6.805	1.39	0.0090909
DAE_0085	387207.8	3745628.6	10.67	4.15	6.805	1.39	0.0090909
DAE_0086	387193.2	3745628.8	10.67	4.15	6.805	1.39	0.0090909
ALS_0001	386523.6	3743597.5	8.84	4.15	6.805	1.39	0.0090909
ALS_0002	386528.1	3743611.4	8.83	4.15	6.805	1.39	0.0090909
ALS_0003	386532.6	3743625.3	8.68	4.15	6.805	1.39	0.0090909
ALS_0004	386537.0	3743639.3	8.34	4.15	6.805	1.39	0.0090909
ALS_0005	386541.5	3743653.2	8.23	4.15	6.805	1.39	0.0090909
ALS_0006	386545.9	3743667.1	8.23	4.15	6.805	1.39	0.0090909
ALS_0007	386550.4	3743681.1	8.23	4.15	6.805	1.39	0.0090909
ALS_0008	386554.8	3743695.0	8.23	4.15	6.805	1.39	0.0090909
ALS_0009	386559.3	3743708.9	8.23	4.15	6.805	1.39	0.0090909
ALS_0010	386563.8	3743722.9	8.23	4.15	6.805	1.39	0.0090909
ALS_0011	386568.2	3743736.8	8.4	4.15	6.805	1.39	0.0090909
ALS_0012	386572.7	3743750.7	8.53	4.15	6.805	1.39	0.0090909
ALS_0013	386577.1	3743764.7	8.68	4.15	6.805	1.39	0.0090909
ALS_0014	386581.6	3743778.6	8.84	4.15	6.805	1.39	0.0090909
ALS_0015	386586.0	3743792.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0016	386590.5	3743806.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0017	386595.0	3743820.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0018	386599.4	3743834.3	9.14	4.15	6.805	1.39	0.0090909
ALS_0019	386603.9	3743848.3	9.14	4.15	6.805	1.39	0.0090909
ALS_0020	386608.3	3743862.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0021	386612.8	3743876.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0022	386617.2	3743890.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0023	386621.7	3743904.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0024	386626.2	3743917.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0025	386630.8	3743931.8	9.14	4.15	6.805	1.39	0.0090909
ALS_0026	386635.7	3743945.6	9.14	4.15	6.805	1.39	0.0090909
ALS_0027	386640.7	3743959.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0028	386645.6	3743973.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0029	386650.6	3743986.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0030	386655.5	3744000.7	9.14	4.15	6.805	1.39	0.0090909
ALS_0031	386660.4	3744014.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0032	386665.4	3744028.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0033	386670.3	3744042.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0034	386675.2	3744055.8	9.14	4.15	6.805	1.39	0.0090909
ALS_0035	386680.2	3744069.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0036	386685.1	3744083.3	9.14	4.15	6.805	1.39	0.0090909
ALS_0037	386690.0	3744097.1	9.14	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALS_0038	386695.0	3744110.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0039	386699.9	3744124.6	9.14	4.15	6.805	1.39	0.0090909
ALS_0040	386704.8	3744138.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0041	386709.3	3744152.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0042	386713.7	3744166.3	9.14	4.15	6.805	1.39	0.0090909
ALS_0043	386718.2	3744180.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0044	386722.7	3744194.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0045	386727.2	3744208.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0046	386731.6	3744222.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0047	386736.1	3744235.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0048	386740.6	3744249.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0049	386745.1	3744263.8	9.14	4.15	6.805	1.39	0.0090909
ALS_0050	386749.5	3744277.7	9.14	4.15	6.805	1.39	0.0090909
ALS_0051	386754.0	3744291.7	9.14	4.15	6.805	1.39	0.0090909
ALS_0052	386758.5	3744305.6	9.14	4.15	6.805	1.39	0.0090909
ALS_0053	386763.0	3744319.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0054	386767.4	3744333.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0055	386771.9	3744347.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0056	386776.4	3744361.3	9.14	4.15	6.805	1.39	0.0090909
ALS_0057	386780.8	3744375.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0058	386785.3	3744389.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0059	386789.8	3744403.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0060	386794.3	3744417.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0061	386798.7	3744431.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0062	386803.2	3744444.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0063	386807.7	3744458.8	9.14	4.15	6.805	1.39	0.0090909
ALS_0064	386812.2	3744472.7	9.14	4.15	6.805	1.39	0.0090909
ALS_0065	386816.6	3744486.7	9.14	4.15	6.805	1.39	0.0090909
ALS_0066	386821.1	3744500.6	9.14	4.15	6.805	1.39	0.0090909
ALS_0067	386825.6	3744514.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0068	386830.1	3744528.5	9.14	4.15	6.805	1.39	0.0090909
ALS_0069	386834.5	3744542.4	9.14	4.15	6.805	1.39	0.0090909
ALS_0070	386839.0	3744556.3	9.14	4.15	6.805	1.39	0.0090909
ALS_0071	386843.5	3744570.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0072	386847.9	3744584.2	9.14	4.15	6.805	1.39	0.0090909
ALS_0073	386852.4	3744598.1	9.14	4.15	6.805	1.39	0.0090909
ALS_0074	386856.9	3744612.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0075	386861.4	3744626.0	9.14	4.15	6.805	1.39	0.0090909
ALS_0076	386865.8	3744639.9	9.14	4.15	6.805	1.39	0.0090909
ALS_0077	386870.3	3744653.8	9.14	4.15	6.805	1.39	0.0090909
ALS_0078	386874.8	3744667.8	9.27	4.15	6.805	1.39	0.0090909
ALS_0079	386879.3	3744681.7	9.45	4.15	6.805	1.39	0.0090909
ALS_0080	386883.7	3744695.6	9.45	4.15	6.805	1.39	0.0090909
ALS_0081	386888.2	3744709.5	9.45	4.15	6.805	1.39	0.0090909
ALS_0082	386892.7	3744723.5	9.45	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALS_0083	386897.2	3744737.4	9.45	4.15	6.805	1.39	0.0090909
ALS_0084	386901.6	3744751.3	9.45	4.15	6.805	1.39	0.0090909
ALS_0085	386906.1	3744765.3	9.45	4.15	6.805	1.39	0.0090909
ALS_0086	386910.6	3744779.2	9.45	4.15	6.805	1.39	0.0090909
ALS_0087	386915.0	3744793.1	9.45	4.15	6.805	1.39	0.0090909
ALS_0088	386919.5	3744807.1	9.45	4.15	6.805	1.39	0.0090909
ALS_0089	386924.0	3744821.0	9.75	4.15	6.805	1.39	0.0090909
ALS_0090	386928.5	3744834.9	9.75	4.15	6.805	1.39	0.0090909
ALS_0091	386932.9	3744848.8	9.75	4.15	6.805	1.39	0.0090909
ALS_0092	386937.4	3744862.8	10.06	4.15	6.805	1.39	0.0090909
ALS_0093	386941.9	3744876.7	10.06	4.15	6.805	1.39	0.0090909
ALS_0094	386946.4	3744890.6	10.36	4.15	6.805	1.39	0.0090909
ALS_0095	386950.8	3744904.6	10.36	4.15	6.805	1.39	0.0090909
ALS_0096	386955.3	3744918.5	10.36	4.15	6.805	1.39	0.0090909
ALS_0097	386959.8	3744932.4	10.66	4.15	6.805	1.39	0.0090909
ALS_0098	386964.3	3744946.4	10.67	4.15	6.805	1.39	0.0090909
ALS_0099	386968.7	3744960.3	10.67	4.15	6.805	1.39	0.0090909
ALS_0100	386973.2	3744974.2	10.67	4.15	6.805	1.39	0.0090909
ALS_0101	386977.7	3744988.1	10.67	4.15	6.805	1.39	0.0090909
ALS_0102	386982.1	3745002.1	10.67	4.15	6.805	1.39	0.0090909
ALS_0103	386986.6	3745016.0	10.67	4.15	6.805	1.39	0.0090909
ALS_0104	386991.1	3745029.9	10.67	4.15	6.805	1.39	0.0090909
ALS_0105	386995.6	3745043.9	10.67	4.15	6.805	1.39	0.0090909
ALS_0106	387000.0	3745057.8	10.67	4.15	6.805	1.39	0.0090909
ALS_0107	387004.5	3745071.7	10.67	4.15	6.805	1.39	0.0090909
ALS_0108	387009.0	3745085.6	10.67	4.15	6.805	1.39	0.0090909
ALS_0109	387013.5	3745099.6	10.67	4.15	6.805	1.39	0.0090909
ALS_0110	387017.9	3745113.5	10.67	4.15	6.805	1.39	0.0090909
ALS_0111	387022.4	3745127.4	10.67	4.15	6.805	1.39	0.0090909
ALS_0112	387026.9	3745141.4	10.67	4.15	6.805	1.39	0.0090909
ALS_0113	387031.4	3745155.3	10.67	4.15	6.805	1.39	0.0090909
ALS_0114	387035.9	3745169.2	10.67	4.15	6.805	1.39	0.0090909
ALS_0115	387040.4	3745183.1	10.67	4.15	6.805	1.39	0.0090909
ALS_0116	387044.9	3745197.0	10.67	4.15	6.805	1.39	0.0090909
ALS_0117	387049.4	3745211.0	10.67	4.15	6.805	1.39	0.0090909
ALS_0118	387054.0	3745224.9	10.67	4.15	6.805	1.39	0.0090909
ALS_0119	387058.5	3745238.8	10.67	4.15	6.805	1.39	0.0090909
ALS_0120	387063.0	3745252.7	10.67	4.15	6.805	1.39	0.0090909
ALS_0121	387067.6	3745266.6	10.67	4.15	6.805	1.39	0.0090909
ALS_0122	387072.1	3745280.5	10.67	4.15	6.805	1.39	0.0090909
ALS_0123	387076.6	3745294.4	10.67	4.15	6.805	1.39	0.0090909
ALS_0124	387081.2	3745308.3	10.67	4.15	6.805	1.39	0.0090909
ALS_0125	387085.7	3745322.2	10.67	4.15	6.805	1.39	0.0090909
ALS_0126	387090.2	3745336.2	10.67	4.15	6.805	1.39	0.0090909
ALS_0127	387094.7	3745350.1	10.67	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALS_0128	387099.3	3745364.0	10.67	4.15	6.805	1.39	0.0090909
ALS_0129	387103.8	3745377.9	10.67	4.15	6.805	1.39	0.0090909
ALS_0130	387108.3	3745391.8	10.67	4.15	6.805	1.39	0.0090909
ALS_0131	387112.9	3745405.7	10.67	4.15	6.805	1.39	0.0090909
ALS_0132	387117.4	3745419.6	10.67	4.15	6.805	1.39	0.0090909
ALS_0133	387121.9	3745433.5	10.67	4.15	6.805	1.39	0.0090909
ALS_0134	387126.4	3745447.5	10.67	4.15	6.805	1.39	0.0090909
ALS_0135	387131.0	3745461.4	10.67	4.15	6.805	1.39	0.0090909
ALS_0136	387135.5	3745475.3	10.67	4.15	6.805	1.39	0.0090909
ALS_0137	387140.0	3745489.2	10.67	4.15	6.805	1.39	0.0090909
ALS_0138	387144.6	3745503.1	10.67	4.15	6.805	1.39	0.0090909
ALS_0139	387149.1	3745517.0	10.67	4.15	6.805	1.39	0.0090909
ALS_0140	387153.6	3745530.9	10.67	4.15	6.805	1.39	0.0090909
ALS_0141	387158.1	3745544.8	10.67	4.15	6.805	1.39	0.0090909
ALS_0142	387162.7	3745558.7	10.67	4.15	6.805	1.39	0.0090909
ALS_0143	387167.2	3745572.7	10.67	4.15	6.805	1.39	0.0090909
ALS_0144	387171.7	3745586.6	10.67	4.15	6.805	1.39	0.0090909
ALS_0145	387176.3	3745600.5	10.67	4.15	6.805	1.39	0.0090909
ALS_0146	387180.8	3745614.4	10.67	4.15	6.805	1.39	0.0090909
ALN_0001	387567.7	3748342.7	15.14	4.15	6.805	1.39	0.0090909
ALN_0002	387570.4	3748328.3	14.61	4.15	6.805	1.39	0.0090909
ALN_0003	387573.0	3748314.0	14.63	4.15	6.805	1.39	0.0090909
ALN_0004	387575.6	3748299.6	14.59	4.15	6.805	1.39	0.0090909
ALN_0005	387578.2	3748285.2	14.56	4.15	6.805	1.39	0.0090909
ALN_0006	387580.8	3748270.8	15.17	4.15	6.805	1.39	0.0090909
ALN_0007	387583.4	3748256.4	15.55	4.15	6.805	1.39	0.0090909
ALN_0008	387586.1	3748242.0	15.91	4.15	6.805	1.39	0.0090909
ALN_0009	387588.7	3748227.6	16.53	4.15	6.805	1.39	0.0090909
ALN_0010	387591.3	3748213.2	16.75	4.15	6.805	1.39	0.0090909
ALN_0011	387593.9	3748198.8	16.95	4.15	6.805	1.39	0.0090909
ALN_0012	387596.1	3748184.4	16.82	4.15	6.805	1.39	0.0090909
ALN_0013	387597.3	3748169.8	16.99	4.15	6.805	1.39	0.0090909
ALN_0014	387598.5	3748155.2	17.05	4.15	6.805	1.39	0.0090909
ALN_0015	387599.7	3748140.6	17.07	4.15	6.805	1.39	0.0090909
ALN_0016	387600.9	3748126.0	16.92	4.15	6.805	1.39	0.0090909
ALN_0017	387602.1	3748111.4	16.7	4.15	6.805	1.39	0.0090909
ALN_0018	387603.3	3748096.9	16.6	4.15	6.805	1.39	0.0090909
ALN_0019	387604.5	3748082.3	16.46	4.15	6.805	1.39	0.0090909
ALN_0020	387605.7	3748067.7	16.46	4.15	6.805	1.39	0.0090909
ALN_0021	387606.9	3748053.1	16.46	4.15	6.805	1.39	0.0090909
ALN_0022	387608.1	3748038.5	16.46	4.15	6.805	1.39	0.0090909
ALN_0023	387609.3	3748024.0	16.46	4.15	6.805	1.39	0.0090909
ALN_0024	387610.5	3748009.4	16.46	4.15	6.805	1.39	0.0090909
ALN_0025	387611.7	3747994.8	16.46	4.15	6.805	1.39	0.0090909
ALN_0026	387612.9	3747980.2	16.46	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALN_0027	387614.1	3747965.6	16.69	4.15	6.805	1.39	0.0090909
ALN_0028	387615.3	3747951.0	16.76	4.15	6.805	1.39	0.0090909
ALN_0029	387616.5	3747936.5	16.76	4.15	6.805	1.39	0.0090909
ALN_0030	387616.3	3747921.9	16.76	4.15	6.805	1.39	0.0090909
ALN_0031	387615.2	3747907.3	16.76	4.15	6.805	1.39	0.0090909
ALN_0032	387614.2	3747892.7	16.76	4.15	6.805	1.39	0.0090909
ALN_0033	387613.1	3747878.1	16.72	4.15	6.805	1.39	0.0090909
ALN_0034	387612.1	3747863.5	16.48	4.15	6.805	1.39	0.0090909
ALN_0035	387611.0	3747848.9	16.46	4.15	6.805	1.39	0.0090909
ALN_0036	387610.0	3747834.3	16.46	4.15	6.805	1.39	0.0090909
ALN_0037	387608.9	3747819.7	16.19	4.15	6.805	1.39	0.0090909
ALN_0038	387607.8	3747805.1	16.15	4.15	6.805	1.39	0.0090909
ALN_0039	387606.8	3747790.5	16.15	4.15	6.805	1.39	0.0090909
ALN_0040	387605.7	3747776.0	16.15	4.15	6.805	1.39	0.0090909
ALN_0041	387604.7	3747761.4	16.15	4.15	6.805	1.39	0.0090909
ALN_0042	387602.9	3747746.8	16.15	4.15	6.805	1.39	0.0090909
ALN_0043	387601.0	3747732.3	16.15	4.15	6.805	1.39	0.0090909
ALN_0044	387599.1	3747717.8	16.15	4.15	6.805	1.39	0.0090909
ALN_0045	387597.3	3747703.3	16.01	4.15	6.805	1.39	0.0090909
ALN_0046	387595.4	3747688.8	16.01	4.15	6.805	1.39	0.0090909
ALN_0047	387593.5	3747674.3	16.15	4.15	6.805	1.39	0.0090909
ALN_0048	387591.6	3747659.8	16.15	4.15	6.805	1.39	0.0090909
ALN_0049	387589.8	3747645.3	16.15	4.15	6.805	1.39	0.0090909
ALN_0050	387587.9	3747630.8	16.15	4.15	6.805	1.39	0.0090909
ALN_0051	387586.0	3747616.3	16.15	4.15	6.805	1.39	0.0090909
ALN_0052	387584.1	3747601.7	15.9	4.15	6.805	1.39	0.0090909
ALN_0053	387582.3	3747587.2	15.85	4.15	6.805	1.39	0.0090909
ALN_0054	387580.4	3747572.7	15.85	4.15	6.805	1.39	0.0090909
ALN_0055	387578.5	3747558.2	15.85	4.15	6.805	1.39	0.0090909
ALN_0056	387576.7	3747543.7	15.85	4.15	6.805	1.39	0.0090909
ALN_0057	387573.0	3747529.5	15.75	4.15	6.805	1.39	0.0090909
ALN_0058	387569.3	3747515.4	15.54	4.15	6.805	1.39	0.0090909
ALN_0059	387565.5	3747501.3	15.54	4.15	6.805	1.39	0.0090909
ALN_0060	387561.8	3747487.1	15.24	4.15	6.805	1.39	0.0090909
ALN_0061	387558.0	3747473.0	15.24	4.15	6.805	1.39	0.0090909
ALN_0062	387554.3	3747458.8	15.24	4.15	6.805	1.39	0.0090909
ALN_0063	387550.5	3747444.7	15.24	4.15	6.805	1.39	0.0090909
ALN_0064	387546.8	3747430.5	15.24	4.15	6.805	1.39	0.0090909
ALN_0065	387543.1	3747416.4	15.24	4.15	6.805	1.39	0.0090909
ALN_0066	387539.3	3747402.3	15.24	4.15	6.805	1.39	0.0090909
ALN_0067	387535.6	3747388.1	15.24	4.15	6.805	1.39	0.0090909
ALN_0068	387531.8	3747374.0	15.24	4.15	6.805	1.39	0.0090909
ALN_0069	387528.7	3747359.7	15.24	4.15	6.805	1.39	0.0090909
ALN_0070	387525.9	3747345.3	15.24	4.15	6.805	1.39	0.0090909
ALN_0071	387523.0	3747331.0	15.24	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALN_0072	387520.2	3747316.6	15.24	4.15	6.805	1.39	0.0090909
ALN_0073	387517.3	3747302.3	15.24	4.15	6.805	1.39	0.0090909
ALN_0074	387514.5	3747287.9	15.24	4.15	6.805	1.39	0.0090909
ALN_0075	387511.6	3747273.6	15.24	4.15	6.805	1.39	0.0090909
ALN_0076	387508.8	3747259.2	15.24	4.15	6.805	1.39	0.0090909
ALN_0077	387505.9	3747244.9	15.24	4.15	6.805	1.39	0.0090909
ALN_0078	387503.1	3747230.5	15.24	4.15	6.805	1.39	0.0090909
ALN_0079	387501.2	3747216.0	15.24	4.15	6.805	1.39	0.0090909
ALN_0080	387500.4	3747201.4	15.24	4.15	6.805	1.39	0.0090909
ALN_0081	387499.5	3747186.8	15.15	4.15	6.805	1.39	0.0090909
ALN_0082	387498.6	3747172.2	15.18	4.15	6.805	1.39	0.0090909
ALN_0083	387497.8	3747157.6	15.24	4.15	6.805	1.39	0.0090909
ALN_0084	387496.9	3747143.0	15.24	4.15	6.805	1.39	0.0090909
ALN_0085	387496.1	3747128.4	15.24	4.15	6.805	1.39	0.0090909
ALN_0086	387495.2	3747113.8	15.24	4.15	6.805	1.39	0.0090909
ALN_0087	387494.4	3747099.2	15.24	4.15	6.805	1.39	0.0090909
ALN_0088	387493.5	3747084.6	15.24	4.15	6.805	1.39	0.0090909
ALN_0089	387492.6	3747070.0	15.24	4.15	6.805	1.39	0.0090909
ALN_0090	387491.8	3747055.4	15.24	4.15	6.805	1.39	0.0090909
ALN_0091	387490.9	3747040.8	15.24	4.15	6.805	1.39	0.0090909
ALN_0092	387490.1	3747026.2	15.24	4.15	6.805	1.39	0.0090909
ALN_0093	387489.2	3747011.6	15.24	4.15	6.805	1.39	0.0090909
ALN_0094	387488.3	3746997.0	15.24	4.15	6.805	1.39	0.0090909
ALN_0095	387487.5	3746982.4	15.24	4.15	6.805	1.39	0.0090909
ALN_0096	387486.6	3746967.8	15.24	4.15	6.805	1.39	0.0090909
ALN_0097	387485.8	3746953.2	15.24	4.15	6.805	1.39	0.0090909
ALN_0098	387484.9	3746938.5	15.24	4.15	6.805	1.39	0.0090909
ALN_0099	387484.0	3746923.9	15.24	4.15	6.805	1.39	0.0090909
ALN_0100	387483.2	3746909.3	15.24	4.15	6.805	1.39	0.0090909
ALN_0101	387482.3	3746894.7	15.24	4.15	6.805	1.39	0.0090909
ALN_0102	387481.5	3746880.1	15.24	4.15	6.805	1.39	0.0090909
ALN_0103	387480.6	3746865.5	15.24	4.15	6.805	1.39	0.0090909
ALN_0104	387479.7	3746850.9	15.23	4.15	6.805	1.39	0.0090909
ALN_0105	387478.9	3746836.3	14.94	4.15	6.805	1.39	0.0090909
ALN_0106	387478.0	3746821.7	14.94	4.15	6.805	1.39	0.0090909
ALN_0107	387477.2	3746807.1	14.91	4.15	6.805	1.39	0.0090909
ALN_0108	387476.3	3746792.5	14.68	4.15	6.805	1.39	0.0090909
ALN_0109	387475.5	3746777.9	14.6	4.15	6.805	1.39	0.0090909
ALN_0110	387474.6	3746763.3	14.37	4.15	6.805	1.39	0.0090909
ALN_0111	387473.8	3746748.7	14.33	4.15	6.805	1.39	0.0090909
ALN_0112	387472.9	3746734.1	14.33	4.15	6.805	1.39	0.0090909
ALN_0113	387472.1	3746719.5	14.33	4.15	6.805	1.39	0.0090909
ALN_0114	387471.2	3746704.9	14.33	4.15	6.805	1.39	0.0090909
ALN_0115	387470.4	3746690.3	14.04	4.15	6.805	1.39	0.0090909
ALN_0116	387469.5	3746675.7	14.02	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALN_0117	387468.7	3746661.0	14.02	4.15	6.805	1.39	0.0090909
ALN_0118	387467.8	3746646.4	13.72	4.15	6.805	1.39	0.0090909
ALN_0119	387467.0	3746631.8	13.72	4.15	6.805	1.39	0.0090909
ALN_0120	387466.1	3746617.2	13.72	4.15	6.805	1.39	0.0090909
ALN_0121	387465.3	3746602.6	13.72	4.15	6.805	1.39	0.0090909
ALN_0122	387464.4	3746588.0	13.72	4.15	6.805	1.39	0.0090909
ALN_0123	387463.6	3746573.4	13.72	4.15	6.805	1.39	0.0090909
ALN_0124	387462.7	3746558.8	13.72	4.15	6.805	1.39	0.0090909
ALN_0125	387460.4	3746544.4	13.72	4.15	6.805	1.39	0.0090909
ALN_0126	387457.1	3746530.2	13.72	4.15	6.805	1.39	0.0090909
ALN_0127	387453.7	3746515.9	13.72	4.15	6.805	1.39	0.0090909
ALN_0128	387450.4	3746501.7	13.72	4.15	6.805	1.39	0.0090909
ALN_0129	387447.0	3746487.4	13.72	4.15	6.805	1.39	0.0090909
ALN_0130	387443.6	3746473.2	13.72	4.15	6.805	1.39	0.0090909
ALN_0131	387440.3	3746459.0	13.72	4.15	6.805	1.39	0.0090909
ALN_0132	387436.9	3746444.7	13.72	4.15	6.805	1.39	0.0090909
ALN_0133	387433.6	3746430.5	13.72	4.15	6.805	1.39	0.0090909
ALN_0134	387430.2	3746416.2	13.72	4.15	6.805	1.39	0.0090909
ALN_0135	387426.9	3746402.0	13.72	4.15	6.805	1.39	0.0090909
ALN_0136	387423.5	3746387.8	13.72	4.15	6.805	1.39	0.0090909
ALN_0137	387420.1	3746373.5	13.72	4.15	6.805	1.39	0.0090909
ALN_0138	387416.8	3746359.3	13.72	4.15	6.805	1.39	0.0090909
ALN_0139	387413.4	3746345.0	13.72	4.15	6.805	1.39	0.0090909
ALN_0140	387410.1	3746330.8	13.72	4.15	6.805	1.39	0.0090909
ALN_0141	387406.7	3746316.6	13.72	4.15	6.805	1.39	0.0090909
ALN_0142	387403.0	3746302.4	13.72	4.15	6.805	1.39	0.0090909
ALN_0143	387398.6	3746288.5	13.72	4.15	6.805	1.39	0.0090909
ALN_0144	387394.2	3746274.5	13.72	4.15	6.805	1.39	0.0090909
ALN_0145	387389.7	3746260.6	13.72	4.15	6.805	1.39	0.0090909
ALN_0146	387385.3	3746246.7	13.72	4.15	6.805	1.39	0.0090909
ALN_0147	387380.9	3746232.7	13.72	4.15	6.805	1.39	0.0090909
ALN_0148	387376.4	3746218.8	13.72	4.15	6.805	1.39	0.0090909
ALN_0149	387372.0	3746204.8	13.72	4.15	6.805	1.39	0.0090909
ALN_0150	387367.6	3746190.9	13.72	4.15	6.805	1.39	0.0090909
ALN_0151	387363.1	3746176.9	13.69	4.15	6.805	1.39	0.0090909
ALN_0152	387358.7	3746163.0	13.5	4.15	6.805	1.39	0.0090909
ALN_0153	387354.3	3746149.1	13.41	4.15	6.805	1.39	0.0090909
ALN_0154	387349.8	3746135.1	13.41	4.15	6.805	1.39	0.0090909
ALN_0155	387345.4	3746121.2	13.41	4.15	6.805	1.39	0.0090909
ALN_0156	387341.0	3746107.2	13.41	4.15	6.805	1.39	0.0090909
ALN_0157	387336.5	3746093.3	13.41	4.15	6.805	1.39	0.0090909
ALN_0158	387332.1	3746079.3	13.41	4.15	6.805	1.39	0.0090909
ALN_0159	387327.7	3746065.4	13.3	4.15	6.805	1.39	0.0090909
ALN_0160	387323.2	3746051.5	13.14	4.15	6.805	1.39	0.0090909
ALN_0161	387318.8	3746037.5	13.04	4.15	6.805	1.39	0.0090909

Source ID	UTM X (m)	UTM Y (m)	Elevation (m)	Release Ht (m)	Sigma Y (m)	Sigma Z (m)	"Length" (mile)
ALN_0162	387314.4	3746023.6	12.86	4.15	6.805	1.39	0.0090909
ALN_0163	387309.9	3746009.6	12.8	4.15	6.805	1.39	0.0090909
ALN_0164	387305.4	3745995.7	12.67	4.15	6.805	1.39	0.0090909
ALN_0165	387300.8	3745981.8	12.5	4.15	6.805	1.39	0.0090909
ALN_0166	387296.3	3745967.9	12.43	4.15	6.805	1.39	0.0090909
ALN_0167	387291.7	3745954.0	12.19	4.15	6.805	1.39	0.0090909
ALN_0168	387287.2	3745940.1	12.19	4.15	6.805	1.39	0.0090909
ALN_0169	387282.6	3745926.2	12.19	4.15	6.805	1.39	0.0090909
ALN_0170	387278.1	3745912.3	12.19	4.15	6.805	1.39	0.0090909
ALN_0171	387273.5	3745898.4	12.19	4.15	6.805	1.39	0.0090909
ALN_0172	387268.9	3745884.5	12.19	4.15	6.805	1.39	0.0090909
ALN_0173	387264.4	3745870.6	12.19	4.15	6.805	1.39	0.0090909
ALN_0174	387259.8	3745856.7	12.19	4.15	6.805	1.39	0.0090909
ALN_0175	387255.3	3745842.8	12.19	4.15	6.805	1.39	0.0090909
ALN_0176	387250.7	3745828.9	12.19	4.15	6.805	1.39	0.0090909
ALN_0177	387246.2	3745815.0	12.19	4.15	6.805	1.39	0.0090909
ALN_0178	387241.6	3745801.1	12.19	4.15	6.805	1.39	0.0090909
ALN_0179	387237.1	3745787.2	12.19	4.15	6.805	1.39	0.0090909
ALN_0180	387232.5	3745773.3	12.19	4.15	6.805	1.39	0.0090909
ALN_0181	387228.0	3745759.4	12.18	4.15	6.805	1.39	0.0090909
ALN_0182	387223.4	3745745.5	12	4.15	6.805	1.39	0.0090909
ALN_0183	387218.9	3745731.6	11.89	4.15	6.805	1.39	0.0090909
ALN_0184	387214.3	3745717.6	11.34	4.15	6.805	1.39	0.0090909
ALN_0185	387209.7	3745703.7	10.78	4.15	6.805	1.39	0.0090909
ALN_0186	387205.2	3745689.8	10.67	4.15	6.805	1.39	0.0090909
ALN_0187	387200.6	3745675.9	10.67	4.15	6.805	1.39	0.0090909
ALN_0188	387196.1	3745662.0	10.67	4.15	6.805	1.39	0.0090909
ALN_0189	387191.9	3745649.3	10.67	4.15	6.805	1.39	0.0090909

ATTACHMENT C CONSTRUCTION EMISSIONS AND SOURCE INFORMATION

Hourly E10 On-Site Construction Emissions by Construction Area (10 hours/day)

Area	NOx (lb/hour)	CO (lb/hour)	Exhaust PM10 (lb/hour)	Exhaust PM2.5 (lb/hour)	Fugitive PM10 (lb/hour)	Fugitive PM2.5 (lb/hour)
Gasoline Tank Area	19.341	6.330	0.523	0.480	1.218	0.140
Tank Conversion Area	25.932	13.325	1.340	1.232	2.785	0.290
Ethanol Loading Area	26.185	13.436	1.353	1.244	3.310	0.380
Gasoline Tank *Alt*	26.142	12.577	1.280	1.176	3.778	0.496

Construction Volume Source Information

Src ID	Coordinates (m)		Per Source Emissions (lb/hour)				Notes:
	UTM-X	UTM-Y	NOx	CO	Exhaust PM10	Exhaust PM2.5	
New Tank Area							
ConNTv1 -	383971	3744732	0.21490	0.07033	0.00581	0.00534	SW corner
ConNTv90	384051	3744822	0.21490	0.07033	0.00581	0.00534	NE corner
Converted Tanks Area							
ConCv1 -	384274	3744535	0.12966	0.06662	0.00670	0.00616	SW corner
ConCv200	384464	3744625	0.12966	0.06662	0.00670	0.00616	NE corner
Loading Rack Area							
ConLv1 -	384758	3744955	0.15586	0.07997	0.00806	0.00741	SW corner
ConLv168	384868	3745085	0.15586	0.07997	0.00806	0.00741	NE corner
New Tank Area *Alternative*							
ConNTv1 -	384619	3745151	0.29046	0.13975	0.01422	0.01307	SW corner
ConNTv90	384699	3745241	0.29046	0.13975	0.01422	0.01307	NE corner

The AERMOD input and output files are available upon request from the SCAQMD.