

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

Report Date: 10/6/2022

NMED/AQB Modeler: Eric Peters

Facility Identification:

Project: Alto Concrete Batch Plant Company: Roper Construction, Inc.

Permit number: 9295 TEMPO ID: 40076

Location Information:

The facility is located 5.1 miles north of Ruidoso, in Lincoln County. The facility is located 7.2 miles north-northwest of Ruidoso Downs.

UTM Coordinates: 438,240 m East, 3,697,950 m North, zone 13, Datum: NAD83

Elevation = 7240 feet

Air Quality Control Region (AQCR): 153

Airshed: Pr

Project Description:

Brief: Roper Construction, Inc. has applied to the New Mexico Air Quality Bureau for a New Source Review air quality permit for the construction of the Alto Concrete Batch Plant (the facility). The facility is a new concrete batch plant.

The following types of emission sources are included in the project: Aggregate Bin Loading (Unit 4), Aggregate Haul Trucks, Aggregate Weigh Batcher and Conveyor (Unit 5,6), Concrete Batch Plant Heater (Unit 12), Concrete Cement Fly Ash Haul Trucks, Concrete Plant Cement Silo Baghouse (Unit 9), Concrete Plant Fly Ash Baghouse (Unit 10), Concrete Plant Truck Load Baghouse (Unit 7,8), Feed Hopper Loading (Unit 2), Feed Hopper Unloading to Conveyor (Unit 3), Storage Piles (Aggregate) (Unit 11), and Storage Piles (Sand) (Unit 11). The emission units used in the modeling are described in the tables below.

For this permit, modeling was required for the following pollutants: Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), Particulate Matter 10 micrometers or less in aerodynamic diameter (PM₁₀), Particulate Matter (2.5 microns or less) (PM_{2.5}), and Sulfur Dioxide (SO₂).

Table 1: Table of Total Facility Emissions

| NO ₂ Rate (lbs/hr) | CO Rate (lbs/hr) | SO ₂ Rate (lbs/hr) | PM ₁₀ Rate (lbs/hr) | PM _{2.5} Rate (lbs/hr) |
|-------------------------------|------------------|-------------------------------|--------------------------------|---------------------------------|
| 0.063 | 0.053 | 0.001 | 0.982 | 0.144 |

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

Table 2: Table of PointHor Sources

| Stack Number | Description | Stack Height (ft) | Diameter (ft) | Velocity (ft/s) | Temperature (°F) | PM10 Rate (lbs/hr) | PM2.5 Rate (lbs/hr) |
|--------------|---|-------------------|---------------|-----------------|------------------|--------------------|---------------------|
| TMBH | Concrete Plant Truck Load Baghouse (Unit 7,8) | 20.0 | 1.2 | 66.3 | -460 | 0.018 | 0.003 |
| CSBH | Concrete Plant Cement Silo Baghouse (Unit 9) | 71.0 | 0.4 | 36.5 | -460 | 0.014 | 0.003 |
| FASBH | Concrete Plant Fly Ash Baghouse (Unit 10) | 71.0 | 0.4 | 36.5 | -460 | 0.009 | 0.002 |

Table 3: Table of PointCap Sources

| Stack Number | Description | Stack Height (ft) | Diameter (ft) | Velocity (ft/s) | Temperature (°F) | NO ₂ Rate (lbs/hr) | CO Rate (lbs/hr) | SO ₂ Rate (lbs/hr) | PM10 Rate (lbs/hr) | PM2.5 Rate (lbs/hr) |
|--------------|---------------------------------------|-------------------|---------------|-----------------|------------------|-------------------------------|------------------|-------------------------------|--------------------|---------------------|
| CBPH | Concrete Batch Plant Heater (Unit 12) | 14.0 | 1.5 | 9.4 | 90 | 0.063 | 0.053 | 0.001 | 0.005 | 0.005 |

Table 4: Table of Volume Sources

| Source ID | Description | Release Height (ft) | Horizontal Dimension (ft) | Vertical Dimension (ft) | PM10 Rate (lbs/hr) | PM2.5 Rate (lbs/hr) |
|-----------|---|---------------------|---------------------------|-------------------------|--------------------|---------------------|
| AB | Aggregate Bin Loading (Unit 4) | 13.1 | 3.8 | 7.6 | 0.009 | 0.002 |
| AGG_0001 | Aggregate Haul Trucks | 11.2 | 19.8 | 10.4 | 0.157 | 0.016 |
| WH | Aggregate Weigh Batcher and Conveyor (Unit 5,6) | 6.6 | 3.8 | 7.6 | 0.009 | 0.002 |
| CON_0001 | Concrete Cement Fly Ash Haul Trucks | 11.2 | 19.8 | 10.4 | 0.120 | 0.012 |
| FH | Feed Hopper Loading (Unit 2) | 19.7 | 3.8 | 7.6 | 0.274 | 0.041 |
| TP | Feed Hopper Unloading to Conveyor (Unit 3) | 6.6 | 1.5 | 3.1 | 0.009 | 0.002 |
| SP1 | Storage Piles (Aggregate) (Unit 11) | 8.0 | 11.6 | 7.4 | 0.179 | 0.027 |
| SP4 | Storage Piles (Sand) (Unit 11) | 8.0 | 11.6 | 7.4 | 0.179 | 0.027 |

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

Modeling Assumptions:

The facility operates from 5AM to 7PM with seasonal operation limited to the scenarios described in Table 5. When the facility operates at maximum production rate, the daily production limit will be reached in 6 hours. When the facility operates at lower production rates, it will take more time to produce the daily maximum concrete volume. 6-hour blocks of time are modeled to capture the maximum potential concentrations by grouping similar meteorological conditions together. For example, the early morning hours are expected to produce the highest concentrations because the wind and dispersion tend to be lowest at that time.

Table 5: Table of Operating Scenarios

| Model Scenario | Time Segments 10-Hour Blocks November - February | Time Segments 12-Hour Blocks March & October | Time Segments 14-Hour Blocks April - September |
|----------------|--|--|--|
| 1 | 7 AM to 1 PM | 6 AM to 12 PM | 5 AM to 11 AM |
| 2 | 9 AM to 3 PM | 8 AM to 2 PM | 7 AM to 1 PM |
| 3 | 11 AM to 5 PM | 10 AM to 4 PM | 9 AM to 3 PM |
| 4 | 11 AM to 5 PM | 12 PM to 6 PM | 11 AM to 5 PM |
| 5 | 11 AM to 5 PM | 12 PM to 6 PM | 1 PM to 7 PM |
| Permit limit | 7 AM to 5 PM | 6 AM to 6 PM | 5 AM to 7 PM |

Permit Conditions:

Permit conditions are required to limit the seasonal operations to maximum daily production, which is 750 cubic yards per day (year-round). In addition, earliest start time and latest end time by month are required conditions and are described in the Permit limit row in Table 5, above.

Conclusion:

This modeling analysis demonstrates that operation of the facility described in this report neither causes nor contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NAAQS for CO, NO₂, PM₁₀, PM_{2.5}, and SO₂; NMAAQs for CO, NO₂, and SO₂; and Class I and Class II PSD increments for NO₂, and PM₁₀.

Action: The permit can be issued based on this modeling analysis.

Modeling report submitted by Montrose Air Quality Services (dated 6/22/2021)

Modeling was last revised on 9/23/2022.

The air quality analysis demonstrates compliance with applicable regulatory requirements.

Model(s) Used: AERMOD version 21112 was used to run the modeling analysis.

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

Note: Complete modeling input and output files can be made available and are located in the Modeling Archives in the folder, "9295_Roper Construction, Inc._Alto Concrete Batch Plant".

Modeling Parameters:

The AERMOD regulatory default parameters were included in assumptions made by the model.

Building downwash produced by buildings at the facility was considered. The following buildings were included in the modeling.

Table 6: Table of Buildings

| Building Name | Height (m) | Diagonal Length (m) |
|---------------|------------|---------------------|
| Office | 3.7 | 31.4 |
| Silo | 21.0 | 4.6 |

Complex Terrain Data:

Both simple and complex types of terrain were used to model the facility. Elevations of receptors, facility sources, and surrounding sources were obtained from USGS data. Flat terrain was used for fugitive sources and elevated terrain was used for other sources.

Receptor Grid: The following grids were used to determine the maximum concentration for each pollutant.

Table 7: Table of Receptors

| Grid Type | Description | Shape | Spacing | Radius |
|------------|-----------------|------------|------------|----------------|
| Cartesian | Intermediate | Round | 250 meters | 3 kilometers |
| Cartesian | Fine | Round | 100 meters | 1 kilometers |
| Cartesian | Very fine | Round | 50 meters | 0.5 kilometers |
| Fence line | Very, very fine | Fence line | 25 meters | Fence line |

Receptors outside of the radii of impact were discarded for the surrounding source runs.

Meteorological Data: AERMOD – Holloman Air Force Base 2016-2020. Additional modeling was performed with Sierra Blanca Regional Airport years 2017 and 2020.

Adjacent Sources:

The Division's Modeling Guidance was used to select 30 sources within 50 km of the facility. The facility is 5.4 km from Roper Construction - Rio Bonita Aggregate. The facility is 10.9 km from Concrete Batch Plant-Ruidoso, GCP5-4858. The facility is 17.2 km from HMA GCP3-5109. The facility is 63.8 km from Corona Compressor Station. The facility is 77.6 km from Lincoln Compressor Station. The facility is 107.0 km from Roswell Compressor Station No9.

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

PSD Increment Information:

The facility is a minor source (for PSD purposes) located in AQCR 153. The minor source baseline dates here are 8/2/1995 for NO₂, not yet established for SO₂, 6/16/2000 for PM₁₀, and not yet established for PM_{2.5}.

The facility is 1.9 km from the Class I area White Mountain Wilderness Area. Class I area modeling is required.

Results Discussion (Holloman AFB data):

The following results are from the review using the Holloman AFB meteorological data. Sierra Blanca Regional Airport data results are presented in the subsequent section.

NO₂ Analysis:

ARM2 was used with default options (0.5 minimum ratio, 0.9 maximum ratio) to determine the conversion of NO_x to NO₂.

Compliance with 1-hour NO₂ NAAQS automatically demonstrates compliance with air quality standards of other periods. The maximum total 1-hour NO₂ concentration was 88.044 µg/m³, which occurred 81 m west from the center of the facility. This was 46.8% of the NAAQS. A background concentration of 38.700 µg/m³ was added from the monitor 5ZR, at 2811 Holland Street, Carlsbad, NM. The maximum source alone 1-hour NO₂ concentration was 49.344 µg/m³, which occurred 81 m west from the center of the facility. This was 26.2% of the NAAQS.

The annual NO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual NO₂ concentration was 0.962 µg/m³, which occurred 87 m north-northwest from the center of the facility. This was 1.0% of the NMAAQs.

The annual NO₂ concentration in Class I areas was below the Class I significance level. No cumulative analysis is required. The maximum source alone annual NO₂ concentration was 0.001 µg/m³, which occurred 1911 m west from the center of the facility. This was 0.0% of the PSD Class I increment.

The annual NO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual NO₂ concentration was 0.962 µg/m³, which occurred 87 m north-northwest from the center of the facility. This was 3.8% of the PSD Class II increment.

PM₁₀ Analysis:

The maximum total 24-hour PM₁₀ concentration was 111.270 µg/m³, which occurred 87 m north-northwest from the center of the facility. This was 74.2% of the NAAQS. A background concentration of 83.300 µg/m³ was added from the monitor 6WM, at Las Cruces-West Mesa Well #46. The maximum source alone 24-hour PM₁₀ concentration was 31.606 µg/m³, which occurred 85 m north-northwest from the center of the facility. This was 21.1% of the NAAQS. The maximum total 24-hour PM₁₀ concentration was 29.262 µg/m³, which occurred 88 m

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

north-northwest from the center of the facility. This was 97.5% of the PSD Class II increment.

The 24-hour PM₁₀ concentration in Class I areas was below the in Class I significance level. No cumulative analysis is required. The maximum source alone 24-hour PM₁₀ concentration was 0.269 µg/m³, which occurred 1911 m west from the center of the facility. This was 3.4% of the PSD Class I increment.

The annual PM₁₀ concentration in Class I areas was below the in Class I significance level. No cumulative analysis is required. The maximum source alone annual PM₁₀ concentration was 0.005 µg/m³, which occurred 1911 m west from the center of the facility. This was 0.1% of the PSD Class I increment.

The maximum total annual PM₁₀ concentration was 8.539 µg/m³, which occurred 83 m north from the center of the facility. This was 50.2% of the PSD Class II increment. The maximum source alone annual PM₁₀ concentration was 8.536 µg/m³, which occurred 83 m north from the center of the facility. This was 50.2% of the PSD Class II increment.

PM_{2.5} Analysis:

The maximum total 24-hour PM_{2.5} concentration was 19.157 µg/m³, which occurred 87 m north-northwest from the center of the facility. This was 54.7% of the NAAQS. A background concentration of 14.900 µg/m³ was added from the monitor 6Q, at Las Cruces-Environ Dept-1170 N. Solano. The maximum source alone 24-hour PM_{2.5} concentration was 4.922 µg/m³, which occurred 85 m north-northwest from the center of the facility. This was 14.1% of the NAAQS.

The maximum total annual PM_{2.5} concentration was 6.469 µg/m³, which occurred 83 m north from the center of the facility. This was 53.9% of the NAAQS. A background concentration of 5.100 µg/m³ was added from the monitor 6Q, at Las Cruces-Environ Dept-1170 N. Solano. The maximum source alone annual PM_{2.5} concentration was 1.339 µg/m³, which occurred 83 m north from the center of the facility. This was 11.2% of the NAAQS.

SO₂ Analysis:

Compliance with 1-hour SO₂ NAAQS automatically demonstrates compliance with air quality standards of other periods. The 1-hour SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone 1-hour SO₂ concentration was 0.528 µg/m³, which occurred 81 m west from the center of the facility. This was 0.3% of the NAAQS.

The 3-hour SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone 3-hour SO₂ concentration was 0.203 µg/m³, which occurred 85 m east from the center of the facility. This was 0.0% of the NAAQS.

The 24-hour SO₂ concentration was below the significance level. No cumulative analysis is

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

required. The maximum source alone 24-hour SO₂ concentration was 0.047 µg/m³, which occurred 66 m south from the center of the facility. This was 0.0% of the NMAAQs.

The annual SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual SO₂ concentration was 0.010 µg/m³, which occurred 87 m north-northwest from the center of the facility. This was 0.0% of the NMAAQs.

Results Discussion (Sierra Blanca Regional Airport data):

The following results are from the review using the Sierra Blanca Regional Airport meteorological data.

CO Analysis:

The 1-hour CO concentration was below the significance level. No cumulative analysis is required. The maximum source alone 1-hour CO concentration was 17.517 µg/m³, which occurred 71 m south-southwest from the center of the facility. This was 0.1% of the NMAAQs.

The 8-hour CO concentration was below the significance level. No cumulative analysis is required. The maximum source alone 8-hour CO concentration was 5.641 µg/m³, which occurred 76 m south-southeast from the center of the facility. This was 0.1% of the NMAAQs.

NO₂ Analysis:

ARM2 was used with default options (0.5 minimum ratio, 0.9 maximum ratio) to determine the conversion of NO_x to NO₂.

Compliance with 1-hour NO₂ NAAQS automatically demonstrates compliance with air quality standards of other periods. The maximum total 1-hour NO₂ concentration was 59.554 µg/m³, which occurred 71 m south-southwest from the center of the facility. This was 31.7% of the NAAQS. A background concentration of 38.700 µg/m³ was added from the monitor 5ZR, at 2811 Holland Street, Carlsbad, NM. The maximum source alone 1-hour NO₂ concentration was 20.854 µg/m³, which occurred 72 m south-southwest from the center of the facility. This was 11.1% of the NAAQS.

NO₂ 24-hour NMAAQs results are missing.

The annual NO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual NO₂ concentration was 0.670 µg/m³, which occurred 83 m east from the center of the facility. This was 0.7% of the NMAAQs.

The annual NO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual NO₂ concentration was 0.000 µg/m³, which occurred 1911 m west from the center of the facility. This was 0.0% of the PSD Class I increment.

The annual NO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual NO₂ concentration was 0.670 µg/m³, which

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

occurred 83 m east from the center of the facility. This was 2.7% of the PSD Class II increment.

PM10 Analysis:

The maximum total 24-hour PM10 concentration was 105.978 $\mu\text{g}/\text{m}^3$, which occurred 87 m north-northwest from the center of the facility. This was 70.7% of the NAAQS. A background concentration of 83.300 $\mu\text{g}/\text{m}^3$ was added from the monitor 6WM, at Las Cruces-West Mesa Well #46. The maximum source alone 24-hour PM10 concentration was 22.666 $\mu\text{g}/\text{m}^3$, which occurred 87 m north-northwest from the center of the facility. This was 15.1% of the NAAQS.

The 24-hour PM10 concentration was below the significance level. No cumulative analysis is required. The maximum source alone 24-hour PM10 concentration was 0.057 $\mu\text{g}/\text{m}^3$, which occurred 1911 m west from the center of the facility. This was 0.7% of the PSD Class I increment.

The annual PM10 concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual PM10 concentration was 0.002 $\mu\text{g}/\text{m}^3$, which occurred 1911 m west from the center of the facility. This was 0.0% of the PSD Class I increment.

The maximum total 24-hour PM10 concentration was 22.626 $\mu\text{g}/\text{m}^3$, which occurred 88 m north-northwest from the center of the facility. This was 75.4% of the PSD Class II increment.

The maximum total annual PM10 concentration was 5.623 $\mu\text{g}/\text{m}^3$, which occurred 83 m north from the center of the facility. This was 33.1% of the PSD Class II increment. The maximum source alone annual PM10 concentration was 5.621 $\mu\text{g}/\text{m}^3$, which occurred 83 m north from the center of the facility. This was 33.1% of the PSD Class II increment.

PM2.5 Analysis:

The maximum total 24-hour PM2.5 concentration was 17.838 $\mu\text{g}/\text{m}^3$, which occurred 87 m north-northwest from the center of the facility. This was 51.0% of the NAAQS. A background concentration of 14.900 $\mu\text{g}/\text{m}^3$ was added from the monitor 6Q, at Las Cruces-Environ Dept-1170 N. Solano. The maximum source alone 24-hour PM2.5 concentration was 3.586 $\mu\text{g}/\text{m}^3$, which occurred 87 m north-northwest from the center of the facility. This was 10.2% of the NAAQS.

The maximum total annual PM2.5 concentration was 5.987 $\mu\text{g}/\text{m}^3$, which occurred 83 m north from the center of the facility. This was 49.9% of the NAAQS. A background concentration of 5.100 $\mu\text{g}/\text{m}^3$ was added from the monitor 6Q, at Las Cruces-Environ Dept-1170 N. Solano. The maximum source alone annual PM2.5 concentration was 0.874 $\mu\text{g}/\text{m}^3$, which occurred 83 m north from the center of the facility. This was 7.3% of the NAAQS.

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

SO₂ Analysis:

Compliance with 1-hour SO₂ NAAQS automatically demonstrates compliance with air quality standards of other periods. The 1-hour SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone 1-hour SO₂ concentration was 0.223 µg/m³, which occurred 71 m south-southwest from the center of the facility. This was 0.1% of the NAAQS.

The 3-hour SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone 3-hour SO₂ concentration was 0.102 µg/m³, which occurred 64 m south-southwest from the center of the facility. This was 0.0% of the NAAQS.

The 24-hour SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone 24-hour SO₂ concentration was 0.031 µg/m³, which occurred 98 m north-northwest from the center of the facility. This was 0.0% of the NMAAQs.

The annual SO₂ concentration was below the significance level. No cumulative analysis is required. The maximum source alone annual SO₂ concentration was 0.007 µg/m³, which occurred 83 m east from the center of the facility. This was 0.0% of the NMAAQs.

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

Table 8: Table of Ambient Impact from Emissions (Holloman AFB meteorological data)

| Pollutant | Period | Modeled Facility Concentration (µg/m ³) | Modeled Concentration with Surrounding Sources (µg/m ³) | Background Concentration (µg/m ³) | Cumulative Concentration (µg/m ³) | Standard | Value of Standard (µg/m ³) | Percent of Standard | UTM East (m) | UTM North (m) | Elevation (ft) |
|-------------------|---------|---|---|---|---|--------------|--|---------------------|--------------|---------------|----------------|
| CO | 1-hour | 41.448 | 41.448 | | 41.448 | NMAAQS | 14997.5 | 0.3 | 438,160.0 | 3,697,962.0 | 7249 |
| CO | 8-hour | 8.689 | 8.689 | | 8.689 | NMAAQS | 9960.1 | 0.1 | 438,150.0 | 3,697,950.0 | 7249 |
| NO ₂ | 1-hour | 49.344 | 49.344 | 38.700 | 88.044 | NAAQS | 188.03 | 46.8 | 438,160.0 | 3,697,962.0 | 7249 |
| NO ₂ | annual | 0.962 | 0.962 | | 0.962 | NMAAQS | 94.02 | 1.0 | 438,210.0 | 3,698,032.0 | 7250 |
| NO ₂ | annual | 0.001 | 0.001 | | 0.001 | PSD Class I | 2.5 | 0.0 | 436,333.0 | 3,698,075.0 | 7418 |
| NO ₂ | annual | 0.962 | 0.962 | | 0.962 | PSD Class II | 25 | 3.8 | 438,210.0 | 3,698,032.0 | 7250 |
| PM ₁₀ | 24-hour | 31.606 | 27.970 | 83.300 | 111.270 | NAAQS | 150 | 74.2 | 438,210.0 | 3,698,032.0 | 7250 |
| PM ₁₀ | 24-hour | 0.269 | 0.269 | | 0.269 | PSD Class I | 8 | 3.4 | 436,333.0 | 3,698,075.0 | 7418 |
| PM ₁₀ | annual | 0.005 | 0.005 | | 0.005 | PSD Class I | 4 | 0.1 | 436,333.0 | 3,698,075.0 | 7418 |
| PM ₁₀ | 24-hour | | 29.262 | | 29.262 | PSD Class II | 30 | 97.5 | 438,210.0 | 3,698,032.0 | 7250 |
| PM ₁₀ | annual | 8.536 | 8.539 | | 8.539 | PSD Class II | 17 | 50.2 | 438,232.0 | 3,698,033.0 | 7247 |
| PM _{2.5} | 24-hour | 4.922 | 4.257 | 14.900 | 19.157 | NAAQS | 35 | 54.7 | 438,210.0 | 3,698,032.0 | 7250 |
| PM _{2.5} | annual | 1.339 | 1.369 | 5.100 | 6.469 | NAAQS | 12 | 53.9 | 438,232.0 | 3,698,033.0 | 7247 |
| SO ₂ | 1-hour | 0.528 | 0.528 | | 0.528 | NAAQS | 196.4 | 0.3 | 438,160.0 | 3,697,962.0 | 7249 |
| SO ₂ | 3-hour | 0.203 | 0.203 | | 0.203 | NAAQS | 1309.3 | 0.0 | 438,325.0 | 3,697,950.0 | 7229 |
| SO ₂ | 24-hour | 0.047 | 0.047 | | 0.047 | NMAAQS | 261.9 | 0.0 | 438,252.0 | 3,697,885.0 | 7248 |
| SO ₂ | annual | 0.010 | 0.010 | | 0.010 | NMAAQS | 52.4 | 0.0 | 438,210.0 | 3,698,032.0 | 7250 |

Air Dispersion Modeling Summary for Permit No. 9295 (revised)

Table 9: Table of Ambient Impact from Emissions (Sierra Blanca Regional Airport meteorological data)

| Pollutant | Period | Modeled Facility Concentration (µg/m ³) | Modeled Concentration with Surrounding Sources (µg/m ³) | Background Concentration (µg/m ³) | Cumulative Concentration (µg/m ³) | Standard | Value of Standard (µg/m ³) | Percent of Standard | UTM East (m) | UTM North (m) | Elevation (ft) |
|-------------------|---------|---|---|---|---|--------------|--|---------------------|--------------|---------------|----------------|
| CO | 1-hour | 17.517 | 17.517 | | 17.517 | NMAAQS | 14997.5 | 0.1 | 438,203.0 | 3,697,889.0 | 7252 |
| CO | 8-hour | 5.641 | 5.641 | | 5.641 | NMAAQS | 9960.1 | 0.1 | 438,276.0 | 3,697,883.0 | 7246 |
| NO ₂ | 1-hour | 20.854 | 20.854 | 38.700 | 59.554 | NAAQS | 188.03 | 31.7 | 438,203.0 | 3,697,889.0 | 7252 |
| NO ₂ | annual | 0.670 | 0.670 | | 0.670 | NMAAQS | 94.02 | 0.7 | 438,323.0 | 3,697,947.0 | 7229 |
| NO ₂ | annual | 0.000 | 0.000 | | 0.000 | PSD Class I | 2.5 | 0.0 | 436,333.0 | 3,698,075.0 | 7418 |
| NO ₂ | annual | 0.670 | 0.670 | | 0.670 | PSD Class II | 25 | 2.7 | 438,323.0 | 3,697,947.0 | 7229 |
| PM ₁₀ | 24-hour | 22.666 | 22.678 | 83.300 | 105.978 | NAAQS | 150 | 70.7 | 438,210.0 | 3,698,032.0 | 7250 |
| PM ₁₀ | 24-hour | 0.057 | 0.057 | | 0.057 | PSD Class I | 8 | 0.7 | 436,333.0 | 3,698,075.0 | 7418 |
| PM ₁₀ | annual | 0.002 | 0.002 | | 0.002 | PSD Class I | 4 | 0.0 | 436,333.0 | 3,698,075.0 | 7418 |
| PM ₁₀ | 24-hour | | 22.626 | | 22.626 | PSD Class II | 30 | 75.4 | 438,210.0 | 3,698,032.0 | 7250 |
| PM ₁₀ | annual | 5.621 | 5.623 | | 5.623 | PSD Class II | 17 | 33.1 | 438,232.0 | 3,698,033.0 | 7247 |
| PM _{2.5} | 24-hour | 3.586 | 2.938 | 14.900 | 17.838 | NAAQS | 35 | 51.0 | 438,210.0 | 3,698,032.0 | 7250 |
| PM _{2.5} | annual | 0.874 | 0.887 | 5.100 | 5.987 | NAAQS | 12 | 49.9 | 438,232.0 | 3,698,033.0 | 7247 |
| SO ₂ | 1-hour | 0.223 | 0.223 | | 0.223 | NAAQS | 196.4 | 0.1 | 438,203.0 | 3,697,889.0 | 7252 |
| SO ₂ | 3-hour | 0.102 | 0.102 | | 0.102 | NAAQS | 1309.3 | 0.0 | 438,227.0 | 3,697,887.0 | 7249 |
| SO ₂ | 24-hour | 0.031 | 0.031 | | 0.031 | NMAAQS | 261.9 | 0.0 | 438,187.0 | 3,698,032.0 | 7253 |
| SO ₂ | annual | 0.007 | 0.007 | | 0.007 | NMAAQS | 52.4 | 0.0 | 438,323.0 | 3,697,947.0 | 7229 |