20.2.72 NMAC
NEW NSR AIR QUALITY PERMIT APPLICATION

For

MOUNTAIN STATES CONSTRUCTORS, INC.

MSCI LOS LUNAS PLANT
Los Lunas, NM

PREPARED BY
MONTROSE AIR QUALITY SERVICES, LLC
ALBUQUERQUE, NM
SEPTEMBER 2025

Mail Application To:		**For Department use only:**
New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		

Universal Air Quality Permit Application

Use this application for NOI, NSR, or Title V sources.

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. Use this application for streamline permits as well.

This application is submitted as (check all that apply): ☐ Request for a No Permit Required Determination (no fee)
☐ **Updating** an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
Construction Status: ☒ Not Constructed ☐ Existing Permitted (or NOI) Facility ☐ Existing Non-permitted (or NOI) Facility
Minor Source: ☐ NOI 20.2.73 NMAC ☒ 20.2.72 NMAC application or revision ☐ 20.2.72.300 NMAC Streamline application
Title V Source: ☐ Title V (new) ☐ Title V renewal ☐ TV minor mod. ☐ TV significant mod. ☐ TV Acid Rain: ☐ New ☐ Renewal
PSD Major Source: ☐ PSD major source (new) ☐ Minor Modification to a PSD source ☐ a PSD major modification

Acknowledgements:

☒ I acknowledge that a pre-application meeting is available to me upon request. ☐ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.

☒ $500 NSR application Filing Fee enclosed OR ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).

☒ Check No.: 172571 in the amount of $500

☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.

☒ I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/.

☐ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full $500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.72.200.A NMAC**
(e.g. application for a new minor source would be 20.2.72.200.A NMAC, one example for a Technical Permit Revision is 20.2.72.219.B.1.b NMAC, a Title V acid rain application would be: 20.2.70.200.C NMAC)

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known: New	Updating Permit/NOI #: New
1	Facility Name: MSCI Los Lunas Plant	Plant primary SIC Code (4 digits): 1442	
		Plant NAIC code (6 digits): 212321	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): 701 State Highway 6, Los Lunas, NM 87031		
2	Plant Operator Company Name: Mountain States Constructors, Inc.	Phone/Fax: (505) 292-0108 / (505) 292-5311	

a	Plant Operator Address: 3601 Pan American Freeway NE #111, Albuquerque, NM 87107	
b	Plant Operator's New Mexico Corporate ID or Tax ID: 85-0276974	
3	Plant Owner(s) name(s): Neil Jackson	Phone/Fax: (505) 238-1537 / (505) 292-5311
a	Plant Owner(s) Mailing Address(s): 3601 Pan American Freeway NE #111, Albuquerque, NM 87107	
4	Bill To (Company): Mountain States Constructors, Inc.	Phone/Fax: (505) 238-1537 / (505) 292-5311
a	Mailing Address: 3601 Pan American Freeway NE #111, Albuquerque, NM 87107	E-mail: Neil@msconstructors.com
5	☐ Preparer: ☒ Consultant: Paul Wade	Phone/Fax: (505) 830-9680 x 6
a	Mailing Address: 9100 2nd St NW Suite 200, Albuquerque, NM 87114	E-mail: Pwade@montrose-env.com
6	Plant Operator Contact: Neil Jackson	Phone/Fax: (505) 238-1537 / (505) 292-5311
a	Address: 3601 Pan American Freeway NE #111, Albuquerque, NM 87107	E-mail: Neil@msconstructors.com
7	Air Permit Contact: Eric Brower	Title: Environmental Manager
a	E-mail: EBrower@msconstructors.com	Phone/Fax: (505) 489-9120 / (505) 292-5311
b	Mailing Address: 3601 Pan American Freeway NE #111, Albuquerque, NM 87107	
c	The designated Air permit Contact will receive all official correspondence (i.e. letters, permits) from the Air Quality Bureau.	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☒ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☒ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☐ No ☒ NA	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☐ Yes ☐ No ☒ NA
3	Is the facility currently shut down? ☐ Yes ☐ No ☒ NA	If yes, give month and year of shut down (MM/YY):
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☒ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☐ No ☒ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is: P-
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is:
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☒ No	If yes, the register No. is:

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly:	Daily:	Annually:
b	Proposed	MP Hourly: 1,000 tph PP1 Hourly: 600 tph PP2 Hourly: 600 tph AS Hourly: 300 tph RAP Hourly: 200 tph	MP Daily: 8000 tpd PP1 Daily: 4800 tpd PP2 Daily: 4800 tpd AS Daily: 2400 tpd RAP Daily: 1600 tpd	MP Annually: 2,356,650 tpy PP1 Annually: 1,413,990 tpy PP2 Annually: 1,413,990 tpy AS Annually: 706,995 tpy RAP Annually: 361,400 tpy
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			

a	Current	Hourly:	Daily:	Annually:
b	Proposed	MP Hourly: 700 tph PP1 Hourly: 420 tph PP2 Hourly: 420 tph AS Hourly: 300 tph RAP Hourly: 200 tph	MP Daily: 5600 tpd PP1 Daily: 3360 tpd PP2 Daily: 3360 tpd AS Daily: 2400 tpd RAP Daily: 1600 tpd	MP Annually: 1649655 tpy PP1 Annually: 989,793 tpy PP2 Annually: 989,793 tpy AS Annually: 706,995 tpy RAP Annually: 361,400 tpy

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): 34.8317348	Longitude (decimal degrees): -106.8831238	County: Valencia	Elevation (ft): 5368
2	UTM Zone: ☐ 12 or ☒ 13	Datum: ☒ NAD 83 ☐ WGS 84		
a	UTM E (in meters, to nearest 10 meters): 327800	UTM N (in meters, to nearest 10 meters): 3856000		
3	Name and zip code of nearest New Mexico town: Los Lunas 87031			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of I-25 and Highway 6 travel west on Highway 6 for 7 miles to access road at 701 State Highway 6 just past Mile Marker 26. Continue North for 0.75 miles to the entrance to the site.			
5	The facility is 7.0 miles west of Los Lunas, NM in Valencia County.			
6	Land Status of facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Government ☐ BLM ☐ Forest Service ☐ Military			
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Village of Los Lunas, Village of Bosque Farms, Township of Peralta, Valencia County, Bernalillo County, Isleta Pueblo			
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☒ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: Bernalillo County - 3.8 km			
9	Name nearest Class I area: Bosque del Apache			
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 107 km			
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: 1550 meters			
12	Method(s) used to delineate the Restricted Area: Fence and Gate "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.			
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☒ Yes ☐ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.			
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☐ No ☒ Yes If yes, what is the name and permit number (if known) of the other facility? NSR Permits 3171-M1, 4453, or 9720			

Section 1-E: Proposed Operating Schedule (The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.)

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): 14.5	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 4000		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: 5:00		X AM ☐PM	End: 7:30	☐AM X PM	
3	Month and year of anticipated start of construction: Upon Permit Issuance					
4	Month and year of anticipated construction completion: Upon Permit Issuance					

5	Month and year of anticipated startup of new or modified facility: Upon Permit Issuance
6	Will this facility operate at this site for more than one year? ☒ Yes ☐ No

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☒ No If yes, specify:		
a	If yes, NOV date or description of issue: N/A		NOV Tracking No: N/A
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☒ No If Yes, provide the 1c & 1d info below:		
c	Document Title:	Date:	Requirement # (or page # and paragraph #):
d	Provide the required text to be inserted in this permit:		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☒ Yes ☐ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☒ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☒ Yes ☐ No		
a	If Yes, what type of source? ☐ **Major** (☐ ≥10 tpy of any single HAP **OR** ☐ ≥25 tpy of any combination of HAPS) **OR** ☒ **Minor** (☒ <10 tpy of any single HAP **AND** ☒ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☒ No		
a	If yes, include the name of company providing commercial electric power to the facility: _____ Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

Section 1-G: Streamline Application (This section applies to 20.2.72.300 NMAC Streamline applications only)

1	☐ I have filled out Section 18, "Addendum for Streamline Applications." ☒ N/A (This is not a Streamline application.)

Section 1-H: Current Title V Information - Required for all applications from TV Sources

(Title V-source required information for all applications submitted pursuant to 20.2.72 NMAC (Minor Construction Permits), or 20.2.74/20.2.79 NMAC (Major PSD/NNSR applications), and/or 20.2.70 NMAC (Title V))

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC):		Phone:
a	R.O. Title:	R.O. e-mail:	
b	R. O. Address:		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC):		Phone:
a	A. R.O. Title:	A. R.O. e-mail:	
b	A. R. O. Address:		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship):		
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.):		
a	Address of Parent Company:		
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.):		

6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations:
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers:

Section 1-I – Submittal Requirements

Each 20.2.73 NMAC (**NOI**), a 20.2.70 NMAC (**Title V**), a 20.2.72 NMAC (**NSR** minor source), or 20.2.74 NMAC (**PSD**) application package shall consist of the following:

Hard Copy Submittal Requirements:

1) One hard copy **original signed and notarized application package** **printed double sided** **'head-to-toe'** **2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Please include a copy of the check on a separate page.

2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This copy should be printed in book form, 3-hole punched, and **must be double sided**. Note that this is in addition to the head-to-to 2-hole punched copy required in 1) above. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.

3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically. Electronic files for applications for NOIs, any type of General Construction Permit (GCP), or technical revisions to NSRs must be submitted with compact disk (CD) or digital versatile disc (DVD). For these permit application submittals, **two** CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal. Electronic files for other New Source Review (construction) permits/permit modifications or Title V permits/permit modifications can be submitted on CD/DVD or sent through AQB's secure file transfer service.

Electronic files sent by (check one):

☐ CD/DVD attached to paper application

☒ Secure electronic transfer. Air Permit Contact Name Paul Wade, Montrose Environmental, Email pwade@montrose-env.com Phone number 505-830-9680 x11703.

a. If the file transfer service is chosen by the applicant, after receipt of the application, the Bureau will email the applicant with instructions for submitting the electronic files through a secure file transfer service. Submission of the electronic files through the file transfer service needs to be completed within 3 business days after the invitation is received, so the applicant should ensure that the files are ready when sending the hard copy of the application. The applicant will not need a password to complete the transfer. **Do not use the file transfer service for NOIs, any type of GCP, or technical revisions to NSR permits.**

4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.

5) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver** and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling ***summary report only*** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.

6) If the applicant submits the electronic files on CD and the application is subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
   a. one additional CD copy for US EPA,
   b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
   c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

If the application is submitted electronically through the secure file transfer service, these extra CDs do not need to be submitted.

Electronic Submittal Requirements [in addition to the required hard copy(ies)]:

1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the application.

2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc,), submit these items in hard copy format. We must be able to review the formulas and inputs that calculated the emissions.

3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.

4) The electronic file names shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the core permit number (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the section # (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the header information throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision number (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. Do not use special symbols (#, @, etc.) in file names. The footer information should not be modified by the applicant.

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Table 2-A: Regulated Emission Sources

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
Main Plant												
1	Quarry Material	NA	NA	NA	1000 tph	1000 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
2	Quarry Truck Loading	NA	NA	NA	1000 tph	1000 tph	NA Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
3	MP Feeder (Quarry Truck Unload)	NA	NA	NA	1000 tph	1000 tph	NA Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
4	MP Jaw Crusher	TBD	TBD	TBD	1000 tph	1000 tph	TBD Jan-26	C4 NA	30502510	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
5	MP Surge Bin	TBD	TBD	TBD	1000 tph	1000 tph	TBD Jan-26	C1 NA	30500147	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
6	MP PreScreen	TBD	TBD	TBD	1000 tph	1000 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
7	MP Waste Screen	TBD	TBD	TBD	1000 tph	300 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
8	MP Surge Bin	TBD	TBD	TBD	1000 tph	150 tph	TBD Jan-26	C1 NA	30500147	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
9	MP Line 1 Jaw Crusher Feeder	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
10	MP Line 1 Jaw Crusher	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	C3 NA	30502510	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
11	MP Line 1 Feeder	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
12	MP Line 1 Cone Crusher	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	C3 NA	30502510	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
13	MP Line 1 Screen	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
14	MP Line 2 Jaw Crusher Feeder	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

[1] Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.

[2] Specify dates required to determine regulatory applicability.

[3] To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator set.

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
[4] "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition												
15	MP Line 2 Jaw Crusher	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
16	MP Line 2 Feeder	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
17	MP Line 2 Cone Crusher	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
18	MP Line 2 Screen	TBD	TBD	TBD	1000 tph	350 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
19-55	MP Transfer Conveyor 37 ea.	Various	Various	Various	See Section 6	See Section 6	Various Jan-26	C1 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
56-64	MP Stacker Conveyor 9 ea.	Various	Various	Various	See Section 6	See Section 6	Various Jan-26	C6 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
65	MP Waste Storage Pile	NA	NA	NA	300 tph	300 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
66	MP Quarry Truck Loading - Product	NA	NA	NA	700 tph	700 tph	NA Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
67	MP Finish Product Storage Pile	NA	NA	NA	700 tph	700 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
68	MP Product Truck Loading - Finish Pile	NA	NA	NA	700 tph	700 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
69E	MP Plant Generator/Engine MSCI 31-0005	CAT	3516 DITA	25Z06704	2288 bhp	2288 bhp	12/21/1999 Jan-26	NA S1	30502099	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	
Pit Plant #1												
70	Quarry Material - Pit Plant 1	NA	NA	NA	600 tph	600 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
71	Pit Plant 1 Feeder	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
72	Pit Plant 1 Jaw Crusher	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
73	Pit Plant 1 Surge Bin	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	C1 NA	30500147	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
74	Pit Plant 1 Prescreen	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
75	Pit Plant 1 Cone Crusher	TBD	TBD	TBD	600 tph	300 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
76	Pit Plant 1 VSI Crusher	TBD	TBD	TBD	600 tph	210 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
77	Pit Plant 1 Screen	TBD	TBD	TBD	600 tph	420 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
78	Pit Plant 1 Air Separator	TBD	TBD	TBD	600 tph	150 tph	TBD Jan-26	C2 NA	30500626	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
79-103	Pit Plant 1 Transfet Conveyor 25 ea.	Various	Various	Various	See Section 6	See Section 6	Various Jan-26	C1 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
104-108	Pit Plant #2 Stacker Conveyor	Various	Various	Various	See Section 6	See Section 6	Various Jan-26	C6 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
109	Pit Plant 1 Finish Product Storage Pile	NA	NA	NA	420 tph	420 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
110	Pit Plant 1 Product Truck Loading - Finish Pile	NA	NA	NA	420 tph	420 tph	NA Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
111E	Pit Plant 1 Generator/Engine MSCI 31-0002	CAT	3512	24Z09726	1604 hp	1604 hp	6/1/2000 Jan-26	NA S2	30502099	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	
Pit Plant #2												
112	Quarry Material - Pit Plant 2	NA	NA	NA	600 tph	600 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
113	Pit Plant 2 Feeder	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
114	Pit Plant 2 Jaw Crusher	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
115	Pit Plant 2 Surge Bin	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	C1 NA	30500147	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
116	Pit Plant 2 PreScreen	TBD	TBD	TBD	600 tph	600 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
117	Pit Plant 2 Line 1 Cone Crusher	TBD	TBD	TBD	600 tph	210 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
118	Pit Plant 2 Line 1 Screen	TBD	TBD	TBD	600 tph	210 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
119	Pit Plant 2 Air Separator	TBD	TBD	TBD	600 tph	90 tph	TBD Jan-26	C2 NA	30500626	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
120	Pit Plant 2 Line 2 Cone Crusher	TBD	TBD	TBD	600 tph	210 tph	TBD Jan-26	C3 NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
121	Pit Plant 2 Line 2 Screen	TBD	TBD	TBD	600 tph	210 tph	TBD Jan-26	C2 NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
122-150	Pit Plant 2 Transfer Conveyor	Various	Various	Various	See Section 6	See Section 6	Various 46023	C1 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
151-158	Pit Plant 2 Stacker Conveyor	Various	Various	Various	See Section 6	See Section 6	Various 46023	C6 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
159	Pit Plant 2 Finish Product Storage Pile	NA	NA	NA	420 tph	420 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
160	Pit Plant 2 Product Truck Loading - Finish Pile	NA	NA	NA	420 tph	420 tph	NA Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
161E	Pit Plant 2 Generator/Engine MSCI 31-0004	CAT	3512B DITA	6WN00526	2153 hp	2153 hp	3/20/2000 Jan-26	NA S3	30502099	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	
162	Waste Storage Pile (Main+Pit1+Pit2)	NA	NA	NA	680 tph	680 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
Air Separator Plant												
163	AS Feeder	TBD	TBD	TBD	300 tph	300 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
164	AS Plant Feeder	TBD	TBD	TBD	300 tph	300 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
165	AS Plant Air Separator	TBD	TBD	TBD	300 tph	300 tph	TBD Jan-26	C2 NA	30500626	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
166-170	AS Transfer Conveyor	Various	Various	Various	See Section 6	See Section 6	Various 46023	C1 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
171-172	AS Plant Stacker Conveyor to Pile 1	Various	Various	Various	See Section 6	See Section 6	Various 46023	C6 NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
173	AS Plant Finish Pile	NA	NA	NA	300 tph	300 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
174	AS Plant Product Truck Loading - Finish Pile	NA	NA	NA	300 tph	300 tph	NA Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
175E	AS Plant Generator/Engine MSCI 31-1403	Isuzu	BH-6HK1X	6HKI-587751	265 hp	265 hp	Sep-14 Jan-26	NA S4	30502099	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	
Recycled Asphalt Plant												
176	RAP Plant Raw Material Source	NA	NA	NA	200 tph	200 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
177	RAP Plant Feeder/Hopper	TBD	TBD	TBD	200 tph	200 tph	TBD Jan-26	NA NA	30502031	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
178	RAP Plant Vertical Impact Crusher	TBD	TBD	TBD	200 tph	200 tph	TBD Jan-26	NA NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
179	RAP Plant Surge Bin	TBD	TBD	TBD	200 tph	200 tph	TBD Jan-26	NA NA	30500147	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
180	RAP Plant 2-Deck Screen	TBD	TBD	TBD	200 tph	200 tph	TBD Jan-26	NA NA	30502015	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
181	RAP Plant Cone Crusher	TBD	TBD	TBD	200 tph	200 tph	TBD Jan-26	NA NA	30502010	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
182-189	RAP Plant Trnasfer Conveyor	Various	Various	Various	See Section 6	See Section 6	Various 46023	NA NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
190	RAP Plant Stacker Conveyor to Pile	Various	Various	Various	See Section 6	See Section 6	Various 46023	NA NA	30502006	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
191	RAP Plant Finish Product Storage Pile	NA	NA	NA	200 tph	200 tph	NA Jan-26	NA NA	30502007	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
192E	RAP Plant Generator/Engine MSCI 30-1101	CAT	C-13	TBD	415 bhp	415 bhp	2014 Jan-26	NA S5	30502099	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	
Haul Road Traffic												
193	Paved Road Main Plant Traffic In	NA	NA	NA	255 Trucks/ Day	255 Trucks/ Day	NA Jan-26	C5 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Paved Road Main Plant Traffic Out	NA	NA	NA	255 Trucks/ Day	255 Trucks/ Day	NA Jan-26	C5 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Unpaved Road Main Plant Traffic	NA	NA	NA	255 Trucks/ Day	255 Trucks/ Day	NA Jan-26	C4 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Pit Plants Traffic Paved In	NA	NA	NA	153 Trucks/ Day	153 Trucks/ Day	NA Jan-26	C5 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Pit Plants Traffic Paved Out	NA	NA	NA	153 Trucks/ Day	153 Trucks/ Day	NA Jan-26	C5 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Pit Plants Traffic Unpaved to Pit	NA	NA	NA	153 Trucks/ Day	153 Trucks/ Day	NA Jan-26	C4 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Pit Plants Traffic Unpaved In Pit	NA	NA	NA	153 Trucks/ Day	153 Trucks/ Day	NA Jan-26	C4 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Rock Truck Road Traffic - Unpaved Pit to Piles	NA	NA	NA	145 Trucks/ Day	145 Trucks/ Day	NA Jan-26	C4 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Rock Truck Road Traffic - Unpaved Quarry Wall to Main Plant	NA	NA	NA	207 Trucks/ Day	207 Trucks/ Day	NA Jan-26	C4 NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
	Rock Truck Road Traffic - Unpaved Main Plant to out of Pit	NA	NA	NA	145 Trucks/ Day	145 Trucks/ Day	NA / Jan-26	C4 / NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Rock Truck Road Traffic - Unpaved Waste Material in Pit	NA	NA	NA	93 Trucks/ Day	93 Trucks/ Day	NA / Jan-26	C4 / NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	Rock Truck Road Traffic - Unpaved Waste Material out of Pit	NA	NA	NA	93 Trucks/ Day	93 Trucks/ Day	NA / Jan-26	C4 / NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
	RAP Delivery	NA	NA	NA	73 Trucks/ Day	73 Trucks/ Day	NA / Jan-26	C5 / NA	30502011	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
194	Unleaded Gasoline Tank T13	Senergy Tank	NA	NA	500 Gallon	500 Gallon	NA / Jan-26	NA / NA	30502099	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Table 2-B: Insignificant Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No. / Serial No.	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
T1	Diesel-Fuel Tank	NA	26-0903 NA	10,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T2	Diesel-Fuel Tank	NA	26-1404 NA	10,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T3	Diesel-Fuel Tank	NA	NA NA	10,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T4	Diesel-Fuel Tank	NA	NA NA	10,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T5	Diesel-Fuel Tank	NA	NA NA	10,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T6	Water Tank	NA	NA NA	10,000 Gallons		NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T7	Water Tank	NA	NA NA	10,000 Gallons		NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T8	Water Tank	NA	NA NA	10,000 Gallons		NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T9	Water Tank	NA	NA NA	10,000 Gallons		NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T10	Water Tank	NA	NA NA	10,000 Gallons		NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T11	Diesel-Fuel Tank	Senergy Tank	NA NA	6,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
T12	Diesel-Fuel Tank	Senergy Tank	NA NA	2,000 Gallons	20.2.72.202.B.2	NA Jan-26	☐ Existing (unchanged) ☐ To be Removed x New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

[1] Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

[2] Specify date(s) required to determine regulatory applicability.

Table 2-C: Emissions Control Equipment

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B. In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions.

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
C1	Conveyor Transfer Points - Wet Dust Suppression System	Jan-26	PM	5, 8, 19-55, 73, 79-103, 115, 122-150, 166-170	95.9%	AP-42 11.19.2 Emission Factors
C2	Screen - Wet Dust Suppression System	Jan-26	PM	6, 7, 13, 18, 74, 77, 78, 116, 118, 119, 121, 165	91.6%	AP-42 11.19.2 Emission Factors
C3	Crusher - Wet Dust Suppression System	Jan-26	PM	4, 10, 12, 15, 17, 72, 75, 76, 114, 117, 120	77.7%	AP-42 11.19.2 Emission Factors
C4	Unpaved Roads - Water and Surfactants (Unit 193)	Jan-26	PM	MPUP_, PTUP_, PTUP_2, QRTP_, QRTP_2, QRTP_3, QRTP_4, WUPO_,	90%	NMED Pollicy
C5	Paved- Swept (Unit 193)	Jan-26	PM	MPPI_, MPPO_, PTIn_, PTOt_, RAP_	95%	NMED Pollicy
C6	Stacker Conveyor Drop to Pile - Wet Dust Suppression System	Jan-26	PM	56-64, 104-108, 151-158, 171, 172	60%	AP-42 13.2.4 Emission Factors Moisture Content = 2.88%

[1] List each control device on a separate line. For each control device, list all emission units controlled by the control device.

Table 2-D: Maximum Emissions (under normal operating conditions)

This Table was intentionally left blank because it would be identical to Table 2-E.

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	-	-	-	-	-	-	-	-	6.60	9.71	3.12	4.59	0.47	0.70	-	-	-	-
2	-	-	-	-	-	-	-	-	6.60	9.71	3.12	4.59	0.47	0.70	-	-	-	-
3	-	-	-	-	-	-	-	-	6.60	9.71	3.12	4.59	0.47	0.70	-	-	-	-
4	-	-	-	-	-	-	-	-	5.40	11.83	2.40	5.26	0.36	0.80	-	-	-	-
5	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36	-	-	-	-
6	-	-	-	-	-	-	-	-	25.00	54.75	8.70	19.05	1.32	2.89	-	-	-	-
7	-	-	-	-	-	-	-	-	7.50	16.43	2.61	5.72	0.40	0.87	-	-	-	-
8	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
9	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24	-	-	-	-
10	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28	-	-	-	-
11	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24	-	-	-	-
12	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28	-	-	-	-
13	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
14	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
15	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
16	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
17	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28	-	-	-	-
18	-	-	-	-	-	-	-	-	8.75	19.16	3.05	6.67	0.46	1.01	-	-	-	-
19	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36	-	-	-	-
20	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36	-	-	-	-
21	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36	-	-	-	-
22	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11	-	-	-	-
23	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11	-	-	-	-
24	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11	-	-	-	-
25	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
26	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
27	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
28	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
29	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
30	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
31	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
32	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
33	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26	-	-	-	-
34	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
35	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26	-	-	-	-
36	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
37	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
38	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24	-	-	-	-
39	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28	-	-	-	-
40	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
41	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
42	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
43	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
44	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
45	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
46	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
47	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24	-	-	-	-
48	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
49	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13	-	-	-	-
50	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
51	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
52	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
53	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
54	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
55	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
56	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10	-	-	-	-
57	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10	-	-	-	-
58	-	-	-	-	-	-	-	-	4.62	6.80	2.19	3.21	0.33	0.49	-	-	-	-
59	-	-	-	-	-	-	-	-	3.75	8.21	1.31	2.86	0.20	0.43	-	-	-	-
60	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
61	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
62	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055	-	-	-	-
63	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
64	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036	-	-	-	-
65	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11	-	-	-	-
66	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26	-	-	-	-
67	-	-	-	-	-	-	-	-	4.62	6.80	2.19	3.21	0.33	0.49	-	-	-	-
68	-	-	-	-	-	-	-	-	4.62	6.80	2.19	3.21	0.33	0.49	-	-	-	-
69E	10.61	23.24	1.65	3.61	1.27	2.78	0.80	1.76	1.11	2.43	1.11	2.43	1.11	2.43	-	-	1.33E-04	2.91E-04
70	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42	-	-	-	-
71	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42	-	-	-	-
72	-	-	-	-	-	-	-	-	3.24	7.10	1.44	5.26	0.22	0.80	-	-	-	-
73	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36	-	-	-	-
74	-	-	-	-	-	-	-	-	15.00	32.85	5.22	19.05	0.79	2.89	-	-	-	-
75	-	-	-	-	-	-	-	-	1.62	3.55	0.72	2.63	0.11	0.40	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
76	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.84	0.076	0.28	-	-	-	-
77	-	-	-	-	-	-	-	-	10.50	23.00	3.65	13.34	0.55	2.02	-	-	-	-
78	-	-	-	-	-	-	-	-	3.75	8.21	1.31	4.76	0.20	0.72	-	-	-	-
79	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36	-	-	-	-
80	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36	-	-	-	-
81	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36	-	-	-	-
82	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36	-	-	-	-
83	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11	-	-	-	-
84	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11	-	-	-	-
85	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11	-	-	-	-
86	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11	-	-	-	-
87	-	-	-	-	-	-	-	-	0.90	1.97	0.33	1.20	0.050	0.18	-	-	-	-
88	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073	-	-	-	-
89	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073	-	-	-	-
90	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.84	0.035	0.13	-	-	-	-
91	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.84	0.035	0.13	-	-	-	-
92	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.69	0.070	0.26	-	-	-	-
93	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.36	0.015	0.055	-	-	-	-
94	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.36	0.015	0.055	-	-	-	-
95	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11	-	-	-	-
96	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11	-	-	-	-
97	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073	-	-	-	-
98	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073	-	-	-	-
99	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091	-	-	-	-
100	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091	-	-	-	-
101	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091	-	-	-	-
102	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091	-	-	-	-
103	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091	-	-	-	-
104	-	-	-	-	-	-	-	-	1.19	1.75	0.56	0.83	0.085	0.13	-	-	-	-
105	-	-	-	-	-	-	-	-	1.19	1.75	0.56	0.83	0.085	0.13	-	-	-	-
106	-	-	-	-	-	-	-	-	0.79	1.17	0.37	0.55	0.057	0.083	-	-	-	-
107	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10	-	-	-	-
108	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10	-	-	-	-
109	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29	-	-	-	-
110	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29	-	-		
111E	7.96	17.44	2.78	6.08	1.21	2.65	0.49	1.08	0.62	1.36	0.62	1.36	0.62	1.36	-	-	8.20E-05	1.80E-04
112	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42	-	-	-	-
113	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42	-	-	-	-
114	-	-	-	-	-	-	-	-	3.24	7.10	1.44	3.15	0.22	0.48	-	-	-	-
115	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36	-	-	-	-
116	-	-	-	-	-	-	-	-	15.00	32.85	5.22	11.43	0.79	1.73	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
117	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.10	0.076	0.17	-	-	-	-
118	-	-	-	-	-	-	-	-	5.25	11.50	1.83	4.00	0.28	0.61	-	-	-	-
119	-	-	-	-	-	-	-	-	2.25	4.93	0.78	1.71	0.12	0.26	-	-	-	-
120	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.10	0.076	0.17	-	-	-	-
121	-	-	-	-	-	-	-	-	5.25	11.50	1.83	4.00	0.28	0.61	-	-	-	-
122	-	-	-	-	-	-	-	-	1.80	3.94	0.66	1.45	0.10	0.22	-	-	-	-
123	-	-	-	-	-	-	-	-	1.80	3.94	0.66	1.45	0.10	0.22	-	-	-	-
124	-	-	-	-	-	-	-	-	1.80	3.94	0.66	1.45	0.10	0.22	-	-	-	-
125	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.43	0.030	0.066	-	-	-	-
126	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.43	0.030	0.066	-	-	-	-
127	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.43	0.030	0.066	-	-	-	-
128	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.01	0.070	0.15	-	-	-	-
129	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.01	0.070	0.15	-	-	-	-
130	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.01	0.070	0.15	-	-	-	-
131	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077	-	-	-	-
132	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077	-	-	-	-
133	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077	-	-	-	-
134	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
135	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
136	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
137	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
138	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033	-	-	-	-
139	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033	-	-	-	-
140	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033	-	-	-	-
141	-	-	-	-	-	-	-	-	0.14	0.32	0.053	0.12	0.0080	0.018	-	-	-	-
142	-	-	-	-	-	-	-	-	0.13	0.28	0.046	0.10	0.0070	0.015	-	-	-	-
143	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077	-	-	-	-
144	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077	-	-	-	-
145	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077	-	-	-	-
146	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
147	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
148	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033	-	-	-	-
149	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
150	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
151	-	-	-	-	-	-	-	-	1.19	1.75	0.56	0.83	0.085	0.125	-	-	-	-
152	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
153	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
154	-	-	-	-	-	-	-	-	0.32	0.47	0.15	0.22	0.023	0.033	-	-	-	-
155	-	-	-	-	-	-	-	-	0.28	0.41	0.13	0.19	0.020	0.029	-	-	-	-
156	-	-	-	-	-	-	-	-	0.59	0.87	0.28	0.41	0.043	0.063	-	-	-	-
157	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
158	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
159	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29	-	-	-	-
160	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29	-	-	-	-
161E	33.88	74.19	5.38	11.77	1.82	3.99	0.76	1.65	0.58	1.27	0.58	1.27	0.58	1.27	-	-	-	-
162	-	-	-	-	-	-	-	-	4.36	6.41	2.06	3.03	0.31	0.46	-	-	-	-
163	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21	-	-	-	-
164	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21	-	-	-	-
165	-	-	-	-	-	-	-	-	7.50	32.85	2.61	5.72	0.40	0.87	-	-	-	-
166	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21	-	-	-	-
167	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11	-	-	-	-
168	-	-	-	-	-	-	-	-	0.090	0.20	0.033	0.072	0.0050	0.011	-	-	-	-
169	-	-	-	-	-	-	-	-	0.81	1.77	0.30	0.65	0.045	0.10	-	-	-	-
170	-	-	-	-	-	-	-	-	0.81	1.77	0.30	0.65	0.045	0.10	-	-	-	-
171	-	-	-	-	-	-	-	-	0.20	0.29	0.094	0.14	0.014	0.021	-	-	-	-
172	-	-	-	-	-	-	-	-	1.78	2.62	0.84	1.24	0.13	0.19	-	-	-	-
173	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21	-	-	-	-
174	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21	-	-	-	-
175E	1.75	3.82	1.53	3.35	0.074	0.16	0.087	0.19	0.087	0.19	0.087	0.19	0.087	0.19	-	-	1.23E-05	2.70E-05
176	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
177	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
178	-	-	-	-	-	-	-	-	0.32	0.71	0.14	0.32	0.022	0.048	-	-	-	-
179	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
180	-	-	-	-	-	-	-	-	1.50	3.29	0.52	1.14	0.079	0.17	-	-	-	-
181	-	-	-	-	-	-	-	-	0.32	0.71	0.14	0.32	0.022	0.048	-	-	-	-
182	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
183	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
184	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
185	-	-	-	-	-	-	-	-	0.11	0.39	0.040	0.14	0.0060	0.022	-	-	-	-
186	-	-	-	-	-	-	-	-	0.11	0.39	0.040	0.14	0.0060	0.022	-	-	-	-
187	-	-	-	-	-	-	-	-	0.11	0.39	0.040	0.14	0.0060	0.022	-	-	-	-
188	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
189	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022	-	-	-	-
190	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
191	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042	-	-	-	-
192E	3.17	6.94	2.20	4.82	0.12	0.26	0.14	0.32	0.18	0.39	0.18	0.39	0.18	0.39	-	-	2.40E-05	5.26E-05
193	-	-	-	-	-	-	-	-	1298.07	2297.59	330.83	585.57	33.08	58.56	-	-	-	-
194	-	-	-	-	0.045	0.20	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**57.36**	**125.63**	**13.53**	**29.63**	**2.27**	**4.97**	**4.55**	**10.07**	**1621.6**	**2952.1**	**461.5**	**868.6**	**55.05**	**106.21**	-	-	**3.77E-04**	**8.25E-04**

[1]**Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but PM is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E^{-4}).

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	-	-	-	-	-	-	-	-	6.60	5.22	3.12	2.47	0.47	0.37	-	-	-	-
2	-	-	-	-	-	-	-	-	6.60	5.22	3.12	2.47	0.47	0.37	-	-	-	-
3	-	-	-	-	-	-	-	-	6.60	5.22	3.12	2.47	0.47	0.37	-	-	-	-
4	-	-	-	-	-	-	-	-	1.20	1.41	0.54	0.64	0.10	0.12	-	-	-	-
5	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015	-	-	-	-
6	-	-	-	-	-	-	-	-	2.20	2.59	0.74	0.87	0.050	0.059	-	-	-	-
7	-	-	-	-	-	-	-	-	0.66	0.78	0.22	0.26	0.015	0.018	-	-	-	-
8	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
9	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13	-	-	-	-
10	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041	-	-	-	-
11	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13	-	-	-	-
12	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041	-	-	-	-
13	-	-	-	-	-	-	-	-	0.77	0.91	0.26	0.31	0.018	0.021	-	-	-	-
14	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13	-	-	-	-
15	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041	-	-	-	-
16	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13	-	-	-	-
17	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041	-	-	-	-
18	-	-	-	-	-	-	-	-	0.77	0.91	0.26	0.31	0.018	0.021	-	-	-	-
19	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015	-	-	-	-
20	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015	-	-	-	-
21	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015	-	-	-	-
22	-	-	-	-	-	-	-	-	0.04	0.049	0.014	0.016	0.0039	0.0046	-	-	-	-
23	-	-	-	-	-	-	-	-	0.04	0.049	0.014	0.016	0.0039	0.0046	-	-	-	-
24	-	-	-	-	-	-	-	-	0.04	0.049	0.014	0.016	0.0039	0.0046	-	-	-	-
25	-	-	-	-	-	-	-	-	0.02	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
26	-	-	-	-	-	-	-	-	0.02	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
27	-	-	-	-	-	-	-	-	0.02	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
28	-	-	-	-	-	-	-	-	0.18	0.21	0.081	0.10	0.015	0.018	-	-	-	-
29	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
30	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
31	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
32	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
33	-	-	-	-	-	-	-	-	0.10	0.12	0.032	0.038	0.0091	0.011	-	-	-	-
34	-	-	-	-	-	-	-	-	0.10	0.12	0.032	0.038	0.0091	0.011	-	-	-	-
35	-	-	-	-	-	-	-	-	0.10	0.12	0.032	0.038	0.0091	0.011	-	-	-	-
36	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
37	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
38	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
39	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
40	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
41	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
42	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
43	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
44	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
45	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
46	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
47	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
48	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
49	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054	-	-	-	-
50	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
51	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
52	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
53	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
54	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
55	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015	-	-	-	-
56	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034	-	-	-	-
57	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034	-	-	-	-
58	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16	-	-	-	-
59	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034	-	-	-	-
60	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022	-	-	-	-
61	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022	-	-	-	-
62	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034	-	-	-	-
63	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022	-	-	-	-
64	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022	-	-	-	-
65	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11	-	-	-	-
66	-	-	-	-	-	-	-	-	4.62	3.66	2.19	1.73	0.33	0.26	-	-	-	-
67	-	-	-	-	-	-	-	-	4.62	3.66	2.19	1.73	0.33	0.26	-	-	-	-
68	-	-	-	-	-	-	-	-	4.62	3.66	2.19	1.73	0.33	0.26	-	-	-	-
69E	10.61	21.23	1.65	3.30	1.27	2.54	0.80	1.60	1.11	2.22	1.11	2.22	1.11	2.22	-	-	1.33E-04	2.66E-04
70	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22	-	-	-	-
71	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22	-	-	-	-
72	-	-	-	-	-	-	-	-	0.72	0.85	0.32	0.38	0.060	0.071	-	-	-	-
73	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
74	-	-	-	-	-	-	-	-	1.32	1.56	0.44	0.52	0.030	0.035	-	-	-	-
75	-	-	-	-	-	-	-	-	0.36	0.42	0.16	0.19	0.030	0.035	-	-	-	-
76	-	-	-	-	-	-	-	-	0.25	0.30	0.11	0.13	0.021	0.025	-	-		
77	-	-	-	-	-	-	-	-	0.92	1.09	0.31	0.37	0.021	0.025	-	-	-	-
78	-	-	-	-	-	-	-	-	0.33	0.39	0.11	0.13	0.0075	0.009	-	-	-	-
79	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
80	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
81	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
82	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
83	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
84	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
85	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
86	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
87	-	-	-	-	-	-	-	-	0.042	0.049	0.014	0.016	0.0039	0.0046	-	-	-	-
88	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018	-	-	-	-
89	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018	-	-	-	-
90	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
91	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
92	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064	-	-	-	-
93	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014	-	-	-	-
94	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014	-	-	-	-
95	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
96	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
97	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018	-	-	-	-
98	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018	-	-	-	-
99	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
100	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
101	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
102	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
103	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023	-	-	-	-
104	-	-	-	-	-	-	-	-	0.71	0.56	0.34	0.27	0.051	0.040	-	-	-	-
105	-	-	-	-	-	-	-	-	0.71	0.56	0.34	0.27	0.051	0.040	-	-	-	-
106	-	-	-	-	-	-	-	-	0.48	0.38	0.22	0.18	0.034	0.027	-	-	-	-
107	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034	-	-	-	-
108	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034	-	-	-	-
109	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16	-	-	-	-
110	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16	-	-	-	-
111E	7.96	15.93	2.78	5.55	1.21	2.42	0.49	0.99	0.62	1.24	0.62	1.24	0.62	1.24	-	-	8.20E-05	1.64E-04
112	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22	-	-	-	-
113	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22	-	-	-	-
114	-	-	-	-	-	-	-	-	0.72	0.85	0.32	0.38	0.060	0.071	-	-	-	-
115	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
116	-	-	-	-	-	-	-	-	1.32	1.56	0.44	0.52	0.030	0.035	-	-	-	-
117	-	-	-	-	-	-	-	-	0.25	0.30	0.11	0.13	0.021	0.025	-	-	-	-
118	-	-	-	-	-	-	-	-	0.46	0.54	0.16	0.18	0.011	0.012	-	-	-	-
119	-	-	-	-	-	-	-	-	0.20	0.23	0.067	0.078	0.0045	0.0053	-	-	-	-
120	-	-	-	-	-	-	-	-	0.25	0.30	0.11	0.13	0.021	0.025	-	-	-	-
121	-	-	-	-	-	-	-	-	0.46	0.54	0.16	0.18	0.011	0.012	-	-	-	-
122	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
123	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-
124	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
125	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
126	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
127	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028	-	-	-	-
128	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064	-	-	-	-
129	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064	-	-	-	-
130	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064	-	-	-	-
131	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
132	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
133	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
134	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
135	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
136	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
137	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
138	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014	-	-	-	-
139	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014	-	-	-	-
140	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014	-	-	-	-
141	-	-	-	-	-	-	-	-	0.0067	0.0079	0.0022	0.0026	0.00062	0.00074	-	-	-	-
142									0.0059	0.0069	0.0019	0.0023	0.00055	0.00064	-	-	-	-
143	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
144	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
145	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032	-	-	-	-
146	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
147	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
148	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014	-	-	-	-
149	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
150	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009	-	-	-	-
151	-	-	-	-	-	-	-	-	0.71	0.56	0.34	0.27	0.051	0.040	-	-	-	-
152	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013	-	-	-	-
153	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013	-	-	-	-
154	-	-	-	-	-	-	-	-	0.19	0.15	0.090	0.071	0.014	0.011	-	-	-	-
155	-	-	-	-	-	-	-	-	0.17	0.13	0.079	0.062	0.012	0.009	-	-	-	-
156	-	-	-	-	-	-	-	-	0.36	0.28	0.17	0.13	0.026	0.020	-	-	-	-
157	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013	-	-	-	-
158	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013	-	-	-	-
159	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16	-	-	-	-
160	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16	-	-	-	-
161E	33.88	54.20	5.38	8.60	1.82	2.91	0.76	1.21	0.58	0.93	0.58	0.93	0.58	0.93	-	-	1.25E-04	2.00E-04
162	-	-	-	-	-	-	-	-	4.36	3.45	2.06	1.63	0.31	0.22	-	-	-	-
163	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11	-	-	-	-
164	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11	-	-	-	-
165	-	-	-	-	-	-	-	-	0.66	0.78	0.22	0.26	0.015	0.018	-	-	-	-
166	-	-	-	-	-	-	-	-	0.042	0.049	0.014	0.016	0.0039	0.0046	-	-	-	-
167	-	-	-	-	-	-	-	-	0.042	0.049	0.014	0.016	0.0039	0.0046	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
168	-	-	-	-	-	-	-	-	0.0042	0.0049	0.0014	0.0016	0.0004	0.0005	-	-	-	-
169	-	-	-	-	-	-	-	-	0.038	0.045	0.012	0.015	0.0035	0.0041	-	-	-	-
170	-	-	-	-	-	-	-	-	0.038	0.045	0.012	0.015	0.0035	0.0041	-	-	-	-
171	-	-	-	-	-	-	-	-	0.12	0.31	0.056	0.15	0.0085	0.022	-	-	-	-
172	-	-	-	-	-	-	-	-	1.07	2.82	0.51	1.33	0.077	0.20	-	-	-	-
173	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11	-	-	-	-
174	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11	-	-	-	-
175E	1.75	3.49	1.53	3.06	0.087	0.17	0.074	0.15	0.087	0.17	0.087	0.17	0.087	0.17	-	-	1.23E-05	2.46E-05
176	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017	-	-	-	-
177	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017	-	-	-	-
178	-	-	-	-	-	-	-	-	0.32	0.29	0.14	0.13	0.022	0.020	-	-	-	-
179	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090	-	-	-	-
180	-	-	-	-	-	-	-	-	1.50	1.36	0.52	0.47	0.079	0.071	-	-	-	-
181	-	-	-	-	-	-	-	-	0.32	0.29	0.14	0.13	0.022	0.020	-	-	-	-
182	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090	-	-	-	-
183	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090	-	-	-	-
184	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090	-	-	-	-
185	-	-	-	-	-	-	-	-	0.11	0.16	0.040	0.060	0.0060	0.0090	-	-	-	-
186	-	-	-	-	-	-	-	-	0.11	0.16	0.040	0.060	0.0060	0.0090	-	-	-	-
187	-	-	-	-	-	-	-	-	0.11	0.16	0.040	0.060	0.0060	0.0090	-	-	-	-
188	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090	-	-	-	-
189	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090	-	-	-	-
190	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017	-	-	-	-
191	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017	-	-	-	-
192E	3.17	4.78	2.20	3.32	0.14	0.18	0.14	0.22	0.18	0.27	0.18	0.27	0.18	0.27	-	-	2.40E-05	3.62E-05
193	-	-	-	-	-	-	-	-	110.41	140.38	28.14	35.78	2.81	3.58	-	-	-	-
194	-	-	-	-	0.045	0.20	-	-	-	-	-	-	-	-	-	-	-	-
Totals	**57.37**	**99.62**	**13.53**	**23.82**	**4.55**	**8.43**	**2.27**	**4.17**	**235.00**	**251.79**	**86.03**	**88.27**	**13.73**	**15.56**	-	-	**3.77E-04**	**6.91E-04**

[1] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Table 2-F: Additional Emissions during Startup, Shutdown, and Routine Maintenance (SSM)

x This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or scehduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)[1], including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (https://www.env.nm.gov/aqb/permit/aqb_pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		PM[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals																		

[1] **For instance**, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in this table. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

[2] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks

x I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		PM		PM10		PM2.5		□ H_2S or □ Lead	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals:																	

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
S1	69E	V	No	13	939.9	14313.4	N/A	Neg	303.7	1.00
S2	111E	V	No	12	854.8	8267.8	N/A	Neg	252.6	0.83
S3	161E	V	No	12	943.5	12184.6	N/A	Neg	372.3	0.83
S4	175E	H	No	12	900.0	5236.0	N/A	Neg	250.0	0.67
S5	192E	H	No	10	854.7	2519.5	N/A	Neg	308.0	0.42

Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above.

Stack No.	Unit No.(s)	Total HAPs		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP		Provide Pollutant Name Here □ HAP or □ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
S1	69E	0.09531	0.19061																
S2	111E	0.05876	0.11753																
S3	161E	0.08981	0.14370																
S4	175E	0.00882	0.01765																
S5	192E	0.01723	0.02598																
Totals:		0.27	0.50																

Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
69E	Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	114.50 gal/hr	458000 Gallons	0.0005	Neg.
111E	Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	70.60 gal/hr	282400 Gallons	0.0005	Neg.
161E	Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	107.9 gal/hr	345280 Gallons	0.0005	Neg.
175E	Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	10.6 gal/hr	42400 Gallons	0.0005	Neg.
192E	Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	20.7 gal/hr	62431 Gallons	0.0005	Neg.

Table 2-K: Liquid Data for Tanks Listed in Table 2-L

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
T1	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T2	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T3	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T4	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T5	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T11	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T12	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079
T13	30500298	Unleaded Gasoline	Unleaded Gasoline	6.01	92	58.54	6.7593	65.66	7.7134

Table 2-L: Tank Data

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary. See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
T1	2026	Diesel	FX	FX	238.1	2,418.9	2.44	0.2	NA	YL	Good	458,000	45.80
T2	2026	Diesel	FX	FX	238.1	2,418.9	2.44	0.2	NA	YL	Good	282,400	28.24
T3	2026	Diesel	FX	FX	238.1	2,418.9	2.44	0.2	NA	Unk.	Good	345,280	34.53
T4	2026	Diesel	FX	FX	238.1	2,418.9	2.44	0.2	NA	WH	Good	42,400	4.24
T5	2026	Diesel	FX	FX	238.1	2,418.9	2.44	0.2	NA	WH	Good	62,431	6.24
T11	2026	Diesel	FX	FX	142.9	1,452.7	2.44	0.2	NA	WH	Good	60,000	10.00
T12	2026	Diesel	FX	FX	47.6	487.6	1.68	0.1	NA	WH	Good	20,000	20.00
T13	2026	Unleaded Gasoline	FX	FX	11.9	120.9	1.22	0.1	NA	WH	Good	10,000	20.00

Table 2-L2: Liquid Storage Tank Data Codes Reference Table

Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
FX: Fixed Roof	**Mechanical Shoe Seal**	**Liquid-mounted resilient seal**	**Vapor-mounted resilient seal**	**Seal Type**	**WH**: White	Good
IF: Internal Floating Roof	**A**: Primary only	**A**: Primary only	**A**: Primary only	**A**: Mechanical shoe, primary only	**AS**: Aluminum (specular)	Poor
EF: External Floating Roof	**B**: Shoe-mounted secondary	**B**: Weather shield	**B**: Weather shield	**B**: Shoe-mounted secondary	**AD**: Aluminum (diffuse)	
P: Pressure	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**LG**: Light Gray	
					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: 1.00 bbl = 0.159 M^3 = 42.0 gal

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Main Plant	Aggregate	Solid	1000 tph	Product	Aggregate	Solid	700 tph
				Waste	Aggregate	Solid	300 tph
Pit Plant 1	Aggregate	Solid	600 tph	Product	Aggregate	Solid	420 tph
				Waste	Aggregate	Solid	180 tph
Pit Plant 2	aggregate	Solid	600 tph	Product	Aggregate	Solid	420 tph
				Waste	Aggregate	Solid	180 tph
Air Sep	Aggregate	Solid	300 tph	Product	Aggregate	Solid	300 tph
RAP	Recycle Ashalt	Solid	200 tph	Product	Recylcled Ashaplt	Solid	200 tph

Table 2-N: CEM Equipment

Enter Continuous Emissions Measurement (CEM) Data in this table. If CEM data will be used as part of a federally enforceable permit condition, or used to satisfy the requirements of a state or federal regulation, include a copy of the CEM's manufacturer specification sheet in the Information Used to Determine Emissions attachment. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
N/A									

Table 2-O: Parametric Emissions Measurement Equipment

Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
N/A								

Table 2-P: Greenhouse Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box ☐ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO_2 ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]									**Total GHG** Mass Basis ton/yr[4]	**Total CO_2e** ton/yr[5]
Unit No.	**GWPs [1]**	**1**	**298**	**25**	**22,800**	**footnote 3**										
69E	**mass GHG**	5154.6	0.040	0.21											5154.9	
	CO_2e	5154.6	12.0	5.2												5171.8
111E	**mass GHG**	3178.3	0.025	0.13											3178.5	
	CO_2e	3178.3	7.42	3.19												3188.9
161E	**mass GHG**	3886.0	0.030	0.16											3886.2	
	CO_2e	3886.0	9.07	3.90												3899.0
175E	**mass GHG**	477.2	0.0037	0.019											477.2	
	CO_2e	477.2	1.11	0.48												478.8
192E	**mass GHG**	702.5	0.0055	0.028											702.6	
	CO_2e	702.5	1.64	0.71												704.9
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
Total	**mass GHG**	13398.6	0.10	0.55											13399.4	
	CO_2e	13398.6	31.24	13.48												13443.4

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[3] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[4] Green house gas emissions on a **mass basis** is the ton per year green house gas emission before adjustment with its GWP.

[5] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Section 3

Application Summary

The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will affect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

The **Process Summary** shall include a brief description of the facility and its processes.

Startup, Shutdown, and Maintenance (SSM) routine or predictable emissions: Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions.

Mountain States Contractors, Inc. (MSCI) is applying for a new 20.2.72 NMAC air quality permit for an aggregate crushing and screening facility operated within the Village of Los Lunas, county of Valencia, state of New Mexico. The site presently operates under General Permit 2 registration GCP-2-3164, which will be relocated once the new NSR permit is approved. Regulation governing this permit application is 20.2.72.200.A(1) NMAC.

MSCI has retained Montrose Environmental Solutions, LLC (Montrose) to assist with the permit application. The address for the plant known as, MSCI Los Lunas Plant, is 701 State Highway 6, Los Lunas, NM 87031. The exact location of the MSCI Los Lunas Plant is at Latitude (decimal degrees): 34.831735 and Longitude (decimal degrees): -106.883123. The approximate location of this facility is 7.0 miles west-northwest of the center of Los Lunas in Valencia County.

The facility consists of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant); 300 tph and 706,995 tpy air separator plant (screening plant); and 200 tph and 361,400 tpy recycled asphalt products (RAP crushing and screening) plant. Daily production rates are presented in Table 3-3.

Main Plant

The 1000 tph crushing and screening operation will include an aggregate quarry source, raw material surge piles, five (5) feeders, three (3) jaw crushers, two (2) surge bins, one (1) pre-screen, one (1) waste screen, two (2) cone crushers, two (2) 3-deck screens, thirty-seven (37) transfer conveyors, and nine (9) stacker conveyors. The crushing plant will be powered by a 2288 horsepower (hp), 1600 kilowatt (kW) diesel-fired engine. Material from the raw material quarry will be loaded and transported by rock trucks to the main plant main feeder. This material is processed first through a jaw crusher and pre-screens to separate product from waste material. Waste material is hauled to the waste pile by rock trucks. Product material is then fed into one of two processing lines that consist of a feeder, jaw crusher, cone crusher, and 3-deck screen. Oversized material from the 3-deck screen is recycled back to the cone crusher. Finish material is loaded into rock trucks and transported to finish piles located along the main access road to the facility. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 4-1 in Section 4 presents an equipment layout for the main plant. The engine hours of operation are presented below in Table 3-1. The material processing hours of operation are presented below in Table 3-2.

Pit Plant #1

The 600 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) pre-screen, one (1) cone crusher, one (1) VSI crusher, one (1) 3-deck screen, one (1) air separator, twenty-five (25) transfer conveyors, and five (5) stacker conveyors. The crushing plant will be powered by a 1604 hp (1010 kW) diesel-fired engine. Material from the raw material quarry will be loaded into the plant feeder. This material is processed first through a jaw crusher, surge bin and pre-screen to separate product from waste material. Waste material is haul to the waste pile by rock trucks. Product material is sized in the cone crusher or sent to and sized in the VSI crusher. From the cone and VSI crushers, the material is sent to the 3-deck screen. Oversized material from the 3-deck screen is recycled back to the VSI crusher. Part of the finished material from the 3-deck screen is sent to the air separator for further size separation. Finish material is loaded into finish piles located along the pit plant road located in the facility quarry. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 4-2 in Section 4 presents an equipment layout for pit plant #1. The engine hours of operation are presented below in Table 3-1. The material processing hours of operation are presented below in Table 3-2.

Pit Plant #2

The 600 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) pre-screen, two (2) cone crushers, two (2) 3-deck screens, one (1) air separator, twenty-nine (29) transfer conveyors, and eight (8) stacker conveyors. The crushing plant will be powered by a 2153 hp (1500 kW) diesel-fired engine. Material from the raw material quarry will be loaded into the plant feeder. This material is processed first through a jaw crusher, surge bin and pre-screen to separate product from waste material. Waste material is haul to the waste pile by rock trucks. Product material is transported by conveyor to a splitter conveyor which will send the material to one of two lines. For each line material is sized in the cone crusher. From the cone crusher, material is sent to the 3-deck screen. Oversized material from the 3-deck screen is recycled back to the cone crusher. Part of the finished material from one of the 3-deck screen is sent to the air separator for further size separation. Finish material is loaded into finish piles located along the pit plant road located in the facility quarry. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 4-3 in Section 4 presents an equipment layout for pit plant #2. The engine hours of operation are presented below in Table 3-1. The material processing hours of operation are presented below in Table 3-2.

Air Separator

The 300 tph air separator operation will include a source of crusher fines from processed aggregate for its material input, one (1) feeder, one (1) air separator, five (5) transfer conveyors, and two (2) stacker conveyors. The air separator will be powered by a 265 hp (198 kW) diesel-fired engine, if not connected to the main plant power system. Processed crusher fines will be loaded into the plant feeder, then fed into the air separator for further sizing. Finish material is loaded into rock trucks and transported to finish piles located along the main access road to the facility. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 4-4 in Section 4 presents an equipment layout for air separator. The engine hours of operation are presented below in Table 3-1. The material processing hours of operation are presented below in Table 3-2.

The first hour of each day will be limited to starting and warming up of the engines. After the first hour, material processing can occur.

TABLE 3-1: MSCI Los Lunas Aggregate Plant Engine Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
6:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
7:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	10.5	11.5	12	14	14	14.5	14.5	14	13.5	12	11	10.5

TABLE 3-2: MSCI Los Lunas Aggregate Plant Processing Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
7:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	9.5	10.5	11	13	13	13.5	13.5	13	12.5	11	10	9.5

RAP Crushing and Screening Plant

The 200 tph recycled asphalt crushing and screening operation will include a raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) cone crusher, one (1) 2-deck screen, eight (8) transfer conveyors, and one (1) stacker conveyor. The RAP crushing plant will be powered by a 415 hp (306 kW) diesel-fired engine. RAP material is brought into the facility in road haul trucks and stored in a RAP material storage pile until loaded into the RAP plant feeder. This material is processed first through a jaw crusher, surge bin and 2-deck screen to produce sized RAP to be used in the co-located HMA. Oversized material from the 2-deck screen sent to the cone crusher then recycled back to the 2-deck screen. Recycled RAP material is loaded into a finish pile until needed for the co-located HMA. The RAP crushing and screening plant will be permitted to operate for the months of March through October. Figure 4-5 in Section 4 presents an equipment layout for RAP crushing and screening plant. The RAP crushing and screening plant processing hours of operation are presented below in Table 3-3.

TABLE 3-3: MSCI Los Lunas RAP Plant Engine Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0.5	0.5	1	1	0.5	0	0	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
9:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
10:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
11:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
2:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
3:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
4:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	11	12.5	12.5	13.5	13.5	12.5	12	11	0	0

TABLE 3-4: Aggregate/Recycle Daily Production Rates

Month	Main Plant Tons Per Day	Pit Plant 1 Tons Per Day	Pit Plant 2 Tons Per Day	Air Separator Tons Per Day	RAP Plant Tons Per Day
January	5500	3300	3300	1650	0
February	5500	3300	3300	1650	0
March	7000	4200	4200	2100	1400
April	8000	4800	4800	2400	1400
May	8000	4800	4800	2400	1400
June	8000	4800	4800	2400	1600
July	8000	4800	4800	2400	1600
August	8000	4800	4800	2400	1600
September	8000	4800	4800	2400	1400
October	7500	4500	4500	2250	1400
November	7000	4200	4200	2100	0
December	5500	3300	3300	1650	0

As seen in Figure 5-1 and 5-2, there are multiply truck routes and two types of material haul trucks, commercial haul (road) trucks and quarry (rock) trucks. Commercial haul trucks are used to transport product from the site, haul RAP material in, and rock truck are used onsite to haul material from the quarry wall to the main plant, product from the main plant to the main plant finish piles, and waste material in the pit to the waste storage pile.

The entrance road to the site is paved until halfway up the east side of the southern loop road, see Figure 5-1. The exit to the site is paved from the north side of the southern loop road traveling west to the facility exit. All other roads will be unpaved and controlled with surfactants.

The following table describes the haul roads at the site and if they are operating in the quarry and are included in the open pit modeled source (QUAARY) emission rate input into the model. The total emissions from all truck traffic are included in Emission Unit 193 "Plant Haul Roads".

TABLE 3-5: MSCI Los Lunas Haul Road Descriptions

Emission Source ID	Model ID	Description	Truck Type	Max Trucks per Day
193	MPPI_	Main plant product haul trucks route entrance into site along the south side the southern loop paved road.	Commercial	255
	MPPO_	Main plant product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	255
	MPUP_	Main plant product haul trucks route to main plant storage piles – unpaved road.	Commercial	255
	PTIn_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	153
	PTOt_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	153
	PTUP_	Pit plants product haul trucks route to the edge of the open pit.	Commercial	153
	QUARRY	Pit plants product haul trucks route from the edge of the open pit to the pit plants storage piles.	Commercial	153
	QRTP_	Rock truck route from edge of open pit to the main plant finish storage piles with product material to the main plant product piles.	Rock	145
	QUARRY	Rock truck route from the quarry wall to deliver raw material to the main plant surge pile.	Rock	207
	QUARRY	Rock truck route from main plant to the edge of open pit with product material to the main plant product piles.	Rock	145
	QUARRY	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes for the waste haul trucks to travel, the most conservative (longest) for emission calculations and was used in the model.	Rock	93
	WUPO_	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes for the waste haul trucks to travel, the most conservative (longest) for emission calculations and was used in the model.	Rock	93
	RAP_	RAP delivery haul trucks route that enters and exits on the paved road from the facility entrance to the RAP storage pile.	Delivery	73

The MSCI Los Lunas Plant will be permitted to allow co-location with one of the three MSCI HMA plant presently operating under NSR Permits 3171-M1, 4453, or 9720. To show compliance with NAAQS for operating any of the plants, an analysis of the worst-case operating parameters was used in the model. The maximum operating schedule for any one of the 3 permits is 24 hour per day operation for 365 days per year. MSCI will accept a permit condition in the new NSR permit for the MSCI Los Lunas Plant that restricts co-location with any MSCI HMA NSR Permits; 3171-M1, 4453, or 9720 HMA plants for less than a year of operation. Additionally, any of the MSCI HMA plants can also co-locate under their existing GCP3 registrations. Any co-located HMA plant will operate under the terms and conditions of their individual NSR permit. Haul truck traffic for the co-located HMA plant to and from the site will travel on paved roads to the plant, with an unpaved road controlled with surfactants around the HMA site itself. Location of the HMA site is shown on Figure 5-3 in Section 5.

Emission sources for the co-located HMA plant includes HMA drum and baghouse; plant main and standby generators; asphalt cement heater; mineral filler silo; asphalt storage silo; cold aggregate and RAP storage piles; cold aggregate delivery system (feeder scalping screen pugmill and conveyors); RAP delivery system (feeder, scalping screen, and conveyors).

If you have any questions regarding this NSR permit application, please call Paul Wade of Montrose at (505) 830-9680 ext 6 or Eric Brower at Mountain States Constructors, Inc. at (505) 292-0108 / (505) 489-9120.

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM)

No SSM emissions are proposed or submitted for this facility. For material processing equipment at the MSCI Los Lunas Plant, Mountain States Contractors, Inc. will follow normal industry practices in minimizing emissions during startup, shutdown, and maintenance to not exceed the maximum hourly or annual emission rates submitted in Table 2-E. All control equipment and methods will be functioning correctly prior to aggregate processing.

Section 4

Process Flow Sheet

A **process flow sheet** and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. The unit numbering system should be consistent throughout this application.

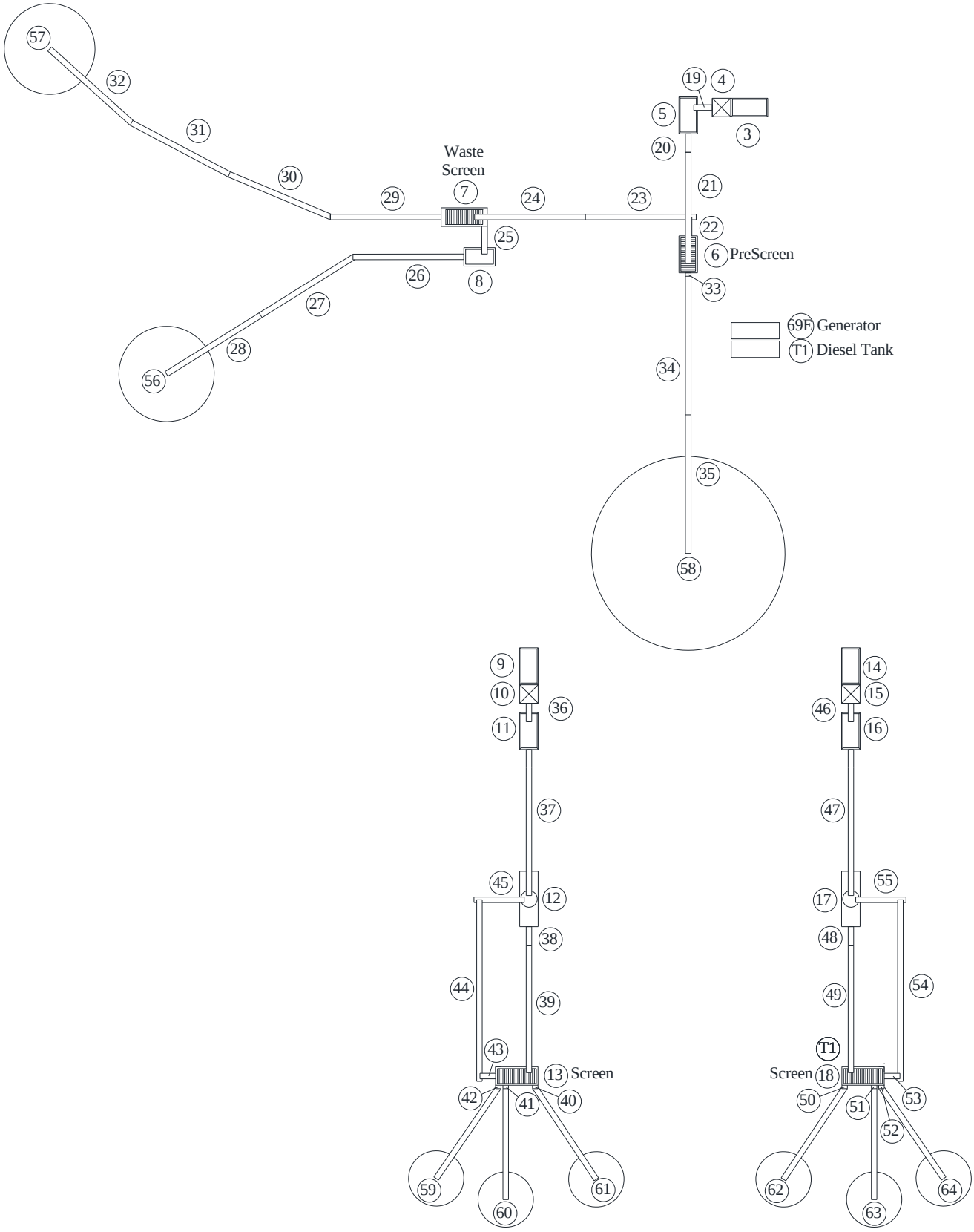


Figure 4-1: Main Plant Equipment Process Flow Diagram

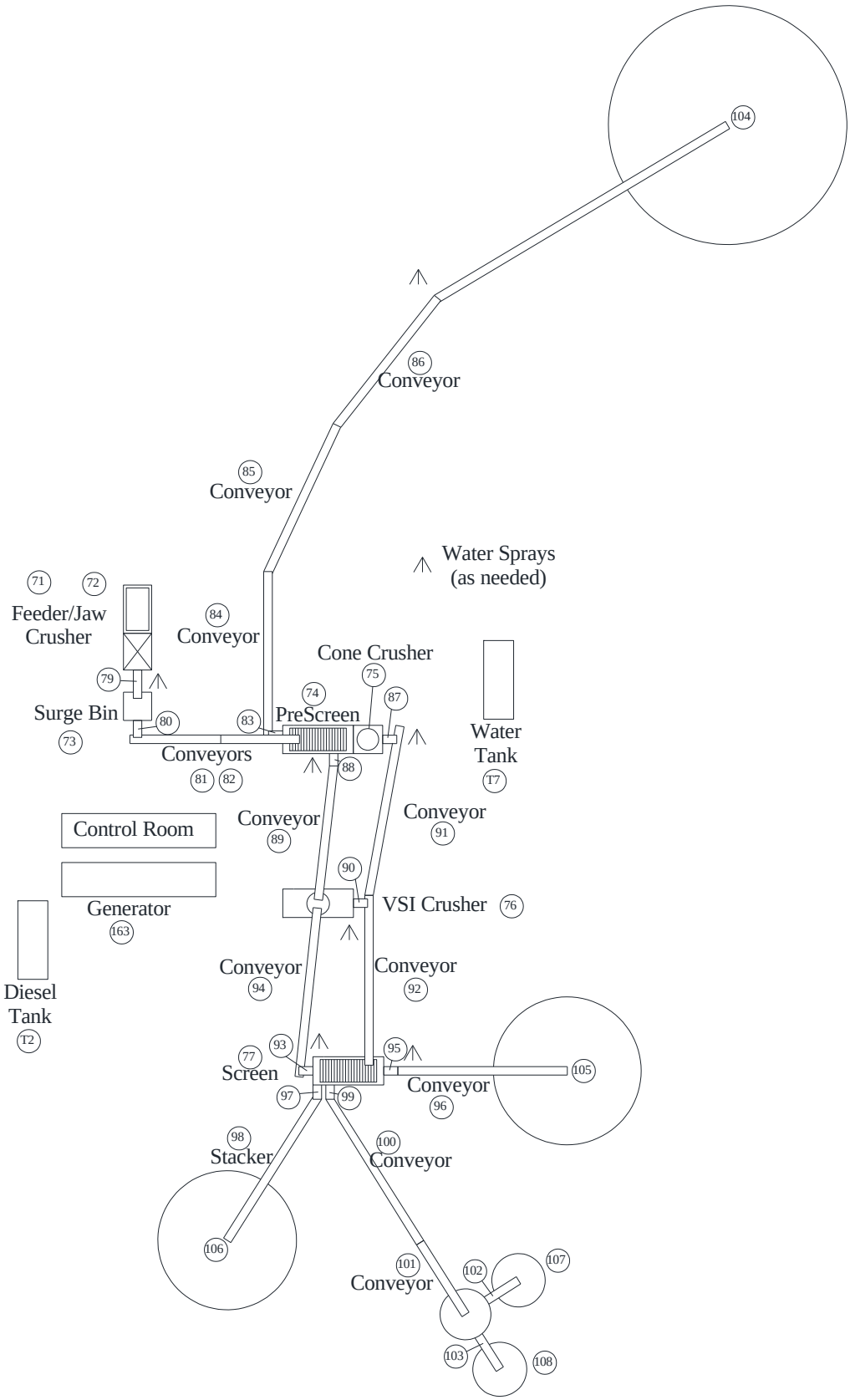


Figure 4-2: Pit Plant #1 Equipment Process Flow Diagram

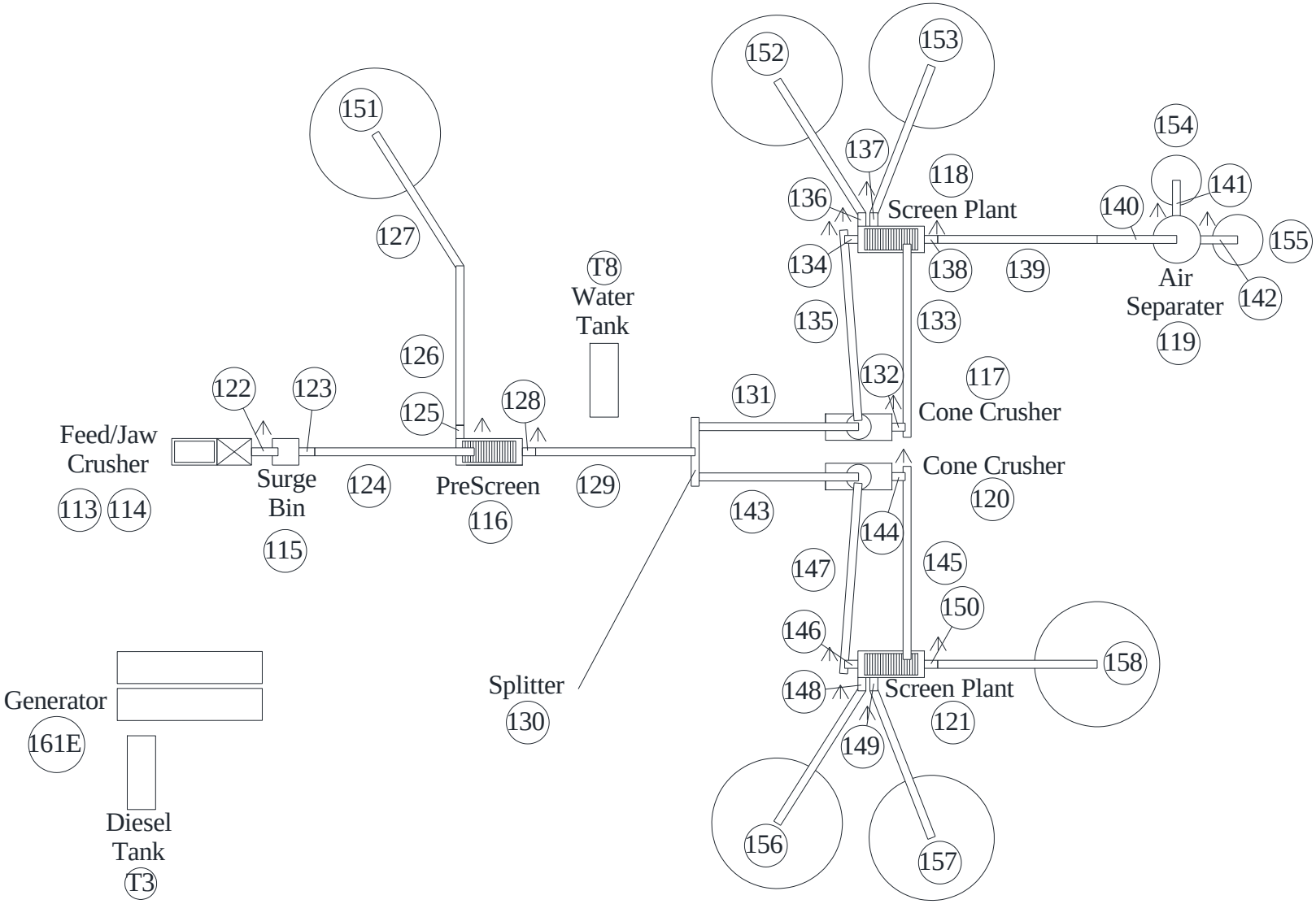


Figure 4-3: Pit Plant #2 Equipment Process Flow Diagram

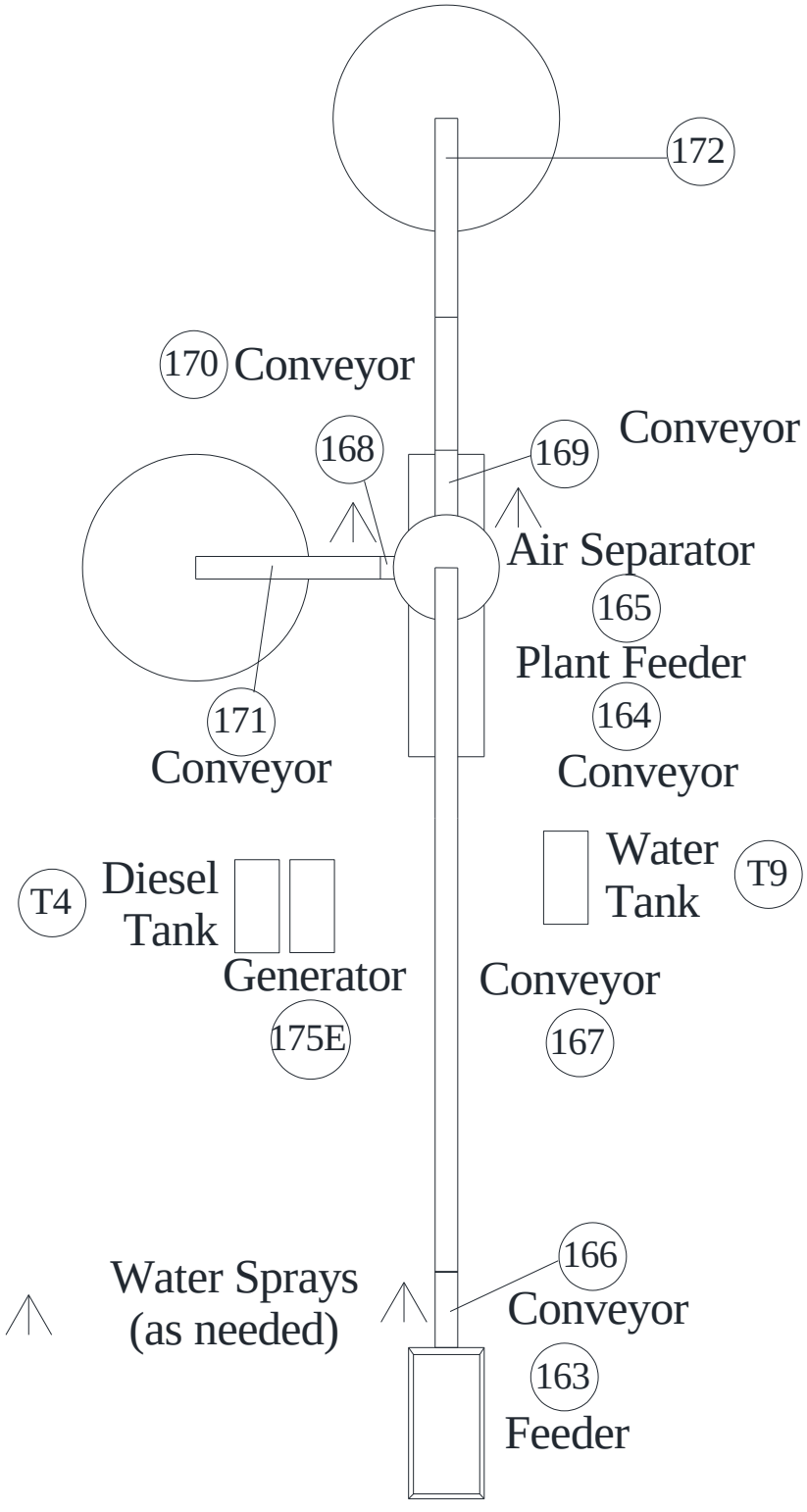


Figure 4-4: Air Separator Plant Equipment Process Flow Diagram

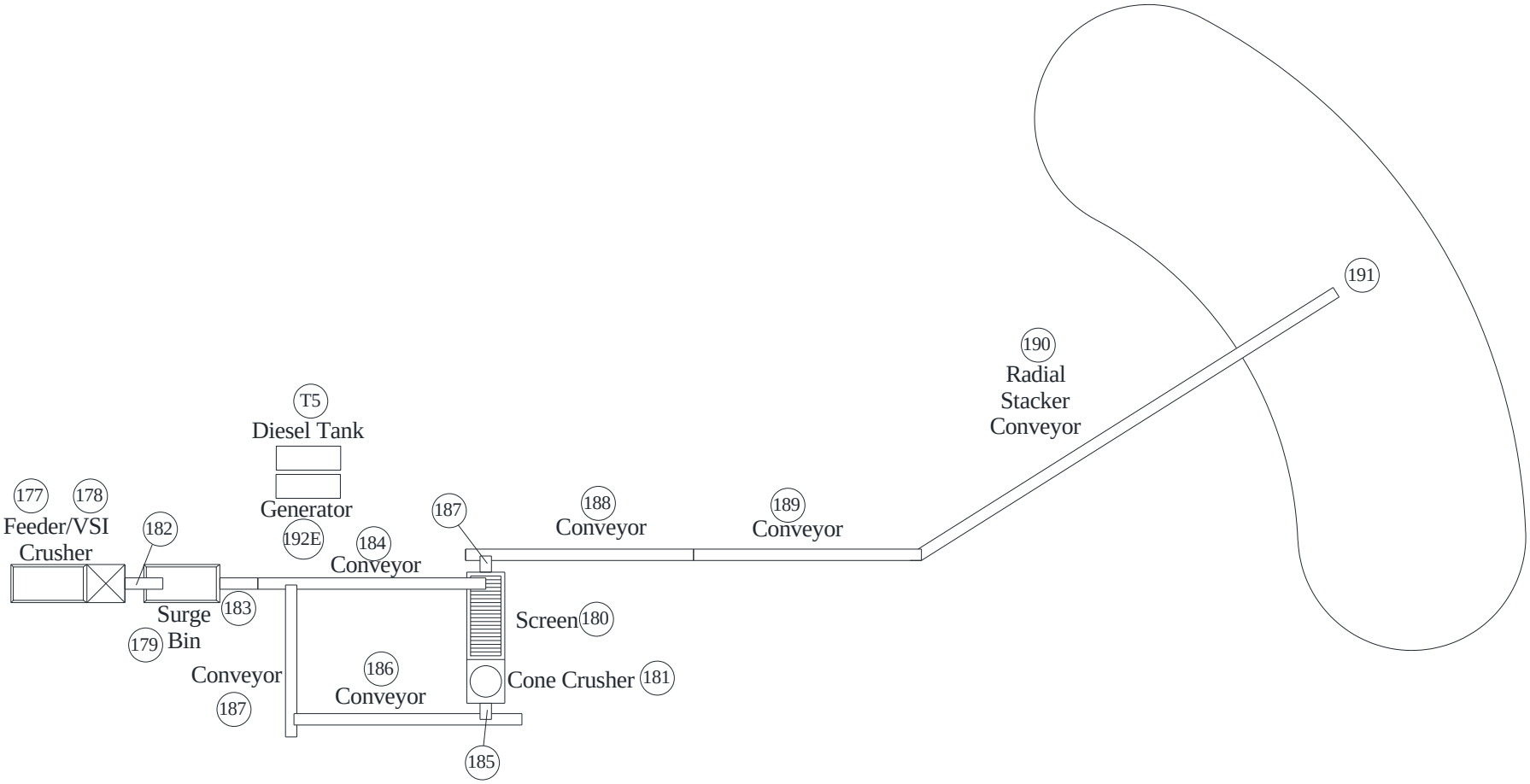


Figure 4-5: RAP Plant Equipment Process Flow Diagram

Section 5

Plot Plan Drawn to Scale

A **plot plan drawn to scale** showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

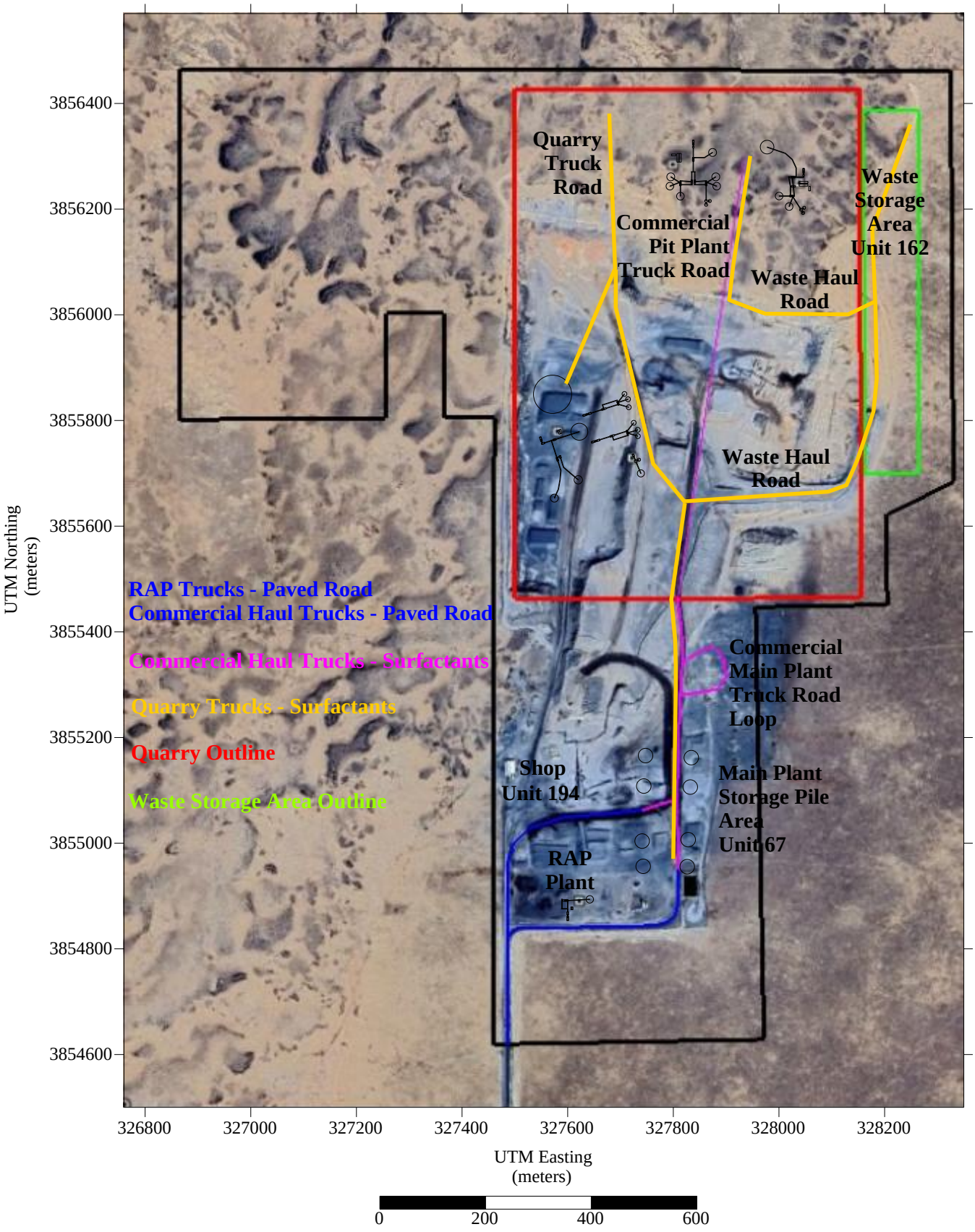


Figure 5-1: MSCI's Los Lunas Plant Aerial View with Equipment Location

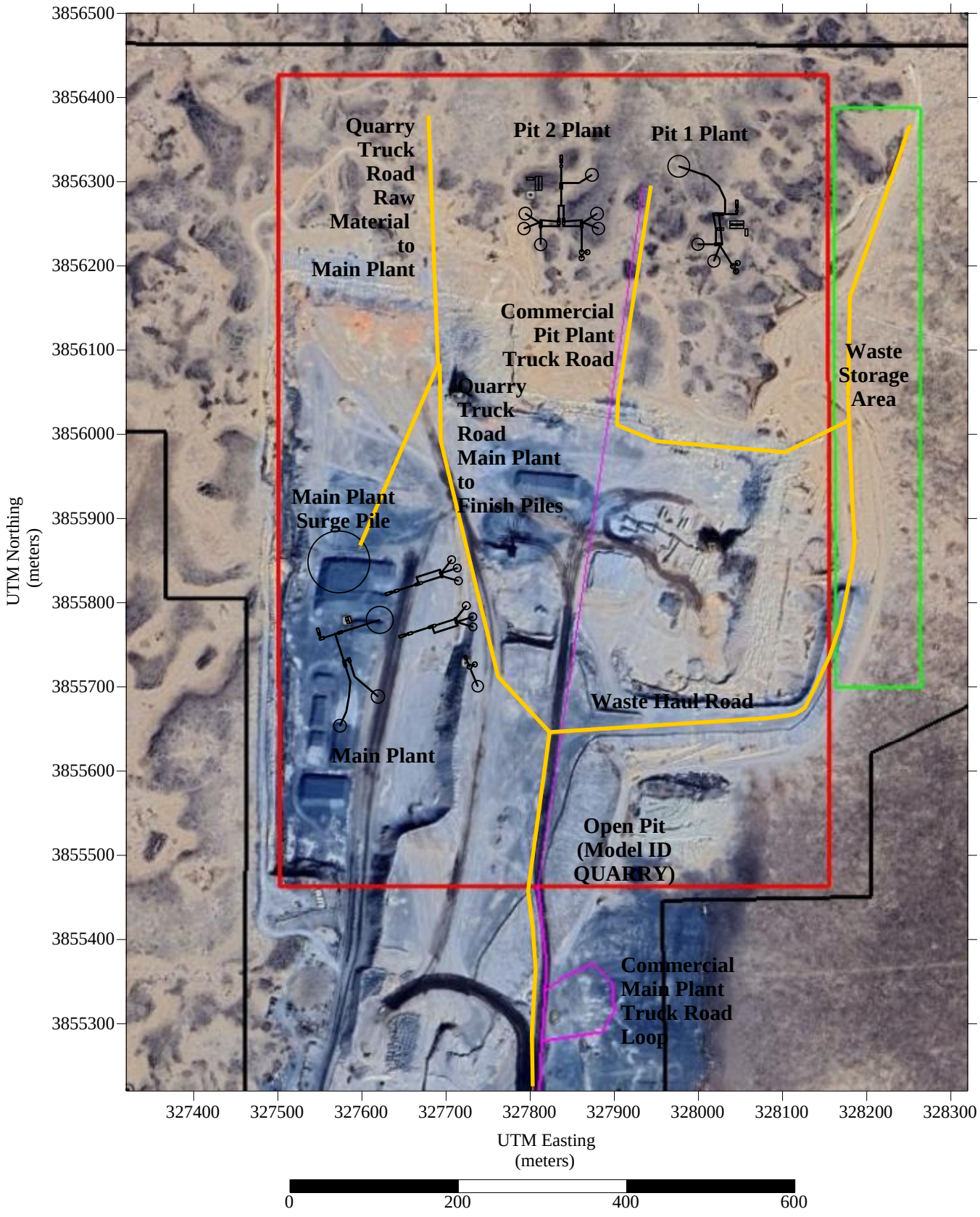


Figure 5-2: MSCI's Los Lunas Plant Aerial View with Storage Pile and Haul Road Locations

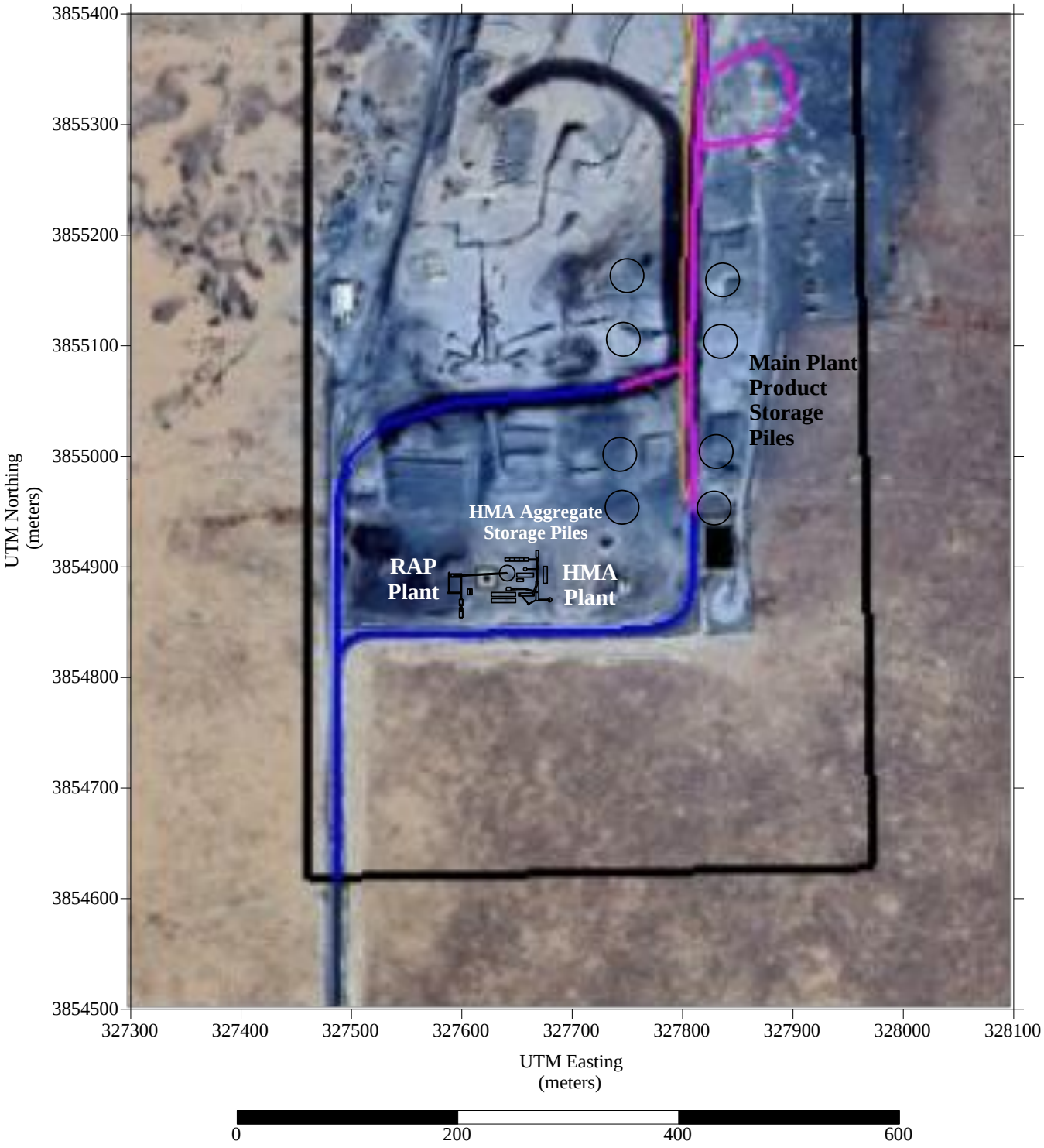


Figure 5-3: MSCI's Los Lunas Plant Aerial View showing location of Co-Located HMA site

Section 6

All Calculations

Show all calculations used to determine both the hourly and annual controlled and uncontrolled emission rates. All calculations shall be performed keeping a minimum of three significant figures. Document the source of each emission factor used (if an emission rate is carried forward and not revised, then a statement to that effect is required). If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and a note specifying what other units to which the calculations apply. All formulas and calculations used to calculate emissions must be submitted. The "Calculations" tab in the UA2 has been provided to allow calculations to be linked to the emissions tables. Add additional "Calc" tabs as needed. If the UA2 or other spread sheets are used, all calculation spread sheet(s) shall be submitted electronically in Microsoft Excel compatible format so that formulas and input values can be checked. Format all spread sheets and calculations such that the reviewer can follow the logic and verify the input values. Define all variables. If calculation spread sheets are not used, provide the original formulas with defined variables. Additionally, provide subsequent formulas showing the input values for each variable in the formula. All calculations, including those calculations are imbedded in the Calc tab of the UA2 portion of the application, the printed Calc tab(s), should be submitted under this section.

Tank Flashing Calculations: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., NOI, permit, or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

SSM Calculations: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the rational for why the others are reported as zero (or left blank in the SSM/GHG Tables). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on calculating SSM emissions. If SSM emissions are greater than those reported in the Section 2, Requested Allowables Table, modeling may be required to ensure compliance with the standards whether the application is NSR or Title V. Refer to the Modeling Section of this application for more guidance on modeling requirements.

Glycol Dehydrator Calculations: The information provided to the AQB shall include the manufacturer's maximum design recirculation rate for the glycol pump. If GRI-Glycalc is used, the full input summary report shall be included as well as a copy of the gas analysis that was used.

Road Calculations: Calculate fugitive particulate emissions and enter haul road fugitives in Tables 2-A, 2-D and 2-E for:

1. If you transport raw material, process material and/or product into or out of or within the facility and have PER emissions greater than 0.5 tpy.
2. If you transport raw material, process material and/or product into or out of the facility more frequently than one round trip per day.

Significant Figures:

A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.

B. At least 5 significant figures shall be retained in all intermediate calculations.

C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:

(1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;

(2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**

(3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
(4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Main Plant, Pit Plant #1, Pit Plant #2, Air Separator

Pre-Control Particulate Emission Rates Main Plant, Pit Plant #1, Pit Plant #2, and Air Separator

Material Handling ($PM_{2.5}$, PM_{10}, and PM)

To estimate material handling pre-control particulate emission rates for crushing, screening, and conveyor transfer operations, emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.19.2, Table 11.19.2-2. To determine missing $PM_{2.5}$ emission factors the ratio of 0.35/0.053 from $PM_{10}/PM_{2.5}$ *k* factors found in AP-42 Section 13.2.4 (11/2006) were used.

To estimate material handling particulate emission rates for aggregate handling operations (aggregate storage piles/stacker drop to storage pile/loading feed bins), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (11/2004), where the k (TSP = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining the maximum hourly emission rate is the NMED default of 11 MPH and for determining the annual emission rate is based on the average wind speed for Albuquerque Airport (2001 – 2011) of 8.1 mph (see Section 7) and the NMED default moisture content of 2 percent.

Pre-controlled annual emissions for tons per year (tpy) were calculated assuming daylight operation for 4380 hours per year. This limit is based on the natural limitation of daylight hours for the safety of personnel operating the facility.

Aggregate Material Handling – Storage Piles, Stacker drop to Storage Piles, and Feed Bin and Truck Loading Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$
E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$
E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$
$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$
E_{PM} (lbs/ton) = 0.00660 lbs/ton;
E_{PM10} (lbs/ton) = 0.00312 lbs/ton
$E_{PM2.5}$ (lbs/ton) = 0.00047 lbs/ton

Annual Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$
E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$
E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$
E_{PM} (lbs/ton) = 0.00443 lbs/ton;
E_{PM10} (lbs/ton) = 0.00210 lbs/ton
$E_{PM2.5}$ (lbs/ton) = 0.00032 lbs/ton

AP-42 Section 11.19.2 Table 11.19.2-2 Emission Factors:

All Bin Unloading and Conveyor Transfers = Uncontrolled Conveyor Transfer Point Emission Factor
Crushing = Uncontrolled Tertiary Crushing Emission Factor
Screening = Uncontrolled Screening Emission Factor

Material Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Uncontrolled Tertiary Crushing	0.00540	0.00240	0.00036
Uncontrolled Screening	0.02500	0.00870	0.00130
Feed Bin Unloading, and Conveyor Transfers	0.00300	0.00110	0.00017
Uncontrolled Max Hourly Aggregate Storage Piles, Aggregate Drop to Piles, Feeder and Truck Loading	0.00660	0.00312	0.00047
Uncontrolled Annual Aggregate Storage Piles, Aggregate Drop to Piles, Feeder and Truck Loading	0.00443	0.00210	0.00032

The following equation was used to calculate the hourly emission rate for each process unit:

Emission Rate (lbs/hour) = Process Rate (tons/hour) * Emission Factor (lbs/ton)

The following equation was used to calculate the annual emission rate for each process unit:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-1 Pre-Controlled Regulated Process Equipment Emission Rates

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
Main Plant								
1	Quarry Material	1000	6.60	9.71	3.12	4.59	0.47	0.70
2	Quarry Truck Loading	1000	6.60	9.71	3.12	4.59	0.47	0.70
3	MP Feeder (Quarry Truck Unload)	1000	6.60	9.71	3.12	4.59	0.47	0.70
4	MP Jaw Crusher	1000	5.40	11.83	2.40	5.26	0.36	0.80
5	MP Surge Bin	1000	3.00	6.57	1.10	2.41	0.17	0.36
6	MP PreScreen	1000	25.00	54.75	8.70	19.05	1.32	2.89
7	MP Waste Screen	300	7.50	16.43	2.61	5.72	0.40	0.87
8	MP Surge Bin	150	0.45	0.99	0.17	0.36	0.025	0.055
9	MP Line 1 Jaw Crusher Feeder	350	2.31	3.40	1.09	1.61	0.17	0.24
10	MP Line 1 Jaw Crusher	350	1.89	4.14	0.84	1.84	0.13	0.28
11	MP Line 1 Feeder	350	2.31	3.40	1.09	1.61	0.17	0.24
12	MP Line 1 Cone Crusher	350	1.89	4.14	0.84	1.84	0.13	0.28
13	MP Line 1 Screen	350	1.05	2.30	0.39	0.84	0.058	0.13
14	MP Line 2 Jaw Crusher Feeder	350	1.05	2.30	0.39	0.84	0.058	0.13
15	MP Line 2 Jaw Crusher	350	1.05	2.30	0.39	0.84	0.058	0.13
16	MP Line 2 Feeder	350	1.05	2.30	0.39	0.84	0.058	0.13
17	MP Line 2 Cone Crusher	350	1.89	4.14	0.84	1.84	0.13	0.28
18	MP Line 2 Screen	350	8.75	19.16	3.05	6.67	0.46	1.01
19	MP Jaw Crusher Conveyor	1000	3.00	6.57	1.10	2.41	0.17	0.36
20	MP Surge Bin Conveyor	1000	3.00	6.57	1.10	2.41	0.17	0.36
21	MP Conveyor	1000	3.00	6.57	1.10	2.41	0.17	0.36
22	MP PreScreen Conveyor	300	0.90	1.97	0.33	0.72	0.050	0.11
23	MP Conveyor	300	0.90	1.97	0.33	0.72	0.050	0.11
24	MP Conveyor	300	0.90	1.97	0.33	0.72	0.050	0.11
25	MP Waste Screen Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
26	MP Surge Bin Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
27	MP Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
28	MP Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
29	MP Waste Screen Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
30	MP Waste Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
31	MP Waste Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
32	MP Waste Conveyor to Stacker Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
33	MP PreScreen Conveyor	700	2.10	4.60	0.77	1.69	0.12	0.26
34	MP Conveyor	700	2.10	4.60	0.77	1.69	0.12	0.26
35	MP Conveyor	700	2.10	4.60	0.77	1.69	0.12	0.26
36	MP Line 1 Jaw Crusher Conveyor	350	1.05	2.30	0.39	0.84	0.058	0.13
37	MP Line 1 Feeder Conveyor	350	1.05	2.30	0.39	0.84	0.058	0.13
38	MP Line 1 Cone Crusher Conveyor	350	2.31	3.40	1.09	1.61	0.17	0.24
39	MP Line 1 Conveyor	350	1.89	4.14	0.84	1.84	0.13	0.28
40	MP Line 1 Screen Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
41	MP Line 1 Screen Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
42	MP Line 1 Screen Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
43	MP Line 1 Screen Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
44	MP Line 1 Return Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
45	MP Line 1 Return Conveyor to Cone	100	0.30	0.66	0.11	0.24	0.017	0.036
46	MP Line 2 Jaw Crusher Conveyor	350	1.05	2.30	0.39	0.84	0.058	0.13
47	MP Line 2 Feeder Conveyor	350	2.31	3.40	1.09	1.61	0.17	0.24
48	MP Line 2 Cone Crusher Conveyor	350	1.05	2.30	0.39	0.84	0.058	0.13
49	MP Line 2 Conveyor	350	1.05	2.30	0.39	0.84	0.058	0.13
50	MP Line 2 Screen Conveyor	150	0.45	0.99	0.17	0.36	0.025	0.055
51	MP Line 2 Screen Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
52	MP Line 2 Screen Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
53	MP Line 2 Screen Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
54	MP Line 2 Return Conveyor	100	0.30	0.66	0.11	0.24	0.017	0.036
55	MP Line 2 Return Conveyor to Cone	100	0.30	0.66	0.11	0.24	0.017	0.036
56	MP Stacker Conveyor to Storage Pile	150	0.99	1.46	0.47	0.69	0.071	0.10
57	MP Stacker Conveyor to Waste Storage Pile	150	0.99	1.46	0.47	0.69	0.071	0.10
58	MP Conveyor Stacker to Surge Pile	700	4.62	6.80	2.19	3.21	0.33	0.49
59	MP Line 1 Stacker Conveyor to Pile	150	3.75	8.21	1.31	2.86	0.20	0.43
60	MP Line 1 Stacker Conveyor to Pile	100	0.30	0.66	0.11	0.24	0.017	0.036
61	MP Line 1 Stacker Conveyor to Pile	100	0.30	0.66	0.11	0.24	0.017	0.036
62	MP Line 2 Stacker Conveyor to Pile	150	0.45	0.99	0.17	0.36	0.025	0.055
63	MP Line 2 Stacker Conveyor to Pile	100	0.30	0.66	0.11	0.24	0.017	0.036
64	MP Line 2 Stacker Conveyor to Pile	100	0.30	0.66	0.11	0.24	0.017	0.036
65	MP Waste Storage Pile	300	0.90	1.97	0.33	0.72	0.050	0.11
66	MP Quarry Truck Loading - Product	700	2.10	4.60	0.77	1.69	0.12	0.26
67	MP Finish Product Storage Pile	700	4.62	6.80	2.19	3.21	0.33	0.49
68	MP Product Truck Loading - Finish Pile	700	4.62	6.80	2.19	3.21	0.33	0.49
Pit Plant #1								
70	Quarry Material - Pit Plant 1	600	3.96	5.83	1.87	2.76	0.28	0.42
71	Pit Plant 1 Feeder	600	3.96	5.83	1.87	2.76	0.28	0.42
72	Pit Plant 1 Jaw Crusher	600	3.24	7.10	1.44	5.26	0.22	0.80
73	Pit Plant 1 Surge Bin	600	1.80	3.94	0.66	2.41	0.10	0.36
74	Pit Plant 1 Prescreen	600	15.00	32.85	5.22	19.05	0.79	2.89
75	Pit Plant 1 Cone Crusher	300	1.62	3.55	0.72	2.63	0.11	0.40
76	Pit Plant 1 VSI Crusher	210	1.13	2.48	0.50	1.84	0.08	0.28

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
77	Pit Plant 1 Screen	420	10.50	23.00	3.65	13.34	0.55	2.02
78	Pit Plant 1 Air Separator	150	3.75	8.21	1.31	4.76	0.20	0.72
79	Pit Plant 1 Jaw Crusher Conveyor	600	1.80	3.94	0.66	2.41	0.10	0.36
80	Pit Plant 1 Surge Bin Conveyor	600	1.80	3.94	0.66	2.41	0.10	0.36
81	Pit Plant 1 Conveyor	600	1.80	3.94	0.66	2.41	0.10	0.36
82	Pit Plant 1 Conveyor	600	1.80	3.94	0.66	2.41	0.10	0.36
83	Pit Plant 1 PreScreen Conveyor	180	0.54	1.18	0.20	0.72	0.030	0.11
84	Pit Plant 1 Waste Conveyor	180	0.54	1.18	0.20	0.72	0.030	0.11
85	Pit Plant 1 Waste Conveyor	180	0.54	1.18	0.20	0.72	0.030	0.11
86	Pit Plant 1 Waste Stacker Conveyor	180	0.54	1.18	0.20	0.72	0.030	0.11
87	Pit Plant 1 Cone Crusher Conveyor	300	0.90	1.97	0.33	1.20	0.050	0.18
88	Pit Plant 1 Prescreen Conveyor	120	0.36	0.79	0.13	0.48	0.020	0.073
89	Pit Plant 1 Conveyor	120	0.36	0.79	0.13	0.48	0.020	0.073
90	Pit Plant 1 VSI Crusher Conveyor	210	0.63	1.38	0.23	0.84	0.035	0.13
91	Pit Plant 1 Conveyor	210	0.63	1.38	0.23	0.84	0.035	0.13
92	Pit Plant 1 Conveyor	420	1.26	2.76	0.46	1.69	0.070	0.26
93	Pit Plant 1 Screen Conveyor	90	0.27	0.59	0.10	0.36	0.015	0.055
94	Pit Plant 1 Return Conveyor to VSI	90	0.27	0.59	0.10	0.36	0.015	0.055
95	Pit Plant 1 Screen Conveyor	180	0.54	1.18	0.20	0.72	0.030	0.11
96	Pit Plant 1 Conveyor	180	0.54	1.18	0.20	0.72	0.030	0.11
97	Pit Plant 1 Screen Conveyor	120	0.36	0.79	0.13	0.48	0.020	0.073
98	Pit Plant 1 Conveyor	120	0.36	0.79	0.13	0.48	0.020	0.073
99	Pit Plant 1 Screen Conveyor	150	0.45	0.99	0.17	0.60	0.025	0.091
100	Pit Plant 1 Conveyor	150	0.45	0.99	0.17	0.60	0.025	0.091
101	Pit Plant 1 Conveyor	150	0.45	0.99	0.17	0.60	0.025	0.091
102	Pit Plant 1 Air Separator Conveyor	150	0.45	0.99	0.17	0.60	0.025	0.091

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
103	Pit Plant 1 Air Separator Conveyor	150	0.45	0.99	0.17	0.60	0.025	0.091
104	Waste Stacker Conveyor Drop to Pile	180	1.19	1.75	0.56	0.83	0.085	0.13
105	Pit Plant 1 Stacker Conveyor to Pile	180	1.19	1.75	0.56	0.83	0.085	0.13
106	Pit Plant 1 Stacker Conveyor to Pile	120	0.79	1.17	0.37	0.55	0.057	0.083
107	Pit Plant 1 Stacker Conveyor to Pile	150	0.99	1.46	0.47	0.69	0.071	0.10
108	Pit Plant 1 Stacker Conveyor to Pile	150	0.99	1.46	0.47	0.69	0.071	0.10
109	Pit Plant 1 Finish Product Storage Pile	420	2.77	4.08	1.31	1.93	0.20	0.29
110	Pit Plant 1 Product Truck Loading - Finish Pile	420	2.77	4.08	1.31	1.93	0.20	0.29
Pit Plant #2								
112	Quarry Material - Pit Plant 2	600	3.96	5.83	1.87	2.76	0.28	0.42
113	Pit Plant 2 Feeder	600	3.96	5.83	1.87	2.76	0.28	0.42
114	Pit Plant 2 Jaw Crusher	600	3.24	7.10	1.44	3.15	0.22	0.48
115	Pit Plant 2 Surge Bin	600	1.80	3.94	0.66	2.41	0.10	0.36
116	Pit Plant 2 PreScreen	600	15.00	32.85	5.22	11.43	0.79	1.73
117	Pit Plant 2 Line 1 Cone Crusher	210	1.13	2.48	0.50	1.10	0.076	0.17
118	Pit Plant 2 Line 1 Screen	210	5.25	11.50	1.83	4.00	0.28	0.61
119	Pit Plant 2 Air Separator	90	2.25	4.93	0.78	1.71	0.12	0.26
120	Pit Plant 2 Line 2 Cone Crusher	210	1.13	2.48	0.50	1.10	0.076	0.17
121	Pit Plant 2 Line 2 Screen	210	5.25	11.50	1.83	4.00	0.28	0.61
122	Pit Plant 2 Jaw Crusher Conveyor	600	1.80	3.94	0.66	1.45	0.10	0.22
123	Pit Plant 2 Surge Bin Conveyor	600	1.80	3.94	0.66	1.45	0.10	0.22
124	Pit Plant 2 Conveyor	600	1.80	3.94	0.66	1.45	0.10	0.22
125	Pit Plant 2 PreScreen Conveyor	180	0.54	1.18	0.20	0.43	0.030	0.066
126	Pit Plant 2 Waste Conveyor	180	0.54	1.18	0.20	0.43	0.030	0.066
127	Pit Plant 2 Waste Stacker Conveyor	180	0.54	1.18	0.20	0.43	0.030	0.066

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
128	Pit Plant 2 PreScreen Conveyor	420	1.26	2.76	0.46	1.01	0.070	0.15
129	Pit Plant 2 Conveyor	420	1.26	2.76	0.46	1.01	0.070	0.15
130	Pit Plant 2 Splitter Conveyor	420	1.26	2.76	0.46	1.01	0.070	0.15
131	Pit Plant 2 Line 1 Conveyor	210	0.63	1.38	0.23	0.51	0.035	0.077
132	Pit Plant 2 Line 1 Cone Crusher Conveyor	210	0.63	1.38	0.23	0.51	0.035	0.077
133	Pit Plant 2 Line 1 Conveyor to Screen	210	0.63	1.38	0.23	0.51	0.035	0.077
134	Pit Plant 2 Line 1 Screen Conveyor	60	0.18	0.39	0.066	0.14	0.010	0.022
135	Pit Plant 2 Return Conveyor to Line 1 Cone	60	0.18	0.39	0.066	0.14	0.010	0.022
136	Pit Plant 2 Line 1 Screen Conveyor	60	0.18	0.39	0.066	0.14	0.010	0.022
137	Pit Plant 2 Line 1 Screen Conveyor	60	0.18	0.39	0.066	0.14	0.010	0.022
138	Pit Plant 2 Line 1 Screen Conveyor	90	0.27	0.59	0.10	0.22	0.015	0.033
139	Pit Plant 2 Line 1 Conveyor	90	0.27	0.59	0.10	0.22	0.015	0.033
140	Pit Plant 2 Line 1 Conveyor	90	0.27	0.59	0.10	0.22	0.015	0.033
141	Pit Plant 2 Air Separator Conveyor	48	0.14	0.32	0.053	0.12	0.008	0.018
142	Pit Plant 2 Air Separator Conveyor	42	0.13	0.28	0.046	0.10	0.007	0.015
143	Pit Plant 2 Line 2 Conveyor	210	0.63	1.38	0.23	0.51	0.035	0.077
144	Pit Plant 2 Line 2 Cone Crusher Conveyor	210	0.63	1.38	0.23	0.51	0.035	0.077
145	Pit Plant 2 Line 2 Conveyor to Screen	210	0.63	1.38	0.23	0.51	0.035	0.077
146	Pit Plant 2 Line 2 Screen Conveyor	60	0.18	0.39	0.066	0.14	0.010	0.022
147	Pit Plant 2 Return Conveyor to Line 2 Cone	60	0.18	0.39	0.066	0.14	0.010	0.022
148	Pit Plant 2 Line 2 Screen Conveyor	90	0.27	0.59	0.10	0.22	0.015	0.033
149	Pit Plant 2 Line 2 Screen Conveyor	60	0.18	0.39	0.066	0.14	0.010	0.022
150	Pit Plant 2 Line 2 Screen Conveyor	60	0.18	0.39	0.066	0.14	0.010	0.022

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
151	Waste Stacker Conveyor Drop to Pile	180	1.19	1.75	0.56	0.83	0.085	0.13
152	Pit Plant 2 Stacker Conveyor to Pile	60	0.40	0.58	0.19	0.28	0.028	0.042
153	Pit Plant 2 Stacker Conveyor to Pile	60	0.40	0.58	0.19	0.28	0.028	0.042
154	Pit Plant 2 Stacker Conveyor to Pile	48	0.32	0.47	0.15	0.22	0.023	0.033
155	Pit Plant 2 Stacker Conveyor to Pile	42	0.28	0.41	0.13	0.19	0.020	0.029
156	Pit Plant 2 Stacker Conveyor to Pile	90	0.59	0.87	0.28	0.41	0.043	0.063
157	Pit Plant 2 Stacker Conveyor to Pile	60	0.40	0.58	0.19	0.28	0.028	0.042
158	Pit Plant 2 Stacker Conveyor to Pile	60	0.40	0.58	0.19	0.28	0.028	0.042
159	Pit Plant 2 Finish Product Storage Pile	420	2.77	4.08	1.31	1.93	0.20	0.29
160	Pit Plant 2 Product Truck Loading - Finish Pile	420	2.77	4.08	1.31	1.93	0.20	0.29
162	Waste Storage Pile (Main+Pit1+Pit2)	660	3.96	5.83	1.87	2.76	0.28	0.42
Air Separator Plant								
163	AS Feeder	300	4.36	6.41	2.06	3.03	0.31	0.46
164	AS Plant Feeder	300	1.98	2.91	0.94	1.38	0.14	0.21
165	AS Plant Air Separator	300	1.98	2.91	0.94	1.38	0.14	0.21
166	AS Feeder Conveyor	300	7.50	32.85	2.61	5.72	0.40	0.87
167	AS Plant Feeder Conveyor	300	1.98	2.91	0.94	1.38	0.14	0.21
168	AS Plant Air Separator Conveyor	30	0.90	1.97	0.33	0.72	0.050	0.11
169	AS Plant Air Separator Conveyor	270	0.09	0.20	0.033	0.072	0.005	0.011
170	AS Plant Conveyor	270	0.81	1.77	0.30	0.65	0.045	0.10
171	AS Plant Stacker Conveyor to Pile 1	30	0.81	1.77	0.30	0.65	0.045	0.10
172	AS Plant Stacker Conveyor to Pile 2	270	0.20	0.29	0.094	0.14	0.014	0.021
173	AS Plant Finish Pile	300	1.78	2.62	0.84	1.24	0.13	0.19
174	AS Plant Product Truck Loading - Finish Pile	300	1.98	2.91	0.94	1.38	0.14	0.21
		TOTALS	**315.83**	**638.26**	**125.99**	**273.25**	**19.08**	**41.38**

Pre-Control Particulate Emission Rates Recycled Asphalt Plant

Material Handling ($PM_{2.5}$, PM_{10}, and PM)

To estimate material handling pre-control particulate emission rates for crushing, screening, and conveyor transfer operations, emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.19.2, Table 11.19.2-2. To determine missing $PM_{2.5}$ emission factors the ratio of 0.35/0.053 from $PM_{10}/PM_{2.5}$ *k* factors found in AP-42 Section 13.2.4 (11/2006) were used.

To estimate material handling particulate emission rates for aggregate handling operations (aggregate and RAP storage piles/ loading feed bins), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (11/2004), where the k (TSP = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining the maximum hourly emission rate is the NMED default of 11 MPH and for determining the annual emission rate is based on the average wind speed for Albuquerque Airport (2001 – 2011) of 8.1 mph (see Section 7) and the NMED default moisture content of 2 percent.

Pre-controlled annual emissions for tons per year (tpy) were calculated assuming daylight operation for 4380 hours per year. This limit is based on the natural limitation of daylight hours for the safety of MSCI personnel operating the RAP plants.

Aggregate Material Handling – Storage Piles, Stacker drop to Piles, and Feed Bin Loading Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00660 lbs/ton;

E_{PM10} (lbs/ton) = 0.00312 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00047 lbs/ton

Annual Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00443 lbs/ton;

E_{PM10} (lbs/ton) = 0.00210 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00032 lbs/ton

AP-42 Section 11.19.2 Table 11.19.2-2 Emission Factors:

All Bin Unloading and Conveyor Transfers = Uncontrolled Conveyor Transfer Point Emission Factor
Crushing = Uncontrolled Tertiary Crushing Emission Factor
Screening = Uncontrolled Screening Emission Factor

Material Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Uncontrolled Tertiary Crushing	0.00540	0.00240	0.00036
Uncontrolled Screening	0.02500	0.00870	0.00130
Feed Bin Unloading, and Conveyor Transfers	0.00300	0.00110	0.00017
Uncontrolled Hourly RAP Storage Piles, RAP Feeder Loading, Stacker to Pile	0.00660	0.00312	0.00047
Uncontrolled Hourly RAP Storage Piles, RAP Feeder Loading, Stacker to Pile	0.00443	0.00210	0.00032

These emission factors are reduced further to account for the inherent properties of RAP with a coating of asphalt which captures small particles within the material. Based on EPA documents "EIIP – Preferred and Alternative Methods for Estimating Air Emissions from Hot-Mix-Asphalt Plants, Final Report, July 1996, Table 3.2-1 Fugitive Dust – Crushed RAP material" the inherent typical efficiency of the material is 70% (see Section 7). The above emission factors are multiplied by 0.3 and are summarized below.

RAP Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Uncontrolled Tertiary Crushing	0.00162	0.00072	0.00011
Uncontrolled Screening	0.00750	0.00261	0.00040
Feed Bin Unloading, and Conveyor Transfers	0.00090	0.00033	0.00005
Uncontrolled Hourly RAP Storage Piles, RAP Feeder Loading, Stacker to Pile	0.00198	0.00094	0.00014
Uncontrolled Hourly RAP Storage Piles, RAP Feeder Loading, Stacker to Pile	0.00133	0.00063	0.00010

The following equation was used to calculate the hourly emission rate for each process unit:

Emission Rate (lbs/hour) = Process Rate (tons/hour) * Emission Factor (lbs/ton)

The following equation was used to calculate the annual emission rate for each process unit:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-2 Pre-Controlled RAP Plant Regulated Process Equipment Emission Rates

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
176	RAP Plant Raw Material Source	200	0.40	0.58	0.19	0.28	0.028	0.042
177	RAP Plant Feeder/Hopper	200	0.40	0.58	0.19	0.28	0.028	0.042
178	RAP Plant Vertical Impact Crusher	200	0.32	0.71	0.14	0.32	0.022	0.048
179	RAP Plant Surge Bin	200	0.18	0.39	0.066	0.14	0.010	0.022
180	RAP Plant 2-Deck Screen	200	1.50	3.29	0.52	1.14	0.079	0.17
181	RAP Plant Cone Crusher	200	0.32	0.71	0.14	0.32	0.022	0.048
182	RAP Plant Crusher Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
183	RAP Plant Surge Bin Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
184	RAP Plant Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
185	RAP Plant Cone Crusher Conveyor	120	0.11	0.39	0.040	0.14	0.0060	0.022
186	RAP Plant Return 1 Conveyor	120	0.11	0.39	0.040	0.14	0.0060	0.022
187	RAP Plant Return 2 Conveyor	120	0.11	0.39	0.040	0.14	0.0060	0.022
188	RAP Plant Screen Under Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
189	RAP Plant Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
190	RAP Plant Stacker Conveyor to Pile	200	0.40	0.58	0.19	0.28	0.028	0.042
191	RAP Plant Finish Product Storage Pile	200	0.40	0.58	0.19	0.28	0.028	0.042
		TOTALS	**5.14**	**10.58**	**2.07**	**4.18**	**0.31**	**0.63**

Allowable Particulate Emission Rates Main Plant, Pit Plant #1, Pit Plant #2, and Air Separator

Material Handling ($PM_{2.5}$, PM_{10}, and PM)

No fugitive dust controls or emission reductions are proposed for the quarry materials, quarry truck loading, loading of the aggregate feed bin, waste storage pile, quarry truck loading – product, finish product storage pile and product truck loading with the exception of limiting annual production rates.

A "Wet Suppression" system will control emissions of particulate matter during crushing, screening, conveyor transfers, and stacker conveyor drop to storage piles. Controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group found in AP-42 Section 11.19.2. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays. Although the moisture content was the only variable measured, other process features may have as much influence on emissions from a given source. No fugitive dust controls are proposed for loading the feeders (3, 9, 11, 14, 16, 71, 113, 163, and 164), and material handling at the quarry material source (1, 70, and 112), storage piles (65, 67, 109, 159, 162 and 174) or truck loading (2, 66, 68, 110, 160 and 174). Water sprays and moisture carryover will control fugitive dust for Units 4-8, 10, 12, 13, 15, 17-64, 72-108, 116-158, and 165-172.

Fugitive dust control for the transfer conveyors (Units 5, 8, 19-55, 73, 79-103, 115, 122-150, and 166-170) will be controlled with material moisture content and/or enclosure. It is estimated that these methods will control to a PM10 efficiency of 95.9 percent per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Fugitive dust control for the plant crushers (Unit 4, 10, 12, 15, 17, 72, 75, 76, 114, 117, and 120) will be controlled, as needed, with enclosures and/or water sprays. It is estimated that these methods will control to a PM10 efficiency of 77.7 percent for crushing operations per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Fugitive dust control for the plant screens (Units 6, 7, 13, 18, 74, 77, 78, 116, 118, 119, 121 and 165) will be controlled, as needed, with enclosures and/or water sprays. It is estimated that these methods will control to a PM10 efficiency of 91.6 percent for screening operations per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Fugitive dust control for the stacker conveyor transfer to storage piles (Units 56-64, 104-108, 151-158, 171, and 172) will be controlled with material moisture content and/or enclosure. It is estimated that the additional moisture during processing will increase the moisture content from the default of 2% to the high moisture content value found in footnote b of AP-42 Table 11.19.2-2, 2.88%. This will control fugitive emissions to an efficiency of 60 percent. Additional emission reductions include limiting annual production rates.

To estimate material handling control particulate emission rates for crushing, screening, and conveyor transfer operations, emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.19.2, Table 11.19.2-2.

To estimate material handling particulate emission rates for aggregate handling operations (mining/aggregate storage piles/loading feed bins/stacker drop to piles), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (11/2004), where the k (PM = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining the maximum hourly emission rate is the NMED default of 11 MPH and for determining annual emission rate is based on the average wind speed for Albuquerque Airport for the years of 2001 through 2011 of 8.1 mph, and the NMED default moisture content of 2 percent.

Quarry, Raw Ore Pile, Feeder and Truck Loading, Finish Pile Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = $k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$

E_{PM} (lbs/ton) = $0.74 \times 0.0032 \times (11/5)^{1.3} / (2/2)^{1.4}$

E_{PM10} (lbs/ton) = $0.35 \times 0.0032 \times (11/5)^{1.3} / (2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = $0.053 \times 0.0032 \times (11/5)^{1.3} / (2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00660 lbs/ton;

E_{PM10} (lbs/ton) = 0.00312 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00047 lbs/ton

Stacker to Storage Pile Loading Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = $k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$

E_{PM} (lbs/ton) = $0.74 \times 0.0032 \times (11/5)^{1.3} / (2.88/2)^{1.4}$

E_{PM10} (lbs/ton) = $0.35 \times 0.0032 \times (11/5)^{1.3} / (2.88/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = $0.053 \times 0.0032 \times (11/5)^{1.3} / (2.88/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00396 lbs/ton;

E_{PM10} (lbs/ton) = 0.00187 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00028 lbs/ton

Quarry, Raw Ore Pile, Feeder and Truck Loading, Finish Pile Emission Equation:

Annual Emission Factor

E (lbs/ton) = $k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$

E_{PM} (lbs/ton) = $0.74 \times 0.0032 \times (8.1/5)^{1.3} / (2/2)^{1.4}$

E_{PM10} (lbs/ton) = $0.35 \times 0.0032 \times (8.1/5)^{1.3} / (2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = $0.053 \times 0.0032 \times (8.1/5)^{1.3} / (2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00443 lbs/ton;

E_{PM10} (lbs/ton) = 0.00210 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00032 lbs/ton

Stacker to Storage Pile Loading Emission Equation:

Annual Emission Factor

E (lbs/ton) = $k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$

E_{PM} (lbs/ton) = $0.74 \times 0.0032 \times (8.1/5)^{1.3} / (2.88/2)^{1.4}$

E_{PM10} (lbs/ton) = $0.35 \times 0.0032 \times (8.1/5)^{1.3} / (2.88/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = $0.053 \times 0.0032 \times (8.1/5)^{1.3} / (2.88/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00266 lbs/ton;

E_{PM10} (lbs/ton) = 0.00126 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00019 lbs/ton

AP-42 Emission Factors:

Feed Bin Unloading = Controlled Conveyor Transfer Point Emission Factor
Crusher = Controlled Tertiary Crusher Emission Factor
Screen = Controlled Screening Emission Factor
Transfer Conveyor = Controlled Conveyor Transfer Point Emission Factor

Material Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Controlled Crushing	0.00120	0.00054	0.00010
Controlled Screening	0.00220	0.00074	0.00005
Controlled Feeder Unloading and Conveyor Transfers	0.00014	0.000046	0.000013
Mining, Aggregate Storage Piles, Feeder and Truck Loading Maximum Hourly	0.00660	0.00312	0.00047
Mining, Aggregate Storage Piles, Feeder and Truck Loading Annual Hourly	0.00443	0.00210	0.00032
Stacker Conveyor to Pile Maximum Hourly	0.00396	0.00187	0.00028
Stacker Conveyor to Pile Annual Hourly	0.00266	0.00126	0.00019

The following equation was used to calculate the hourly emission rate for each process unit:

Emission Rate (lbs/hour) = Process Rate (tons/hour) * Emission Factor (lbs/ton)

The following equation was used to calculate the annual emission rate for each process unit:

$$\text{Emission Rate (tons/year)} = \frac{\text{Hourly Emission Rate (lbs/ton)} * \text{Annual Throughput (tons/year)}}{\text{2000 lbs/ton}}$$

Table 6-3 Allowable Regulated Process Equipment Emission Rates

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
Main Plant								
1	Quarry Material	1000	6.60	5.22	3.12	2.47	0.47	0.37
2	Quarry Truck Loading	1000	6.60	5.22	3.12	2.47	0.47	0.37
3	MP Feeder (Quarry Truck Unload)	1000	6.60	5.22	3.12	2.47	0.47	0.37
4	MP Jaw Crusher	1000	1.20	1.41	0.54	0.64	0.10	0.12
5	MP Surge Bin	1000	0.14	0.16	0.046	0.054	0.013	0.015
6	MP PreScreen	1000	2.20	2.59	0.74	0.87	0.050	0.059
7	MP Waste Screen	300	0.66	0.78	0.22	0.26	0.015	0.018
8	MP Surge Bin	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
9	MP Line 1 Jaw Crusher Feeder	350	2.31	1.83	1.09	0.86	0.17	0.13
10	MP Line 1 Jaw Crusher	350	0.42	0.49	0.19	0.22	0.035	0.041
11	MP Line 1 Feeder	350	2.31	1.83	1.09	0.86	0.17	0.13
12	MP Line 1 Cone Crusher	350	0.42	0.49	0.19	0.22	0.035	0.041
13	MP Line 1 Screen	350	0.77	0.91	0.26	0.31	0.018	0.021
14	MP Line 2 Jaw Crusher Feeder	350	2.31	1.83	1.09	0.86	0.17	0.13
15	MP Line 2 Jaw Crusher	350	0.42	0.49	0.19	0.22	0.035	0.041
16	MP Line 2 Feeder	350	2.31	1.83	1.09	0.86	0.17	0.13
17	MP Line 2 Cone Crusher	350	0.42	0.49	0.19	0.22	0.035	0.041
18	MP Line 2 Screen	350	0.77	0.91	0.26	0.31	0.018	0.021
19	MP Jaw Crusher Conveyor	1000	0.14	0.16	0.046	0.054	0.013	0.015
20	MP Surge Bin Conveyor	1000	0.14	0.16	0.046	0.054	0.013	0.015
21	MP Conveyor	1000	0.14	0.16	0.046	0.054	0.013	0.015
22	MP PreScreen Conveyor	300	0.042	0.049	0.014	0.016	0.0039	0.0046
23	MP Conveyor	300	0.042	0.049	0.014	0.016	0.0039	0.0046
24	MP Conveyor	300	0.042	0.049	0.014	0.016	0.0039	0.0046
25	MP Waste Screen Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
26	MP Surge Bin Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
27	MP Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
28	MP Conveyor	150	0.18	0.21	0.081	0.095	0.015	0.018
29	MP Waste Screen Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
30	MP Waste Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
31	MP Waste Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
32	MP Waste Conveyor to Stacker Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
33	MP PreScreen Conveyor	700	0.10	0.12	0.032	0.038	0.0091	0.011
34	MP Conveyor	700	0.10	0.12	0.032	0.038	0.0091	0.011
35	MP Conveyor	700	0.10	0.12	0.032	0.038	0.0091	0.011
36	MP Line 1 Jaw Crusher Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
37	MP Line 1 Feeder Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
38	MP Line 1 Cone Crusher Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
39	MP Line 1 Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
40	MP Line 1 Screen Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
41	MP Line 1 Screen Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
42	MP Line 1 Screen Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
43	MP Line 1 Screen Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
44	MP Line 1 Return Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
45	MP Line 1 Return Conveyor to Cone	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
46	MP Line 2 Jaw Crusher Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
47	MP Line 2 Feeder Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
48	MP Line 2 Cone Crusher Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
49	MP Line 2 Conveyor	350	0.049	0.058	0.016	0.019	0.0046	0.0054
50	MP Line 2 Screen Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
51	MP Line 2 Screen Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
52	MP Line 2 Screen Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
53	MP Line 2 Screen Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
54	MP Line 2 Return Conveyor	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
55	MP Line 2 Return Conveyor to Cone	100	0.014	0.016	0.0046	0.0054	0.0013	0.0015
56	MP Stacker Conveyor to Storage Pile	150	0.59	0.47	0.28	0.22	0.043	0.034
57	MP Stacker Conveyor to Waste Storage Pile	150	0.59	0.47	0.28	0.22	0.043	0.034
58	MP Conveyor Stacker to Surge Pile	700	2.77	2.19	1.31	1.04	0.20	0.16
59	MP Line 1 Stacker Conveyor to Pile	150	0.59	0.47	0.28	0.22	0.043	0.034
60	MP Line 1 Stacker Conveyor to Pile	100	0.40	0.31	0.19	0.15	0.028	0.022
61	MP Line 1 Stacker Conveyor to Pile	100	0.40	0.31	0.19	0.15	0.028	0.022
62	MP Line 2 Stacker Conveyor to Pile	150	0.59	0.47	0.28	0.22	0.043	0.034
63	MP Line 2 Stacker Conveyor to Pile	100	0.40	0.31	0.19	0.15	0.028	0.022
64	MP Line 2 Stacker Conveyor to Pile	100	0.40	0.31	0.19	0.15	0.028	0.022
65	MP Waste Storage Pile	300	1.98	1.57	0.94	0.74	0.14	0.11
66	MP Quarry Truck Loading - Product	700	4.62	3.66	2.19	1.73	0.33	0.26
67	MP Finish Product Storage Pile	700	4.62	3.66	2.19	1.73	0.33	0.26
68	MP Product Truck Loading - Finish Pile	700	4.62	3.66	2.19	1.73	0.33	0.26
Pit Plant #1								
70	Quarry Material - Pit Plant 1	600	3.96	3.13	1.87	1.48	0.28	0.22
71	Pit Plant 1 Feeder	600	3.96	3.13	1.87	1.48	0.28	0.22
72	Pit Plant 1 Jaw Crusher	600	0.72	0.85	0.32	0.38	0.060	0.071
73	Pit Plant 1 Surge Bin	600	0.084	0.099	0.028	0.033	0.0078	0.0092
74	Pit Plant 1 Prescreen	600	1.32	1.56	0.44	0.52	0.030	0.035
75	Pit Plant 1 Cone Crusher	300	0.36	0.42	0.16	0.19	0.030	0.035
76	Pit Plant 1 VSI Crusher	210	0.25	0.30	0.11	0.13	0.021	0.025

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
77	Pit Plant 1 Screen	420	0.92	1.09	0.31	0.37	0.021	0.025
78	Pit Plant 1 Air Separator	150	0.33	0.39	0.11	0.13	0.008	0.009
79	Pit Plant 1 Jaw Crusher Conveyor	600	0.084	0.099	0.028	0.033	0.0078	0.0092
80	Pit Plant 1 Surge Bin Conveyor	600	0.084	0.10	0.028	0.033	0.0078	0.0092
81	Pit Plant 1 Conveyor	600	0.084	0.10	0.028	0.033	0.0078	0.0092
82	Pit Plant 1 Conveyor	600	0.084	0.10	0.028	0.033	0.0078	0.0092
83	Pit Plant 1 PreScreen Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
84	Pit Plant 1 Waste Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
85	Pit Plant 1 Waste Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
86	Pit Plant 1 Waste Stacker Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
87	Pit Plant 1 Cone Crusher Conveyor	300	0.042	0.049	0.014	0.016	0.0039	0.0046
88	Pit Plant 1 Prescreen Conveyor	120	0.017	0.020	0.0055	0.0065	0.0016	0.0018
89	Pit Plant 1 Conveyor	120	0.017	0.020	0.0055	0.0065	0.0016	0.0018
90	Pit Plant 1 VSI Crusher Conveyor	210	0.029	0.035	0.010	0.011	0.0027	0.0032
91	Pit Plant 1 Conveyor	210	0.029	0.035	0.010	0.011	0.0027	0.0032
92	Pit Plant 1 Conveyor	420	0.059	0.069	0.019	0.023	0.0055	0.0064
93	Pit Plant 1 Screen Conveyor	90	0.013	0.015	0.0041	0.0049	0.0012	0.0014
94	Pit Plant 1 Return Conveyor to VSI	90	0.013	0.015	0.0041	0.0049	0.0012	0.0014
95	Pit Plant 1 Screen Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
96	Pit Plant 1 Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
97	Pit Plant 1 Screen Conveyor	120	0.017	0.020	0.0055	0.0065	0.0016	0.0018
98	Pit Plant 1 Conveyor	120	0.017	0.020	0.0055	0.0065	0.0016	0.0018
99	Pit Plant 1 Screen Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
100	Pit Plant 1 Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
101	Pit Plant 1 Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
102	Pit Plant 1 Air Separator Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023
103	Pit Plant 1 Air Separator Conveyor	150	0.021	0.025	0.0069	0.0081	0.0020	0.0023

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
104	Waste Stacker Conveyor Drop to Pile	180	0.71	0.56	0.34	0.27	0.051	0.040
105	Pit Plant 1 Stacker Conveyor to Pile	180	0.71	0.56	0.34	0.27	0.051	0.040
106	Pit Plant 1 Stacker Conveyor to Pile	120	0.48	0.38	0.22	0.18	0.034	0.027
107	Pit Plant 1 Stacker Conveyor to Pile	150	0.59	0.47	0.28	0.22	0.043	0.034
108	Pit Plant 1 Stacker Conveyor to Pile	150	0.59	0.47	0.28	0.22	0.043	0.034
109	Pit Plant 1 Finish Product Storage Pile	420	2.77	2.19	1.31	1.04	0.20	0.16
110	Pit Plant 1 Product Truck Loading - Finish Pile	420	2.77	2.19	1.31	1.04	0.20	0.16
Pit Plant #2								
112	Quarry Material - Pit Plant 2	600	3.96	3.13	1.87	1.48	0.28	0.22
113	Pit Plant 2 Feeder	600	3.96	3.13	1.87	1.48	0.28	0.22
114	Pit Plant 2 Jaw Crusher	600	0.72	0.85	0.32	0.38	0.060	0.071
115	Pit Plant 2 Surge Bin	600	0.084	0.099	0.028	0.033	0.0078	0.0092
116	Pit Plant 2 PreScreen	600	1.32	1.56	0.44	0.52	0.030	0.035
117	Pit Plant 2 Line 1 Cone Crusher	210	0.25	0.30	0.11	0.13	0.021	0.025
118	Pit Plant 2 Line 1 Screen	210	0.46	0.54	0.16	0.18	0.011	0.012
119	Pit Plant 2 Air Separator	90	0.20	0.23	0.067	0.078	0.0045	0.0053
120	Pit Plant 2 Line 2 Cone Crusher	210	0.25	0.30	0.11	0.13	0.021	0.025
121	Pit Plant 2 Line 2 Screen	210	0.46	0.54	0.16	0.18	0.011	0.012
122	Pit Plant 2 Jaw Crusher Conveyor	600	0.084	0.099	0.028	0.033	0.0078	0.0092
123	Pit Plant 2 Surge Bin Conveyor	600	0.084	0.099	0.028	0.033	0.0078	0.0092
124	Pit Plant 2 Conveyor	600	0.084	0.099	0.028	0.033	0.0078	0.0092
125	Pit Plant 2 PreScreen Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
126	Pit Plant 2 Waste Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
127	Pit Plant 2 Waste Stacker Conveyor	180	0.025	0.030	0.0083	0.010	0.0023	0.0028
128	Pit Plant 2 PreScreen Conveyor	420	0.059	0.069	0.019	0.023	0.0055	0.0064

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
129	Pit Plant 2 Conveyor	420	0.059	0.069	0.019	0.023	0.0055	0.0064
130	Pit Plant 2 Splitter Conveyor	420	0.059	0.069	0.019	0.023	0.0055	0.0064
131	Pit Plant 2 Line 1 Conveyor	210	0.029	0.035	0.010	0.011	0.0027	0.0032
132	Pit Plant 2 Line 1 Cone Crusher Conveyor	210	0.029	0.035	0.010	0.011	0.0027	0.0032
133	Pit Plant 2 Line 1 Conveyor to Screen	210	0.029	0.035	0.010	0.011	0.0027	0.0032
134	Pit Plant 2 Line 1 Screen Conveyor	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
135	Pit Plant 2 Return Conveyor to Line 1 Cone	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
136	Pit Plant 2 Line 1 Screen Conveyor	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
137	Pit Plant 2 Line 1 Screen Conveyor	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
138	Pit Plant 2 Line 1 Screen Conveyor	90	0.013	0.015	0.0041	0.0049	0.0012	0.0014
139	Pit Plant 2 Line 1 Conveyor	90	0.013	0.015	0.0041	0.0049	0.0012	0.0014
140	Pit Plant 2 Line 1 Conveyor	90	0.013	0.015	0.0041	0.0049	0.0012	0.0014
141	Pit Plant 2 Air Separator Conveyor	48	0.0067	0.0079	0.0022	0.0026	0.00062	0.00074
142	Pit Plant 2 Air Separator Conveyor	42	0.0059	0.0069	0.0019	0.0023	0.00055	0.00064
143	Pit Plant 2 Line 2 Conveyor	210	0.029	0.035	0.010	0.011	0.0027	0.0032
144	Pit Plant 2 Line 2 Cone Crusher Conveyor	210	0.029	0.035	0.010	0.011	0.0027	0.0032
145	Pit Plant 2 Line 2 Conveyor to Screen	210	0.029	0.035	0.010	0.011	0.0027	0.0032
146	Pit Plant 2 Line 2 Screen Conveyor	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
147	Pit Plant 2 Return Conveyor to Line 2 Cone	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
148	Pit Plant 2 Line 2 Screen Conveyor	90	0.013	0.015	0.0041	0.0049	0.0012	0.0014
149	Pit Plant 2 Line 2 Screen Conveyor	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
150	Pit Plant 2 Line 2 Screen Conveyor	60	0.0084	0.010	0.0028	0.0033	0.00078	0.00092
151	Waste Stacker Conveyor Drop to Pile	180	0.71	0.56	0.34	0.27	0.051	0.040

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
152	Pit Plant 2 Stacker Conveyor to Pile	60	0.24	0.19	0.11	0.089	0.017	0.013
153	Pit Plant 2 Stacker Conveyor to Pile	60	0.24	0.19	0.11	0.089	0.017	0.013
154	Pit Plant 2 Stacker Conveyor to Pile	48	0.19	0.15	0.090	0.071	0.014	0.011
155	Pit Plant 2 Stacker Conveyor to Pile	42	0.17	0.13	0.079	0.062	0.012	0.0094
156	Pit Plant 2 Stacker Conveyor to Pile	90	0.36	0.28	0.17	0.13	0.026	0.020
157	Pit Plant 2 Stacker Conveyor to Pile	60	0.24	0.19	0.11	0.089	0.017	0.013
158	Pit Plant 2 Stacker Conveyor to Pile	60	0.24	0.19	0.11	0.089	0.017	0.013
159	Pit Plant 2 Finish Product Storage Pile	420	2.77	2.19	1.31	1.04	0.20	0.16
160	Pit Plant 2 Product Truck Loading - Finish Pile	420	2.77	2.19	1.31	1.04	0.20	0.16
162	Waste Storage Pile (Main+Pit1+Pit2)	600	4.36	3.45	2.06	1.63	0.31	0.22
Air Separator Plant								
163	AS Feeder	300	1.98	1.57	0.94	0.74	0.14	0.11
164	AS Plant Feeder	300	1.98	1.57	0.94	0.74	0.14	0.11
165	AS Plant Air Separator	300	0.66	0.78	0.22	0.26	0.015	0.018
166	AS Feeder Conveyor	300	0.042	0.049	0.014	0.016	0.0039	0.0046
167	AS Plant Feeder Conveyor	300	0.042	0.049	0.014	0.016	0.0039	0.0046
168	AS Plant Air Separator Conveyor	30	0.0042	0.0049	0.0014	0.0016	0.00039	0.00046
169	AS Plant Air Separator Conveyor	270	0.038	0.045	0.012	0.015	0.0035	0.0041
170	AS Plant Conveyor	270	0.038	0.045	0.012	0.015	0.0035	0.0041
171	AS Plant Stacker Conveyor to Pile 1	30	0.12	0.31	0.056	0.15	0.0085	0.022
172	AS Plant Stacker Conveyor to Pile 2	270	1.07	2.82	0.51	1.33	0.077	0.20
173	AS Plant Finish Pile	300	1.98	1.57	0.94	0.74	0.14	0.11
174	AS Plant Product Truck Loading - Finish Pile	300	1.98	1.57	0.94	0.74	0.14	0.11
		TOTALS	**116.87**	**102.21**	**53.24**	**45.94**	**8.02**	**6.89**

Allowable Particulate Emission Rates Recycled Asphalt Plant

Material Handling ($PM_{2.5}$, PM_{10}, and PM)

To estimate material handling pre-control particulate emission rates for crushing, screening, and conveyor transfer operations, emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.19.2, Table 11.19.2-2. To determine missing $PM_{2.5}$ emission factors the ratio of 0.35/0.053 from $PM_{10}/PM_{2.5}$ *k* factors found in AP-42 Section 13.2.4 (11/2006) were used.

To estimate material handling particulate emission rates for aggregate handling operations (aggregate and RAP storage piles/ loading feed bins), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (11/2004), where the k (TSP = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining the maximum hourly emission rate is the NMED default of 11 MPH and for determining the annual emission rate is based on the average wind speed for Albuquerque Airport (2001-2011) of 8.1 mph (see Section 7) and the NMED default moisture content of 2 percent.

Allowable annual emissions for tons per year (tpy) were calculated based on annual proposed throughput of 361,400 tons per year instead of 876,000 tons per year used in the Pre-controlled emission equations.

Aggregate Material Handling – Storage Piles, and Feed Bin Loading Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00660 lbs/ton;

E_{PM10} (lbs/ton) = 0.00312 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00047 lbs/ton

Annual Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(8.1/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00443 lbs/ton;

E_{PM10} (lbs/ton) = 0.00210 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00032 lbs/ton

AP-42 Section 11.19.2 Table 11.19.2-2 Emission Factors:

All Bin Unloading and Conveyor Transfers = Uncontrolled Conveyor Transfer Point Emission Factor
Crushing = Uncontrolled Tertiary Crushing Emission Factor
Screening = Uncontrolled Screening Emission Factor

Material Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Uncontrolled Tertiary Crushing	0.00540	0.00240	0.00036
Uncontrolled Screening	0.02500	0.00870	0.00130
Feed Bin Unloading, and Conveyor Transfers	0.00300	0.00110	0.00017
Uncontrolled Hourly RAP Storage Piles, RAP Feeder Loading	0.00660	0.00312	0.00047
Uncontrolled Annual RAP Storage Piles, RAP Feeder Loading	0.00443	0.00210	0.00032

These emission factors are reduced further to account for the inherent properties of RAP with a coating of asphalt which captures small particles within the material. Based on EPA documents "EIIP – Preferred and Alternative Methods for Estimating Air Emissions from Hot-Mix-Asphalt Plants, Final Report, July 1996, Table 3.2-1 Fugitive Dust – Crushed RAP material" the inherent typical efficiency of the material is 70% (see Section 7). The above emission factors are multiplied by 0.3 and are summarized below.

RAP Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Uncontrolled Tertiary Crushing	0.00162	0.00072	0.00011
Uncontrolled Screening	0.00750	0.00261	0.00040
Feed Bin Unloading, and Conveyor Transfers	0.00090	0.00033	0.00005
Uncontrolled Hourly RAP Storage Piles, RAP Feeder Loading	0.00198	0.00094	0.00014
Uncontrolled Annual RAP Storage Piles, RAP Feeder Loading	0.00133	0.00063	0.00010

The following equation was used to calculate the hourly emission rate for each process unit:

Emission Rate (lbs/hour) = Process Rate (tons/hour) * Emission Factor (lbs/ton)

The following equation was used to calculate the annual emission rate for each process unit:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-4 RAP Plant Allowable Regulated Process Equipment Emission Rates

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
176	RAP Plant Raw Material Source	200	0.40	0.58	0.19	0.28	0.028	0.042
177	RAP Plant Feeder/Hopper	200	0.40	0.58	0.19	0.28	0.028	0.042
178	RAP Plant Vertical Impact Crusher	200	0.32	0.71	0.14	0.32	0.022	0.048
179	RAP Plant Surge Bin	200	0.18	0.39	0.066	0.14	0.010	0.022
180	RAP Plant 2-Deck Screen	200	1.50	3.29	0.52	1.14	0.079	0.17
181	RAP Plant Cone Crusher	200	0.32	0.71	0.14	0.32	0.022	0.048
182	RAP Plant Crusher Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
183	RAP Plant Surge Bin Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
184	RAP Plant Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
185	RAP Plant Cone Crusher Conveyor	120	0.11	0.39	0.040	0.14	0.0060	0.022
186	RAP Plant Return 1 Conveyor	120	0.11	0.39	0.040	0.14	0.0060	0.022
187	RAP Plant Return 2 Conveyor	120	0.11	0.39	0.040	0.14	0.0060	0.022
188	RAP Plant Screen Under Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
189	RAP Plant Conveyor	200	0.18	0.39	0.066	0.14	0.010	0.022
190	RAP Plant Stacker Conveyor to Pile	200	0.40	0.58	0.19	0.28	0.028	0.042
191	RAP Plant Finish Product Storage Pile	200	0.40	0.58	0.19	0.28	0.028	0.042
		TOTALS	**5.14**	**4.37**	**2.07**	**1.72**	**0.31**	**0.26**

Estimates for 2288 hp (1600 kW) Main Plant Diesel-Fired Engine (69E) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 2288 horsepower (hp), 1600 kilowatt (kW) engine (Unit 69E) provides power to the Main Plant. Emission rates for NO_X and CO are based on stack test plus 25% safety factor (See Section 7). PM and VOC's emission rates are based on manufacture specifications (See Section 7). Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 500 ppm fuel content and a fuel usage rate of 114.5 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Pre-controlled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Allowable annual emissions in tons per year (tpy) were calculated assuming proposed operation of 4000 hours per year.

Unit 69E Emission Rates:

Pollutant	Emission Factor (lbs/hr)
Nitrogen Oxide (NOx)	10.61
Carbon Monoxides (CO)	1.65
Particulate (PM)	1.11
Hydrocarbons (VOC)	1.27

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 114.5 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 500 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{114.5 \text{ gallons}}{\text{hr}} \mid \frac{7.0 \text{ lbs}}{\text{gallon}} \mid \frac{0.0005 \text{ lbs Sulfur}}{\text{lbs of fuel}} \mid \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}}$$

Emission Rate (lbs/hr) = 0.8 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).
CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

PM Emission Rates were found in the manufactures emissions data listed as 503.49 g/hr. A conversion to lbs/hr was done by dividing 503.49 g/hr by 453.592 lbs as there are 453.59 grams in a lb:

Emission Rate (lbs/hr) = 503.49 (g/hr) / 453.592 lbs

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-5: Pre-controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
69E	NO_X	2288/1600	10.6	23.2
	CO	2288/1600	1.7	3.6
	SO_2	2288/1600	0.80	1.76
	VOC	2288/1600	1.27	2.78
	PM	2288/1600	1.11	2.43

Table 6-6: Allowable Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
69E	NO_X	2288/1600	10.6	21.2
	CO	2288/1600	1.7	3.3
	SO_2	2288/1600	0.80	1.60
	VOC	2288/1600	1.27	2.54
	PM	2288/1600	1.11	2.22

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-7: Pre-controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
69E	CO_2	10.21 kg/gal	114.5	1	2577.3	5644.3
	CH_4	0.41 g/gal	114.5	28	2.59	5.67
	N_2O	0.080 g/gal	114.5	265	6.02	13.18
	GHG				2585.9	5663.1

Table 6-8: Allowable GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
69E	CO_2	10.21 kg/gal	114.5	1	2577.3	5154.6
	CH_4	0.41 g/gal	114.5	28	2.59	5.17
	N_2O	0.08 g/gal	114.5	265	6.02	12.04
	GHG				2585.9	5171.8

Estimates for 1604 hp Pit Plant #1 Diesel-Fired Engine (111E) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 1604 horsepower (hp), 1010 kilowatt (kW) engine (111E) provides power to Pit Plant #1. Emission rates for NO_X and CO are based on stack test plus 25% safety factor (See Section 7). PM and VOC's emission rates are based on manufacture specifications (See Section 7). Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 500 ppm fuel content and a fuel usage rate of 70.6 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Pre-controlled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Allowable annual emissions in tons per year (tpy) were calculated assuming proposed operation of 4000 hours per year.

Unit 111E Emission Rates:

Pollutant	Emission Factor (lbs/hr)
Nitrogen Oxide (NOx)	7.96
Carbon Monoxides (CO)	2.78
Particulate (PM)	0.62
Hydrocarbons (VOC)	1.21

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 70.6 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 500 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{70.6 \text{ gallons}}{\text{hr}} \left| \frac{7.0 \text{ lbs}}{\text{gallon}} \right| \frac{0.0005 \text{ lbs Sulfur}}{\text{lbs of fuel}} \left| \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}} \right.$$

Emission Rate (lbs/hr) = 0.49 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).

CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-9: Pre-controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
111E	NO_X	1604/1010	7.96	17.44
	CO	1604/1010	2.78	6.08
	SO_2	1604/1010	0.49	1.08
	VOC	1604/1010	1.21	2.65
	PM	1604/1010	0.62	1.36

Table 6-10: Allowable Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
111E	NO_X	1604/1010	7.96	15.93
	CO	1604/1010	2.78	5.55
	SO_2	1604/1010	0.49	0.99
	VOC	1604/1010	1.21	2.42
	PM	1604/1010	0.62	1.24

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-11: Pre-controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
111E	CO_2	10.21 kg/gal	70.60	1	1589.1	3480.2
	CH_4	0.41 g/gal	70.60	28	1.60	3.49
	N_2O	0.08 g/gal	70.60	265	3.71	8.13
	GHG				1594.5	3491.9

Table 6-12: Allowable GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
111E	CO_2	10.21 kg/gal	70.60	1	1589.1	3178.3
	CH_4	0.41 g/gal	70.60	28	1.60	3.19
	N_2O	0.08 g/gal	70.60	265	3.71	7.42
	GHG				1594.5	3188.9

Estimates for 2153 hp Pit Plant #2 Diesel-Fired Engine (161E) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 2153 horsepower (hp), 1500 kilowatt (kW) engine (161E) provides power to Pit Plant #2. Emission rates for NO_X and CO are based on stack test plus 25% safety factor (See Section 7). PM and VOC's emission rates are based on manufacture specifications (See Section 7). Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 500 ppm fuel content and a fuel usage rate of 107.9 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Pre-controlled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Allowable annual emissions in tons per year (tpy) were calculated assuming proposed operation of 3200 hours per year.

Unit 161E Emission Rates:

Pollutant	Emission Factor (lbs/hr)
Nitrogen Oxide (NOx)	33.88
Carbon Monoxides (CO)	5.38
Particulate (PM)	0.58
Hydrocarbons (VOC)	1.82

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 107.9 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 500 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{107.9 \text{ gallons}}{\text{hr}} \left| \frac{7.0 \text{ lbs}}{\text{gallon}} \right| \frac{0.0005 \text{ lbs Sulfur}}{\text{lbs of fuel}} \left| \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}} \right.$$

Emission Rate (lbs/hr) = 0.76 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).
CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-13: Pre-controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
161E	NO_X	2153/1500	33.88	74.19
	CO	2153/1500	5.38	11.77
	SO_2	2153/1500	0.76	1.65
	VOC	2153/1500	1.82	3.99
	PM	2153/1500	0.58	1.27

Table 6-14: Allowable Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
161E	NO_X	2153/1500	33.88	54.20
	CO	2153/1500	5.38	8.60
	SO_2	2153/1500	0.76	1.21
	VOC	2153/1500	1.82	2.91
	PM	2153/1500	0.58	0.93

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-15: Pre-controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
161E	CO_2	10.21 kg/gal	107.9	1	2428.7	5318.9
	CH_4	0.41 g/gal	107.9	28	2.44	5.34
	N_2O	0.08 g/gal	107.9	265	5.67	12.42
	GHG				2436.8	5336.7

Table 6-16: Allowable GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
161E	CO_2	10.21 kg/gal	107.9	1	2428.7	3886.0
	CH_4	0.41 g/gal	107.9	28	2.44	3.90
	N_2O	0.08 g/gal	107.9	265	5.67	9.07
	GHG				2436.8	3899.0

Estimates for 265 hp Air Separator Diesel-Fired Engine (175E) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 265 horsepower (hp), 198 kilowatt (kW) engine (175E) provides power to the Air Separator Plant. Emission rates for NO_X, CO, PM and VOC's are based on EPA Tier 3 emission factors (See Section 7). Tier 3 emission factors list NMHC+NOx. NOx emission factor is 95% of the NMHC+NOx emission factor and Hydrocarbons (VOC) is 5% of the NMHC+NOx emission factor. Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 500 ppm fuel content and a fuel usage rate of 13.7 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Pre-controlled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Allowable annual emissions in tons per year (tpy) were calculated assuming proposed operation of 4000 hours per year.

EPA Tier 3:

Pollutant	EPA Tier 3 Emission Factor (gram/kW)
NMHC+NOx	4.00
Nitrogen Oxide (NOx)	3.80
Carbon Monoxides (CO)	3.50
Particulate (PM)	0.20
Hydrocarbons (VOC)	0.20

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 10.6 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 500 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{10.6 \text{ gallons}}{\text{hr}} \left| \frac{7.0 \text{ lbs}}{\text{gallon}} \right| \frac{0.0005 \text{ lbs Sulfur}}{\text{lbs of fuel}} \left| \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}} \right.$$

Emission Rate (lbs/hr) = 0.10 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).

CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

The following equation was used to calculate the hourly emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (grams/kW)} * \text{Kilowatt}}{453.6 \text{ grams/lb}}$$

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hr)} * \text{Operating Hour (hrs/year)}}{2000 \text{ lbs/ton}}$$

Table 6-17: Pre-controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
175E	NO_X	265/198	1.75	3.82
	CO	265/198	1.53	3.35
	SO_2	265/198	0.074	0.16
	VOC	265/198	0.087	0.19
	PM	265/198	0.087	0.19

Table 6-18: Allowable Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
175E	NO_X	265/198	1.75	3.49
	CO	265/198	1.53	3.06
	SO_2	265/198	0.074	0.15
	VOC	265/198	0.087	0.17
	PM	265/198	0.087	0.17

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-19: Pre-controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
175E	CO_2	10.21 kg/gal	10.6	1	238.6	522.5
	CH_4	0.41 g/gal	10.6	28	0.24	0.52
	N_2O	0.08 g/gal	10.6	265	0.56	1.22
	GHG				239.4	524.3

Table 6-20: Allowable GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
175E	CO_2	10.21 kg/gal	10.6	1	238.6	477.2
	CH_4	0.41 g/gal	10.6	28	0.24	0.48
	N_2O	0.08 g/gal	10.6	265	0.56	1.11
	GHG				239.4	478.8

Estimates for 415 hp Recycled Asphalt Plant Diesel-Fired Engine (192E) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 415 horsepower (hp), 309 kilowatt (kW) engine (192E) provides power to the Recycled Asphalt Plant. Emission rates for NO_X, CO, PM and VOC's are based on Manufacturer Specifications (See Section 7). Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 500 ppm fuel content and a fuel usage rate of 20.70 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Pre-controlled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Allowable annual emissions in tons per year (tpy) were calculated assuming proposed operation of 3016 hours per year.

Unit 192E Emission Rates:

Pollutant	Emission Factor (lbs/hr)
Nitrogen Oxide (NOx)	3.17
Carbon Monoxides (CO)	2.20
Particulate (PM)	0.18
Hydrocarbons (VOC)	0.12

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 20.70 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 500 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{20.70 \text{ gallons}}{\text{hr}} \mid \frac{7.0 \text{ lbs}}{\text{gallon}} \mid \frac{0.0005 \text{ lbs Sulfur}}{\text{lbs of fuel}} \mid \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}}$$

Emission Rate (lbs/hr) = 0.14 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).

CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{2000 \text{ lbs/ton}}$$

Table 6-21: Pre-controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
192E	NO_X	415/309	3.17	6.94
	CO	415/309	2.20	4.82
	SO_2	415/309	0.14	0.32
	VOC	415/309	0.12	0.26
	PM	415/309	0.18	0.39

Table 6-22: Allowable Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
192E	NO_X	415/309	3.17	4.78
	CO	415/309	2.20	3.32
	SO_2	415/309	0.14	0.22
	VOC	415/309	0.12	0.18
	PM	415/309	0.18	0.27

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-23: Pre-controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
192E	CO_2	10.21 kg/gal	20.70	1	465.9	1020.4
	CH_4	0.41 g/gal	20.70	28	0.47	1.02
	N_2O	0.08 g/gal	20.70	265	1.09	2.38
	GHG				467.5	1023.8

Table 6-24: Allowable GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
192E	CO_2	10.21 kg/gal	20.70	1	465.9	702.6
	CH_4	0.41 g/gal	20.70	28	0.47	0.71
	N_2O	0.08 g/gal	20.70	265	1.09	1.64
	GHG				467.5	705.0

Pre-controlled estimates for Haul Truck Traffic ($PM_{2.5}$, PM_{10} and PM) (Units 193)

Road descriptions: Commercial Trucks (MPPI_, MPPO_, MPUP_, PTIn_, PTOt_, PTUP_, PTUP_2, RAP_) and Quarry Truck (QRTP_, QRTP_2, QRTP_3, QRTP_4, WUPO_)

Haul truck travel emissions were estimated using AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads" emission equation. Paved haul roads are preexisting to this permit application and are controlled by 95% efficiency per NMED policy. Pre-controlled emissions for unpaved roads are based on no controls. Haul roads leading into and out of the RAP Plant and Main Plant storage piles area from the main entrance are paved and swept as the control method. The unpaved roads include commercial trucks to the pit plant storage piles, main plant storage piles, and quarry truck.

$$E = k * (s/12)^{a} * (W/3)^{b} * [(365 - p)/365] * VMT$$

Where k = constant PM2.5 = 0.15
PM10 = 1.5
PM = 4.9
s = % silt content (Table 13.2.2-1, "Sand and Gravel" 4.8%)
W = mean vehicle weight
p = number of days with at least 0.01 in of precip. (NMED Policy = 70 days)
a = Constant PM2.5 = 0.9
PM10 = 0.9
PM = 0.7
b = Constant PM2.5 = 0.45
PM10 = 0.45
PM = 0.45

Table 6-25 shows the pre-controlled haul road fugitive dust emission factors (lb/VMT) per road description.
Table 6-26 shows the pre-controlled haul road fugitive dust emission rate variables used to calculate the emission rates per road description.
Table 6-27 shows the pre-controlled haul road fugitive dust emission rates (lb/hr and tons/yr).

Table 6-25: Pre-Controlled Haul Road Fugitive Dust Emission Factors

Road ID	Description	Average Vehicle Weight (W) (Tons)	% CE	Hourly Emission Factor (E) lb/VMT		Annual Emission Factor (E) lb/VMT	
MPPI_	Main plant product haul trucks route entrance into site along the south side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
MPPO_	Main plant product haul trucks route exit from site along the north side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
MPUP_	Main plant product haul trucks route to main plant storage piles – unpaved road.	26	0	PM PM10 PM2.5	6.82 1.74 0.17	PM PM10 PM2.5	5.51 1.40 0.14
PTIn_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
PTOt_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
PTUP_	Pit plants product haul trucks route to the edge of the open pit.	26	0	PM PM10 PM2.5	6.82 1.74 0.17	PM PM10 PM2.5	5.51 1.40 0.14
PTUP_2	Pit plants product haul trucks route from the edge of the open pit to the pit plants storage piles.	26	0	PM PM10 PM2.5	6.82 1.74 0.17	PM PM10 PM2.5	5.51 1.40 0.14
QRTP_	Rock truck route from edge of open pit to the main plant finish storage piles with product material to the	63.3	0	PM PM10 PM2.5	10.17 2.59 0.26	PM PM10 PM2.5	8.22 2.10 0.21
QRTP_2	Rock truck route from the quarry wall to deliver raw material to the main plant surge pile.	63.3	0	PM PM10 PM2.5	10.17 2.59 0.26	PM PM10 PM2.5	8.22 2.10 0.21
QRTP_3	Rock truck route from main plant to the edge of open pit with product material to the main plant product	63.3	0	PM PM10 PM2.5	10.17 2.59 0.26	PM PM10 PM2.5	8.22 2.10 0.21
QRTP_4	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes	63.3	0	PM PM10 PM2.5	10.17 2.59 0.26	PM PM10 PM2.5	8.22 2.10 0.21
WUPO_	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes	63.3	0	PM PM10 PM2.5	10.17 2.59 0.26	PM PM10 PM2.5	8.22 2.10 0.21
RAP_	RAP delivery haul trucks route that enters and exits on the paved road from the facility entrance to the RAP	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070

Table 6-26: Pre-Controlled Haul Road Fugitive Dust Emission Rate Variables

Road ID	Road Length (Miles)	Miles / Vehicle	Trucks / Hour	Trucks / Year	VMT / Hour	VMT / Year
MPPI_[1]	0.39	0.39	31.8	139363.6	12.28	53786.74
MPPO_[1]	0.40	0.40	31.8	139363.6	12.70	55611.28
MPUP_	0.28	0.56	31.8	139363.6	17.74	77716.85
PTIn_[1]	0.39	0.39	38.2	167236.4	14.74	64544.08
PTOt_[1]	0.40	0.40	38.2	167236.4	15.24	66733.54
PTUP_	0.30	0.61	38.2	167236.4	23.25	101828.59
PTUP_2	0.53	1.06	38.2	167236.4	40.64	178016.04
QRTP_	0.24	0.48	18.1	79344.7	8.71	38138.53
QRTP_2	0.34	0.68	25.9	113349.6	17.49	76626.49
QRTP_3	0.35	0.70	18.1	79344.7	12.74	55806.28
QRTP_4	0.52	1.05	17.1	74810.8	17.91	78424.66
WUPO_	0.41	0.82	17.1	74810.8	14.09	61705.60
RAP_	0.18	0.36	9.1	39818.2	3.24	14189.67

[1]Roads are one way traffic only.

Table 6-27: Pre-controlled Haul Road Fugitive Dust Emission Rates (Unit 193)

Road ID	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
MPPI_	4.19	7.41	1.07	1.89	0.11	0.19
MPPO_	4.33	7.66	1.10	1.95	0.11	0.20
MPUP_	120.98	214.13	30.83	54.57	3.08	5.46
PTIn_	5.02	8.89	1.28	2.27	0.13	0.23
PTOt_	5.19	9.19	1.32	2.34	0.13	0.23
PTUP_	158.51	280.57	40.40	71.51	4.04	7.15
PTUP_2	277.11	490.49	70.63	125.01	7.06	12.50
QRTP_	88.58	156.79	22.58	39.96	2.26	4.00
QRTP_2	177.97	315.01	45.36	80.28	4.54	8.03
QRTP_3	129.61	229.42	33.03	58.47	3.30	5.85
QRTP_4	182.15	322.40	46.42	82.17	4.64	8.22
WUPO_	143.32	253.67	36.53	64.65	3.65	6.47
RAP_	1.10	1.95	0.28	0.50	0.028	0.050
Total	**1298.07**	**2297.59**	**330.83**	**585.57**	**33.08**	**58.56**

Allowable estimates for Haul Truck Traffic ($PM_{2.5}$, PM_{10} and PM) (Units 193)

Road descriptions: Commercial Trucks (MPPI_, MPPO_, MPUP_, PTIn_, PTOt_, PTUP_, PTUP_2, RAP_) and Quarry Truck (QRTP_, QRTP_2, QRTP_3, QRTP_4, WUPO_)

Haul truck travel emissions were estimated using AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads" emission equation. Paved haul roads are controlled by 95% efficiency per NMED policy. Allowable emissions for unpaved roads are controlled by surfactants at a 90% control efficiency per NMED policy. Haul roads leading into and out of the RAP Plant and Main Plant storage piles area from the main entrance are paved and swept as the control method. The unpaved roads include commercial trucks to the pit plant storage piles, main plant storage piles, and quarry truck.

Table 6-28 shows the Allowable haul road fugitive dust emission factors (lb/VMT) per road description.
Table 6-29 shows the Allowable haul road fugitive dust emission rate variables used to calculate the emission rates per road description.
Table 6-30 shows the Allowable haul road fugitive dust emission rates (lb/hr and lb/yr).

Table 6-28: Allowable Haul Road Fugitive Dust Emission Factors

Road ID	Description	Average Vehicle Weight (W) (Tons)	% CE	Hourly Emission Factor (E) lb/VMT		Annual Emission Factor (E) lb/VMT	
MPPI_	Main plant product haul trucks route entrance into site along the south side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
MPPO_	Main plant product haul trucks route exit from site along the north side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
MPUP_	Main plant product haul trucks route to main plant storage piles – unpaved road.	26	90	PM PM10 PM2.5	0.68 1.74 0.017	PM PM10 PM2.5	0.55 0.14 0.014
PTIn_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
PTOt_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070
PTUP_	Pit plants product haul trucks route to the edge of the open pit.	26	90	PM PM10 PM2.5	0.68 1.74 0.017	PM PM10 PM2.5	0.55 0.14 0.014
PTUP_2	Pit plants product haul trucks route from the edge of the open pit to the pit plants storage piles.	26	90	PM PM10 PM2.5	0.68 1.74 0.017	PM PM10 PM2.5	0.55 0.14 0.014
QRTP_	Rock truck route from edge of open pit to the main plant finish storage piles with product material to the	63.3	90	PM PM10 PM2.5	1.02 0.26 0.026	PM PM10 PM2.5	0.82 0.21 0.021
QRTP_2	Rock truck route from the quarry wall to deliver raw material to the main plant surge pile.	63.3	90	PM PM10 PM2.5	1.02 0.26 0.026	PM PM10 PM2.5	0.82 0.21 0.021
QRTP_3	Rock truck route from main plant to the edge of open pit with product material to the main plant product	63.3	90	PM PM10 PM2.5	1.02 0.26 0.026	PM PM10 PM2.5	0.82 0.21 0.021

QRTP_4	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes	63.3	90	PM PM10 PM2.5	1.02 0.26 0.026	PM PM10 PM2.5	0.82 0.21 0.021
WUPO_	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes	63.3	90	PM PM10 PM2.5	1.02 0.26 0.026	PM PM10 PM2.5	0.82 0.21 0.021
RAP_	RAP delivery haul trucks route that enters and exits on the paved road from the facility entrance to the RAP	26	95	PM PM10 PM2.5	0.34 0.087 0.0087	PM PM10 PM2.5	0.28 0.070 0.0070

Table 6-29: Allowable Haul Road Fugitive Dust Emission Rate Variables

Road ID	Road Length (Miles)	Miles / Vehicle	Trucks / Hour	Trucks / Year	VMT / Hour	VMT / Year
MPPI_[1]	0.39	0.39	31.8	74984.3	12.28	28939.84
MPPO_[1]	0.40	0.40	31.8	74984.3	12.70	29921.54
MPUP_	0.28	0.56	31.8	74984.3	17.74	41815.39
PTIn_[1]	0.39	0.39	19.1	89981.2	7.37	34727.81
PTOt_[1]	0.40	0.40	19.1	89981.2	7.62	35905.84
PTUP_	0.30	0.61	19.1	89981.2	11.62	54788.66
PTUP_2	0.53	1.06	19.1	89981.2	20.32	95781.16
QRTP_	0.24	0.48	18.1	42691.3	8.71	20520.36
QRTP_2	0.34	0.68	25.9	60987.5	17.49	41228.73
QRTP_3	0.35	0.70	18.1	42691.3	12.74	30026.45
QRTP_4	0.52	1.05	11.6	40251.8	12.21	42196.23
WUPO_	0.41	0.82	11.6	40251.8	9.61	33200.57
RAP_	0.18	0.36	9.1	16427.3	3.24	5854.05

[1]Roads are one way traffic only.

Table 6-30: Allowable Haul Road Fugitive Dust Emission Rates (Unit 193)

Road ID	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
MPPI_	4.19	3.99	1.07	1.02	0.11	0.10
MPPO_	4.33	4.12	1.10	1.05	0.11	0.11
MPUP_	12.10	11.52	3.08	2.94	0.31	0.29
PTIn_	2.51	4.78	0.64	1.22	0.64	0.12
PTOt_	2.60	4.95	0.66	1.26	0.066	0.13
PTUP_	7.93	15.10	2.02	3.85	0.20	0.38
PTUP_2	13.86	26.39	3.53	6.73	0.35	0.67
QRTP_	8.86	8.44	2.26	2.15	0.23	0.21
QRTP_2	17.80	16.95	4.54	4.32	0.45	0.43
QRTP_3	12.96	12.34	3.30	3.15	0.33	0.31
QRTP_4	12.42	17.35	3.17	4.42	0.32	0.44
WUPO_	9.77	13.65	2.49	3.48	0.25	0.35
RAP_	1.10	0.81	0.28	0.21	0.028	0.021
Total	**110.41**	**140.38**	**28.14**	**35.78**	**2.81**	**3.58**

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
Main Plant															
1	Quarry Material	-	-	-	-	-	-	-	-	6.60	9.71	3.12	4.59	0.47	0.70
2	Quarry Truck Loading	-	-	-	-	-	-	-	-	6.60	9.71	3.12	4.59	0.47	0.70
3	MP Feeder (Quarry Truck Unload)	-	-	-	-	-	-	-	-	6.60	9.71	3.12	4.59	0.47	0.70
4	MP Jaw Crusher	-	-	-	-	-	-	-	-	5.40	11.83	2.40	5.26	0.36	0.80
5	MP Surge Bin	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36
6	MP PreScreen	-	-	-	-	-	-	-	-	25.00	54.75	8.70	19.05	1.32	2.89
7	MP Waste Screen	-	-	-	-	-	-	-	-	7.50	16.43	2.61	5.72	0.40	0.87
8	MP Surge Bin	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
9	MP Line 1 Jaw Crusher Feeder	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24
10	MP Line 1 Jaw Crusher	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28
11	MP Line 1 Feeder	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24
12	MP Line 1 Cone Crusher	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28
13	MP Line 1 Screen	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
14	MP Line 2 Jaw Crusher Feeder	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
15	MP Line 2 Jaw Crusher	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
16	MP Line 2 Feeder	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
17	MP Line 2 Cone Crusher	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28
18	MP Line 2 Screen	-	-	-	-	-	-	-	-	8.75	19.16	3.05	6.67	0.46	1.01

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
19	MP Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36
20	MP Surge Bin Conveyor	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36
21	MP Conveyor	-	-	-	-	-	-	-	-	3.00	6.57	1.10	2.41	0.17	0.36
22	MP PreScreen Conveyor	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11
23	MP Conveyor	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11
24	MP Conveyor	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11
25	MP Waste Screen Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
26	MP Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
27	MP Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
28	MP Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
29	MP Waste Screen Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
30	MP Waste Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
31	MP Waste Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
32	MP Waste Conveyor to Stacker Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
33	MP PreScreen Conveyor	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26
34	MP Conveyor	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26
35	MP Conveyor	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26
36	MP Line 1 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
37	MP Line 1 Feeder Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
38	MP Line 1 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24
39	MP Line 1 Conveyor	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.13	0.28
40	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
41	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
42	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
43	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
44	MP Line 1 Return Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
45	MP Line 1 Return Conveyor to Cone	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
46	MP Line 2 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
47	MP Line 2 Feeder Conveyor	-	-	-	-	-	-	-	-	2.31	3.40	1.09	1.61	0.17	0.24
48	MP Line 2 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
49	MP Line 2 Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.058	0.13
50	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
51	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
52	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
53	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
54	MP Line 2 Return Conveyor	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
55	MP Line 2 Return Conveyor to Cone	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
56	MP Stacker Conveyor to Storage Pile	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10
57	MP Stacker Conveyor to Waste Storage Pile	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10
58	MP Conveyor Stacker to Surge Pile	-	-	-	-	-	-	-	-	4.62	6.80	2.19	3.21	0.33	0.49
59	MP Line 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	3.75	8.21	1.31	2.86	0.20	0.43
60	MP Line 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
61	MP Line 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
62	MP Line 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.36	0.025	0.055
63	MP Line 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
64	MP Line 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.30	0.66	0.11	0.24	0.017	0.036
65	MP Waste Storage Pile	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11
66	MP Quarry Truck Loading - Product	-	-	-	-	-	-	-	-	2.10	4.60	0.77	1.69	0.12	0.26
67	MP Finish Product Storage Pile	-	-	-	-	-	-	-	-	4.62	6.80	2.19	3.21	0.33	0.49
68	MP Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	4.62	6.80	2.19	3.21	0.33	0.49
69E	MP Plant Generator/Engine	10.61	23.24	1.65	3.61	0.80	1.76	1.27	2.78	1.11	2.43	1.11	2.43	1.11	2.43
Pit Plant #1															

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
70	Quarry Material - Pit Plant 1	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42
71	Pit Plant 1 Feeder	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42
72	Pit Plant 1 Jaw Crusher	-	-	-	-	-	-	-	-	3.24	7.10	1.44	5.26	0.22	0.80
73	Pit Plant 1 Surge Bin	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36
74	Pit Plant 1 Prescreen	-	-	-	-	-	-	-	-	15.00	32.85	5.22	19.05	0.79	2.89
75	Pit Plant 1 Cone Crusher	-	-	-	-	-	-	-	-	1.62	3.55	0.72	2.63	0.11	0.40
76	Pit Plant 1 VSI Crusher	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.84	0.076	0.28
77	Pit Plant 1 Screen	-	-	-	-	-	-	-	-	10.50	23.00	3.65	13.34	0.55	2.02
78	Pit Plant 1 Air Separator	-	-	-	-	-	-	-	-	3.75	8.21	1.31	4.76	0.20	0.72
79	Pit Plant 1 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36
80	Pit Plant 1 Surge Bin Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36
81	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36
82	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36
83	Pit Plant 1 PreScreen Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11
84	Pit Plant 1 Waste Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11
85	Pit Plant 1 Waste Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11
86	Pit Plant 1 Waste Stacker Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11
87	Pit Plant 1 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.90	1.97	0.33	1.20	0.050	0.18

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
88	Pit Plant 1 Prescreen Conveyor	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073
89	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073
90	Pit Plant 1 VSI Crusher Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.84	0.035	0.13
91	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.84	0.035	0.13
92	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.69	0.070	0.26
93	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.36	0.015	0.055
94	Pit Plant 1 Return Conveyor to VSI	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.36	0.015	0.055
95	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11
96	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.72	0.030	0.11
97	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073
98	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.36	0.79	0.13	0.48	0.020	0.073
99	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091
100	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091
101	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091
102	Pit Plant 1 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091
103	Pit Plant 1 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.45	0.99	0.17	0.60	0.025	0.091
104	Waste Stacker Conveyor Drop to Pile	-	-	-	-	-	-	-	-	1.19	1.75	0.56	0.83	0.085	0.13

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
105	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	1.19	1.75	0.56	0.83	0.085	0.13
106	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.79	1.17	0.37	0.55	0.057	0.083
107	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10
108	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.99	1.46	0.47	0.69	0.071	0.10
109	Pit Plant 1 Finish Product Storage Pile	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29
110	Pit Plant 1 Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29
111E	Pit Plant 1 Generator/Engine	7.96	17.44	2.78	6.08	0.49	1.08	1.21	2.65	0.62	1.36	0.62	1.36	0.62	1.36
Pit Plant #2															
112	Quarry Material - Pit Plant 2	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42
113	Pit Plant 2 Feeder	-	-	-	-	-	-	-	-	3.96	5.83	1.87	2.76	0.28	0.42
114	Pit Plant 2 Jaw Crusher	-	-	-	-	-	-	-	-	3.24	7.10	1.44	3.15	0.22	0.48
115	Pit Plant 2 Surge Bin	-	-	-	-	-	-	-	-	1.80	3.94	0.66	2.41	0.10	0.36
116	Pit Plant 2 PreScreen	-	-	-	-	-	-	-	-	15.00	32.85	5.22	11.43	0.79	1.73
117	Pit Plant 2 Line 1 Cone Crusher	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.10	0.076	0.17
118	Pit Plant 2 Line 1 Screen	-	-	-	-	-	-	-	-	5.25	11.50	1.83	4.00	0.28	0.61
119	Pit Plant 2 Air Separator	-	-	-	-	-	-	-	-	2.25	4.93	0.78	1.71	0.12	0.26
120	Pit Plant 2 Line 2 Cone Crusher	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.10	0.076	0.17
121	Pit Plant 2 Line 2 Screen	-	-	-	-	-	-	-	-	5.25	11.50	1.83	4.00	0.28	0.61

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
122	Pit Plant 2 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	1.45	0.10	0.22
123	Pit Plant 2 Surge Bin Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	1.45	0.10	0.22
124	Pit Plant 2 Conveyor	-	-	-	-	-	-	-	-	1.80	3.94	0.66	1.45	0.10	0.22
125	Pit Plant 2 PreScreen Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.43	0.030	0.066
126	Pit Plant 2 Waste Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.43	0.030	0.066
127	Pit Plant 2 Waste Stacker Conveyor	-	-	-	-	-	-	-	-	0.54	1.18	0.20	0.43	0.030	0.066
128	Pit Plant 2 PreScreen Conveyor	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.01	0.070	0.15
129	Pit Plant 2 Conveyor	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.01	0.070	0.15
130	Pit Plant 2 Splitter Conveyor	-	-	-	-	-	-	-	-	1.26	2.76	0.46	1.01	0.070	0.15
131	Pit Plant 2 Line 1 Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077
132	Pit Plant 2 Line 1 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077
133	Pit Plant 2 Line 1 Conveyor to Screen	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077
134	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
135	Pit Plant 2 Return Conveyor to Line 1 Cone	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
136	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
137	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
138	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
139	Pit Plant 2 Line 1 Conveyor	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033
140	Pit Plant 2 Line 1 Conveyor	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033
141	Pit Plant 2 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.14	0.32	0.053	0.12	0.0080	0.018
142	Pit Plant 2 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.13	0.28	0.046	0.10	0.0070	0.015
143	Pit Plant 2 Line 2 Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077
144	Pit Plant 2 Line 2 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077
145	Pit Plant 2 Line 2 Conveyor to Screen	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.035	0.077
146	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
147	Pit Plant 2 Return Conveyor to Line 2 Cone	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
148	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.27	0.59	0.10	0.22	0.015	0.033
149	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
150	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
151	Waste Stacker Conveyor Drop to Pile	-	-	-	-	-	-	-	-	1.19	1.75	0.56	0.83	0.085	0.125
152	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
153	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
154	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.32	0.47	0.15	0.22	0.023	0.033
155	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.28	0.41	0.13	0.19	0.020	0.029

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
156	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.59	0.87	0.28	0.41	0.043	0.063
157	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
158	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
159	Pit Plant 2 Finish Product Storage Pile	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29
160	Pit Plant 2 Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	2.77	4.08	1.31	1.93	0.20	0.29
161E	Pit Plant 2 Generator/Engine	33.88	74.19	5.38	11.77	0.76	1.65	1.82	3.99	0.58	1.27	0.58	1.27	0.58	1.27
162	Waste Storage Pile (Main+Pit1+Pit2)	-	-	-	-	-	-	-	-	4.36	6.41	2.06	3.03	0.31	0.46
Air Separator Plant															
163	AS Feeder	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21
164	AS Plant Feeder	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21
165	AS Plant Air Separator	-	-	-	-	-	-	-	-	7.50	32.85	2.61	5.72	0.40	0.87
166	AS Feeder Conveyor	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21
167	AS Plant Feeder Conveyor	-	-	-	-	-	-	-	-	0.90	1.97	0.33	0.72	0.050	0.11
168	AS Plant Air Separator Conveyor	-	-	-	-	-	-	-	-	0.090	0.20	0.033	0.072	0.0050	0.011
169	AS Plant Air Separator Conveyor	-	-	-	-	-	-	-	-	0.81	1.77	0.30	0.65	0.045	0.10
170	AS Plant Conveyor	-	-	-	-	-	-	-	-	0.81	1.77	0.30	0.65	0.045	0.10
171	AS Plant Stacker Conveyor to Pile 1	-	-	-	-	-	-	-	-	0.20	0.29	0.094	0.14	0.014	0.021

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
172	AS Plant Stacker Conveyor to Pile 2	-	-	-	-	-	-	-	-	1.78	2.62	0.84	1.24	0.13	0.19
173	AS Plant Finish Pile	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21
174	AS Plant Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	1.98	2.91	0.94	1.38	0.14	0.21
175E	AS Plant Generator/Engine	1.75	3.82	1.53	3.35	0.074	0.16	0.087	0.19	0.087	0.19	0.087	0.19	0.087	0.19
Recycle Asphalt Plant															
176	RAP Plant Raw Material Source	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
177	RAP Plant Feeder/Hopper	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
178	RAP Plant Vertical Impact Crusher	-	-	-	-	-	-	-	-	0.32	0.71	0.14	0.32	0.022	0.048
179	RAP Plant Surge Bin	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
180	RAP Plant 2-Deck Screen	-	-	-	-	-	-	-	-	1.50	3.29	0.52	1.14	0.079	0.17
181	RAP Plant Cone Crusher	-	-	-	-	-	-	-	-	0.32	0.71	0.14	0.32	0.022	0.048
182	RAP Plant Crusher Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
183	RAP Plant Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
184	RAP Plant Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
185	RAP Plant Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.11	0.39	0.040	0.14	0.0060	0.022
186	RAP Plant Return 1 Conveyor	-	-	-	-	-	-	-	-	0.11	0.39	0.040	0.14	0.0060	0.022
187	RAP Plant Return 2 Conveyor	-	-	-	-	-	-	-	-	0.11	0.39	0.040	0.14	0.0060	0.022

Table 6-31 Summary of Pre-controlled NOx, CO, SO2, VOC, and PM Emission Rates

Pre-controlled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
188	RAP Plant Screen Under Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
189	RAP Plant Conveyor	-	-	-	-	-	-	-	-	0.18	0.39	0.066	0.14	0.010	0.022
190	RAP Plant Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
191	RAP Plant Finish Product Storage Pile	-	-	-	-	-	-	-	-	0.40	0.58	0.19	0.28	0.028	0.042
192E	RAP Plant Generator/Engine	3.17	6.94	2.20	4.82	0.14	0.32	0.12	0.26	0.18	0.39	0.18	0.39	0.18	0.39
Roads															
193	Roads	-	-	-	-	-	-	-	-	1298.1	2297.6	330.83	585.57	33.08	58.56
194	Unleaded Gas Tank 13	-	-	-	-	-	-	0.045	0.20	-	-	-	-	-	-
	Total	**57.36**	**125.63**	**13.53**	**29.63**	**2.27**	**4.97**	**4.55**	**10.07**	**1621.6**	**2952.1**	**461.5**	**868.6**	**55.1**	**106.2**

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
Main Plant															
1	Quarry Material	-	-	-	-	-	-	-	-	6.60	5.22	3.12	2.47	0.47	0.37
2	Quarry Truck Loading	-	-	-	-	-	-	-	-	6.60	5.22	3.12	2.47	0.47	0.37
3	MP Feeder (Quarry Truck Unload)	-	-	-	-	-	-	-	-	6.60	5.22	3.12	2.47	0.47	0.37
4	MP Jaw Crusher	-	-	-	-	-	-	-	-	1.20	1.41	0.54	0.64	0.10	0.12
5	MP Surge Bin	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015
6	MP PreScreen	-	-	-	-	-	-	-	-	2.20	2.59	0.74	0.87	0.050	0.059
7	MP Waste Screen	-	-	-	-	-	-	-	-	0.66	0.78	0.22	0.26	0.015	0.018
8	MP Surge Bin	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
9	MP Line 1 Jaw Crusher Feeder	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13
10	MP Line 1 Jaw Crusher	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041
11	MP Line 1 Feeder	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13
12	MP Line 1 Cone Crusher	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041
13	MP Line 1 Screen	-	-	-	-	-	-	-	-	0.77	0.91	0.26	0.31	0.018	0.021
14	MP Line 2 Jaw Crusher Feeder	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13
15	MP Line 2 Jaw Crusher	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041
16	MP Line 2 Feeder	-	-	-	-	-	-	-	-	2.31	1.83	1.09	0.86	0.17	0.13
17	MP Line 2 Cone Crusher	-	-	-	-	-	-	-	-	0.42	0.49	0.19	0.22	0.035	0.041
18	MP Line 2 Screen	-	-	-	-	-	-	-	-	0.77	0.91	0.26	0.31	0.018	0.021

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
19	MP Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015
20	MP Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015
21	MP Conveyor	-	-	-	-	-	-	-	-	0.14	0.16	0.046	0.054	0.013	0.015
22	MP PreScreen Conveyor	-	-	-	-	-	-	-	-	0.04	0.049	0.014	0.016	0.0039	0.0046
23	MP Conveyor	-	-	-	-	-	-	-	-	0.04	0.049	0.014	0.016	0.0039	0.0046
24	MP Conveyor	-	-	-	-	-	-	-	-	0.04	0.049	0.014	0.016	0.0039	0.0046
25	MP Waste Screen Conveyor	-	-	-	-	-	-	-	-	0.02	0.025	0.0069	0.0081	0.0020	0.0023
26	MP Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.02	0.025	0.0069	0.0081	0.0020	0.0023
27	MP Conveyor	-	-	-	-	-	-	-	-	0.02	0.025	0.0069	0.0081	0.0020	0.0023
28	MP Conveyor	-	-	-	-	-	-	-	-	0.18	0.21	0.081	0.10	0.015	0.018
29	MP Waste Screen Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
30	MP Waste Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
31	MP Waste Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
32	MP Waste Conveyor to Stacker Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
33	MP PreScreen Conveyor	-	-	-	-	-	-	-	-	0.10	0.12	0.032	0.038	0.0091	0.011
34	MP Conveyor	-	-	-	-	-	-	-	-	0.10	0.12	0.032	0.038	0.0091	0.011
35	MP Conveyor	-	-	-	-	-	-	-	-	0.10	0.12	0.032	0.038	0.0091	0.011
36	MP Line 1 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
37	MP Line 1 Feeder Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
38	MP Line 1 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
39	MP Line 1 Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
40	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
41	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
42	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
43	MP Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
44	MP Line 1 Return Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
45	MP Line 1 Return Conveyor to Cone	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
46	MP Line 2 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
47	MP Line 2 Feeder Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
48	MP Line 2 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
49	MP Line 2 Conveyor	-	-	-	-	-	-	-	-	0.049	0.058	0.016	0.019	0.0046	0.0054
50	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
51	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
52	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
53	MP Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
54	MP Line 2 Return Conveyor	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
55	MP Line 2 Return Conveyor to Cone	-	-	-	-	-	-	-	-	0.014	0.016	0.0046	0.0054	0.0013	0.0015
56	MP Stacker Conveyor to Storage Pile	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034
57	MP Stacker Conveyor to Waste Storage Pile	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034
58	MP Conveyor Stacker to Surge Pile	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16
59	MP Line 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034
60	MP Line 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022
61	MP Line 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022
62	MP Line 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034
63	MP Line 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022
64	MP Line 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.31	0.19	0.15	0.028	0.022
65	MP Waste Storage Pile	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11
66	MP Quarry Truck Loading - Product	-	-	-	-	-	-	-	-	4.62	3.66	2.19	1.73	0.33	0.26
67	MP Finish Product Storage Pile	-	-	-	-	-	-	-	-	4.62	3.66	2.19	1.73	0.33	0.26
68	MP Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	4.62	3.66	2.19	1.73	0.33	0.26
69E	MP Plant Generator/Engine	10.61	21.23	1.65	3.30	0.80	1.60	1.27	2.54	1.11	2.22	1.11	2.22	1.11	2.22
Pit Plant #1															

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
70	Quarry Material - Pit Plant 1	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22
71	Pit Plant 1 Feeder	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22
72	Pit Plant 1 Jaw Crusher	-	-	-	-	-	-	-	-	0.72	0.85	0.32	0.38	0.060	0.071
73	Pit Plant 1 Surge Bin	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
74	Pit Plant 1 Prescreen	-	-	-	-	-	-	-	-	1.32	1.56	0.44	0.52	0.030	0.035
75	Pit Plant 1 Cone Crusher	-	-	-	-	-	-	-	-	0.36	0.42	0.16	0.19	0.030	0.035
76	Pit Plant 1 VSI Crusher	-	-	-	-	-	-	-	-	0.25	0.30	0.11	0.13	0.021	0.025
77	Pit Plant 1 Screen	-	-	-	-	-	-	-	-	0.92	1.09	0.31	0.37	0.021	0.025
78	Pit Plant 1 Air Separator	-	-	-	-	-	-	-	-	0.33	0.39	0.11	0.13	0.0075	0.009
79	Pit Plant 1 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
80	Pit Plant 1 Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
81	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
82	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
83	Pit Plant 1 PreScreen Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
84	Pit Plant 1 Waste Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
85	Pit Plant 1 Waste Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
86	Pit Plant 1 Waste Stacker Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
87	Pit Plant 1 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.042	0.049	0.014	0.016	0.0039	0.0046

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
88	Pit Plant 1 Prescreen Conveyor	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018
89	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018
90	Pit Plant 1 VSI Crusher Conveyor	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
91	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
92	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064
93	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014
94	Pit Plant 1 Return Conveyor to VSI	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014
95	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
96	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
97	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018
98	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.017	0.020	0.0055	0.0065	0.0016	0.0018
99	Pit Plant 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
100	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
101	Pit Plant 1 Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
102	Pit Plant 1 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
103	Pit Plant 1 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.021	0.025	0.0069	0.0081	0.0020	0.0023
104	Waste Stacker Conveyor Drop to Pile	-	-	-	-	-	-	-	-	0.71	0.56	0.34	0.27	0.051	0.040

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
105	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.71	0.56	0.34	0.27	0.051	0.040
106	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.48	0.38	0.22	0.18	0.034	0.027
107	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034
108	Pit Plant 1 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.59	0.47	0.28	0.22	0.043	0.034
109	Pit Plant 1 Finish Product Storage Pile	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16
110	Pit Plant 1 Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16
111E	Pit Plant 1 Generator/Engine	7.96	15.93	2.78	5.55	0.49	0.99	1.21	2.42	0.62	1.24	0.62	1.24	0.62	1.24
Pit Plant #2															
112	Quarry Material - Pit Plant 2	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22
113	Pit Plant 2 Feeder	-	-	-	-	-	-	-	-	3.96	3.13	1.87	1.48	0.28	0.22
114	Pit Plant 2 Jaw Crusher	-	-	-	-	-	-	-	-	0.72	0.85	0.32	0.38	0.060	0.071
115	Pit Plant 2 Surge Bin	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
116	Pit Plant 2 PreScreen	-	-	-	-	-	-	-	-	1.32	1.56	0.44	0.52	0.030	0.035
117	Pit Plant 2 Line 1 Cone Crusher	-	-	-	-	-	-	-	-	0.25	0.30	0.11	0.13	0.021	0.025
118	Pit Plant 2 Line 1 Screen	-	-	-	-	-	-	-	-	0.46	0.54	0.16	0.18	0.011	0.012
119	Pit Plant 2 Air Separator	-	-	-	-	-	-	-	-	0.20	0.23	0.067	0.078	0.0045	0.0053
120	Pit Plant 2 Line 2 Cone Crusher	-	-	-	-	-	-	-	-	0.25	0.30	0.11	0.13	0.021	0.025
121	Pit Plant 2 Line 2 Screen	-	-	-	-	-	-	-	-	0.46	0.54	0.16	0.18	0.011	0.012

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
122	Pit Plant 2 Jaw Crusher Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
123	Pit Plant 2 Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
124	Pit Plant 2 Conveyor	-	-	-	-	-	-	-	-	0.084	0.10	0.028	0.033	0.0078	0.009
125	Pit Plant 2 PreScreen Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
126	Pit Plant 2 Waste Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
127	Pit Plant 2 Waste Stacker Conveyor	-	-	-	-	-	-	-	-	0.025	0.030	0.0083	0.010	0.0023	0.0028
128	Pit Plant 2 PreScreen Conveyor	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064
129	Pit Plant 2 Conveyor	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064
130	Pit Plant 2 Splitter Conveyor	-	-	-	-	-	-	-	-	0.059	0.069	0.019	0.023	0.0055	0.0064
131	Pit Plant 2 Line 1 Conveyor	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
132	Pit Plant 2 Line 1 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
133	Pit Plant 2 Line 1 Conveyor to Screen	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
134	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
135	Pit Plant 2 Return Conveyor to Line 1 Cone	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
136	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
137	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
138	Pit Plant 2 Line 1 Screen Conveyor	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
139	Pit Plant 2 Line 1 Conveyor	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014
140	Pit Plant 2 Line 1 Conveyor	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014
141	Pit Plant 2 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.0067	0.0079	0.0022	0.0026	0.00062	0.00074
142	Pit Plant 2 Air Separator Conveyor	-	-	-	-	-	-	-	-	0.0059	0.0069	0.0019	0.0023	0.00055	0.00064
143	Pit Plant 2 Line 2 Conveyor	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
144	Pit Plant 2 Line 2 Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
145	Pit Plant 2 Line 2 Conveyor to Screen	-	-	-	-	-	-	-	-	0.029	0.035	0.010	0.011	0.0027	0.0032
146	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
147	Pit Plant 2 Return Conveyor to Line 2 Cone	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
148	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.013	0.015	0.0041	0.0049	0.0012	0.0014
149	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
150	Pit Plant 2 Line 2 Screen Conveyor	-	-	-	-	-	-	-	-	0.0084	0.010	0.0028	0.0033	0.00078	0.0009
151	Waste Stacker Conveyor Drop to Pile	-	-	-	-	-	-	-	-	0.71	0.56	0.34	0.27	0.051	0.040
152	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013
153	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013
154	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.19	0.15	0.090	0.071	0.014	0.011
155	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.17	0.13	0.079	0.062	0.012	0.009

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
156	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.36	0.28	0.17	0.13	0.026	0.020
157	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013
158	Pit Plant 2 Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.24	0.19	0.11	0.09	0.017	0.013
159	Pit Plant 2 Finish Product Storage Pile	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16
160	Pit Plant 2 Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	2.77	2.19	1.31	1.04	0.20	0.16
161E	Pit Plant 2 Generator/Engine	33.88	54.20	5.38	8.60	0.76	1.21	1.82	2.91	0.58	0.93	0.58	0.93	0.58	0.93
162	Waste Storage Pile (Main+Pit1+Pit2)	-	-	-	-	-	-	-	-	4.36	3.45	2.06	1.63	0.31	0.22
Air Separator Plant															
163	AS Feeder	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11
164	AS Plant Feeder	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11
165	AS Plant Air Separator	-	-	-	-	-	-	-	-	0.66	0.78	0.22	0.26	0.015	0.018
166	AS Feeder Conveyor	-	-	-	-	-	-	-	-	0.042	0.049	0.014	0.016	0.0039	0.0046
167	AS Plant Feeder Conveyor	-	-	-	-	-	-	-	-	0.042	0.049	0.014	0.016	0.0039	0.0046
168	AS Plant Air Separator Conveyor	-	-	-	-	-	-	-	-	0.0042	0.0049	0.0014	0.0016	0.0004	0.0005
169	AS Plant Air Separator Conveyor	-	-	-	-	-	-	-	-	0.038	0.045	0.012	0.015	0.0035	0.0041
170	AS Plant Conveyor	-	-	-	-	-	-	-	-	0.038	0.045	0.012	0.015	0.0035	0.0041
171	AS Plant Stacker Conveyor to Pile 1	-	-	-	-	-	-	-	-	0.12	0.31	0.056	0.15	0.0085	0.022

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
172	AS Plant Stacker Conveyor to Pile 2	-	-	-	-	-	-	-	-	1.07	2.82	0.51	1.33	0.077	0.20
173	AS Plant Finish Pile	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11
174	AS Plant Product Truck Loading - Finish Pile	-	-	-	-	-	-	-	-	1.98	1.57	0.94	0.74	0.14	0.11
175E	AS Plant Generator/Engine	1.75	3.49	1.53	3.06	0.074	0.15	0.09	0.17	0.087	0.17	0.087	0.17	0.087	0.17
Recycle Asphalt Plant															
176	RAP Plant Raw Material Source	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017
177	RAP Plant Feeder/Hopper	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017
178	RAP Plant Vertical Impact Crusher	-	-	-	-	-	-	-	-	0.32	0.29	0.14	0.13	0.022	0.020
179	RAP Plant Surge Bin	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090
180	RAP Plant 2-Deck Screen	-	-	-	-	-	-	-	-	1.50	1.36	0.52	0.47	0.079	0.071
181	RAP Plant Cone Crusher	-	-	-	-	-	-	-	-	0.32	0.29	0.14	0.13	0.022	0.020
182	RAP Plant Crusher Conveyor	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090
183	RAP Plant Surge Bin Conveyor	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090
184	RAP Plant Conveyor	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090
185	RAP Plant Cone Crusher Conveyor	-	-	-	-	-	-	-	-	0.11	0.16	0.040	0.060	0.0060	0.0090
186	RAP Plant Return 1 Conveyor	-	-	-	-	-	-	-	-	0.11	0.16	0.040	0.060	0.0060	0.0090
187	RAP Plant Return 2 Conveyor	-	-	-	-	-	-	-	-	0.11	0.16	0.040	0.060	0.0060	0.0090

Table 6-32 Summary of Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Allowable Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
188	RAP Plant Screen Under Conveyor	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090
189	RAP Plant Conveyor	-	-	-	-	-	-	-	-	0.18	0.16	0.066	0.060	0.010	0.0090
190	RAP Plant Stacker Conveyor to Pile	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017
191	RAP Plant Finish Product Storage Pile	-	-	-	-	-	-	-	-	0.40	0.24	0.19	0.11	0.028	0.017
192E	RAP Plant Generator/Engine	3.17	2.86	2.20	1.99	0.14	0.13	0.12	0.11	0.18	0.16	0.18	0.16	0.18	0.16
Roads															
193	Roads	-	-	-	-	-	-	-	-	110.41	140.38	28.14	35.78	2.81	3.58
194	Unleaded Gas Tank 13	-	-	-	-	-	-	0.045	0.20	-	-	-	-	-	-
	Total	**57.37**	**99.62**	**13.53**	**23.82**	**2.27**	**4.17**	**4.55**	**8.43**	**235.0**	**251.8**	**86.03**	**88.27**	**13.73**	**15.56**

Estimates for Federal HAPs Air Pollutants

The Main Plant engine (Unit 69E), Pit Plant engines (Unit 111E, and 161E), Air Separator Engine (175E), and the RAP Plant Engine (192E) are sources of HAPs as it appears in Section 112 (b) of the 1990 CAAA. Emissions of HAPs were determined for Units 69E, 111E, 161E, 175E and 192E engines using AP-42 Section 3.3 and Section 1.3.

The following tables summarize the HAPs emission rates from the Main Plant engine (Unit 69E), Pit Plant engines (Unit 111E, and 161E), Air Separator Engine (175E), and the RAP Plant Engine (192E). Combined totals for HAPs for the whole facility are 0.27 pounds per hour and 0.50 tons per year.

Mountain States Constructors, Inc. – Main Plant Engine – Unit 69E
2288 HP Main Plant Engine
EPA HAPS Emissions Diesel Fired Engines

Horsepower Rating:	2288	horsepower	
Fuel Usage:	114.5	gallons/hr	
MMBtu/hr:	14.656	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	0.000014656	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	4000	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetalehyde	75-07-0		7.67E-04	0.011241	0.022482
Acrolein	107-02-8		9.25E-05	0.001356	0.002711
Benzene	71-43-2		9.33E-04	0.013674	0.027348
1,3-Butadiene	106-99-0		3.91E-05	0.000573	0.001146
Formaldehyde	50-00-0		1.18E-03	0.017294	0.034588
Propylene	115-07-1		2.58E-03	0.037812	0.075625
Toluene	108-88-3		4.09E-04	0.005994	0.011989
Xylene	1330-20-7		2.85E-04	0.004177	0.008354
		Total Non-PAH HAPS	6.29E-03	0.092122	0.184244

PAH HAPS	CAS#	Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9	1.42E-06	0.000021	0.000042
Acenaphthylene	208-96-8	5.06E-06	0.000074	0.000148
Anthracene	120-12-7	1.87E-06	0.000027	0.000055
Benzo(a)anthracene	56-55-3	1.68E-06	0.000025	0.000049
Benzo(a)pyrene	50-32-8	1.88E-07	0.000003	0.000006
Benzo(b)fluoranthene	205-99-2	9.91E-08	0.000001	0.000003
Benzo(a)pyrene	192-97-2	1.55E-07	0.000002	0.000005
Benzo(g,h,I)perylene	191-24-2	4.89E-07	0.000007	0.000014
Benzo(k)fluoranthene	207-08-9	1.55E-07	0.000002	0.000005
Dibenz(a,h)anthracene		5.83E-07	0.000009	0.000017

Chrysene	218-01-9		3.53E-07	0.000005	0.000010
Fluoranthene	206-44-0		7.61E-06	0.000112	0.000223
Fluorene	86-73-7		2.92E-05	0.000428	0.000856
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000005	0.000011
Naphthalene	91-20-3		8.48E-05	0.001243	0.002486
Phenanthrene	85-01-8		2.94E-05	0.000431	0.000862
Pyrene	129-00-0		4.78E-06	0.000070	0.000140
		Total PAH HAPS	1.68E-04	0.002465	0.004931

HAPS Metals		**Emission Factor (lbs/Btu^12)**	**Emission Rate (lbs/hr)**	**Emission Rate (ton/yr)**
Arsenic		4	0.000059	0.000117
Beryllium		3	0.000044	0.000088
Cadmium		3	0.000044	0.000088
Chromium		3	0.000044	0.000088
Lead		9	0.000132	0.000264
Manganese		6	0.000088	0.000176
Mercury		3	0.000044	0.000088
Nickel		3	0.000044	0.000088
Selenium		15	0.000220	0.000440
	Total Metals HAPS	49	0.000718	0.001436
	Total HAPS		**0.09531**	**0.19061**

Mountain States Constructors, Inc. – Pit Plant #1 – Unit 111E

1604 HP Pit Plant #1 Engine

EPA HAPS Emissions Diesel Fired Engines

Horsepower Rating:	1604	horsepower	
Fuel Usage:	70.6	gallons/hr	
MMBtu/hr:	9.0368	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	9.0368E-06	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	4000	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetalehyde	75-07-0		7.67E-04	0.006931	0.013862
Acrolein	107-02-8		9.25E-05	0.000836	0.001672
Benzene	71-43-2		9.33E-04	0.008431	0.016863
1,3-Butadiene	106-99-0		3.91E-05	0.000353	0.000707
Formaldehyde	50-00-0		1.18E-03	0.010663	0.021327
Propylene	115-07-1		2.58E-03	0.023315	0.046630
Toluene	108-88-3		4.09E-04	0.003696	0.007392
Xylene	1330-20-7		2.85E-04	0.002575	0.005151
		Total Non-PAH HAPS	6.29E-03	0.056802	0.113603

PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9		1.42E-06	0.000013	0.000026
Acenaphthylene	208-96-8		5.06E-06	0.000046	0.000091
Anthracene	120-12-7		1.87E-06	0.000017	0.000034
Benzo(a)anthracene	56-55-3		1.68E-06	0.000015	0.000030
Benzo(a)pyrene	50-32-8		1.88E-07	0.000002	0.000003
Benzo(b)fluoranthene	205-99-2		9.91E-08	0.000001	0.000002
Benzo(a)pyrene	192-97-2		1.55E-07	0.000001	0.000003
Benzo(g,h,I)perylene	191-24-2		4.89E-07	0.000004	0.000009
Benzo(k)fluoranthene	207-08-9		1.55E-07	0.000001	0.000003
Dibenz(a,h)anthracene			5.83E-07	0.000005	0.000011
Chrysene	218-01-9		3.53E-07	0.000003	0.000006
Fluoranthene	206-44-0		7.61E-06	0.000069	0.000138
Fluorene	86-73-7		2.92E-05	0.000264	0.000528
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000003	0.000007
Naphthalene	91-20-3		8.48E-05	0.000766	0.001533
Phenanthrene	85-01-8		2.94E-05	0.000266	0.000531
Pyrene	129-00-0		4.78E-06	0.000043	0.000086
		Total PAH HAPS	1.68E-04	0.001520	0.003040

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000036	0.000072
Beryllium		3	0.000027	0.000054
Cadmium		3	0.000027	0.000054
Chromium		3	0.000027	0.000054
Lead		9	0.000081	0.000163
Manganese		6	0.000054	0.000108
Mercury		3	0.000027	0.000054
Nickel		3	0.000027	0.000054
Selenium		15	0.000136	0.000271
	Total Metals HAPS	49	0.000443	0.000886
	Total HAPS		**0.05876**	**0.11753**

Mountain States Constructors, Inc. – Pit Plant #2 – Unit 161E

2153 HP Pit Plant #2 Engine

EPA HAPS Emissions Diesel Fired Engines

Horsepower Rating:	2153	horsepower	
Fuel Usage:	107.9	gallons/hr	
MMBtu/hr:	13.8112	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	1.38112E-05	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	3200	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetalehyde	75-07-0		7.67E-04	0.010593	0.016949
Acrolein	107-02-8		9.25E-05	0.001278	0.002044
Benzene	71-43-2		9.33E-04	0.012886	0.020617
1,3-Butadiene	106-99-0		3.91E-05	0.000540	0.000864
Formaldehyde	50-00-0		1.18E-03	0.016297	0.026076
Propylene	115-07-1		2.58E-03	0.035633	0.057013
Toluene	108-88-3		4.09E-04	0.005649	0.009038
Xylene	1330-20-7		2.85E-04	0.003936	0.006298
		Total Non-PAH HAPS	6.29E-03	0.086812	0.138899

PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9		1.42E-06	0.000020	0.000031
Acenaphthylene	208-96-8		5.06E-06	0.000070	0.000112
Anthracene	120-12-7		1.87E-06	0.000026	0.000041
Benzo(a)anthracene	56-55-3		1.68E-06	0.000023	0.000037
Benzo(a)pyrene	50-32-8		1.88E-07	0.000003	0.000004
Benzo(b)fluoranthene	205-99-2		9.91E-08	0.000001	0.000002
Benzo(a)pyrene	192-97-2		1.55E-07	0.000002	0.000003
Benzo(g,h,I)perylene	191-24-2		4.89E-07	0.000007	0.000011
Benzo(k)fluoranthene	207-08-9		1.55E-07	0.000002	0.000003
Dibenz(a,h)anthracene			5.83E-07	0.000008	0.000013
Chrysene	218-01-9		3.53E-07	0.000005	0.000008
Fluoranthene	206-44-0		7.61E-06	0.000105	0.000168
Fluorene	86-73-7		2.92E-05	0.000403	0.000645
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000005	0.000008
Naphthalene	91-20-3		8.48E-05	0.001171	0.001874
Phenanthrene	85-01-8		2.94E-05	0.000406	0.000650
Pyrene	129-00-0		4.78E-06	0.000066	0.000106
		Total PAH HAPS	1.68E-04	0.002323	0.003717

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000055	0.000088
Beryllium		3	0.000041	0.000066
Cadmium		3	0.000041	0.000066
Chromium		3	0.000041	0.000066
Lead		9	0.000124	0.000199
Manganese		6	0.000083	0.000133
Mercury		3	0.000041	0.000066
Nickel		3	0.000041	0.000066
Selenium		15	0.000207	0.000331
	Total Metals HAPS	49	0.000677	0.001083
	Total HAPS		**0.08981**	**0.14370**

Mountain States Constructors, Inc. – Air Separator Engine – Unit 175E

265 HP Air Separator Plant Engine

EPA HAPS Emissions Diesel Fired Engines

Horsepower Rating:	265	horsepower	
Fuel Usage:	10.6	gallons/hr	
MMBtu/hr:	1.7536	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	1.7536E-06	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	4000	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetalehyde	75-07-0		7.67E-04	0.001041	0.002081
Acrolein	107-02-8		9.25E-05	0.000126	0.000251
Benzene	71-43-2		9.33E-04	0.001266	0.002532
1,3-Butadiene	106-99-0		3.91E-05	0.000053	0.000106
Formaldehyde	50-00-0		1.18E-03	0.001601	0.003202
Propylene	115-07-1		2.58E-03	0.003501	0.007001
Toluene	108-88-3		4.09E-04	0.000555	0.001110
Xylene	1330-20-7		2.85E-04	0.000387	0.000773
		Total Non-PAH HAPS	6.29E-03	0.008528	0.017057

PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9		1.42E-06	0.000002	0.000004
Acenaphthylene	208-96-8		5.06E-06	0.000007	0.000014
Anthracene	120-12-7		1.87E-06	0.000003	0.000005
Benzo(a)anthracene	56-55-3		1.68E-06	0.000002	0.000005
Benzo(a)pyrene	50-32-8		1.88E-07	0.000000	0.000001
Benzo(b)fluoranthene	205-99-2		9.91E-08	0.000000	0.000000
Benzo(a)pyrene	192-97-2		1.55E-07	0.000000	0.000000
Benzo(g,h,I)perylene	191-24-2		4.89E-07	0.000001	0.000001
Benzo(k)fluoranthene	207-08-9		1.55E-07	0.000000	0.000000
Dibenz(a,h)anthracene			5.83E-07	0.000001	0.000002
Chrysene	218-01-9		3.53E-07	0.000000	0.000001
Fluoranthene	206-44-0		7.61E-06	0.000010	0.000021
Fluorene	86-73-7		2.92E-05	0.000040	0.000079
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000001	0.000001
Naphthalene	91-20-3		8.48E-05	0.000115	0.000230
Phenanthrene	85-01-8		2.94E-05	0.000040	0.000080
Pyrene	129-00-0		4.78E-06	0.000006	0.000013
		Total PAH HAPS	1.68E-04	0.000228	0.000456

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000005	0.000011
Beryllium		3	0.000004	0.000008
Cadmium		3	0.000004	0.000008
Chromium		3	0.000004	0.000008
Lead		9	0.000012	0.000024
Manganese		6	0.000008	0.000016
Mercury		3	0.000004	0.000008
Nickel		3	0.000004	0.000008
Selenium		15	0.000020	0.000041
	Total Metals HAPS	49	0.000066	0.000133
	Total HAPS		**0.00882**	**0.01765**

Mountain States Constructors, Inc. – RAP – Unit 192E

415 HP RAP Plant Engine

EPA HAPS Emissions Diesel Fired Engines

Horsepower Rating:	415	horsepower	
Fuel Usage:	20.7	gallons/hr	
MMBtu/hr:	2.6496	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	2.6496E-06	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	3016	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetalehyde	75-07-0		7.67E-04	0.002032	0.003065
Acrolein	107-02-8		9.25E-05	0.000245	0.000370
Benzene	71-43-2		9.33E-04	0.002472	0.003728
1,3-Butadiene	106-99-0		3.91E-05	0.000104	0.000156
Formaldehyde	50-00-0		1.18E-03	0.003127	0.004715
Propylene	115-07-1		2.58E-03	0.006836	0.010309
Toluene	108-88-3		4.09E-04	0.001084	0.001634
Xylene	1330-20-7		2.85E-04	0.000755	0.001139
		Total Non-PAH HAPS	6.29E-03	0.016654	0.025115

PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9		1.42E-06	0.000004	0.000006
Acenaphthylene	208-96-8		5.06E-06	0.000013	0.000020
Anthracene	120-12-7		1.87E-06	0.000005	0.000007
Benzo(a)anthracene	56-55-3		1.68E-06	0.000004	0.000007
Benzo(a)pyrene	50-32-8		1.88E-07	0.000000	0.000001
Benzo(b)fluoranthene	205-99-2		9.91E-08	0.000000	0.000000
Benzo(a)pyrene	192-97-2		1.55E-07	0.000000	0.000001
Benzo(g,h,I)perylene	191-24-2		4.89E-07	0.000001	0.000002
Benzo(k)fluoranthene	207-08-9		1.55E-07	0.000000	0.000001
Dibenz(a,h)anthracene			5.83E-07	0.000002	0.000002
Chrysene	218-01-9		3.53E-07	0.000001	0.000001
Fluoranthene	206-44-0		7.61E-06	0.000020	0.000030
Fluorene	86-73-7		2.92E-05	0.000077	0.000117
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000001	0.000001
Naphthalene	91-20-3		8.48E-05	0.000225	0.000339
Phenanthrene	85-01-8		2.94E-05	0.000078	0.000117
Pyrene	129-00-0		4.78E-06	0.000013	0.000019
		Total PAH HAPS	1.68E-04	0.000446	0.000672

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000011	0.000016
Beryllium		3	0.000008	0.000012
Cadmium		3	0.000008	0.000012
Chromium		3	0.000008	0.000012
Lead		9	0.000024	0.000036
Manganese		6	0.000016	0.000024
Mercury		3	0.000008	0.000012
Nickel		3	0.000008	0.000012
Selenium		15	0.000040	0.000060
	Total Metals HAPS	49	0.000130	0.000196
	Total HAPS		**0.01723**	**0.02598**

Unit 194: Unleaded Gasoline Tank – 500 Gallon

The Shop 500 gallon unleaded fuel tank is applicable to 40 CFR Part 63 Subpart CCCCCC. The fuel usage is less than 10,000 gallons per month and will follow the requirements below found in 40 CFR Part 63.11116.

Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.
(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:
(1) Minimize gasoline spills;
(2) Clean up spills as expeditiously as practicable;
(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.
(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.
(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.
(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

Tank VOC emissions were determined using EPAs TANKs 4.0.9.d program.

TANKS 4.0.9d

Emissions Report - Detail Format

Tank Indentification and Physical Characteristics

Identification	
User Identification:	MSCI Los Lunas Plant Tank 13
City:	Albuquerque
State:	New Mexico
Company:	Mountain States Constructors, Inc.
Type of Tank:	Horizontal Tank
Description:	500 Gallon Unleaded Gasoline
Tank Dimensions	
Shell Length (ft):	6.00
Diameter (ft):	4.00
Volume (gallons):	500.00
Turnovers:	20.00
Net Throughput(gal/yr):	10,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N
Paint Characteristics	
Shell Color/Shade:	White/White
Shell Condition	Good
Breather Vent Settings	
Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Albuquerque, New Mexico (Avg Atmospheric Pressure = 12.15 psia)

TANKS 4.0.9d

Emissions Report - Detail Format

Liquid Contents of Storage Tank

MSCI Los Lunas Plant Tank 13 - Horizontal Tank

Albuquerque, New Mexico

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Gasoline (RVP 13)	All	58.54	51.41	65.66	56.17	6.7593	5.9014	7.7134	62.0000			92.00	Option 4: RVP=13, ASTM Slope=3

TANKS 4.0.9d

Emissions Report - Detail Format

Detail Calculations (AP-42)

MSCI Los Lunas Plant Tank 13 - Horizontal Tank

Albuquerque, New Mexico

Annual Emission Calcaulations

Standing Losses (lb):	292.4181
Vapor Space Volume (cu ft):	48.0243
Vapor Density (lb/cu ft):	0.0754
Vapor Space Expansion Factor:	0.3800
Vented Vapor Saturation Factor:	0.5826
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	48.0243
Tank Diameter (ft):	4.0000
Effective Diameter (ft):	5.5293
Vapor Space Outage (ft):	2.0000
Tank Shell Length (ft):	6.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0754
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Daily Avg. Liquid Surface Temp. (deg. R):	518.2062
Daily Average Ambient Temp. (deg. F):	56.1542
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	515.8442
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.3800
Daily Vapor Temperature Range (deg. R):	28.5089
Daily Vapor Pressure Range (psia):	1.8120
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	5.9014
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	7.7134
Daily Avg. Liquid Surface Temp. (deg R):	518.2062
Daily Min. Liquid Surface Temp. (deg R):	511.0790
Daily Max. Liquid Surface Temp. (deg R):	525.3334
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.5826
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	6.7593
Vapor Space Outage (ft):	2.0000

Working Losses (lb):	99.7799
Vapor Molecular Weight (lb/lb-mole):	62.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.7593
Annual Net Throughput (gal/yr.):	10,000.0000
Annual Turnovers:	20.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	4.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	392.1980

TANKS 4.0.9d

Emissions Report - Detail Format

Individual Tank Emission Totals

Emissions Report for: Annual

MSCI Los Lunas Plant Tank 13 - Horizontal Tank

Albuquerque, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Gasoline (RVP 13)	99.78	292.42	392.20

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO_2e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO_2e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO_2e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO2e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following X By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at http://www.epa.gov/ttn/chief/ap42/index.html
- EPA's Internet emission factor database WebFIRE at http://cfpub.epa.gov/webfire/
- 40 CFR 98 Mandatory Green House Gas Reporting except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.
- Sources listed on EPA's NSR Resources for Estimating GHG Emissions at http://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases:

Global Warming Potentials (GWP):
Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO_2 over a specified time period.

"Greenhouse gas" for the purpose of air permit regulations is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. **(20.2.70.7 NMAC, 20.2.74.7 NMAC).** You may also find GHGs defined in 40 CFR 86.1818-12(a).

Metric to Short Ton Conversion:
Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 Mandatory Greenhouse Reporting requires metric tons.
1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

Section 7

Information Used to Determine Emissions

Information Used to Determine Emissions shall include the following:

- ☐ If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
- ☐ If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
- ☒ If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
- ☐ If an older version of AP-42 is used, include a complete copy of the section.
- ☒ If an EPA document or other material is referenced, include a complete copy.
- ☐ Fuel specifications sheet.
- ☐ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.

A-XXXX-7-AP42S1-3	Diesel-Fired Engine HAPs Emission Factors
A-XXXX-7-AP42S3-3	Diesel-Fired Engine HAPs Emission Factors
A-XXXX-7-AP42S11-19-2	Crusher, Screen and Transfer Point Emission Factors
A-XXXX-7-AP42S13-2-2	Unpaved Road Emission Factors
A-XXXX-7-AP42S13-2-4	Material Handling Emission Factors
A-XXXX-7-WindspeedAlbuquerque	Albuquerque Airport 2001-2011 Wind Speed Average
A-XXXX-7-Unit69E	Unit 69E: Main Plant Engine
A-XXXX-7-Unit111E	Unit 111E: Pit #1 Plant Engine
A-XXXX-7-Unit161E	Unit 161E: Pit #2 Plant Engine
A-XXXX-7-Unit175E	Unit 175E: Air Separator Plant Engine
A-XXXX-7-Unit192E	Unit 192E: RAP Plant Engine
A-XXXX-7-EPAii03	EPA documents “EIIP – Preferred and Alternative Methods for Estimating Air Emissions from Hot-Mix-Asphalt Plants, Final Report, July 1996, Table 3.2-1 Fugitive Dust – Crushed RAP material”
A-XXXX-7-EPA_GHG	EPA’s “Emission Factors for Greenhouse Gas Inventories” (February 13, 2024)
A-XXXX-7-CrusherEI.xls	MSCI Los Lunas Plant Emissions Spreadsheet (Electronic File)

1.3 Fuel Oil Combustion

1.3.1 General[1-3]

Two major categories of fuel oil are burned by combustion sources: distillate oils and residual oils. These oils are further distinguished by grade numbers, with Nos. 1 and 2 being distillate oils; Nos. 5 and 6 being residual oils; and No. 4 being either distillate oil or a mixture of distillate and residual oils. No. 6 fuel oil is sometimes referred to as Bunker C. Distillate oils are more volatile and less viscous than residual oils. They have negligible nitrogen and ash contents and usually contain less than 0.3 percent sulfur (by weight). Distillate oils are used mainly in domestic and small commercial applications, and include kerosene and diesel fuels. Being more viscous and less volatile than distillate oils, the heavier residual oils (Nos. 5 and 6) may need to be heated for ease of handling and to facilitate proper atomization. Because residual oils are produced from the residue remaining after the lighter fractions (gasoline, kerosene, and distillate oils) have been removed from the crude oil, they contain significant quantities of ash, nitrogen, and sulfur. Residual oils are used mainly in utility, industrial, and large commercial applications.

1.3.2 Firing Practices[4]

The major boiler configurations for fuel oil-fired combustors are watertube, firetube, cast iron, and tubeless design. Boilers are classified according to design and orientation of heat transfer surfaces, burner configuration, and size. These factors can all strongly influence emissions as well as the potential for controlling emissions.

Watertube boilers are used in a variety of applications ranging from supplying large amounts of process steam to providing space heat for industrial facilities. In a watertube boiler, combustion heat is transferred to water flowing through tubes which line the furnace walls and boiler passes. The tube surfaces in the furnace (which houses the burner flame) absorb heat primarily by radiation from the flames. The tube surfaces in the boiler passes (adjacent to the primary furnace) absorb heat primarily by convective heat transfer.

Firetube boilers are used primarily for heating systems, industrial process steam generators, and portable power boilers. In firetube boilers, the hot combustion gases flow through the tubes while the water being heated circulates outside of the tubes. At high pressures and when subjected to large variations in steam demand, firetube units are more susceptible to structural failure than watertube boilers. This is because the high-pressure steam in firetube units is contained by the boiler walls rather than by multiple small-diameter watertubes, which are inherently stronger. As a consequence, firetube boilers are typically small and are used primarily where boiler loads are relatively constant. Nearly all firetube boilers are sold as packaged units because of their relatively small size.

A cast iron boiler is one in which combustion gases rise through a vertical heat exchanger and out through an exhaust duct. Water in the heat exchanger tubes is heated as it moves upward through the tubes. Cast iron boilers produce low pressure steam or hot water, and generally burn oil or natural gas. They are used primarily in the residential and commercial sectors.

Another type of heat transfer configuration used on smaller boilers is the tubeless design. This design incorporates nested pressure vessels with water in between the shells. Combustion gases are fired into the inner pressure vessel and are then sometimes recirculated outside the second vessel.

Table 1.3-9. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM FUEL OIL COMBUSTION[a]

Organic Compound	Average Emission Factor[b] ($lb/10^3$ Gal)	EMISSION FACTOR RATING
Benzene	2.14E-04	C
Ethylbenzene	6.36E-05[c]	E
Formaldehyde[d]	3.30E-02	C
Naphthalene	1.13E-03	C
1,1,1-Trichloroethane	2.36E-04[c]	E
Toluene	6.20E-03	D
o-Xylene	1.09E-04[c]	E
Acenaphthene	2.11E-05	C
Acenaphthylene	2.53E-07	D
Anthracene	1.22E-06	C
Benz(a)anthracene	4.01E-06	C
Benzo(b,k)fluoranthene	1.48E-06	C
Benzo(g,h,i)perylene	2.26E-06	C
Chrysene	2.38E-06	C
Dibenzo(a,h) anthracene	1.67E-06	D
Fluoranthene	4.84E-06	C
Fluorene	4.47E-06	C
Indo(1,2,3-cd)pyrene	2.14E-06	C
Phenanthrene	1.05E-05	C
Pyrene	4.25E-06	C
OCDD	3.10E-09[c]	E

[a] Data are for residual oil fired boilers, Source Classification Codes (SCCs) 1-01-004-01/04.
[b] References 64-72. To convert from $lb/10^3$ gal to $kg/10^3$ L, multiply by 0.12.
[c] Based on data from one source test (Reference 67).
[d] The formaldehyde number presented here is based only on data from utilities using No. 6 oil. The number presented in Table 1.3-7 is based on utility, commercial, and industrial boilers.

Table 1.3-10. EMISSION FACTORS FOR TRACE ELEMENTS FROM DISTILLATE FUEL OIL COMBUSTION SOURCES[a]

EMISSION FACTOR RATING: E

Firing Configuration (SCC)	Emission Factor (lb/10^{12} Btu)										
	As	Be	Cd	Cr	Cu	Pb	Hg	Mn	Ni	Se	Zn
Distillate oil fired (1-01-005-01, 1-02-005-01, 1-03-005-01)	4	3	3	3	6	9	3	6	3	15	4

[a] Data are for distillate oil fired boilers, SCC codes 1-01-005-01, 1-02-005-01, and 1-03-005-01. References 29-32, 40-44 and 83. To convert from lb/10^{12} Btu to pg/J, multiply by 0.43.

Table 1.3-11. EMISSION FACTORS FOR METALS FROM UNCONTROLLED NO. 6 FUEL OIL COMBUSTION[a]

Metal	Average Emission Factor[b, d] ($lb/10^3$ Gal)	EMISSION FACTOR RATING
Antimony	5.25E-03[c]	E
Arsenic	1.32E-03	C
Barium	2.57E-03	D
Beryllium	2.78E-05	C
Cadmium	3.98E-04	C
Chloride	3.47E-01	D
Chromium	8.45E-04	C
Chromium VI	2.48E-04	C
Cobalt	6.02E-03	D
Copper	1.76E-03	C
Fluoride	3.73E-02	D
Lead	1.51E-03	C
Manganese	3.00E-03	C
Mercury	1.13E-04	C
Molybdenum	7.87E-04	D
Nickel	8.45E-02	C
Phosphorous	9.46E-03	D
Selenium	6.83E-04	C
Vanadium	3.18E-02	D
Zinc	2.91E-02	D

[a] Data are for residual oil fired boilers, Source Classification Codes (SCCs) 1-01-004-01/04.

[b] References 64-72. 18 of 19 sources were uncontrolled and 1 source was controlled with low efficiency ESP. To convert from $lb/10^3$ gal to $kg/10^3$ L, multiply by 0.12.

[c] References 29-32,40-44.

[d] For oil/water mixture, reduce factors in proportion to water content of the fuel (due to dilution). To adjust the listed values for water content, multiply the listed value by 1-decimal fraction of water (ex: For fuel with 9 percent water by volume, multiply by 1-0.9=.91).

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES[a]

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO_x	0.011	1.63	0.031	4.41	D
CO	0.439	62.7	6.68 E-03	0.95	D
SO_x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10[b]	7.21 E-04	0.10	2.20 E-03	0.31	D
CO_2[c]	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

[a] References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

[b] PM-10 = particulate matter less than or equal to 10 μm aerodynamic diameter. All particulate is assumed to be ≤ 1 μm in size.

[c] Assumes 99% conversion of carbon in fuel to CO_2 with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

11.19.2 Crushed Stone Processing and Pulverized Mineral Processing

11.19.2.1 Process Description [24, 25]

Crushed Stone Processing

Major rock types processed by the crushed stone industry include limestone, granite, dolomite, traprock, sandstone, quartz, and quartzite. Minor types include calcareous marl, marble, shell, and slate. Major mineral types processed by the pulverized minerals industry, a subset of the crushed stone processing industry, include calcium carbonate, talc, and barite. Industry classifications vary considerably and, in many cases, do not reflect actual geological definitions.

Rock and crushed stone products generally are loosened by drilling and blasting and then are loaded by power shovel or front-end loader into large haul trucks that transport the material to the processing operations. Techniques used for extraction vary with the nature and location of the deposit. Processing operations may include crushing, screening, size classification, material handling and storage operations. All of these processes can be significant sources of PM and PM-10 emissions if uncontrolled.

Quarried stone normally is delivered to the processing plant by truck and is dumped into a bin. A feeder is used as illustrated in Figure 11.19.2-1. The feeder or screens separate large boulders from finer rocks that do not require primary crushing, thus reducing the load to the primary crusher. Jaw, impactor, or gyratory crushers are usually used for initial reduction. The crusher product, normally 7.5 to 30 centimeters (3 to 12 inches) in diameter, and the grizzly throughs (undersize material) are discharged onto a belt conveyor and usually are conveyed to a surge pile for temporary storage or are sold as coarse aggregates.

The stone from the surge pile is conveyed to a vibrating inclined screen called the scalping screen. This unit separates oversized rock from the smaller stone. The undersized material from the scalping screen is considered to be a product stream and is transported to a storage pile and sold as base material. The stone that is too large to pass through the top deck of the scalping screen is processed in the secondary crusher. Cone crushers are commonly used for secondary crushing (although impact crushers are sometimes used), which typically reduces material to about 2.5 to 10 centimeters (1 to 4 inches). The material (throughs) from the second level of the screen bypasses the secondary crusher because it is sufficiently small for the last crushing step. The output from the secondary crusher and the throughs from the secondary screen are transported by conveyor to the tertiary circuit, which includes a sizing screen and a tertiary crusher.

Tertiary crushing is usually performed using cone crushers or other types of impactor crushers. Oversize material from the top deck of the sizing screen is fed to the tertiary crusher. The tertiary crusher output, which is typically about 0.50 to 2.5 centimeters (3/16th to 1 inch), is returned to the sizing screen. Various product streams with different size gradations are separated in the screening operation. The products are conveyed or trucked directly to finished product bins, to open area stock piles, or to other processing systems such as washing, air separators, and screens and classifiers (for the production of manufactured sand).

Some stone crushing plants produce manufactured sand. This is a small-sized rock product with a maximum size of 0.50 centimeters (3/16 th inch). Crushed stone from the tertiary sizing screen is sized in a vibrating inclined screen (fines screen) with relatively small mesh sizes.

Oversized material is processed in a cone crusher or a hammermill (fines crusher) adjusted to produce small diameter material. The output is returned to the fines screen for resizing.

In certain cases, stone washing is required to meet particulate end product specifications or demands.

Pulverized Mineral Processing

Pulverized minerals are produced at specialized processing plants. These plants supply mineral products ranging from sizes of approximately 1 micrometer to more than 75 micrometers aerodynamic diameter. Pharmaceutical, paint, plastics, pigment, rubber, and chemical industries use these products. Due to the specialized characteristics of the mineral products and the markets for these products, pulverized mineral processing plants have production rates that are less than 5% of the production capacities of conventional crushed stone plants. Two alternative processing systems for pulverized minerals are summarized in Figure 11-19.2-2.

In dry processing systems, the mineral aggregate material from conventional crushing and screening operations is subject to coarse and fine grinding primarily in roller mills and/or ball mills to reduce the material to the necessary product size range. A classifier is used to size the ground material and return oversized material that can be pulverized using either wet or dry processes. The classifier can either be associated with the grinding operation, or it can be a stand-alone process unit. Fabric filters control particulate matter emissions from the grinding operation and the classifier. The products are stored in silos and are shipped by truck or in bags.

In wet processing systems, the mineral aggregate material is processed in wet mode coarse and fine grinding operations. Beneficiation processes use flotation to separate mineral impurities. Finely ground material is concentrated and flash dried. Fabric filters are used to control particulate matter emissions from the flash dryer. The product is then stored in silos, bagged, and shipped.

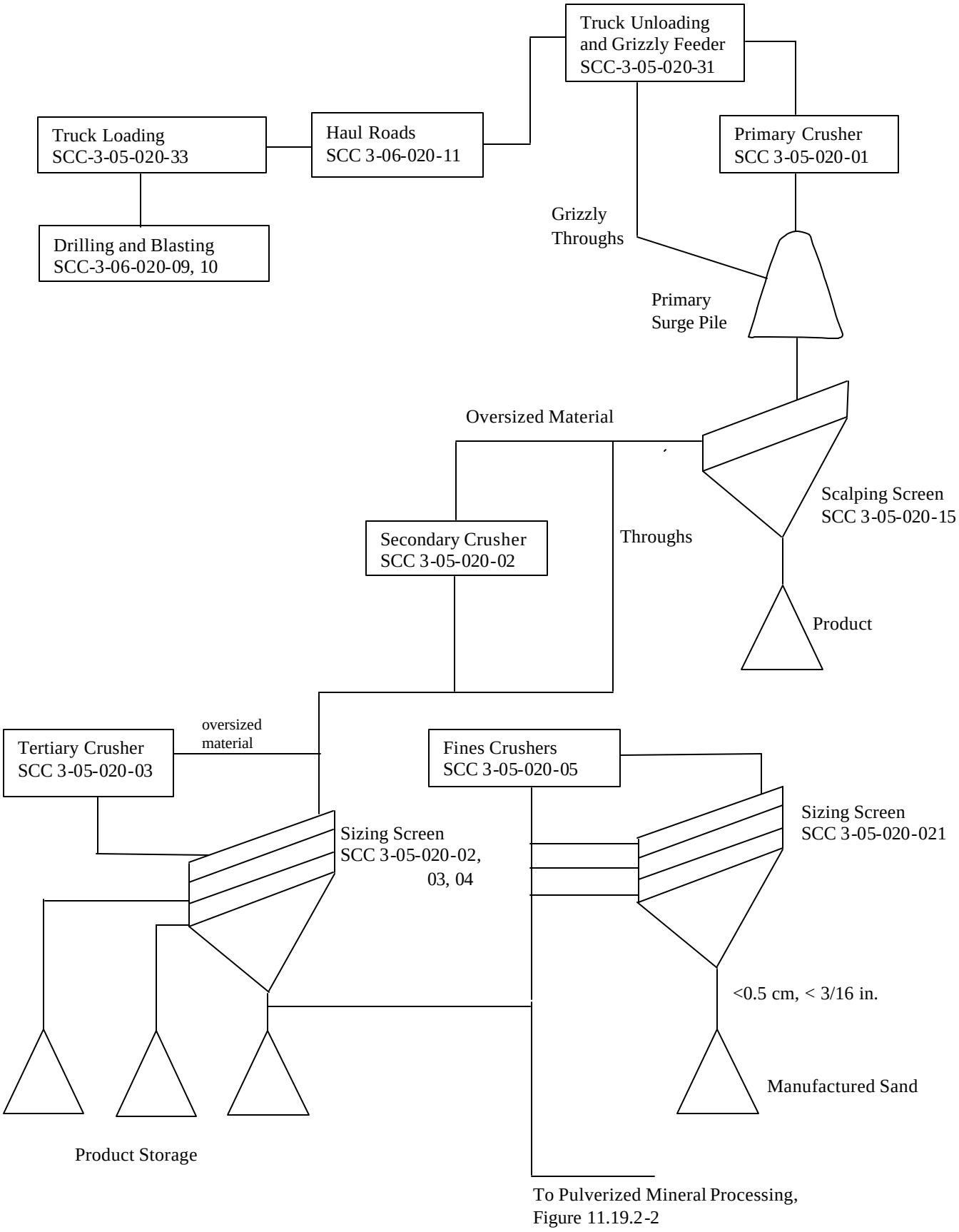


Figure 11.19.2-1. Typical stone processing plant

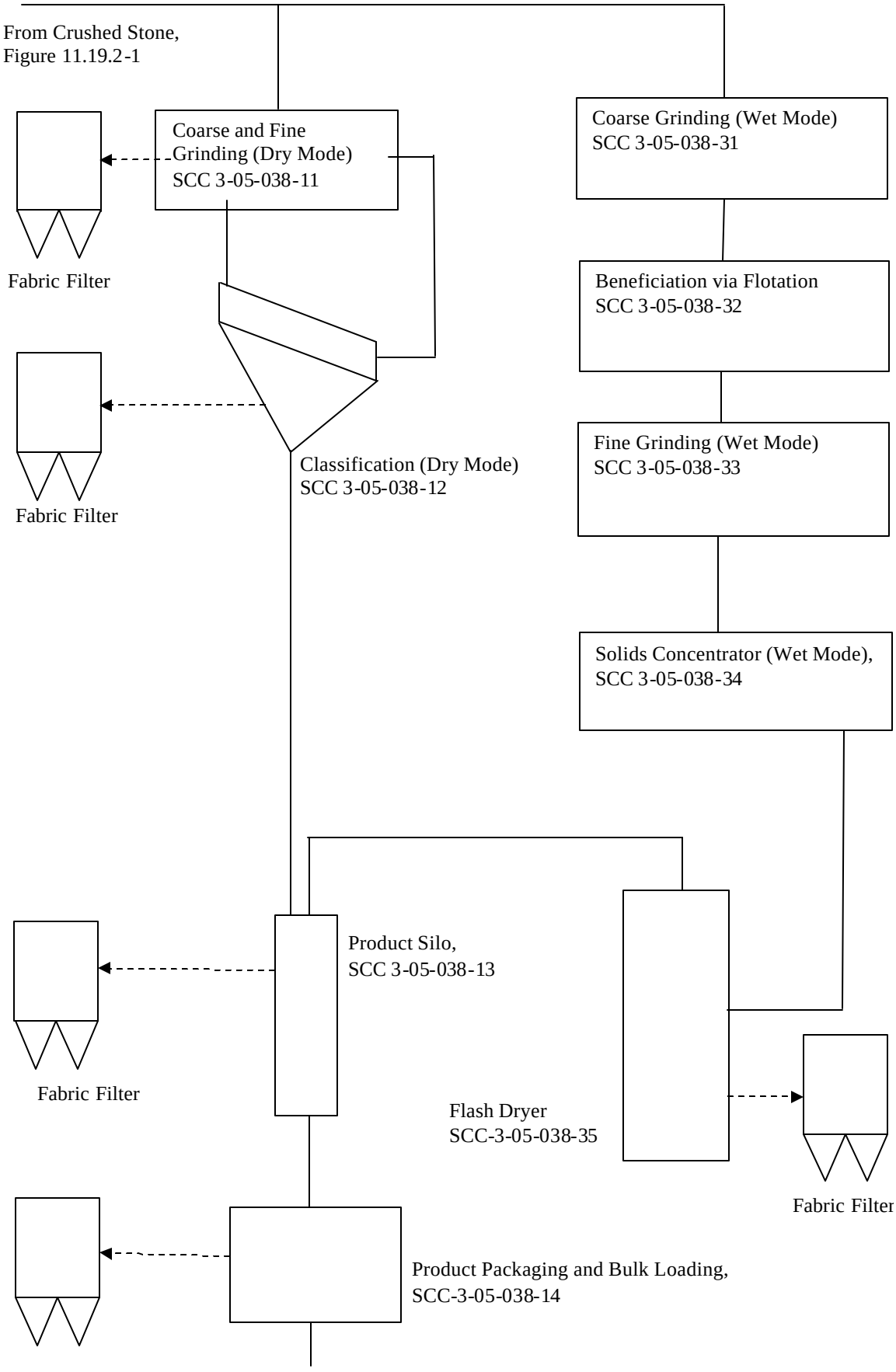


Figure 11.19.2-2 Flowchart for Pulverized Mineral Processing

11.19.2.2 Emissions and Controls [10, 11, 12, 13, 14, and 26]

Crushed Stone Processing

Emissions of PM, PM-10, and PM-2.5 occur from a number of operations in stone quarrying and processing. A substantial portion of these emissions consists of heavy particles that may settle out within the plant. As in other operations, crushed stone emission sources may be categorized as either process sources or fugitive dust sources. Process sources include those for which emissions are amenable to capture and subsequent control. Fugitive dust sources generally involve the reentrainment of settled dust by wind or machine movement. Emissions from process sources should be considered fugitive unless the sources are vented to a baghouse or are contained in an enclosure with a forced-air vent or stack. Factors affecting emissions from either source category include the stone size distribution and the surface moisture content of the stone processed, the process throughput rate, the type of equipment and operating practices used, and topographical and climatic factors.

Of graphical and seasonal factors, the primary variables affecting uncontrolled PM emissions are wind and material moisture content. Wind parameters vary with geographical location, season, and weather. It can be expected that the level of emissions from unenclosed sources (principally fugitive dust sources) will be greater during periods of high winds. The material moisture content also varies with geographical location, season, and weather. Therefore, the levels of uncontrolled emissions from both process emission sources and fugitive dust sources generally will be greater in arid regions of the country than in temperate ones and greater during the summer months because of a higher evaporation rate.

The moisture content of the material processed can have a substantial effect on emissions. This effect is evident throughout the processing operations. Surface wetness causes fine particles to agglomerate on or to adhere to the faces of larger stones, with a resulting dust suppression effect. However, as new fine particles are created by crushing and attrition and as the moisture content is reduced by evaporation, this suppressive effect diminishes and may disappear. Plants that use wet suppression systems (spray nozzles) to maintain relatively high material moisture contents can effectively control PM emissions throughout the process. Depending on the geographical and climatic conditions, the moisture content of mined rock can range from nearly zero to several percent. Because moisture content is usually expressed on a basis of overall weight percent, the actual moisture amount per unit area will vary with the size of the rock being handled. On a constant mass-fraction basis, the per-unit area moisture content varies inversely with the diameter of the rock. The suppressive effect of the moisture depends on both the absolute mass water content and the size of the rock product. Typically, wet material contains >1.5 percent water.

A variety of material, equipment, and operating factors can influence emissions from crushing. These factors include (1) stone type, (2) feed size and distribution, (3) moisture content, (4) throughput rate, (5) crusher type, (6) size reduction ratio, and (7) fines content. Insufficient data are available to present a matrix of rock crushing emission factors detailing the above classifications and variables. Available data indicate that PM-10 and PM-2.5 emissions from limestone and granite processing operations are similar. Therefore, the emission factors developed from the emissions data gathered at limestone and granite processing facilities are considered to be representative of typical crushed stone processing operations. Emission factors for filterable PM, PM-10, and PM-2.5 emissions from crushed stone processing operations are presented in Tables 11.19.2-1 (Metric units) and 11.19.2-2 (English units.)

Table 11.19.2-1 (Metric Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (kg/Mg)[a]

Source [b]	Total Particulate Matter [r,s]	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Primary Crushing (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Primary Crushing (controlled) (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Secondary Crushing (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Secondary Crushing (controlled) (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Tertiary Crushing (SCC 3-050030-03)	0.0027[d]	E	0.0012[o]	C	ND[n]	
Tertiary Crushing (controlled) (SCC 3-05-020-03)	0.0006[d]	E	0.00027[p]	C	0.00005[q]	E
Fines Crushing (SCC 3-05-020-05)	0.0195[e]	E	0.0075[e]	E	ND	
Fines Crushing (controlled) (SCC 3-05-020-05)	0.0015[f]	E	0.0006[f]	E	0.000035[q]	E
Screening (SCC 3-05-020-02, 03)	0.0125[c]	E	0.0043[l]	C	ND	
Screening (controlled) (SCC 3-05-020-02, 03)	0.0011[d]	E	0.00037[m]	C	0.000025[q]	E
Fines Screening (SCC 3-05-020-21	0.15[g]	E	0.036[g]	E	ND	
Fines Screening (controlled) (SCC 3-05-020-21)	0.0018[g]	E	0.0011[g]	E	ND	
Conveyor Transfer Point (SCC 3-05-020-06)	0.0015[h]	E	0.00055[h]	D	ND	
Conveyor Transfer Point (controlled) (SCC 3-05-020-06)	0.00007[i]	E	2.3×10^{-5}[i]	D	6.5×10^{-6}[q]	E
Wet Drilling - Unfragmented Stone (SCC 3-05-020-10)	ND		4.0×10^{-5}[j]	E	ND	
Truck Unloading - Fragmented Stone (SCC 3-05-020-31)	ND		8.0×10^{-6}[j]	E	ND	
Truck Unloading - Conveyor, crushed stone (SCC 3-05-020-32)	ND		5.0×10^{-5}[k]	E	ND	

a. Emission factors represent uncontrolled emissions unless noted. Emission factors in kg/Mg of material throughput. SCC = Source Classification Code. ND = No data.

b. Controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays. Although the moisture content was the only variable measured, other process features may have as much influence on emissions from a given source. Visual observations from each source under normal operating conditions are probably the best indicator of which emission factor is most appropriate. Plants that employ substandard control measures as indicated by visual observations should use the uncontrolled factor with appropriate control efficiency that best reflects the effectiveness of the controls employed.

c. References 1, 3, 7, and 8

d. References 3, 7, and 8

e. Reference 4

f. References 4 and 15

g. Reference 4

h. References 5 and 6

i. References 5, 6, and 15

j. Reference 11

k. Reference 12

l. References 1, 3, 7, and 8

m. References 1, 3, 7, 8, and 15

n. No data available, but emission factors for PM-10 for tertiary crushers can be used as an upper limit for primary or secondary crushing

o. References 2, 3, 7, 8

p. References 2, 3, 7, 8, and 15

q. Reference 15

r. PM emission factors are presented based on PM-100 data in the Background Support Document for Section 11.19.2

s. Emission factors for PM-30 and PM-50 are available in Figures 11.19.2-3 through 11.19.2-6.

Table 11.19.2-2 (English Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (lb/Ton)[a]

Source [b]	Total Particulate Matter [r,s]	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Primary Crushing (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Primary Crushing (controlled) (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Secondary Crushing (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Secondary Crushing (controlled) (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Tertiary Crushing (SCC 3-050030-03)	0.0054[d]	E	0.0024[o]	C	ND[n]	
Tertiary Crushing (controlled) (SCC 3-05-020-03)	0.0012[d]	E	0.00054[p]	C	0.00010[q]	E
Fines Crushing (SCC 3-05-020-05)	0.0390[e]	E	0.0150[e]	E	ND	
Fines Crushing (controlled) (SCC 3-05-020-05)	0.0030[f]	E	0.0012[f]	E	0.000070[q]	E
Screening (SCC 3-05-020-02, 03)	0.025[c]	E	0.0087[l]	C	ND	
Screening (controlled) (SCC 3-05-020-02, 03)	0.0022[d]	E	0.00074[m]	C	0.000050[q]	E
Fines Screening (SCC 3-05-020-21)	0.30[g]	E	0.072[g]	E	ND	
Fines Screening (controlled) (SCC 3-05-020-21)	0.0036[g]	E	0.0022[g]	E	ND	
Conveyor Transfer Point (SCC 3-05-020-06)	0.0030[h]	E	0.00110[h]	D	ND	
Conveyor Transfer Point (controlled) (SCC 3-05-020-06)	0.00014[t]	E	4.6×10^{-5}[t]	D	1.3×10^{-5}[q]	E
Wet Drilling - Unfragmented Stone (SCC 3-05-020-10)	ND		8.0×10^{-5}[j]	E	ND	
Truck Unloading -Fragmented Stone (SCC 3-05-020-31)	ND		1.6×10^{-5}[j]	E	ND	
Truck Unloading - Conveyor, crushed stone (SCC 3-05-020-32)	ND		0.00010[k]	E	ND	

a. Emission factors represent uncontrolled emissions unless noted. Emission factors in lb/Ton of material of throughput. SCC = Source Classification Code. ND = No data.

b. Controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays. Although the moisture content was the only variable measured, other process features may have as much influence on emissions from a given source. Visual observations from each source under normal operating conditions are probably the best indicator of which emission factor is most appropriate. Plants that employ substandard control measures as indicated by visual observations should use the uncontrolled factor with an appropriate control efficiency that best reflects the effectiveness of the controls employed.

c. References 1, 3, 7, and 8

d. References 3, 7, and 8

e. Reference 4

f. References 4 and 15

g. Reference 4

h. References 5 and 6

i. References 5, 6, and 15

j. Reference 11

k. Reference 12

l. References 1, 3, 7, and 8

m. References 1, 3, 7, 8, and 15

n. No data available, but emission factors for PM-10 for tertiary crushers can be used as an upper limit for primary or secondary crushing

o. References 2, 3, 7, 8

p. References 2, 3, 7, 8, and 15

q. Reference 15

r. PM emission factors are presented based on PM-100 data in the Background Support Document for Section 11.19.2

s. Emission factors for PM-30 and PM-50 are available in Figures 11.19.2-3 through 11.19.2-6.

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Emission factor estimates for stone quarry blasting operations are not presented because of the sparsity and unreliability of available tests. While a procedure for estimating blasting emissions is presented in Section 11.9, Western Surface Coal Mining, that procedure should not be applied to stone quarries because of dissimilarities in blasting techniques, material blasted, and size of blast areas. Emission factors for fugitive dust sources, including paved and unpaved roads, materials handling and transfer, and wind erosion of storage piles, can be determined using the predictive emission factor equations presented in AP-42 Section 13.2.

The data used in the preparation of the controlled PM calculations was derived from the individual A-rated tests for PM-2.5 and PM-10 summarized in the Background Support Document. For conveyor transfer points, the controlled PM value was derived from A-rated PM-2.5, PM-10, and PM data summarized in the Background Support Document.

The extrapolation line was drawn through the PM-2.5 value and the mean of the PM-10 values. PM emission factors were calculated for PM-30, PM-50, and PM-100. Each of these particle size limits is used by one or more regulatory agencies as the definition of total particulate matter. The graphical extrapolations used in calculating the emission factors are presented in Figures 11.19.2-3, -4, -5, and -6.

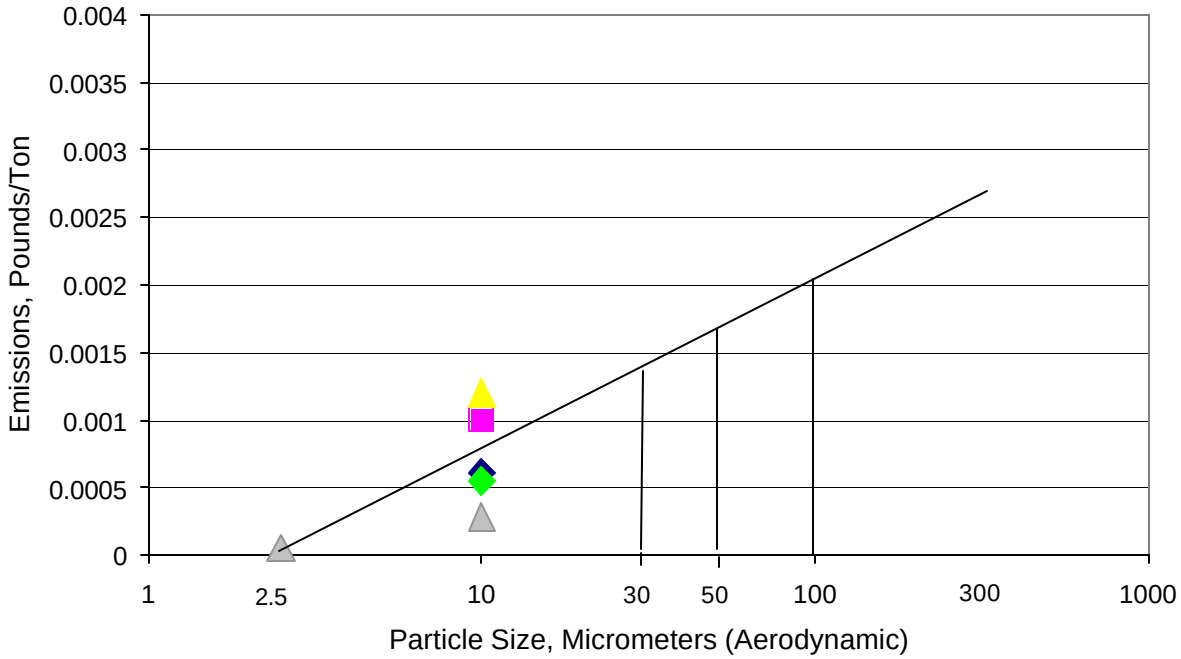


Figure 11-19-3. PM Emission Factor Calculation, Screening (Controlled)

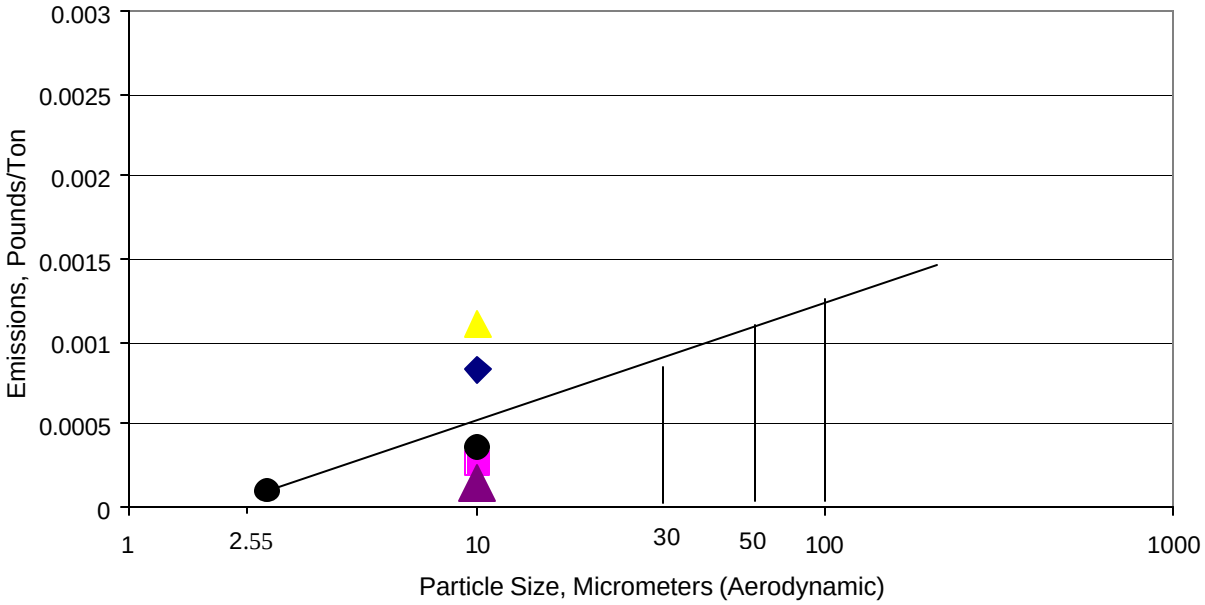


Figure 11.19-4. PM Emission Factor Calculation, Tertiary Crushing (Controlled)

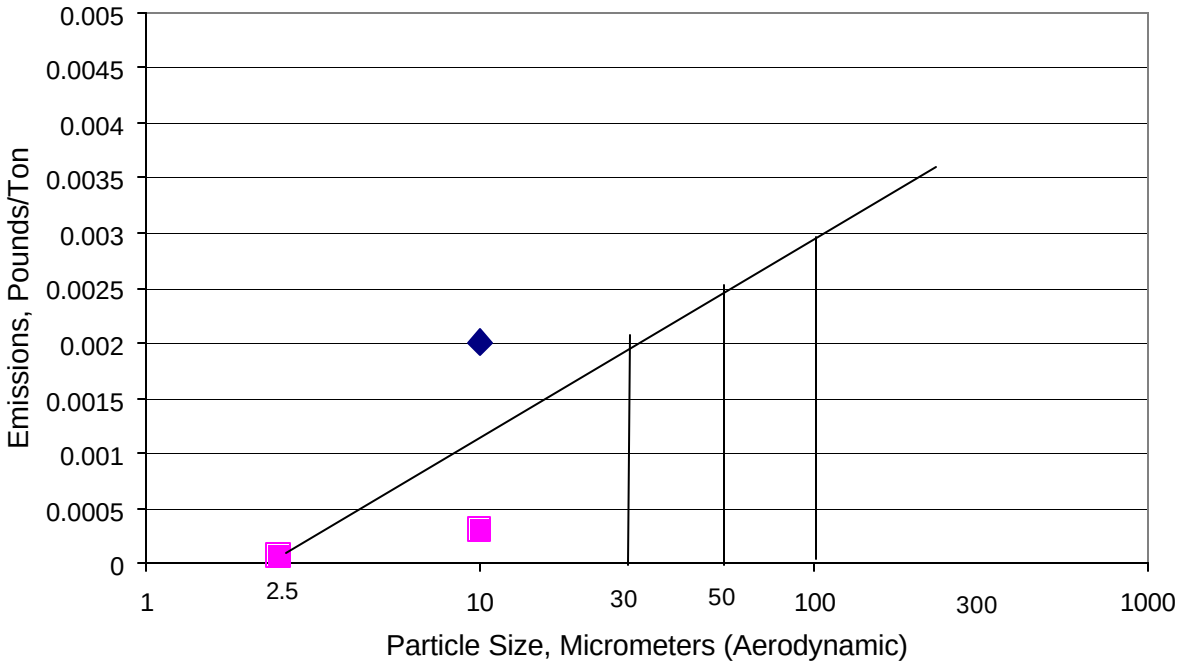


Figure 11-19.5. PM Emission Factor Calculation, Fines Crushing (Controlled)

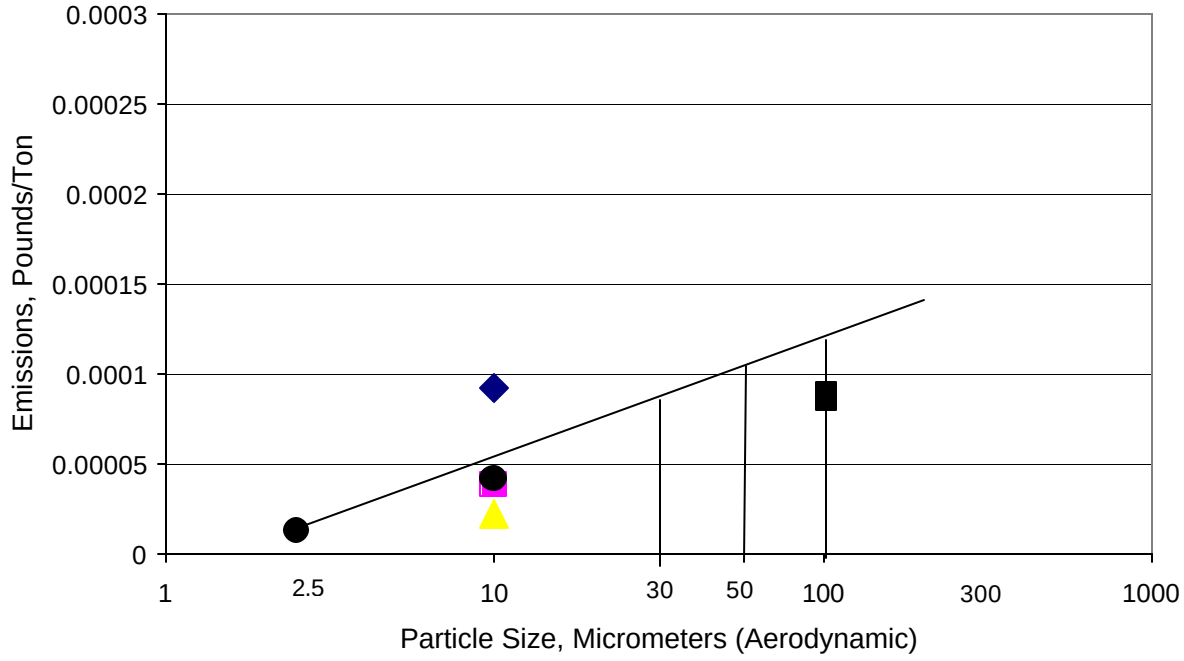


Figure 11.19-6. PM Emission Factor Calculation, Conveyor Transfer Points (Controlled)

The uncontrolled PM emission factors have been calculated from the controlled PM emission factors calculated in accordance with Figures 11.19.2-3 through 11.19.2-6. The PM-10 control efficiencies have been applied to the PM controlled emission factor data to calculate the uncontrolled PM emission rates.

Screening PM-10

Controlled = 0.00073 Lbs./Ton.

Uncontrolled = 0.00865 Lbs./Ton.

Efficiency = 91.6%

Tertiary Crushing PM-10

Controlled = 0.00054

Uncontrolled = 0.00243

Efficiency = 77.7%

Fines Crushing PM-10:

Controlled = 0.0012

Uncontrolled = 0.015

Efficiency = 92.0%

Conveyor Transfer Points PM-10

Controlled = 0.000045

Uncontrolled = 0.0011

Efficiency = 95.9%

The uncontrolled total particulate matter emission factor was calculated from the controlled total particulate matter using Equation 1:

$$\text{Uncontrolled emission factor} = \frac{\text{Controlled total particulate emission factor}}{(100\% - \text{PM-10 Efficiency }\%)/100\%}$$

Equation 1

The Total PM emission factors calculated using Figures 11.19.2-3 through 11.19.2-6 were developed because (1) there are more A-rated test data supporting the calculated values and (2) the extrapolated values provide the flexibility for agencies and source operators to select the most appropriate definition for Total PM. All of the Total PM emission factors have been rated as E due to the limited test data and the need to estimate emission factors using extrapolations of the PM-2.5 and PM-10 data.

Pulverized Mineral Processing

Emissions of particulate matter from dry mode pulverized mineral processing operations are controlled by pulse jet and envelope type fabric filter systems. Due to the low-to-moderate gas temperatures generated by the processing equipment, conventional felted filter media are used. Collection efficiencies for fabric filter-controlled dry process equipment exceed 99.5%. Emission factors for pulverized mineral processing operations are presented in Tables 11.19.2-3 and 11.19.2-4.

Table 11.19.2-3 (Metric Units). EMISSION FACTORS FOR PULVERIZED MINERAL PROCESSING OPERATIONS [a]

Source [b]	Total Particulate Matter	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Grinding (Dry) with Fabric Filter Control (SCC 3-05-038-11)	0.0202	D	0.0169	B	0.0060	B
Classifiers (Dry) with Fabric Filter Control (SCC 3-05-038-12)	0.0112	E	0.0052	E	0.0020	E
Flash Drying with Fabric Filter Control (SCC 3-05-038-35)	0.0134	C	0.0073	C	0.0042	C
Product Storage with Fabric Filter Control (SCC 3-05-38-13)	0.0055	E	0.0008	E	0.0003	E

a. Emission factors represent controlled emissions unless noted. Emission factors are in kg/Mg of material throughput.

b. Date from references 16 through 23

Table 11.19.2-4 (English Units). EMISSION FACTORS FOR PULVERIZED MINERAL PROCESSING OPERATIONS [a]

Source [b]	Total Particulate Matter	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Grinding (Dry) with Fabric Filter Control (SCC 3-05-038-11)	0.0404	D	0.0339	B	0.0121	B
Classifiers (Dry) with Fabric Filter Control (SCC 3-05-038-12)	0.0225	E	0.0104	E	0.0041	E
Flash Drying with Fabric Filter Control (SCC 3-05-038-35)	0.0268	C	0.0146	C	0.0083	C
Product Storage with Fabric Filter Control (SCC 3-05-038-13)	0.0099	E	0.0016	E	0.0006	E

a. Emission factors represent controlled emissions unless noted. Emission factors are in lb/Ton of material throughput.

b. Data from references 16 through 23

References for Section 11.19.2[1]

1. J. Richards, T. Brozell, and W. Kirk, *PM-10 Emission Factors for a Stone Crushing Plant Deister Vibrating Screen*, EPA Contract No. 68-Dl-0055, Task 2.84, U. S. Environmental Protection Agency, Research Triangle Park, NC, February 1992.

2. J. Richards, T. Brozell, and W. Kirk, *PM-10 Emission Factors for a Stone Crushing Plant Tertiary Crusher*, EPA Contract No. 68-D1-0055, Task 2.84, U. S. Environmental Protection Agency, Research Triangle Park, NC, February 1992.

3. W. Kirk, T. Brozell, and J. Richards, *PM-10 Emission Factors for a Stone Crushing Plant Deister Vibrating Screen and Crusher*, National Stone Association, Washington DC, December 1992.

4. T. Brozell, J. Richards, and W. Kirk, *PM-10 Emission Factors for a Stone Crushing Plant Tertiary Crusher and Vibrating Screen*, EPA Contract No. 68-DO-0122, U. S. Environmental Protection Agency, Research Triangle Park, NC, December 1992.

5. T. Brozell, *PM-10 Emission Factors for Two Transfer Points at a Granite Stone Crushing Plant*, EPA Contract No. 68-DO-0122, U. S. Environmental Protection Agency, Research Triangle Park, NC, January 1994.

6. T. Brozell, *PM-10 Emission Factors for a Stone Crushing Plant Transfer Point*, EPA Contract No. 68-DO-0122, U. S. Environmental Protection Agency, Research Triangle Park, NC, February 1993.

7. T. Brozell and J. Richards, *PM-10 Emission Factors for a Limestone Crushing Plant Vibrating Screen and Crusher for Bristol, Tennessee*, EPA Contract No. 68-D2-0163, U. S. Environmental Protection Agency, Research Triangle Park, NC, July 1993.

8. T. Brozell and J. Richards, *PM-10 Emission Factors for a Limestone Crushing Plant Vibrating Screen and Crusher for Marysville, Tennessee*, EPA Contract No. 68-D2-0163, U. S. Environmental Protection Agency, Research Triangle Park, NC, July 1993.

9. *Air Pollution Control Techniques for Nonmetallic Minerals Industry*, EPA-450/3-82-014, U. S. Environmental Protection Agency, Research Triangle Park, NC, August 1982.

10. *Review Emission Data Base and Develop Emission Factors for the Construction Aggregate Industry*, Engineering-Science, Inc., Arcadia, CA, September 1984.

11. P. K. Chalekode *et al., Emissions from the Crushed Granite Industry: State of the Art*, EPA-600/2-78-021, U. S. Environmental Protection Agency, Washington, DC, February 1978.

12. T. R. Blackwood *et al., Source Assessment: Crushed Stone*, EPA-600/2-78-004L, U. S. Environmental Protection Agency, Washington, DC, May 1978.

13. *An Investigation of Particulate Emissions from Construction Aggregate Crushing Operations and Related New Source Performance Standards*, National Crushed Stone Association, Washington, DC, December 1979.

[1] References 1 through 23 are identical to References 1 through 23 in the Background Support Document for AP-42, Section 11.19-2.

14. F. Record and W. T. Harnett, *Particulate Emission Factors for the Construction Aggregate Industry, Draft Report*, GCA-TR-CH-83-02, EPA Contract No. 68-02-3510, GCA Corporation, Chapel Hill, NC, February 1983.

15. T. Brozell, T. Holder, and J. Richards, *Measurement of PM-10 and PM2.5 Emission Factors at a Stone Crushing Plant*, National Stone Association, December 1996.

16. T. Brozell, and J. Richards, *$PM_{10}/PM_{2.5}$ Emission Factor Testing for the Pulverized Mineral Division of the National Stone, Sand and Gravel Association.* Report to the National Stone, Sand and Gravel Association; October 2001.

17. Frank Ward & Company, *A Report of Particulate Source Sampling Performed for Franklin Industrial Minerals Located in Sherwood, Tennessee,* Report to Franklin Industrial Minerals, August 1994.

18. Advanced Industrial Resources, LLC. *Performance Test Report of Baghouse No. 37 at Franklin Industrial Minerals, Report to Franklin Industrial Minerals,* November 1999.

19. Advanced Industrial Resources, LLC. *Performance Test Report of BH-750Limestone System at Franklin Industrial Minerals, Report to Franklin Industrial Minerals,* May 2000.

20. Air Quality Technical Services, *Performance Testing for Flash Dryer #1, Omya, Inc. Plant in Florence, Vermont.* June 1997.

21. Air Quality Technical Services, *Performance Testing for Flash Dryer #2, Omya, Inc. Plant in Florence, Vermont,* March 1998.

22. Air Quality Technical Services. *Performance Testing for Flash Dryer #3, Omya, Inc. Plant in Florence, Vermont,* August 2000.

23. Air Quality Technical Services. *Performance Testing for Flash Dryer #3, Omya, Inc. Plant in Florence, Vermont,* September 2000.

24. *Air Pollution Control Techniques for Nonmetallic Minerals Industry*, EPA-450/3-82-014, U.S. Environmental Protection Agency, Research Triangle Park, NC, August 1982.

25. Written communication from J. Richards, Air Control Techniques, P.C. to B. Shrager, MRI, March 18, 1994.

26. C. Cowherd, Jr. et. al., *Development of Emission Factors For Fugitive Dust Sources*, EPA-450/3-74-037, U.S. Environmental Protection Agency, Research Triangle Park, NC, June 1974.

13.2.2 Unpaved Roads

13.2.2.1 General

When a vehicle travels an unpaved road, the force of the wheels on the road surface causes pulverization of surface material. Particles are lifted and dropped from the rolling wheels, and the road surface is exposed to strong air currents in turbulent shear with the surface. The turbulent wake behind the vehicle continues to act on the road surface after the vehicle has passed.

The particulate emission factors presented in the previous draft version of this section of AP-42, dated October 2001, implicitly included the emissions from vehicles in the form of exhaust, brake wear, and tire wear as well as resuspended road surface material[25]. EPA included these sources in the emission factor equation for unpaved public roads (equation 1b in this section) since the field testing data used to develop the equation included both the direct emissions from vehicles and emissions from resuspension of road dust.

This version of the unpaved public road emission factor equation only estimates particulate emissions from resuspended road surface material [23, 26]. The particulate emissions from vehicle exhaust, brake wear, and tire wear are now estimated separately using EPA's MOBILE6.2 [24]. This approach eliminates the possibility of double counting emissions. Double counting results when employing the previous version of the emission factor equation in this section and MOBILE6.2 to estimate particulate emissions from vehicle traffic on unpaved public roads. It also incorporates the decrease in exhaust emissions that has occurred since the unpaved public road emission factor equation was developed. The previous version of the unpaved public road emission factor equation includes estimates of emissions from exhaust, brake wear, and tire wear based on emission rates for vehicles in the 1980 calendar year fleet. The amount of PM released from vehicle exhaust has decreased since 1980 due to lower new vehicle emission standards and changes in fuel characteristics.

13.2.2.2 Emissions Calculation And Correction Parameters[1-6]

The quantity of dust emissions from a given segment of unpaved road varies linearly with the volume of traffic. Field investigations also have shown that emissions depend on source parameters that characterize the condition of a particular road and the associated vehicle traffic. Characterization of these source parameters allow for "correction" of emission estimates to specific road and traffic conditions present on public and industrial roadways.

Dust emissions from unpaved roads have been found to vary directly with the fraction of silt (particles smaller than 75 micrometers [μm] in diameter) in the road surface materials.[1] The silt fraction is determined by measuring the proportion of loose dry surface dust that passes a 200-mesh screen, using the ASTM-C-136 method. A summary of this method is contained in Appendix C of AP-42. Table 13.2.2-1 summarizes measured silt values for industrial unpaved roads. Table 13.2.2-2 summarizes measured silt values for public unpaved roads. It should be noted that the ranges of silt content vary over two orders of magnitude. Therefore, the use of data from this table can potentially introduce considerable error. Use of this data is strongly discouraged when it is feasible to obtain locally gathered data.

Since the silt content of a rural dirt road will vary with geographic location, it should be measured for use in projecting emissions. As a conservative approximation, the silt content of the parent soil in the area can be used. Tests, however, show that road silt content is normally lower than in the surrounding parent soil, because the fines are continually removed by the vehicle traffic, leaving a higher percentage of coarse particles.

Other variables are important in addition to the silt content of the road surface material. For example, at industrial sites, where haul trucks and other heavy equipment are common, emissions are highly correlated with vehicle weight. On the other hand, there is far less variability in the weights of cars and pickup trucks that commonly travel publicly accessible unpaved roads throughout the United States. For those roads, the moisture content of the road surface material may be more dominant in determining differences in emission levels between, for example a hot, desert environment and a cool, moist location.

The PM-10 and TSP emission factors presented below are the outcomes from stepwise linear regressions of field emission test results of vehicles traveling over unpaved surfaces. Due to a limited amount of information available for PM-2.5, the expression for that particle size range has been scaled against the result for PM-10. Consequently, the quality rating for the PM-2.5 factor is lower than that for the PM-10 expression.

Table 13.2.2-1. TYPICAL SILT CONTENT VALUES OF SURFACE MATERIAL ON INDUSTRIAL UNPAVED ROADS[a]

Industry	Road Use Or Surface Material	Plant Sites	No. Of Samples	Silt Content (%)	
				Range	Mean
Copper smelting	Plant road	1	3	16 - 19	17
Iron and steel production	Plant road	19	135	0.2 - 19	6.0
Sand and gravel processing	Plant road	1	3	4.1 - 6.0	4.8
	Material storage area	1	1	-	7.1
Stone quarrying and processing	Plant road	2	10	2.4 - 16	10
	Haul road to/from pit	4	20	5.0-15	8.3
Taconite mining and processing	Service road	1	8	2.4 - 7.1	4.3
	Haul road to/from pit	1	12	3.9 - 9.7	5.8
Western surface coal mining	Haul road to/from pit	3	21	2.8 - 18	8.4
	Plant road	2	2	4.9 - 5.3	5.1
	Scraper route	3	10	7.2 - 25	17
	Haul road (freshly graded)	2	5	18 - 29	24
Construction sites	Scraper routes	7	20	0.56-23	8.5
Lumber sawmills	Log yards	2	2	4.8-12	8.4
Municipal solid waste landfills	Disposal routes	4	20	2.2 - 21	6.4

[a]References 1,5-15.

The following empirical expressions may be used to estimate the quantity in pounds (lb) of size-specific particulate emissions from an unpaved road, per vehicle mile traveled (VMT):

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k\,(s/12)^a (W/3)^b \qquad (1a)$$

and, for vehicles traveling on publicly accessible roads, dominated by light duty vehicles, emissions may be estimated from the following:

$$E = \frac{k\,(s/12)^a (S/30)^d}{(M/0.5)^c} - C \qquad (1b)$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
M = surface material moisture content (%)
S = mean vehicle speed (mph)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

The source characteristics s, W and M are referred to as correction parameters for adjusting the emission estimates to local conditions. The metric conversion from lb/VMT to grams (g) per vehicle kilometer traveled (VKT) is as follows:

1 lb/VMT = 281.9 g/VKT

The constants for Equations 1a and 1b based on the stated aerodynamic particle sizes are shown in Tables 13.2.2-2 and 13.2.2-4. The PM-2.5 particle size multipliers (k-factors) are taken from Reference 27.

Table 13.2.2-2. CONSTANTS FOR EQUATIONS 1a AND 1b

Constant	Industrial Roads (Equation 1a)			Public Roads (Equation 1b)		
	PM-2.5	PM-10	PM-30*	PM-2.5	PM-10	PM-30*
k (lb/VMT)	0.15	1.5	4.9	0.18	1.8	6.0
a	0.9	0.9	0.7	1	1	1
b	0.45	0.45	0.45	-	-	-
c	-	-	-	0.2	0.2	0.3
d	-	-	-	0.5	0.5	0.3
Quality Rating	B	B	B	B	B	B

*Assumed equivalent to total suspended particulate matter (TSP)
"-" = not used in the emission factor equation

Table 13.2.2-2 also contains the quality ratings for the various size-specific versions of Equation 1a and 1b. The equation retains the assigned quality rating, if applied within the ranges of source conditions, shown in Table 13.2.2-3, that were tested in developing the equation:

Table 13.2.2-3. RANGE OF SOURCE CONDITIONS USED IN DEVELOPING EQUATION 1a AND 1b

Emission Factor	Surface Silt Content, %	Mean Vehicle Weight		Mean Vehicle Speed		Mean No. of Wheels	Surface Moisture Content, %
		Mg	ton	km/hr	mph		
Industrial Roads (Equation 1a)	1.8-25.2	1.8-260	2-290	8-69	5-43	4-17[a]	0.03-13
Public Roads (Equation 1b)	1.8-35	1.4-2.7	1.5-3	16-88	10-55	4-4.8	0.03-13

[a] See discussion in text.

As noted earlier, the models presented as Equations 1a and 1b were developed from tests of traffic on unpaved surfaces. Unpaved roads have a hard, generally nonporous surface that usually dries quickly after a rainfall or watering, because of traffic-enhanced natural evaporation. (Factors influencing how fast a road dries are discussed in Section 13.2.2.3, below.) The quality ratings given above pertain to the mid-range of the measured source conditions for the equation. A higher mean vehicle weight and a higher than normal traffic rate may be justified when performing a worst-case analysis of emissions from unpaved roads.

The emission factors for the exhaust, brake wear and tire wear of a 1980's vehicle fleet (*C*) was obtained from EPA's MOBILE6.2 model [23]. The emission factor also varies with aerodynamic size range

as shown in Table 13.2.2-4

Table 13.2.2-4. EMISSION FACTOR FOR 1980'S VEHICLE FLEET EXHAUST, BRAKE WEAR AND TIRE WEAR

Particle Size Range[a]	*C*, Emission Factor for Exhaust, Brake Wear and Tire Wear[b] lb/VMT
$PM_{2.5}$	0.00036
PM_{10}	0.00047
PM_{30}[c]	0.00047

[a] Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.
[b] Units shown are pounds per vehicle mile traveled (lb/VMT).
[c] PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

It is important to note that the vehicle-related source conditions refer to the average weight, speed, and number of wheels for all vehicles traveling the road. For example, if 98 percent of traffic on the road are 2-ton cars and trucks while the remaining 2 percent consists of 20-ton trucks, then the mean weight is 2.4 tons. More specifically, Equations 1a and 1b are *not* intended to be used to calculate a separate emission factor for each vehicle class within a mix of traffic on a given unpaved road. That is, in the example, one should *not* determine one factor for the 2-ton vehicles and a second factor for the 20-ton trucks. Instead, only one emission factor should be calculated that represents the "fleet" average of 2.4 tons for all vehicles traveling the road.

Moreover, to retain the quality ratings when addressing a group of unpaved roads, it is necessary that reliable correction parameter values be determined for the road in question. The field and laboratory procedures for determining road surface silt and moisture contents are given in AP-42 Appendices C.1 and C.2. Vehicle-related parameters should be developed by recording visual observations of traffic. In some cases, vehicle parameters for industrial unpaved roads can be determined by reviewing maintenance records or other information sources at the facility.

In the event that site-specific values for correction parameters cannot be obtained, then default values may be used.In the absence of site-specific silt content information, an appropriate mean value from Table 13.2.2-1 may be used as a default value, but the quality rating of the equation is reduced by two letters. Because of significant differences found between different types of road surfaces and between different areas of the country, use of the default moisture content value of 0.5 percent in Equation 1b is discouraged. The quality rating should be downgraded two letters when the default moisture content value is used. (It is assumed that readers addressing industrial roads have access to the information needed to develop average vehicle information in Equation 1a for their facility.)

The effect of routine watering to control emissions from unpaved roads is discussed below in Section 13.2.2.3, “Controls”. However, all roads are subject to some natural mitigation because of rainfall and other precipitation. The Equation 1a and 1b emission factors can be extrapolated to annual

average uncontrolled conditions (but including natural mitigation) under the simplifying assumption that annual average emissions are inversely proportional to the number of days with measurable (more than 0.254 mm [0.01 inch]) precipitation:

$$E_{ext} = E\ [(365 - P)/365] \quad (2)$$

where:

E_{ext} = annual size-specific emission factor extrapolated for natural mitigation, lb/VMT

E = emission factor from Equation 1a or 1b

P = number of days in a year with at least 0.254 mm (0.01 in) of precipitation (see below)

Figure 13.2.2-1 gives the geographical distribution for the mean annual number of "wet" days for the United States.

Equation 2 provides an estimate that accounts for precipitation on an annual average basis for the purpose of inventorying emissions. It should be noted that Equation 2 does not account for differences in the temporal distributions of the rain events, the quantity of rain during any event, or the potential for the rain to evaporate from the road surface. In the event that a finer temporal and spatial resolution is desired for inventories of public unpaved roads, estimates can be based on a more complex set of assumptions. These assumptions include:

1. The moisture content of the road surface material is increased in proportion to the quantity of water added;
2. The moisture content of the road surface material is reduced in proportion to the Class A pan evaporation rate;
3. The moisture content of the road surface material is reduced in proportion to the traffic volume; and
4. The moisture content of the road surface material varies between the extremes observed in the area. The CHIEF Web site (http://www.epa.gov/ttn/chief/ap42/ch13/related/c13s02-2.html) has a file which contains a spreadsheet program for calculating emission factors which are temporally and spatially resolved. Information required for use of the spreadsheet program includes monthly Class A pan evaporation values, hourly meteorological data for precipitation, humidity and snow cover, vehicle traffic information, and road surface material information.

It is emphasized that the simple assumption underlying Equation 2 and the more complex set of assumptions underlying the use of the procedure which produces a finer temporal and spatial resolution have not been verified in any rigorous manner. For this reason, the quality ratings for either approach should be downgraded one letter from the rating that would be applied to Equation 1.

13.2.2.3 Controls[18-22]

A wide variety of options exist to control emissions from unpaved roads. Options fall into the following three groupings:

1. Vehicle restrictions that limit the speed, weight or number of vehicles on the road;

2. Surface improvement, by measures such as (a) paving or (b) adding gravel or slag to a dirt road; and
3. Surface treatment, such as watering or treatment with chemical dust suppressants.

Available control options span broad ranges in terms of cost, efficiency, and applicability. For example, traffic controls provide moderate emission reductions (often at little cost) but are difficult to enforce. Although paving is highly effective, its high initial cost is often prohibitive. Furthermore, paving is not feasible for industrial roads subject to very heavy vehicles and/or spillage of material in transport. Watering and chemical suppressants, on the other hand, are potentially applicable to most industrial roads at moderate to low costs. However, these require frequent reapplication to maintain an acceptable level of control. Chemical suppressants are generally more cost-effective than water but not in cases of temporary roads (which are common at mines, landfills, and construction sites). In summary, then, one needs to consider not only the type and volume of traffic on the road but also how long the road will be in service when developing control plans.

Vehicle restrictions. These measures seek to limit the amount and type of traffic present on the road or to lower the mean vehicle speed. For example, many industrial plants have restricted employees from driving on plant property and have instead instituted bussing programs. This eliminates emissions due to employees traveling to/from their worksites. Although the heavier average vehicle weight of the busses increases the base emission factor, the decrease in vehicle-miles-traveled results in a lower overall emission rate.

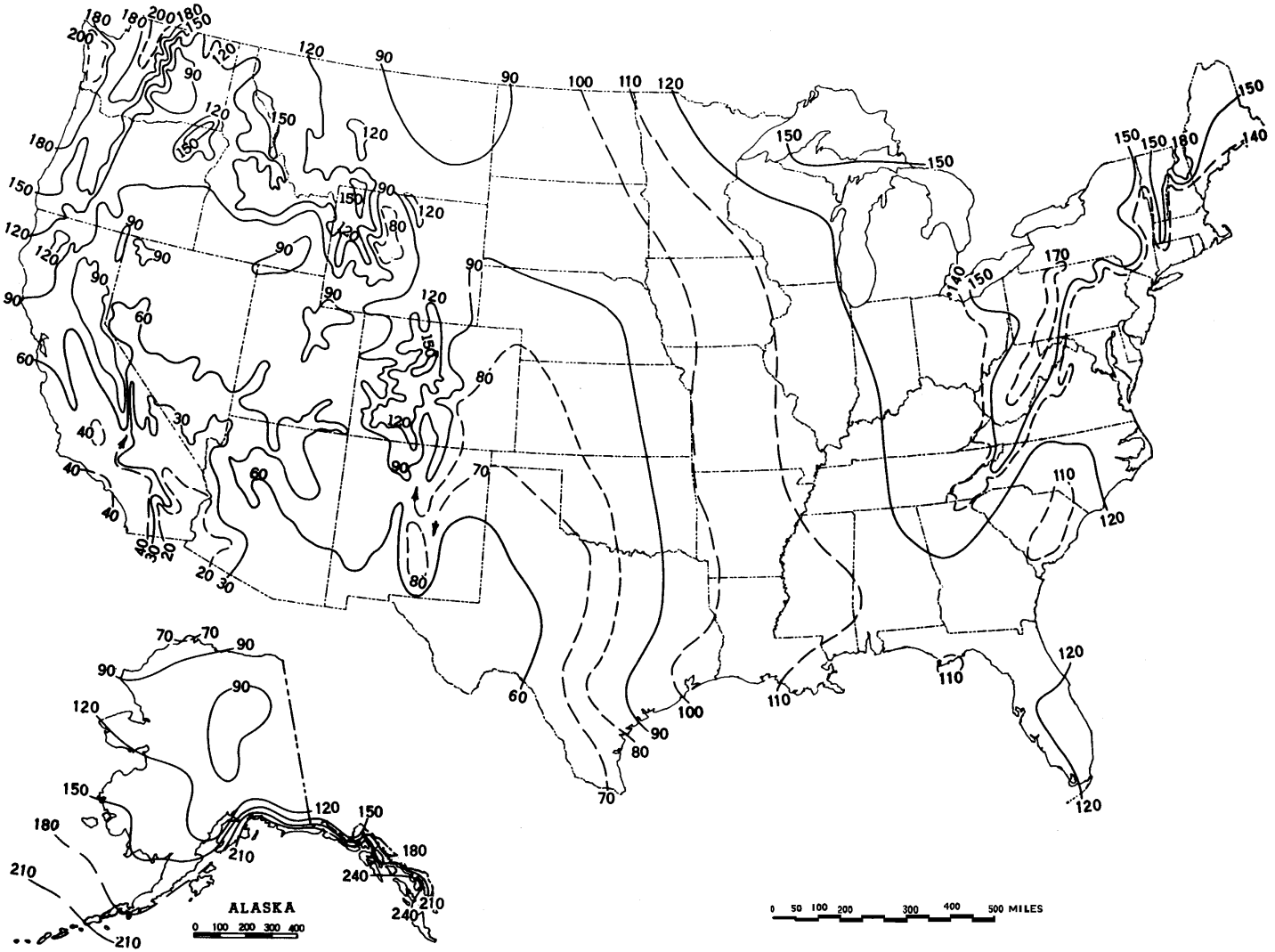


Figure 13.2.2-1. Mean number of days with 0.01 inch or more of precipitation in United States.

Surface improvements. Control options in this category alter the road surface. As opposed to the "surface treatments" discussed below, improvements are relatively "permanent" and do not require periodic retreatment.

The most obvious surface improvement is paving an unpaved road. This option is quite expensive and is probably most applicable to relatively short stretches of unpaved road with at least several hundred vehicle passes per day. Furthermore, if the newly paved road is located near unpaved areas or is used to transport material, it is essential that the control plan address routine cleaning of the newly paved road surface.

The control efficiencies achievable by paving can be estimated by comparing emission factors for unpaved and paved road conditions. The predictive emission factor equation for paved roads, given in Section 13.2.1, requires estimation of the silt loading on the traveled portion of the paved surface, which in turn depends on whether the pavement is periodically cleaned. Unless curbing is to be installed, the effects of vehicle excursion onto unpaved shoulders (berms) also must be taken into account in estimating the control efficiency of paving.

Other improvement methods cover the road surface with another material that has a lower silt content. Examples include placing gravel or slag on a dirt road. Control efficiency can be estimated by comparing the emission factors obtained using the silt contents before and after improvement. The silt content of the road surface should be determined after 3 to 6 months rather than immediately following placement. Control plans should address regular maintenance practices, such as grading, to retain larger aggregate on the traveled portion of the road.

Surface treatments refer to control options which require periodic reapplication. Treatments fall into the two main categories of (a) "wet suppression" (i. e., watering, possibly with surfactants or other additives), which keeps the road surface wet to control emissions and (b) "chemical stabilization/ treatment", which attempts to change the physical characteristics of the surface. The necessary reapplication frequency varies from several minutes for plain water under summertime conditions to several weeks or months for chemical dust suppressants.

Watering increases the moisture content, which conglomerates particles and reduces their likelihood to become suspended when vehicles pass over the surface. The control efficiency depends on how fast the road dries after water is added. This in turn depends on (a) the amount (per unit road surface area) of water added during each application; (b) the period of time between applications; (c) the weight, speed and number of vehicles traveling over the watered road during the period between applications; and (d) meteorological conditions (temperature, wind speed, cloud cover, etc.) that affect evaporation during the period.

Figure 13.2.2-2 presents a simple bilinear relationship between the instantaneous control efficiency due to watering and the resulting increase in surface moisture. The moisture ratio "M" (i.e., the x-axis in Figure 13.2.2-2) is found by dividing the surface moisture content of the watered road by the surface moisture content of the uncontrolled road. As the watered road surface dries, both the ratio M and the predicted instantaneous control efficiency (i.e., the y-axis in the figure) decrease. The figure shows that between the uncontrolled moisture content and a value twice as large, a small increase in moisture content results in a large increase in control efficiency. Beyond that, control efficiency grows slowly with increased moisture content.

Given the complicated nature of how the road dries, characterization of emissions from watered roadways is best done by collecting road surface material samples at various times between water truck passes. (Appendices C.1 and C.2 present the sampling and analysis procedures.) The moisture content measured can then be associated with a control efficiency by use of Figure 13.2.2-2. Samples that reflect average conditions during the watering cycle can take the form of either a series of samples between water applications or a single sample at the midpoint. It is essential that samples be collected during periods with active traffic on the road. Finally, because of different evaporation rates, it is recommended that samples be collected at various times during the year. If only one set of samples is to be collected, these must be collected during hot, summertime conditions.

When developing watering control plans for roads that do not yet exist, it is strongly recommended that the moisture cycle be established by sampling similar roads in the same geographic area. If the moisture cycle cannot be established by similar roads using established watering control plans, the more complex methodology used to estimate the mitigation of rainfall and other precipitation can be used to estimate the control provided by routine watering. An estimate of the maximum daytime Class A pan evaporation (based upon daily evaporation data published in the monthly Climatological Data for the state by the National Climatic Data Center) should be used to insure that adequate watering capability is available during periods of highest evaporation. The hourly precipitation values in the spreadsheet should be replaced with the equivalent inches of precipitation (where the equivalent of 1 inch of precipitation is provided by an application of 5.6 gallons of water per square yard of road). Information on the long term average annual evaporation and on the percentage that occurs between May and October was published in the Climatic Atlas (Reference 16). Figure 13.2.2-3 presents the geographical distribution for "Class A pan evaporation" throughout the United States. Figure 13.2.2-4 presents the geographical distribution of the percentage of this evaporation that occurs between May and October. The U. S. Weather Bureau Class A evaporation pan is a cylindrical metal container with a depth of 10 inches and a diameter of 48 inches. Periodic measurements are made of the changes of the water level.

The above methodology should be used only for prospective analyses and for designing watering programs for existing roadways. The quality rating of an emission factor for a watered road that is based on this methodology should be downgraded two letters. Periodic road surface samples should be collected and analyzed to verify the efficiency of the watering program.

As opposed to watering, chemical dust suppressants have much less frequent reapplication requirements. These materials suppress emissions by changing the physical characteristics of the existing road surface material. Many chemical unpaved road dust suppressants form a hardened surface that binds particles together. After several applications, a treated road often resembles a paved road except that the surface is not uniformly flat. Because the improved surface results in more grinding of small particles, the silt content of loose material on a highly controlled surface may be substantially higher than when the surface was uncontrolled. For this reason, the models presented as Equations 1a and 1b cannot be used to estimate emissions from chemically stabilized roads. Should the road be allowed to return to an

uncontrolled state with no visible signs of large-scale cementing of material, the Equation 1a and 1b emission factors could then be used to obtain conservatively high emission estimates.

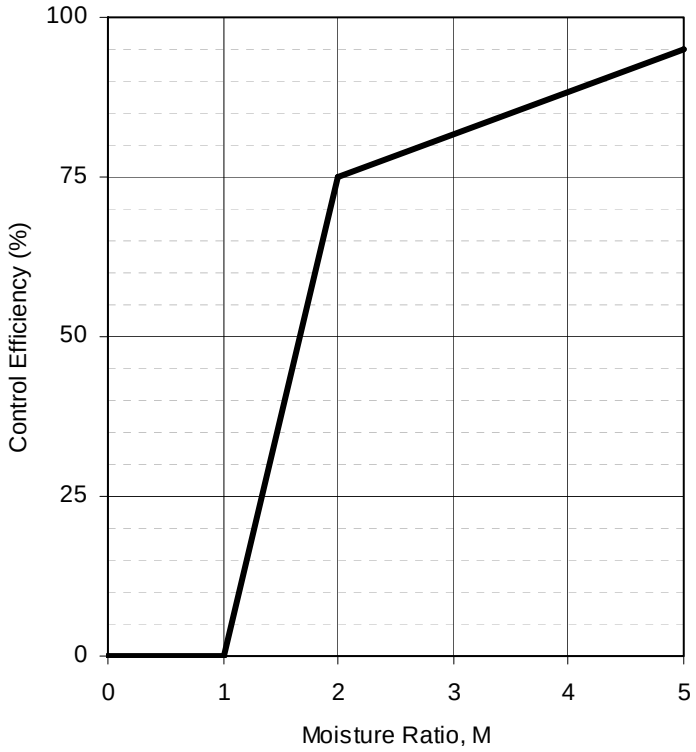


Figure 13.2.2-2. Watering control effectiveness for unpaved travel surfaces

The control effectiveness of chemical dust suppressants appears to depend on (a) the dilution rate used in the mixture; (b) the application rate (volume of solution per unit road surface area); (c) the time between applications; (d) the size, speed and amount of traffic during the period between applications; and (e) meteorological conditions (rainfall, freeze/thaw cycles, etc.) during the period. Other factors that affect the performance of dust suppressants include other traffic characteristics (e. g., cornering, track-on from unpaved areas) and road characteristics (e. g., bearing strength, grade). The variabilities in the above factors and differences between individual dust control products make the control efficiencies of chemical dust suppressants difficult to estimate. Past field testing of emissions from controlled unpaved roads has shown that chemical dust suppressants provide a PM-10 control efficiency of about 80 percent when applied at regular intervals of 2 weeks to 1 month.

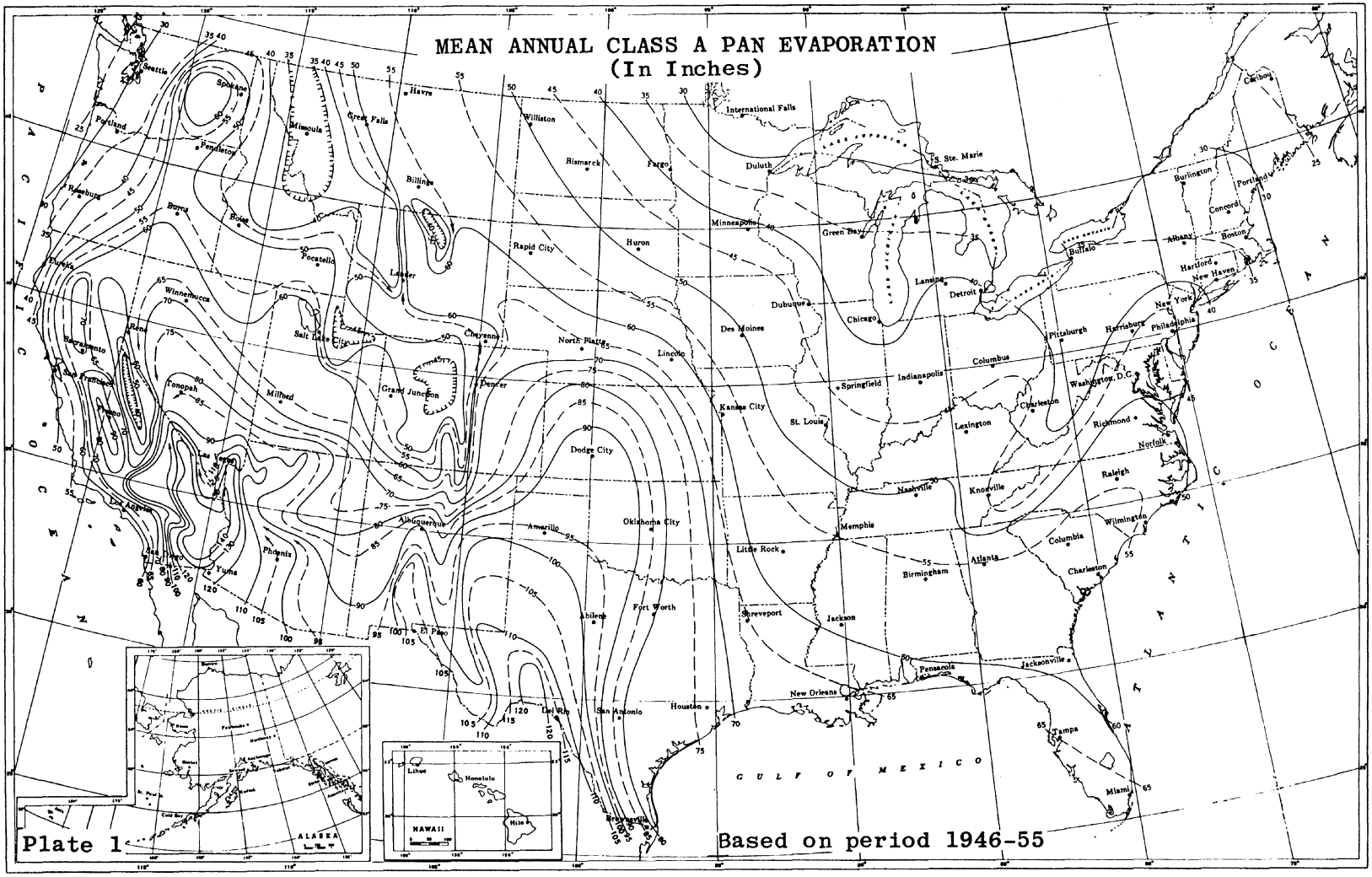


Figure 13.2.2-3. Annual evaporation data.

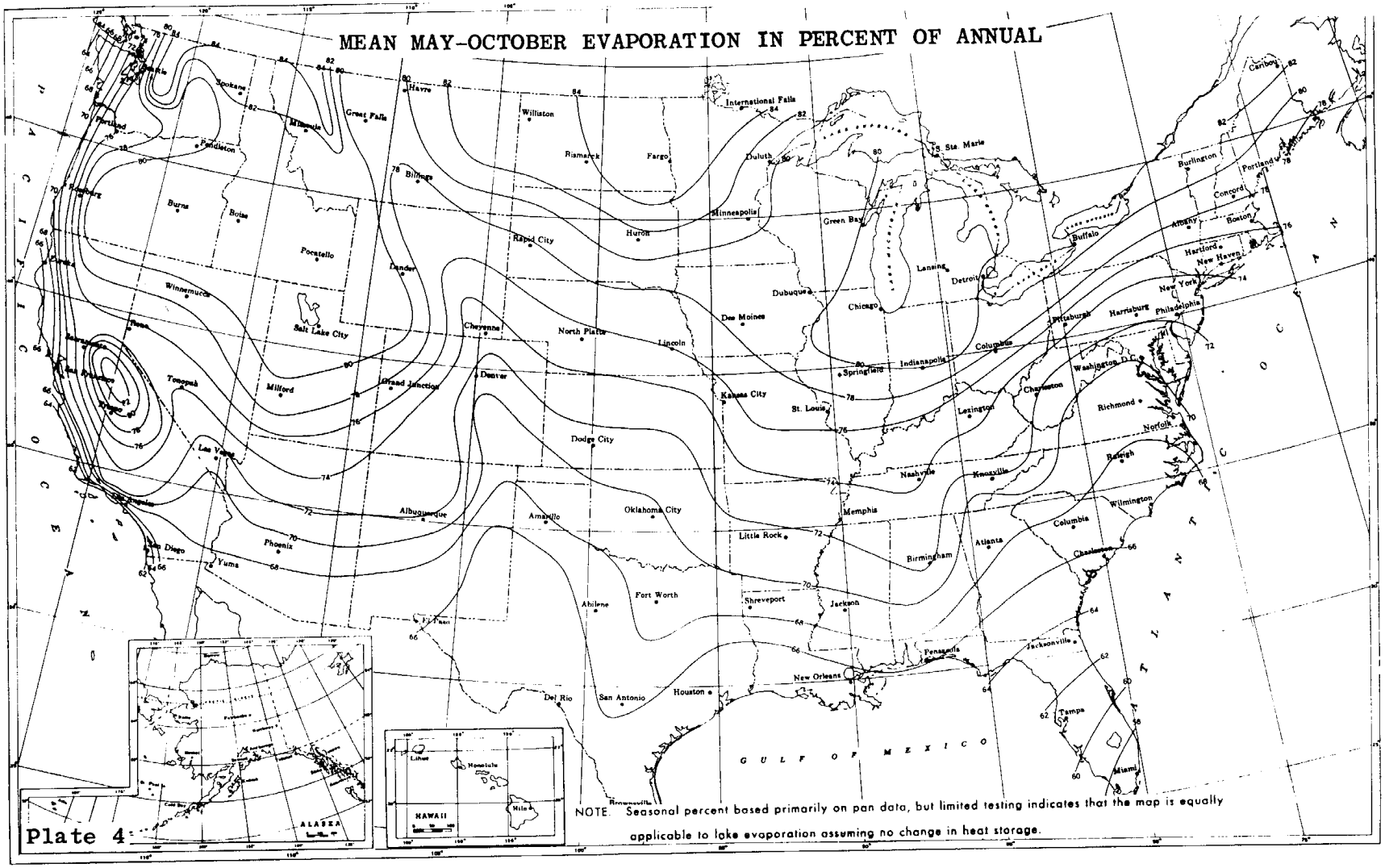


Figure 13.2.2-4. Geographical distribution of the percentage of evaporation occurring between May and October.

Petroleum resin products historically have been the dust suppressants (besides water) most widely used on industrial unpaved roads. Figure 13.2.2-5 presents a method to estimate average control efficiencies associated with petroleum resins applied to unpaved roads.[20] Several items should be noted:

1. The term "ground inventory" represents the total volume (per unit area) of petroleum resin concentrate (*not solution*) applied since the start of the dust control season.

2. Because petroleum resin products must be periodically reapplied to unpaved roads, the use of a time-averaged control efficiency value is appropriate. Figure 13.2.2-5 presents control efficiency values averaged over two common application intervals, 2 weeks and 1 month. Other application intervals will require interpolation.

3. Note that zero efficiency is assigned until the ground inventory reaches 0.05 gallon per square yard (gal/yd^2). Requiring a minimum ground inventory ensures that one must apply a reasonable amount of chemical dust suppressant to a road before claiming credit for emission control. Recall that the ground inventory refers to the amount of petroleum resin concentrate rather than the total solution.

As an example of the application of Figure 13.2.2-5, suppose that Equation 1a was used to estimate an emission factor of 7.1 lb/VMT for PM-10 from a particular road. Also, suppose that, starting on May 1, the road is treated with 0.221 gal/yd^2 of a solution (1 part petroleum resin to 5 parts water) on the first of each month through September. Then, the average controlled emission factors, shown in Table 13.2.2-5, are found.

Table 13.2-2-5. EXAMPLE OF AVERAGE CONTROLLED EMISSION FACTORS FOR SPECIFIC CONDITIONS

Period	Ground Inventory, gal/yd^2	Average Control Efficiency, %[a]	Average Controlled Emission Factor, lb/VMT
May	0.037	0	7.1
June	0.073	62	2.7
July	0.11	68	2.3
August	0.15	74	1.8
September	0.18	80	1.4

[a] From Figure 13.2.2-5, $\leq$10 µm. Zero efficiency assigned if ground inventory is less than 0.05 gal/yd^2. 1 lb/VMT = 281.9 g/VKT. 1 gal/yd^2 = 4.531 L/m^2.

Besides petroleum resins, other newer dust suppressants have also been successful in controlling emissions from unpaved roads. Specific test results for those chemicals, as well as for petroleum resins and watering, are provided in References 18 through 21.

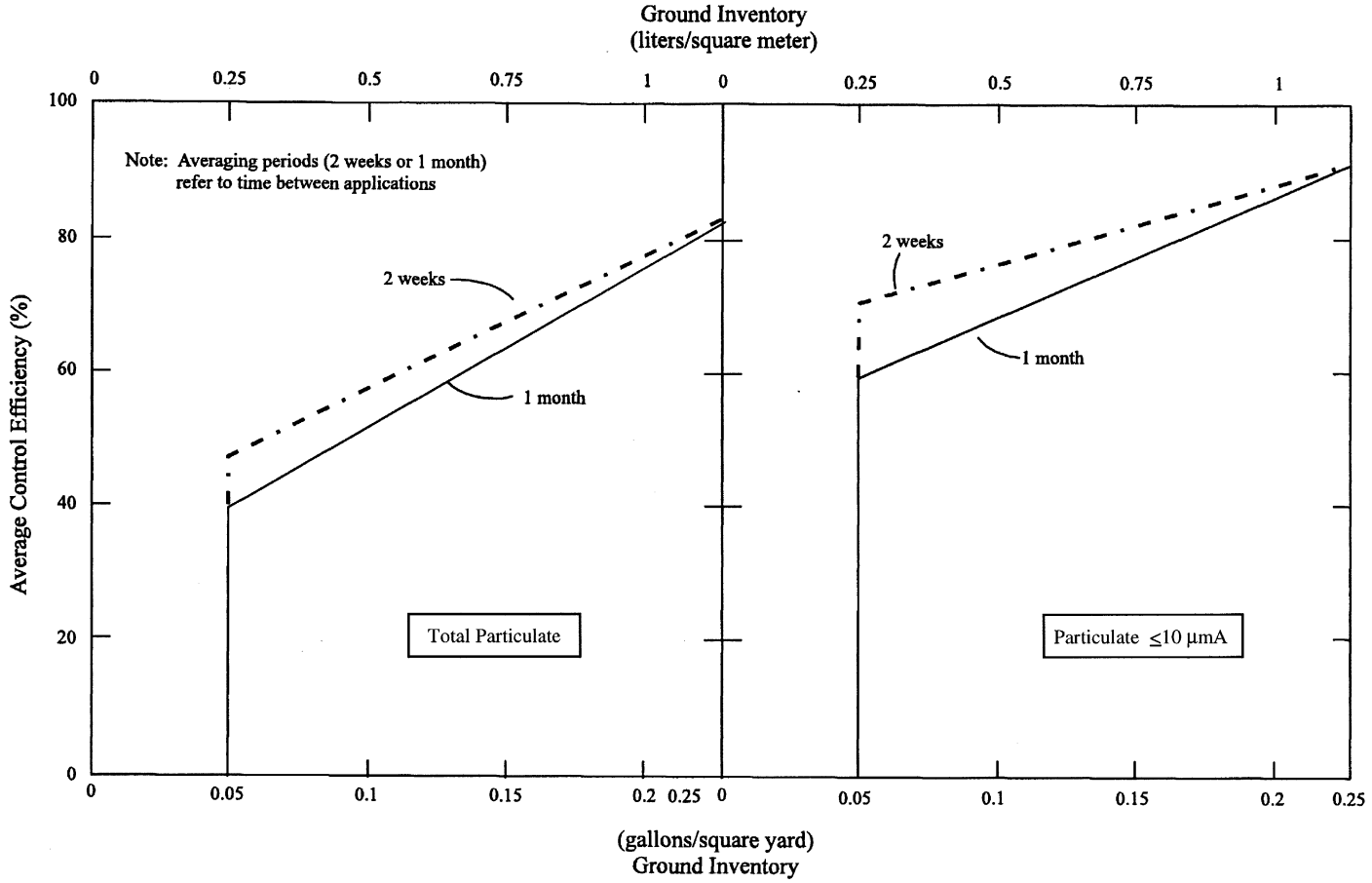


Figure 13.2.2-5. Average control efficiencies over common application intervals.

13.2.2.4 Updates Since The Fifth Edition

The Fifth Edition was released in January 1995. Revisions to this section since that date are summarized below. For further detail, consult the background report for this section (Reference 6).

October 1998 (Supplement E)– This was a major revision of this section. Significant changes to the text and the emission factor equations were made.

October 2001 – Separate emission factors for unpaved surfaces at industrial sites and publicly accessible roads were introduced. Figure 13.2.2-2 was included to provide control effectiveness estimates for watered roads.

December 2003 – The public road emission factor equation (equation 1b) was adjusted to remove the component of particulate emissions from exhaust, brake wear, and tire wear. The parameter C in the new equation varies with aerodynamic size range of the particulate matter. Table 13.2.2-4 was added to present the new coefficients.

January 2006 – The PM-2.5 particle size multipliers (i.e., factors) in Table 13.2.2-2 were modified and the quality ratings were upgraded from C to B based on the wind tunnel studies of a variety of dust emitting surface materials.

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13.2.4 Aggregate Handling And Storage Piles

13.2.4.1 General

Inherent in operations that use minerals in aggregate form is the maintenance of outdoor storage piles. Storage piles are usually left uncovered, partially because of the need for frequent material transfer into or out of storage.

Dust emissions occur at several points in the storage cycle, such as material loading onto the pile, disturbances by strong wind currents, and loadout from the pile. The movement of trucks and loading equipment in the storage pile area is also a substantial source of dust.

13.2.4.2 Emissions And Correction Parameters

The quantity of dust emissions from aggregate storage operations varies with the volume of aggregate passing through the storage cycle. Emissions also depend on 3 parameters of the condition of a particular storage pile: age of the pile, moisture content, and proportion of aggregate fines.

When freshly processed aggregate is loaded onto a storage pile, the potential for dust emissions is at a maximum. Fines are easily disaggregated and released to the atmosphere upon exposure to air currents, either from aggregate transfer itself or from high winds. As the aggregate pile weathers, however, potential for dust emissions is greatly reduced. Moisture causes aggregation and cementation of fines to the surfaces of larger particles. Any significant rainfall soaks the interior of the pile, and then the drying process is very slow.

Silt (particles equal to or less than 75 micrometers [μm] in diameter) content is determined by measuring the portion of dry aggregate material that passes through a 200-mesh screen, using ASTM-C-136 method.[1] Table 13.2.4-1 summarizes measured silt and moisture values for industrial aggregate materials.

Table 13.2.4-1. TYPICAL SILT AND MOISTURE CONTENTS OF MATERIALS AT VARIOUS INDUSTRIES[a]

Industry	No. Of Facilities	Material	Silt Content (%)			Moisture Content (%)		
			No. Of Samples	Range	Mean	No. Of Samples	Range	Mean
Iron and steel production	9	Pellet ore	13	1.3 - 13	4.3	11	0.64 - 4.0	2.2
		Lump ore	9	2.8 - 19	9.5	6	1.6 - 8.0	5.4
		Coal	12	2.0 - 7.7	4.6	11	2.8 - 11	4.8
		Slag	3	3.0 - 7.3	5.3	3	0.25 - 2.0	0.92
		Flue dust	3	2.7 - 23	13	1	—	7
		Coke breeze	2	4.4 - 5.4	4.9	2	6.4 - 9.2	7.8
		Blended ore	1	—	15	1	—	6.6
		Sinter	1	—	0.7	0	—	—
		Limestone	3	0.4 - 2.3	1.0	2	ND	0.2
Stone quarrying and processing	2	Crushed limestone	2	1.3 - 1.9	1.6	2	0.3 - 1.1	0.7
		Various limestone products	8	0.8 - 14	3.9	8	0.46 - 5.0	2.1
Taconite mining and processing	1	Pellets	9	2.2 - 5.4	3.4	7	0.05 - 2.0	0.9
		Tailings	2	ND	11	1	—	0.4
Western surface coal mining	4	Coal	15	3.4 - 16	6.2	7	2.8 - 20	6.9
		Overburden	15	3.8 - 15	7.5	0	—	—
		Exposed ground	3	5.1 - 21	15	3	0.8 - 6.4	3.4
Coal-fired power plant	1	Coal (as received)	60	0.6 - 4.8	2.2	59	2.7 - 7.4	4.5
Municipal solid waste landfills	4	Sand	1	—	2.6	1	—	7.4
		Slag	2	3.0 - 4.7	3.8	2	2.3 - 4.9	3.6
		Cover	5	5.0 - 16	9.0	5	8.9 - 16	12
		Clay/dirt mix	1	—	9.2	1	—	14
		Clay	2	4.5 - 7.4	6.0	2	8.9 - 11	10
		Fly ash	4	78 - 81	80	4	26 - 29	27
		Misc. fill materials	1	—	12	1	—	11

[a] References 1-10. ND = no data.

13.2.4.3 Predictive Emission Factor Equations

Total dust emissions from aggregate storage piles result from several distinct source activities within the storage cycle:

1. Loading of aggregate onto storage piles (batch or continuous drop operations).
2. Equipment traffic in storage area.
3. Wind erosion of pile surfaces and ground areas around piles.
4. Loadout of aggregate for shipment or for return to the process stream (batch or continuous drop operations).

Either adding aggregate material to a storage pile or removing it usually involves dropping the material onto a receiving surface. Truck dumping on the pile or loading out from the pile to a truck with a front-end loader are examples of batch drop operations. Adding material to the pile by a conveyor stacker is an example of a continuous drop operation.

The quantity of particulate emissions generated by either type of drop operation, per kilogram (kg) (ton) of material transferred, may be estimated, with a rating of A, using the following empirical expression:[11]

$$E = k(0.0016) \frac{\left(\frac{U}{2.2}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (kg/megagram [Mg])} \quad (1)$$

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (pound [lb]/ton)}$$

where:

E = emission factor
k = particle size multiplier (dimensionless)
U = mean wind speed, meters per second (m/s) (miles per hour [mph])
M = material moisture content (%)

The particle size multiplier in the equation, k, varies with aerodynamic particle size range, as follows:

Aerodynamic Particle Size Multiplier (k) For Equation 1				
< 30 µm	< 15 µm	< 10 µm	< 5 µm	< 2.5 µm
0.74	0.48	0.35	0.20	0.053[a]

[a] Multiplier for < 2.5 µm taken from Reference 14.

The equation retains the assigned quality rating if applied within the ranges of source conditions that were tested in developing the equation, as follows. Note that silt content is included, even though silt content does not appear as a correction parameter in the equation. While it is reasonable to expect that silt content and emission factors are interrelated, no significant correlation between the 2 was found during the derivation of the equation, probably because most tests with high silt contents were conducted under lower winds, and vice versa. It is recommended that estimates from the equation be reduced 1 quality rating level if the silt content used in a particular application falls outside the range given:

Ranges Of Source Conditions For Equation 1			
Silt Content (%)	Moisture Content (%)	Wind Speed	
		m/s	mph
0.44 - 19	0.25 - 4.8	0.6 - 6.7	1.3 - 15

To retain the quality rating of the equation when it is applied to a specific facility, reliable correction parameters must be determined for specific sources of interest. The field and laboratory procedures for aggregate sampling are given in Reference 3. In the event that site-specific values for

correction parameters cannot be obtained, the appropriate mean from Table 13.2.4-1 may be used, but the quality rating of the equation is reduced by 1 letter.

For emissions from equipment traffic (trucks, front-end loaders, dozers, etc.) traveling between or on piles, it is recommended that the equations for vehicle traffic on unpaved surfaces be used (see Section 13.2.2). For vehicle travel between storage piles, the silt value(s) for the areas among the piles (which may differ from the silt values for the stored materials) should be used.

Worst-case emissions from storage pile areas occur under dry, windy conditions. Worst-case emissions from materials-handling operations may be calculated by substituting into the equation appropriate values for aggregate material moisture content and for anticipated wind speeds during the worst case averaging period, usually 24 hours. The treatment of dry conditions for Section 13.2.2, vehicle traffic, "Unpaved Roads", follows the methodology described in that section centering on parameter p. A separate set of nonclimatic correction parameters and source extent values corresponding to higher than normal storage pile activity also may be justified for the worst-case averaging period.

13.2.4.4 Controls[12-13]

Watering and the use of chemical wetting agents are the principal means for control of aggregate storage pile emissions. Enclosure or covering of inactive piles to reduce wind erosion can also reduce emissions. Watering is useful mainly to reduce emissions from vehicle traffic in the storage pile area. Watering of the storage piles themselves typically has only a very temporary slight effect on total emissions. A much more effective technique is to apply chemical agents (such as surfactants) that permit more extensive wetting. Continuous chemical treating of material loaded onto piles, coupled with watering or treatment of roadways, can reduce total particulate emissions from aggregate storage operations by up to 90 percent.[12]

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8. *Determination Of Fugitive Coal Dust Emissions From Rotary Railcar Dumping*, TRC, Hartford, CT, May 1984.

9. *PM-10 Emission Inventory Of Landfills In the Lake Calumet Area*, EPA Contract No. 68-02-3891, Midwest Research Institute, Kansas City, MO, September 1987.

10. *Chicago Area Particulate Matter Emission Inventory — Sampling And Analysis*, EPA Contract No. 68-02-4395, Midwest Research Institute, Kansas City, MO, May 1988.

11. *Update Of Fugitive Dust Emission Factors In AP-42 Section 11.2*, EPA Contract No. 68-02-3891, Midwest Research Institute, Kansas City, MO, July 1987.

12. G. A. Jutze, *et al., Investigation Of Fugitive Dust Sources Emissions And Control*, EPA-450/3-74-036a, U. S. Environmental Protection Agency, Research Triangle Park, NC, June 1974.

13. C. Cowherd, Jr., *et al., Control Of Open Fugitive Dust Sources*, EPA-450/3-88-008, U. S. Environmental Protection Agency, Research Triangle Park, NC, September 1988.

14. C. Cowherd, *Background Document for Revisions to Fine Fraction Ratios &sed for AP-42 Fugitive Dust Emission Factors*. Prepared by Midwest Research Institute for Western Governors Association, Western Regional Air Partnership, Denver, CO, February 1, 2006.

NEW MEXICO

STATION	Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
ALBUQUERQUE INTL SUNPORT AP (KABQ)	2001-2011	7.0	7.7	8.8	10.4	9.7	9.2	8.1	7.7	7.5	7.3	7.1	6.7	8.1
CARLSBAD-CAVERN CITY AP (KCNM)	2001-2011	8.7	9.7	10.6	11.4	10.1	9.7	7.9	7.2	7.6	8.1	8.3	8.4	9.0
CLAYTON MUNICIPAL AIRPARK AP (KCAO)	2001-2011	11.8	12.3	13.0	14.5	13.4	12.8	11.5	11.1	11.7	12.0	12.4	11.9	12.4
CLINES CORNERS (KCQC)	2001-2011	15.9	15.9	15.7	16.7	14.3	13.0	10.0	10.1	11.2	13.4	14.8	16.3	14.0
DEMING MUNICIPAL AIRPORT (KDMN)	2001-2011	8.1	9.0	9.8	11.0	10.0	9.3	7.9	7.1	7.4	7.4	7.6	7.7	8.5
FARMINGTON-FOUR CORNERS AP (KFMN)	2001-2011	6.6	7.6	8.6	9.8	9.0	8.7	8.1	7.5	7.4	7.3	7.2	7.0	7.9
GALLUP MUNICIPAL AIRPORT (KGUP)	2001-2011	5.1	6.6	8.1	10.5	9.2	8.6	6.6	5.9	6.1	6.1	5.8	5.5	7.0
GRANTS-MILAN MUNI AIRPORT (KGNT)	2001-2011	7.6	8.3	9.2	10.6	9.6	9.0	7.7	6.9	7.4	7.7	7.9	7.5	8.3
LAS VEGAS MUNICIPAL ARPT (KLVS)	2001-2011	10.2	11.6	12.0	14.0	12.5	11.6	9.2	9.1	10.0	10.3	10.7	10.6	11.0
RATON MUNI/CREWS FIELD APT (KRTN)	2001-2011	8.1	9.0	9.9	11.9	10.9	10.0	8.0	7.8	8.2	8.7	8.4	8.1	9.1
ROSWELL INTERNATIONAL AP (KROW)	2001-2011	7.2	8.5	9.5	10.6	9.9	10.0	8.3	7.5	7.7	7.6	7.4	7.0	8.4
SANTA FE MUNICIPAL AIRPORT (KSAF)	2001-2011	8.7	8.7	9.4	10.6	10.3	9.6	8.4	8.1	8.1	8.3	8.3	8.3	8.9
TRUTH OR CONSEQUENCES AP (KTCS)	2001-2011	7.1	8.4	9.6	10.6	10.0	9.2	7.4	7.1	7.0	7.6	7.5	6.9	8.2
TUCUMCARI MUNICIPAL ARPT (KTCC)	2001-2011	9.7	10.4	11.4	13.1	11.8	11.6	9.5	9.2	9.7	9.9	10.3	10.1	10.6

Main Plant Engine

CAT 3516

31-0005

TEST REPORT

FROM ONE

CATERPILLAR B3516
COMPRESSION IGNITION COMBUSTION ENGINE

IN SERVICE AT THE

GCP-2-3164, CRUSH #3

PREPARED FOR

MOUNTAIN STATE CONSTRUCTORS INC.

NEW MEXICO ENVIRONMENT DEPARTMENT
AIR QUALITY BUREAU PERMIT NUMBER
GCP-2-3164

TEST DATE: NOVEMBER 17, 2023

PREPARED BY

COMPLIANCE SERVICES AND TESTING, LLC

PROJECT NUMBER: 2583

COMPLIANCE SERVICES & TESTING
P.O. Box 94191-87199
7108 Washington St. NE
Suite A
Albuquerque, NM 87109
(505) 681-4909 Phone
www.comptesting.com

November 27, 2023

Mr. Neil Jackson
Mountain State Constructors, Inc.
3601 Pan American Freeway, #111
Albuquerque, NM 87107

Re: Emissions testing at the GCP-2-3164, Crush #3

Mr. Jackson,

On November 17, 2023, exhaust emissions testing was performed on a Caterpillar B3516 diesel generator engine in service at the MSCI GCP-2-3164, Crush #3, near Los Lunas, NM. The testing was conducted to determine its compliance status NMED-AQB GCP-2-3164 permit. The generator engine is identified as follows:

Manufacturer	Caterpillar
Model Number	B3516
Unit Number	31-0005
Serial Number	25Z06704
Site Rated Horsepower	2288
Site Rated Kilowatts	1683
Rated Speed	1400

The testing followed procedures found the in the ASTM D6522-00 Performance Testing protocol. The exhaust flow rate for the diesel generator engine was determined by using EPA Method 19. The theoretical moisture content at the observed oxygen concentration was stoichiometrically calculated using Method 19. The mass emission rates are reported in terms of pounds per hour. Three 10-minute Method 9 opacity readings were performed on the engine concurrent with the gaseous test.

The test matrix consisted of three 20-minute test runs on engine exhaust in accordance with 40CFR60.8 requirements. Stack gas entered the system through a stainless-steel probe with an in-line filter. The sample was delivered

Summary of Results
Crusher #3 - Los Lunas - Unit #31-0005

Company: Mountain States Constructors Inc.
Location: Crusher #3 - Los Lunas
Source: Catapillar 3516
Engine Serial Number: 25Z06704
Engine Site Rating: 2288 HP @ 1400 RPM
Generator Rating: 2000 kW @ 1400 RPM
Technician: MM, AB

Test Run Number	***1***	***2***	***3***	
Emission Unit Number	**31-0005**	**31-0005**	**31-0005**	
Date	11/17/23	11/17/23	11/17/23	
Start Time	11:45	12:06	12:27	
Stop Time	12:05	12:26	12:47	
Engine & Generator Operational Parameters				***Average***
Load (%)	19.6	20.0	20.2	**19.9**
Calculated Horsepower (Hp)	448.0	457.3	462.9	**456.1**
Generator Wattage (kW)	612	614	619	**615.0**
Voltage (V)	482	482	482	**482.0**
Amperage (A) (3 phase)	1270	1273	1285	**1276.0**
Power Factor	1	1	1	**1.00**
Frequency (Hz)	60.0	60.1	59.9	**60.0**
Fuel Data				
Calculated Fuel Consumption (Gal/Hr)	24.0	24.5	24.8	**24.4**
O2 F-Factor (DSCF/MMBtu, HHV basis)	9,190	9,190	9,190	**9,190**
Fuel Heating Value (Btu/gal, HHV)	140,000	140,000	140,000	**140,000**
BHp Specific Fuel Rate (Btu/Hp-hr, HHV basis)	7,500	7,500	7,500	**7,500**
Ambient Conditions				
Pressure Altitude (MSL)	5375	5375	5375	**5375**
Atmospheric Pressure ("Hg)	24.57	24.57	24.57	**24.57**
Dry Bulb Temperature (°F)	71.8	72.0	72.3	**72.0**
Wet Bulb Temperature (°F)	52.7	52.5	52.7	**52.6**
Humidity (lb/lb air)	0.0058	0.0056	0.0056	**0.0057**
Measured Exhaust Emissions				
NOx (ppmv)	653.26	659.37	694.93	**669.19**
CO (ppmv)	172.00	168.19	173.71	**171.30**
O2 (vol %)	14.60	14.96	14.57	**14.71**
CO2 (vol % - Calculated from Fo = 1.36)	4.63	4.37	4.66	**4.55**
Opacity (%) **{Limit = 10%}**	6.00	5.50	5.90	**5.80**
Exhaust Flow Rates				
Dry Standard Cubic Feet per Minute	1,708.46	1,847.16	1,755.19	**1,770.27**
Dry Standard Cubic Feet per Hour	102,508	110,830	105,311	**106,216**
Calculated Mass Emission Rates				
NOx (lbs/hr)	8.00	8.73	8.74	**8.49**
CO (lbs/hr)	1.28	1.36	1.33	**1.32**
NOx (tons/yr) **{4380 hours/year}**	17.52	19.11	19.14	**18.59**
CO (tons/yr) **{4380 hours/year}**	2.81	2.97	2.91	**2.90**

CATERPILLAR®

GEN SET PACKAGE PERFORMANCE DATA [25Z06704]

MAY 31, 2023

For Help Desk Phone Numbers Click here

Performance Number: DM0319

Change Level: 07

Sales Model: 3516 DITA
Combustion: DI
Aspr: TA
Engine Power:
1600 W/F EKW
1635 W/O F EKW
2,304 HP
Speed: 1,800 RPM
After Cooler: JWAC
Manifold Type: DRY
Governor Type: WDWRD
After Cooler Temp(F): 180
Turbo Quantity: 4
Engine App: GP
Turbo Arrangement: Parallel
Hertz: 60
Application Type: PACKAGE-DIE
Engine Rating: PGS
Strategy:
Rating Type: PRIME
Certification:

General Performance Data

GEN W/F EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
1,600	100	2288	239.17	0.35	114.52	202.64	61.98	5,265.42	1,177.34	939.92	14,302.45
1,440	90	2063	215.67	0.35	104.06	198.68	55.11	4,922.87	1,127.3	922.28	13,193.57
1,280	80	1840	192.32	0.36	93.6	194.9	48.15	4,587.38	1,078.7	900.68	12,091.75
1,200	75	1729	180.72	0.36	88.26	193.28	44.66	4,428.46	1,054.58	885.2	11,530.25
1,120	70	1618	168.97	0.36	82.92	191.48	41.19	4,262.48	1,030.46	869.72	10,965.21
960	60	1396	145.91	0.36	72.59	186.8	34.41	3,891.68	982.04	839.3	9,806.89
800	50	1176	122.85	0.37	62.29	180.32	27.93	3,520.88	932.9	809.06	8,634.44
640	40	960	100.37	0.38	52.12	170.6	22.06	3,164.2	879.08	764.96	7,472.59
480	30	740	77.31	0.39	41.69	159.44	16.67	2,800.46	812.12	703.04	6,275.42
400	25	628	65.7	0.41	36.38	153.68	14.18	2,616.82	773.6	667.4	5,671.54
320	20	515	53.81	0.42	31.12	149.36	11.87	2,429.65	729.68	629.06	5,071.19
160	10	286	29.88	0.52	21.11	149	7.88	2,048.25	618.62	544.64	3,944.65

MECHANICAL Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
1,600	100	92	94	103	94	86	84	84	82	86
1,440	90	92	94	103	94	86	84	84	82	86
1,280	80	92	94	103	94	86	84	84	82	86
1,200	75	92	94	103	94	86	84	84	82	86
1,120	70	92	94	103	94	86	84	84	82	86
960	60	92	94	103	94	86	84	84	82	86
800	50	92	94	103	94	86	84	84	82	86
640	40	92	94	103	94	86	84	84	82	86
480	30	92	94	103	94	86	84	84	82	86
400	25	92	94	103	94	86	84	84	82	86
320	20	92	94	103	94	86	84	84	82	86
160	10	91	94	103	94	86	82	82	80	84

EMISSIONS DATA

Certification:

To properly apply this data you must refer to performance parameter DM1176 for additional information...

REFERENCE EXHAUST STACK DIAMETER	12 IN
WET EXHAUST MASS	23,986.3 LB/HR
WET EXHAUST FLOW (939.20 F STACK TEMP)	14,313.05 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	5,030.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	4,608.57 STD CFM
FUEL FLOW RATE	114 GAL/HR

RATED SPEED "Potential site variation"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
1,600	100	2288	62.5600	12.3100	.8800	1.1100	9.9000	5.9000	1.4700
1,200	75	1729	56.0600	7.4100	1.2700	.7100	11.2000	3.6000	1.3000
800	50	1176	40.6900	4.2300	1.2700	.6200	12.2000	2.9000	1.3100
400	25	628	20.2800	2.8800	1.0700	.5500	13.8000	2.5000	1.3000
160	10	286	11.1100	3.3000	1.2400	.7000	16.0000	3.8000	1.2900

RATED SPEED "Nominal Data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
1,600	100	2288	52.1400	6.8400	.6600	2,439.6	.7900	9.9000	5.9000	1.4700
1,200	75	1729	46.7100	4.1200	.9600	1,868	.5100	11.2000	3.6000	1.3000
800	50	1176	33.9100	2.3500	.9600	1,317.9	.4400	12.2000	2.9000	1.3100
400	25	628	16.9000	1.6000	.8000	771.8	.4000	13.8000	2.5000	1.3000
160	10	286	9.2600	1.8300	.9300	442.4	.5000	16.0000	3.8000	1.2900

Pit #1 Plant Engine

CAT 3512

31-0002

EMISSIONS DATA [24Z09726] ***JANUARY 15, 2019***

For Help Desk Phone Numbers Click here (/tmi/tmihome/TMIContactInfo.htm)

TMI Emissions Data Survey (https://www.caterpillarsurveys.com/se.aspx?s=4F5AA3C87FC94347)

Emissions Certificates Search (https://dealer.cat.com/en/products/standards-regulations/emissions-certificates.html)

Engine Emissions Data

For Emissions / Certification feedback and questions, please submit a ticket via our ERC Request Portal (https://ercrequestspilotprogram.atlassian.net/servicedesk/customer/portal/2)

This emission data is Caterpillar's best estimate for this rating. If actual emissions are required then an emission test needs to be run on your engine.

Serial Number (Machine)	
Serial Number (Engine)	**24Z09726**
Sales Model	3512
Regulatory Build Date	01-JUN-2000
As Shipped Data	
Engine Arrangement Number	2W8405
Certification Arrangement	
Test Spec Number	0T6411

Regulatory Status	Please Contact Engine Certification using Request portal (https://ercrequestspilotprogram.atlassian.net/servicedesk/customer/portal/2/create/25)
Current Flash file	No Flash File Found
CORR FL Power at RPM	1,604 HP (1,196.0 KW)1800 RPM
Advertised Power	1,447 HP 1,800RPM

Disclaimer: The information provided has been compiled from third party sources and is accurate to the best of Caterpillar's knowledge. However, Caterpillar cannot guarantee the accuracy, completeness, or validity of the information and is not liable for any errors or omissions contained therein. All information provided should be independently verified and confirmed, including by examining the emissions label located on the engine.

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INITIAL COMPLIANCE TEST REPORT

FROM ONE

CATERPILLAR 3512

RECIPROCATING INTERNAL COMBUSTION ENGINE

IN SERVICE AT THE

MSCI HMA #3

PREPARED FOR

MOUNTAIN STATES CONSTRUCTORS

NEW MEXICO ENVIRONMENT DEPARTMENT
AIR QUALITY BUREAU PERMIT NUMBERS
GCP-3-8180

TEST DATE: FEBRUARY 25, 2019

PREPARED BY

COMPLIANCE SERVICES AND TESTING, LLC

PROJECT NUMBER: 1899

COMPLIANCE SERVICES & TESTING
P.O. Box 94191-87199
7108 Washington St. NE
Suite A
Albuquerque, NM 87109
(505) 681-4909 Phone
www.comptesting.com

March 1, 2019

Mr. Henry Smith
Mountain States Constructors
3601 Pan American Frwy NE #111
Albuquerque, NM 87107

Re: Emissions testing at MSCI HMA #3

Mr. Smith,

On February 25, 2019, exhaust emissions testing was performed on a Caterpillar 3512 engine in service at the MSCI HMA #3. The engine is used to power the plant. The testing was conducted to determine its compliance status NMED-AQB GCP-3-8180 permit. The generator engine is identified as follows:

Engine Information	
Manufacturer	Caterpillar
Model Number	3512
Unit Number	31-0002
Serial Number	24Z09726
Rated Kilowatt	1000
Rated Speed	1800

The testing followed procedures found the in NMED "ASTM D6522-00 Performance Testing." The mass emission rates were calculated using the exhaust concentrations and the exhaust flow rate determined by EPA Method 2 (velocity head pressures). The theoretical moisture content at the observed oxygen concentration was stoichiometrically calculated using Method 19.
The exhaust flow rates are in terms of pounds per hour and tons per year. Three 10-minute Method 9 opacity readings were performed on the engine.

The test matrix consisted of three 20-minute test runs on engine exhaust in accordance with 40CFR60.8 requirements. Stack gas entered the system through a stainless-steel probe with an in-line filter. The sample was delivered

Summary of Results
Unit #: 31-0002

Company: Mountain States Constructors
Location: MSCI HMA #3
Source: Caterpillar 3512 SN: 24Z09726
Engine Site Rating: 1341 Hp @ 1800 RPM
Generator Rating: 1000 KW @ 1800 RPM
Technician: JC

Test Run Number	***1***	***2***	***3***	
Unit Number	**31-0002**	**31-0002**	**31-0002**	
Date	2/25/19	2/25/19	2/25/19	
Start Time	12:10	12:35	13:00	
Stop Time	12:30	12:55	13:20	
Engine/Compressor Operation				***Average***
Engine Speed (rpm)	1800	1800	1800	**1800**
Load (%)	93	93	93	**93**
Engine Horsepower (Hp)	1247	1247	1247	**1247**
Generator Wattage (kW)	930	930	930	**930**
Voltage (V)	480.0	480.0	480.0	**480.0**
Amperage (A) (3 phase)	1120	1120	1120	**1120.0**
Frequency (Hz)	60	60	60	**60.0**
Fuel Data				
Calculated Fuel Consumption (Gal/Hr)	77.9	77.9	77.9	**77.9**
O2 F-Factor (DSCF/MMBtu, HHV basis)	9190	9190	9190	**9190**
Fuel Heating Value (Btu/gal, HHV)	136000	136000	136000	**136000**
BHp Specific Fuel Rate (Btu/Hp-hr, HHV basis)	8500	8500	8500	**8500**
Ambient Conditions				
Pressure Altitude (MSL)	5220	5220	5220	**5220**
Atmospheric Pressure ("Hg)	24.72	24.72	24.72	**24.72**
Dry Bulb Temperature (°F)	49.0	52.0	53.0	**51.3**
Wet Bulb Temperature (°F)	39.3	41.3	41.6	**40.7**
Humidity (lb/lb air)	0.0039	0.0041	0.0040	**0.0040**
Measured Exhaust Emissions (Corrected)				***Average***
NOx (ppmv)	1129.00	962.96	973.99	**1021.98**
CO (ppmv)	600.13	572.16	584.82	**585.71**
O2 (vol %)	8.23	8.15	8.16	**8.18**
CO2 (vol %)	9.34	9.35	9.38	**9.36**
Fo (Distillate #2 Fuel Oil)	1.36	1.36	1.36	**1.36**
Opacity (%) **{Limit = 7%}**	5.0	5.0	5.0	**5.0**
Exhaust Flow Rates (EPA Method 2)				
SCF/Min (dry basis, calc. from meas. stack velocity)	863.9	869.4	878.1	**870.5**
SCF/Hr (dry basis, calc. from meas. stack velocity)	51,834	52,165	52,685	**52,228**
Calculated Mass Emission Rates (Pitot Tube: EPA Method 2)				
NOx (lbs/hr)	6.99	6.00	6.13	**6.37**
CO (lbs/hr)	2.26	2.17	2.24	**2.22**
*NOx (tons/yr) **{Facility Wide Limit = 95}**	30.61	26.28	26.84	**27.91**
*CO (tons/yr) **{Facility Wide Limit = 95}**	9.91	9.50	9.81	**9.74**

***Based upon 8760 hours/year.**

GEN SET PERFORMANCE DATA [24Z09726]

JANUARY 15, 2019

For Help Desk Phone Numbers Click here

Performance Number: TM8946 **Change Level:** 12

Sales Model: 3512 DITA **Combustion:** DI **Aspr:** TA
Engine Power:
1010 W/O F EKW 1,447 HP **Speed:** 1,800 RPM **After Cooler:** JWAC
Manifold Type: DRY **Governor Type:** WDWRD **After Cooler Temp(F):** 180
Turbo Quantity: **Engine App:** GS **Turbo Arrangement:**
Hertz: 60 **Application Type:** GEN SET-DIE **Engine Rating:** GS **Strategy:**
Rating Type: PRIME **Certification:**

General Performance Data

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
1,010	100	1430	199.28	0.35	70.59	190.4	52.47	3,238.36	1,114.34	854.78	8,267.17
909	90	1285	179.12	0.35	63.93	187.52	45.31	2,984.09	1,074.02	844.88	7,557.35
808	80	1142	159.11	0.35	57.43	185.36	38.5	2,743.95	1,037.3	832.1	6,875.77
757.5	75	1070	149.1	0.35	54.21	184.28	35.15	2,623.88	1,019.66	825.26	6,540.28
707	70	999	139.24	0.36	51.01	183.38	31.89	2,507.34	1,002.2	817.7	6,208.32
606	60	857	119.51	0.36	44.7	181.58	25.56	2,277.8	967.46	800.42	5,555
505	50	717	99.79	0.38	38.41	179.06	19.4	2,044.72	923	780.62	4,905.21
404	40	579	80.79	0.39	32.33	176.72	13.77	1,825.77	867.2	754.52	4,280.14
303	30	439	61.21	0.42	26.15	174.2	8.44	1,606.82	798.26	720.32	3,655.07
252.5	25	368	51.34	0.44	23.04	172.94	6.19	1,515	755.06	691.16	3,358.43
202	20	296	41.19	0.47	19.89	171.86	4.26	1,437.31	705.2	652.46	3,079.44
101	10	150	20.89	0.63	13.58	170.06	1.15	1,306.64	588.74	555.26	2,539.13

Engine Heat Rejection Data

GEN PWR EKW	PERCENT LOAD	REJ TO JW BTU/MN	REJ TO ATMOS BTU/MN	REJ TO EXHAUST BTU/MN	EXH RCOV TO 350F BTU/MN	FROM OIL CLR BTU/MN	FROM AFT CLR BTU/MN	WORK ENERGY BTU/MN	LHV ENERGY BTU/MN	HHV ENERGY BTU/MN
1,010	100	36,226.1	6,653.8	58,121.0	30,596.0	8,075.5	7,620.6	60,680.2	151,501.4	161,396.7
909	90	32,700.2	6,426.3	52,604.6	27,581.9	7,336.2	5,743.9	54,481.3	137,227.0	146,155.6
808	80	29,288.0	6,198.8	47,315.7	24,624.7	6,540.0	4,094.6	48,396.3	123,237.0	131,312.5
757.5	75	27,581.9	6,085.1	44,756.6	23,202.9	6,198.8	3,412.2	45,382.2	116,355.8	123,976.3
707	70	25,932.7	6,028.2	42,197.4	21,781.2	5,800.7	2,729.8	42,368.1	109,474.5	116,640.1
606	60	22,634.2	5,800.7	37,192.9	18,994.5	5,118.3	1,592.4	36,339.9	95,882.6	102,138.3
505	50	19,449.5	5,573.2	32,245.2	16,264.8	4,379.0	625.6	30,368.5	82,404.5	87,807.1
404	40	16,321.7	5,402.6	27,581.9	13,535.0	3,696.5	-170.6	24,567.8	69,381.3	73,930.8
303	30	13,193.8	5,175.2	22,804.8	10,862.2	3,014.1	-739.3	18,653.3	56,130.6	59,770.2
252.5	25	11,601.5	5,061.4	20,416.3	9,383.5	2,616.0	-966.8	15,582.3	49,419.9	52,661.5
202	20	10,009.1	4,947.7	18,027.8	7,791.2	2,274.8	-1,137.4	12,568.2	42,709.3	45,495.9
101	10	6,767.5	4,720.2	13,193.8	4,720.2	1,535.5	-1,364.9	6,369.4	29,117.4	31,051.0

REFERENCE EXHAUST STACK DIAMETER	10 IN
WET EXHAUST MASS	14,762.1 LB/HR
WET EXHAUST FLOW (854.60 F STACK TEMP)	8,274.23 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	3,091.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	2,831.53 STD CFM
FUEL FLOW RATE	70 GAL/HR

RATED SPEED "Potential site variation"

EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
1,010	100	1430	35.5200	5.1800	1.2100	.6200	11.6000	2.8000	1.2800
757.5	75	1285	26.8200	3.3100	1.3000	.5200	12.3000	2.9000	1.2900
505	50	1142	17.6900	2.6400	1.1300	.7100	13.0000	3.3000	1.3000
252.5	25	1070	9.1300	2.7500	1.1500	.7300	14.2000	4.8000	1.4200
101	10	999	4.6200	3.1100	1.3200	.5400	15.4000	5.9000	1.5300

RATED SPEED "Nominal Data"

EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
1,010	100	1430	29.6000	2.8800	.9100	1,609.4	.4400	11.6000	2.8000	1.2800
757.5	75	1070	22.3500	1.8400	.9800	1,220.4	.3700	12.3000	2.9000	1.2900
505	50	717	14.7400	1.4700	.8500	863.5	.5100	13.0000	3.3000	1.3000
252.5	25	368	7.6100	1.5300	.8600	512.9	.5200	14.2000	4.8000	1.4200
101	10	150	3.8500	1.7300	.9900	296.4	.3800	15.4000	5.9000	1.5300

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp. / Altitude	50 F	68 F	86 F	104 F	122 F	NORMAL
0 FT	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp
984.25 FT	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp
1,640.42 FT	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp
3,280.84 FT	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp
4,921.26 FT	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp
6,561.68 FT	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,446.96 hp	1,404.05 hp	1,446.96 hp
8,202.1 FT	1,446.96 hp	1,446.96 hp	1,406.73 hp	1,361.14 hp	1,319.56 hp	1,446.96 hp
9,842.52 FT	1,413.44 hp	1,365.16 hp	1,320.9 hp	1,277.99 hp	1,239.1 hp	1,409.41 hp
10,498.69 FT	1,378.57 hp	1,331.63 hp	1,287.38 hp	1,245.81 hp	1,206.92 hp	1,379.91 hp

Pit #2 Plant Engine

CAT 3512

31-0004

ENGINE TEST [6WN00526]

SEPTEMBER 24, 2025

For Help Desk Phone Numbers Click here

Notice: TMI is moving location November 2025. If you link to TMI your link may break.Notify Shane Gilles with your current URL so we can advise of a new URL.

Sales Model: 3512B
TMI Load Date: 22Mar2000
Built Date: 20Mar2000
Shipped Date: 28Mar2000
Plant: Lafayette

Tested Date: 22Mar2000
Tested: B
Cell Number: 510

Show 50 **entries** **Search:**

Test Element	Eng Updates	Test Value	Test Spec Value	Measure
Spec Number		2T8373	2T8373	
Arrangement Number		1282846	1282846	
Corr Fl Power		2,233	2,215	HP
Speed		1,800	1,800	RPM
COR FL FUEL RATE		109.5	108.7	GAL/HR
CSFC		0.347	0.349	LB/HP-HR
Adj Boost		83.6	83.2	IN HG
Fuel Pressure		65	66	PSI
Oil Pressure		57	55	PSI
TQ COR FUEL RATE		107.9	108.4	GAL/HR
TQ CK CSFC		0.344	0.345	LB/HP-HR
TQ CK ADJ BST		83.5	82.9	IN HG
Torq Ck Speed		1,700	1,700	RPM
TQ CK COR TQ		6,857	6,780	LB.FT
Low Idle Speed		900	900	RPM
Low Idle Oil Pressure		55	52	PSI
High Idle Speed		1,818	1,818	RPM
FL Static Fuel Setting		1.024	1.024	IN
FT Static Fuel Setting		1.039	1.039	IN
Full Load Setting(FLS) Intercept		0	0	
Full Torque Setting(FTS) Slope		0	0	

Showing 1 to 21 of 21 entries Previous 1 Next

	Value	Unit
Advertised Power	2,172	HP
Advertised Speed	1,800	RPM

Caterpillar Confidential: **Green**
Content Owner: Commercial Processes Division
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SOURCE TEST REPORT
2021 PERFORMANCE EMISSIONS TESTING
MOUNTAIN STATES CONSTRUCTORS, INC.
ONE CATERPILLAR 3512B GENERATOR
ALBUQUERQUE, NEW MEXICO

Prepared For:

Mountain States Constructors, Inc.
3601 Pan American Freeway, Suite 111
Albuquerque, NM 87107

For Submittal To:

New Mexico Air Quality Bureau
525 Camino De Los Marquez, Suite 1
Santa Fe, NM 87505

Prepared By:

Montrose Air Quality Services, LLC
3001 South 35th Street, Suite C-2
Phoenix, AZ 85034

Document Number:	**W007AS-009878-RT-2652**
Test Date:	**July 8, 2021**
Submittal Date:	**August 2, 2021**

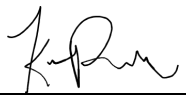
REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature: Jeff Hogan Date: 08 / 02 / 2021

Name: Jeff Hogan Title: District Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  Date: 08 / 02 / 2021

Name: Katie Resch Title: Reporting Hub Manager

1.0 INTRODUCTION

1.1 SUMMARY OF TEST PROGRAM

Mountain States Constructors, Inc (MSC) contracted Montrose Air Quality Services, LLC (Montrose) to perform an emissions test program on the sources listed in Table 1-1 at the facility located in Albuquerque, NM. The tests were conducted to determine compliance with the emission limits/source testing requirements of the New Mexico Environmental Department Air Quality Bureau (NMED) NSR Permit No. GCP-2-Rev.3.

The specific objectives were to measure the following parameters:

- Emission Compliance:
  - o CO, NO_x, (ppm volume dry, ton/yr)
  - o Opacity
- O_2 and CO_2 (% volume dry) – for molecular weight & dilution calculations
- Volumetric Flow Rate (dscfm) & Moisture Content (%)

Montrose performed the tests according to the schedule presented in Table 1-1.

TABLE 1-1
SUMMARY OF TEST PROGRAM

Test Date	Unit ID/ Source Name	Activity/ Parameters	Test Methods	No. of Runs	Duration (Minutes)
7/8/2021	31-004	O_2, CO_2	EPA 3A	3	60
		Volumetric Flow Rate	EPA 1 & 2		
		Moisture	EPA 4		
		NO_x	EPA 7E		
		CO	EPA 10		
		Opacity	EPA 9	3	10

To simplify this report, a list of Units and Abbreviations is included in Appendix C.1. Throughout this report, chemical nomenclature, acronyms, and reporting units are not defined. Please refer to the list for specific details.

This report presents the test results and supporting data, descriptions of the testing procedures, descriptions of the facility and sampling locations, and a summary of the quality assurance procedures used by Montrose. The average emission test results are summarized and compared to their respective permit limits in Table 1-2. Detailed results for individual test runs can be found in Section 4.0. All supporting data can be found in the appendices.

The testing was conducted by the Montrose personnel listed in Table 1-3. The tests were conducted according to the Universal Stack Test Protocol Form dated June 8, 2021 that was submitted via email to the NMED (Stacktest.aqb@state.nm.us).

TABLE 1-2
SUMMARY OF AVERAGE COMPLIANCE RESULTS
UNIT 31-004
JULY 8, 2021

Parameter/Units	31-004	Emission Limits
Carbon Monoxide (CO)		
ppmvd	287.1	--
lb/hr	4.3	--
tons/yr	6.41	95.0
Nitrogen Oxides (NO_x as NO_2)		
ppmvd	1,108	--
lb/hr	27.1	--
tons/yr	40.6	95.0
Opacity		
%	5.5	20

Note: Tons/year calculations are based on generator operating for no more than 3,000 hours a year.

CATERPILLAR®

GEN SET PACKAGE PERFORMANCE DATA [6WN00526]

SEPTEMBER 17, 2020

For Help Desk Phone Numbers Click here

Performance Number: DM2053

Change Level: 09

Sales Model: 3512BDITA **Combustion:** DI **Aspr:** TA

Engine Power:
1500 W/F EKW 1545 W/O F EKW
2,172 HP

Speed: 1,800 RPM **After Cooler:** JWAC

Manifold Type: DRY **Governor Type:** ADEM **After Cooler Temp(F):** 194

Turbo Quantity: 4 **Engine App:** GP **Turbo Arrangement:** Parallel

Hertz: 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:** Low BSFC Strategy

Rating Type: **Certification:** N-C 1970 - 2100

General Performance Data

GEN W/F EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
1,500	100	2153	299.94	0.35	107.86	224.24	79.54	4,428.46	1,293.98	943.52	12,183.57
1,350	90	1940	270.21	0.35	96.85	221.72	73.62	4,230.7	1,231.34	887.72	11,152.38
1,200	80	1728	240.77	0.35	85.27	218.3	66.13	3,955.25	1,166.9	826.52	9,930.49
1,125	75	1623	226.12	0.34	79.57	217.04	61.95	3,789.27	1,143.14	796.28	9,287.77
1,050	70	1517	211.32	0.34	73.41	214.52	55.14	3,559.72	1,109.48	765.32	8,503.78
900	60	1307	182.17	0.34	63.8	211.1	43.95	3,107.69	1,056.02	740.66	7,257.17
750	50	1099	153.02	0.35	54.71	208.04	34.35	2,705.11	1,004.72	721.4	6,190.67
600	40	895	124.59	0.36	46.02	205.16	26.24	2,351.96	954.68	702.5	5,283.08
450	30	688	95.87	0.38	37.35	202.1	19.31	2,034.13	903.74	683.42	4,495.56
375	25	584	81.37	0.4	33.05	200.66	16.29	1,892.87	878.18	673.7	4,149.48
300	20	479	66.72	0.42	28.72	199.04	13.5	1,762.2	846.14	659.84	3,824.58
150	10	266	37.13	0.52	19.94	195.62	8.05	1,567.97	715.1	586.04	3,178.32

MECHANICAL Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
1,500	100	92	94	103	94	86	82	83	80	84
1,350	90	92	94	103	94	86	82	83	80	84
1,200	80	92	94	103	94	86	82	83	80	84
1,125	75	92	94	103	94	86	82	83	80	84
1,050	70	92	94	103	94	86	82	83	80	84
900	60	92	94	103	94	86	82	83	80	84
750	50	92	94	103	94	86	82	83	80	84
600	40	92	94	103	94	86	82	83	80	84
450	30	92	94	103	94	86	82	83	80	84
375	25	92	94	103	94	86	82	83	80	84
300	20	92	94	103	94	86	82	83	80	84
150	10	92	94	103	94	86	82	83	80	84

EMISSIONS DATA

N-C 1970 - 2100 ********** N1

Non-Certified: This engine rating is not emission certified by any domestic or foreign agency.

REFERENCE EXHAUST STACK DIAMETER	10 IN
WET EXHAUST MASS	20,339.8 LB/HR
WET EXHAUST FLOW (942.80 F STACK TEMP)	12,190.63 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	4,198.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	3,845.77 STD CFM
FUEL FLOW RATE	107 GAL/HR

RATED SPEED "Potential site variation"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
1,500	100	2153	54.9400	13.8200	1.8200	.5800	9.5000	2.0000	1.2800
1,125	75	1623	41.9800	9.0000	1.5700	.4000	11.1000	1.3000	1.2800
750	50	1099	22.0100	8.9300	.8700	.3800	12.0000	2.1000	1.3100
375	25	584	12.0400	7.5000	.6500	.4400	13.0000	3.7000	1.3500
150	10	266	8.2500	5.0600	.5900	.3700	15.1000	3.6000	1.3300

RATED SPEED "Nominal Data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
1,500	100	2153	45.7800	7.6800	1.3700	2,179.7	.4100	9.5000	2.0000	1.2800
1,125	75	1623	34.9800	5.0000	1.1800	1,586	.2900	11.1000	1.3000	1.2800
750	50	1099	18.3400	4.9600	.6500	1,085.7	.2700	12.0000	2.1000	1.3100
375	25	584	10.0300	4.1700	.4900	649.6	.3200	13.0000	3.7000	1.3500
150	10	266	6.8700	2.8100	.4500	386.9	.2600	15.1000	3.6000	1.3300

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp. / Altitude	50 F	68 F	86 F	104 F	122 F	NORMAL
0 FT	2,172.45 hp	2,172.45 hp	2,172.45 hp	2,172.45 hp	2,172.45 hp	2,172.45 hp
984.25 FT	2,172.45 hp	2,172.45 hp	2,172.45 hp	2,172.45 hp	2,109.42 hp	2,172.45 hp
1,640.42 FT	2,172.45 hp	2,172.45 hp	2,172.45 hp	2,125.52 hp	2,059.81 hp	2,172.45 hp
3,280.84 FT	2,172.45 hp	2,137.59 hp	2,066.51 hp	2,000.8 hp	1,939.11 hp	2,109.42 hp
4,921.26 FT	2,081.26 hp	2,010.19 hp	1,944.48 hp	1,882.79 hp	1,823.79 hp	2,006.17 hp
6,561.68 FT	1,956.55 hp	1,890.84 hp	1,827.81 hp	1,770.15 hp	1,715.16 hp	1,906.93 hp
8,202.1 FT	1,838.54 hp	1,775.51 hp	1,717.85 hp	1,662.86 hp	1,610.57 hp	1,811.72 hp
9,842.52 FT	1,725.89 hp	1,666.89 hp	1,611.91 hp	1,560.95 hp	1,512.67 hp	1,720.53 hp
10,498.69 FT	1,682.98 hp	1,625.32 hp	1,571.68 hp	1,522.06 hp	1,475.12 hp	1,685.66 hp

The powers listed above and all the Powers displayed are Corrected Powers

Identification Reference and Notes

Engine Arrangement:	1282846	**Lube Oil Press @ Rated Spd(PSI):**	55.8
Effective Serial No:	6WN00803	**Piston Speed @ Rated Eng SPD(FT/Min):**	2,173.2
Primary Engine Test Spec:	2T8373	**Max Operating Altitude(FT):**	2,296.6
Performance Parm Ref:	TM5739	**PEEC Elect Control Module Ref**	
Performance Data Ref:	DM2053	**PEEC Personality Cont Mod Ref**	
Aux Coolant Pump Perf Ref:			
Cooling System Perf Ref:		**Turbocharger Model**	BTV7510-0.96
Certification Ref:		**Fuel Injector**	2563663
Certification Year:		**Timing-Static (DEG):**	--
Compression Ratio:	14.0	**Timing-Static Advance (DEG):**	--
Combustion System:	DI	**Timing-Static (MM):**	--
Aftercooler Temperature (F):	194	**Unit Injector Timing (MM):**	64.3
Crankcase Blowby Rate(CFH):	2,171.9	**Torque Rise (percent)**	--
Fuel Rate (Rated RPM) No Load(Gal/HR):	11.8	**Peak Torque Speed RPM**	--
Lube Oil Press @ Low Idle Spd(PSI):	20.0	**Peak Torque (LB.FT):**	--

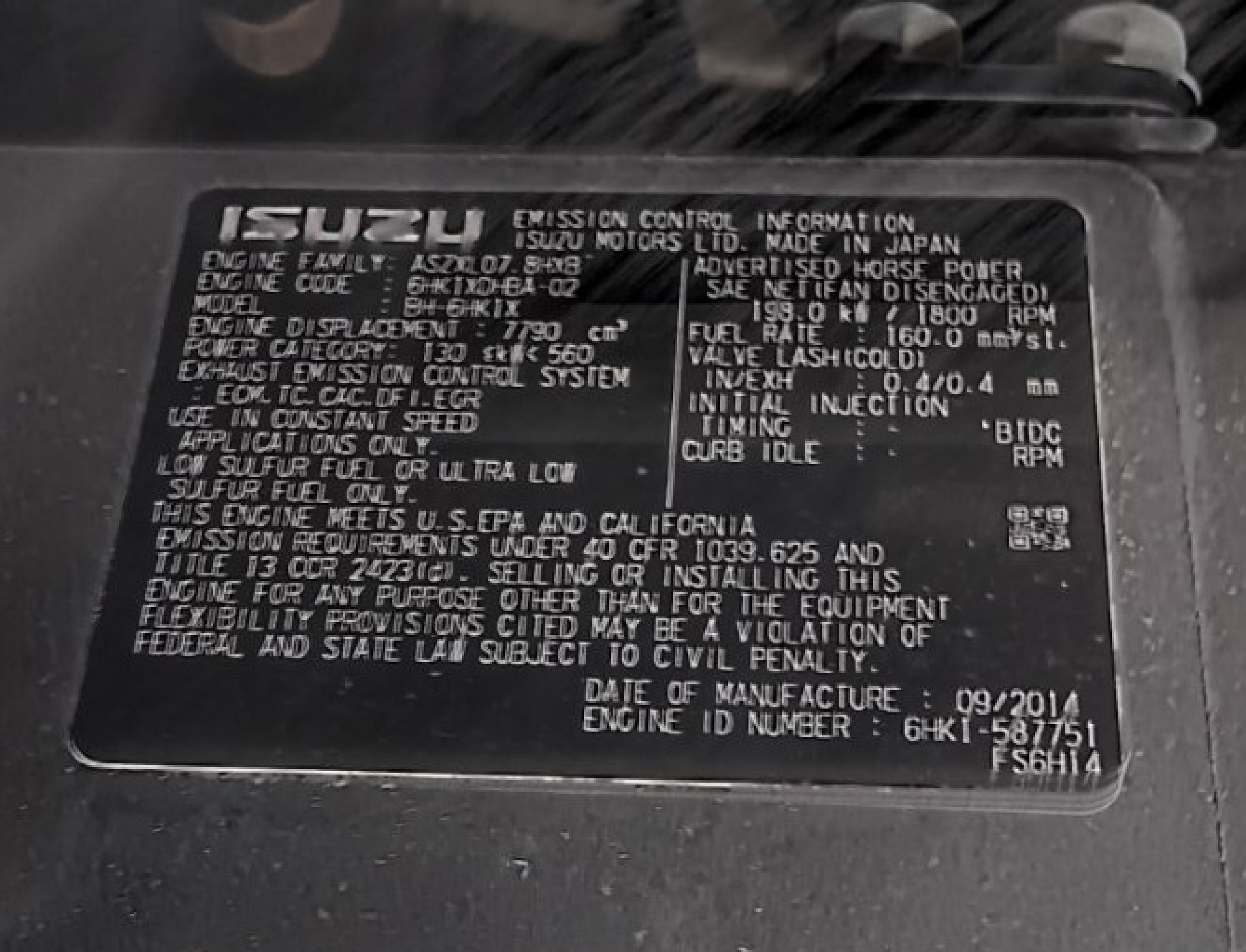
Air Separator Plant Engine

Isuzu

31-1403

8. Specifications

Model			SDG150S-8B1		
Generator	Exciting system		Brushless		
	Armature connection		Star with Neutral		ZigZag
	Phase number		Three		Single
	Power factor	%	80		100
	Frequency	Hz	60		
	Rated output	kVA	150		87
	Rated output	kW	120		87
	Voltage	V	240	480	240/120
	Current	A	361	180	363
Engine	Model		ISUZU BH- 6HK1X		
	Type		4-cycle, water-cooled, direct injection, turbo charged, intercooled		
	Number of cylinders		6		
	Total displacement	cu. in. (L)	475 (7.790)		
	Rated output	hp (kW)	190.4 (142)		
	Revolution per minute	rpm (min^{-1})	1,800 (1,800)		
	Lubricating oil capacity	gal. (L)	10.0 (38)		
	Coolant capacity (including radiator)	gal. (L)	6.7 (25.5)		
	Battery		95D31×2 (24V)		
	Fuel tank capacity	gal. (L)	215 (815)		
General Specifications	Overall length	in. (mm)	126 (3,190)		
	Overall width	in. (mm)	46 (1,180)		
	Overall height	in. (mm)	74 (1,880)		
	Net dry mass (weight)	lbs (kg)	6,007 (2,725)		
	Operating mass (weight)	lbs (kg)	7,628 (3,460)		
Others	The capacity of oil fence	gal. (L)	112 (423)		


ISUZU
EMISSION CONTROL INFORMATION
ISUZU MOTORS LTD. MADE IN JAPAN
ENGINE FAMILY : AS7XL07.8HNB
ENGINE CODE : 6HK1X0H-BA-02
MODEL : BH-6HK1X
ENGINE DISPLACEMENT : 7790 cm³
POWER CATEGORY : 130 ≤kW< 560
EXHAUST EMISSION CONTROL SYSTEM
: ECM,TC,CAC,DFI,EGR
USE IN CONSTANT SPEED
APPLICATIONS ONLY.
LOW SULFUR FUEL OR ULTRA LOW
SULFUR FUEL ONLY.
ADVERTISED HORSE POWER
SAE NET(FAN DISENGAGED)
199.0 kW / 1800 RPM
FUEL RATE : 160.0 mm³/st.
VALVE LASH(COLD)
IN/EXH : 0.4/0.4 mm
INITIAL INJECTION
TIMING : °BTDC
CURB IDLE : RPM
THIS ENGINE MEETS U.S.EPA AND CALIFORNIA
EMISSION REQUIREMENTS UNDER 40 CFR 1039.625 AND
TITLE 13 CCR 2423(d). SELLING OR INSTALLING THIS
ENGINE FOR ANY PURPOSE OTHER THAN FOR THE EQUIPMENT
FLEXIBILITY PROVISIONS CITED MAY BE A VIOLATION OF
FEDERAL AND STATE LAW SUBJECT TO CIVIL PENALTY.
DATE OF MANUFACTURE : 09/2014
ENGINE ID NUMBER : 6HK1-587751
FS6H14

California Environmental Protection Agency AIR RESOURCES BOARD	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0333 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2010	ASZXL07.8HXB	7.8	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation	Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW < 225	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	N/A	N/A	N/A
		CERT	--	--	3.4	0.9	0.08	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 10 day of September 2009.

Annette Hebert, Chief
Mobile Source Operations Division

U-R-006-0333

8/27/09

Engine Model Summary Template

ATTACHMENT

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
ASZXL07.8HXB	6HK1XDHBA-01	BH-6HK1X	240.1@1800	144.0@1800	86.5@1800	NA	NA	NA	ECM, TC, CAC, DFI, EGR
ASZXL07.8HXB	6HK1XDHBA-02	BH-6HK1X	265.6@1800	160.0@1800	96.1@1800	NA	NA	NA	ECM, TC, CAC, DFI, EGR

RAP Plant Engine

CAT C-13

PERFORMANCE DATA[DM7686]

October 23, 2014

Performance Number: DM7686 **Change Level: 08**

SALES MODEL:	C13	**COMBUSTION:**	DI
ENGINE POWER (BHP):	415	**ENGINE SPEED (RPM):**	2,100
PEAK TORQUE (FT-LB):	1,398.4	**PEAK TORQUE SPEED (RPM):**	1,400
COMPRESSION RATIO:	17.3	**TORQUE RISE (%):**	35
RATING LEVEL:	INDUSTRIAL B	**ASPIRATION:**	TA
PUMP QUANTITY:	1	**AFTERCOOLER TYPE:**	ATAAC
FUEL TYPE:	DIESEL	**AFTERCOOLER CIRCUIT TYPE:**	JW+OC, ATAAC
MANIFOLD TYPE:	DRY	**INLET MANIFOLD AIR TEMP (F):**	120
GOVERNOR TYPE:	ELEC	**JACKET WATER TEMP (F):**	192.2
INJECTOR TYPE:	EUI	**TURBO CONFIGURATION:**	SINGLE
REF EXH STACK DIAMETER (IN):	5	**TURBO QUANTITY:**	1
MAX OPERATING ALTITUDE (FT):	4,400	**TURBOCHARGER MODEL:**	GTA4502BS 1.33 A/R
		CERTIFICATION YEAR:	2006
		PISTON SPD @ RATED ENG SPD (FT/MIN):	2,163.4

INDUSTRY	SUBINDUSTRY	APPLICATION
INDUSTRIAL	FORESTRY	INDUSTRIAL
INDUSTRIAL	GENERAL INDUSTRIAL	INDUSTRIAL
OIL AND GAS	LAND PRODUCTION	INDUSTRIAL
INDUSTRIAL	AGRICULTURE	INDUSTRIAL
INDUSTRIAL	CONSTRUCTION	INDUSTRIAL
INDUSTRIAL	MATERIAL HANDLING	INDUSTRIAL
INDUSTRIAL	MINING	INDUSTRIAL
OIL AND GAS	WELL SERVICING	INDUSTRIAL

General Performance Data

ENGINE SPEED	ENGINE POWER	ENGINE TORQUE	BRAKE MEAN EFF PRES (BMEP)	BRAKE SPEC FUEL CONSUMPTN (BSFC)	VOL FUEL CONSUMPTN (VFC)	INLET MFLD PRES	INLET MFLD TEMP	EXH MFLD TEMP	EXH MFLD PRES	ENGINE OUTLET TEMP
RPM	BHP	LB-FT	PSI	LB/BHP-HR	GAL/HR	IN-HG	DEG F	DEG F	IN-HG	DEG F
2,100	415	1,038	205	0.347	20.7	45.8	125.2	1,117.2	38.8	894.7
2,000	415	1,090	215	0.342	20.5	46.5	123.4	1,121.0	37.4	904.1
1,900	415	1,147	227	0.343	20.4	47.3	123.1	1,135.1	36.0	921.8
1,800	415	1,211	239	0.339	20.2	48.0	121.2	1,149.8	34.3	942.4
1,700	410	1,268	251	0.336	19.8	48.1	118.7	1,161.0	32.3	956.0
1,600	402	1,318	261	0.333	19.2	48.2	116.9	1,161.1	30.4	956.8
1,500	389	1,364	269	0.336	18.8	48.4	115.2	1,180.3	28.7	980.4
1,400	373	1,399	276	0.331	17.8	47.3	111.2	1,186.0	26.4	986.3
1,300	342	1,380	273	0.340	16.7	47.0	110.0	1,188.8	24.4	991.4
1,200	308	1,349	267	0.331	14.7	38.3	100.9	1,202.6	18.6	1,040.6
1,100	261	1,245	246	0.337	12.6	31.1	95.2	1,211.3	13.8	1,064.3

ENGINE SPEED	ENGINE POWER	COMPRESSOR OUTLET PRES	COMPRESSOR OUTLET TEMP	WET INLET AIR VOL FLOW RATE	ENGINE OUTLET WET EXH GAS VOL FLOW RATE	WET INLET AIR MASS FLOW RATE	WET EXH GAS MASS FLOW RATE	WET EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)	DRY EXH VOL FLOW RATE (32 DEG F AND 29.98 IN HG)
RPM	BHP	IN-HG	DEG F	CFM	CFM	LB/HR	LB/HR	FT3/MIN	FT3/MIN
2,100	415	47	312.1	964.1	2,520.1	4,201.4	4,346.6	914.9	841.8
2,000	415	47	311.0	941.4	2,473.4	4,093.2	4,236.4	891.7	819.5
1,900	415	48	310.6	913.3	2,427.4	3,961.5	4,104.3	863.9	792.5
1,800	415	48	311.4	884.5	2,385.2	3,832.3	3,973.8	836.4	765.8
1,700	410	49	310.3	844.0	2,296.2	3,649.7	3,788.7	797.5	728.4
1,600	402	48	308.2	807.2	2,189.8	3,476.7	3,611.1	760.1	694.5
1,500	389	48	310.3	765.7	2,113.7	3,297.0	3,428.3	721.6	657.1
1,400	373	47	309.4	710.6	1,968.2	3,054.6	3,179.5	669.2	608.1
1,300	342	47	310.5	664.7	1,840.9	2,846.3	2,963.4	623.8	566.5
1,200	308	38	279.3	552.0	1,577.2	2,352.7	2,455.8	516.9	467.0
1,100	261	30	250.7	456.5	1,322.9	1,939.3	2,027.8	426.8	384.2

Emissions Data

RATED SPEED POTENTIAL SITE VARIATION: 2100 RPM

ENGINE POWER		BHP	415	311	208	104	41.5
PERCENT LOAD		%	100	75	50	25	10
TOTAL NOX (AS NO2)		G/HR	1,437	794	417	220	140
TOTAL CO		G/HR	1,000	1,253	313	540	474
TOTAL HC		G/HR	55	75	114	137	169
PART MATTER		G/HR	83.0	82.1	48.0	75.6	72.4
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	1,613.1	1,076.6	780.1	723.6	785.1
TOTAL CO	(CORR 5% O2)	MG/NM3	1,120.7	1,705.6	597.9	1,773.9	2,665.4
TOTAL HC	(CORR 5% O2)	MG/NM3	53.0	88.8	184.8	389.8	819.8
PART MATTER	(CORR 5% O2)	MG/NM3	78.4	96.3	79.1	223.1	372.8
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	786	524	380	352	382
TOTAL CO	(CORR 5% O2)	PPM	897	1,364	478	1,419	2,132
TOTAL HC	(CORR 5% O2)	PPM	99	166	345	728	1,530
TOTAL NOX (AS NO2)		G/HP-HR	3.49	2.57	2.02	2.13	3.38
TOTAL CO		G/HP-HR	2.43	4.06	1.52	5.23	11.48
TOTAL HC		G/HP-HR	0.13	0.24	0.55	1.32	4.08
PART MATTER		G/HP-HR	0.20	0.27	0.23	0.73	1.75
TOTAL NOX (AS NO2)		LB/HR	3.17	1.75	0.92	0.49	0.31
TOTAL CO		LB/HR	2.20	2.76	0.69	1.19	1.05
TOTAL HC		LB/HR	0.12	0.17	0.25	0.30	0.37
PART MATTER		LB/HR	0.18	0.18	0.11	0.17	0.16

RATED SPEED NOMINAL DATA: 2100 RPM

ENGINE POWER		BHP	415	311	208	104	41.5
PERCENT LOAD		%	100	75	50	25	10
TOTAL NOX (AS NO2)		G/HR	1,331	735	386	204	129
TOTAL CO		G/HR	535	670	167	289	254
TOTAL HC		G/HR	29	40	60	72	89
TOTAL CO2		KG/HR	213	172	126	71	42
PART MATTER		G/HR	42.6	42.1	24.6	38.7	37.1
TOTAL NOX (AS NO2)	(CORR 5% O2)	MG/NM3	1,493.6	996.8	722.3	670.0	727.0
TOTAL CO	(CORR 5% O2)	MG/NM3	599.3	912.1	319.7	948.6	1,425.3
TOTAL HC	(CORR 5% O2)	MG/NM3	28.0	47.0	97.8	206.2	433.8
PART MATTER	(CORR 5% O2)	MG/NM3	40.2	49.4	40.6	114.4	191.2
TOTAL NOX (AS NO2)	(CORR 5% O2)	PPM	728	486	352	326	354
TOTAL CO	(CORR 5% O2)	PPM	479	730	256	759	1,140
TOTAL HC	(CORR 5% O2)	PPM	52	88	182	385	810
TOTAL NOX (AS NO2)		G/HP-HR	3.23	2.38	1.87	1.97	3.13
TOTAL CO		G/HP-HR	1.30	2.17	0.81	2.80	6.14
TOTAL HC		G/HP-HR	0.07	0.13	0.29	0.70	2.16
PART MATTER		G/HP-HR	0.10	0.14	0.12	0.38	0.90
TOTAL NOX (AS NO2)		LB/HR	2.93	1.62	0.85	0.45	0.29
TOTAL CO		LB/HR	1.18	1.48	0.37	0.64	0.56
TOTAL HC		LB/HR	0.06	0.09	0.13	0.16	0.20
TOTAL CO2		LB/HR	469	378	278	157	92
PART MATTER		LB/HR	0.09	0.09	0.05	0.09	0.08
OXYGEN IN EXH		%	10.7	12.5	14.1	15.5	17.1
DRY SMOKE OPACITY		%	1.4	1.5	0.9	2.0	2.0
BOSCH SMOKE NUMBER			0.97	1.04	0.54	1.27	1.29

Regulatory Information

EPA TIER 3		2005 - 2010		
GASEOUS EMISSIONS DATA MEASUREMENTS PROVIDED TO THE EPA ARE CONSISTENT WITH THOSE DESCRIBED IN EPA 40 CFR PART 89 SUBPART D AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THE "MAX LIMITS" SHOWN BELOW ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.				
Locality	**Agency**	**Regulation**	**Tier/Stage**	**Max Limits - G/BKW - HR**
U.S. (INCL CALIF)	EPA	NON-ROAD	TIER 3	CO: 3.5 NOx + HC: 4.0 PM: 0.20

EU STAGE IIIA		2006 - 2010		
GASEOUS EMISSION DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN EU 97/68/EC, ECE REGULATION NO. 96 AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. GASEOUS EMISSION VALUES ARE WEIGHTED CYCLE AVERAGES AND ARE IN COMPLIANCE WITH THE NON-ROAD REGULATIONS.				
Locality	**Agency**	**Regulation**	**Tier/Stage**	**Max Limits - G/BKW - HR**
EUROPE	EU	NON-ROAD	STAGE IIIA	CO: 3.5 NOx + HC: 4.0 PM: 0.20

IMO II	2011 - ----
GASEOUS EMISSIONS DATA MEASUREMENTS ARE CONSISTENT WITH THOSE DESCRIBED IN REGULATION 13 OF REVISED ANNEX VI OF MARPOL 73/78 AND ISO 8178 FOR MEASURING HC, CO, PM, AND NOX. THIS ENGINE CONFORMS TO INTERNATIONAL MARINE ORGANIZATION'S (IMO) MARINE COMPRESSION-IGNITION EMISSION REGULATIONS.

VOLUME II: CHAPTER 3

PREFERRED AND ALTERNATIVE METHODS FOR ESTIMATING AIR EMISSIONS FROM HOT-MIX ASPHALT PLANTS

Final Report

July 1996

Prepared by:
Eastern Research Group, Inc.
Post Office Box 2010
Morrisville, North Carolina 27560

Prepared for:
Point Sources Committee
Emission Inventory Improvement Program

In the counterflow drum mixing process, the aggregate is proportioned through a cold feed system prior to introduction to the drying process. As opposed to the parallel flow drum mixing process though, the aggregate moves opposite to the flow of the exhaust gases. After drying and heating take place, the aggregate is transferred to a part of the drum that is not exposed to the exhaust gas and coated with asphalt cement. This process prevents stripping of the asphalt cement by the hot exhaust gas. If RAP is used, it is usually introduced into the coating chamber.

2.2 EMISSION SOURCES

Emissions from HMA plants derive from both controlled (i.e., ducted) and uncontrolled sources. Section 7 lists the source classification codes (SCCs) for these emission points.

2.2.1 MATERIAL HANDLING (FUGITIVE EMISSIONS)

Material handling includes the receipt, movement, and processing of fuel and materials used at the HMA facility. Fugitive particulate matter (PM) emissions from aggregate storage piles are typically caused by front-end loader operations that transport the aggregate to the cold feed unit hoppers. The amount of fugitive PM emissions from aggregate piles will be greater in strong winds (Gunkel, 1992). Piles of RAP, because RAP is coated with asphalt cement, are not likely to cause significant fugitive dust problems. Other pre-dryer fugitive emission sources include the transfer of aggregate from the cold feed unit hoppers to the dryer feed conveyor and, subsequently, to the dryer entrance. Aggregate moisture content prior to entry into the dryer is typically 3 percent to 7 percent. This moisture content, along with aggregate size classification, tend to minimize emissions from these sources, which contribute little to total facility PM emissions. PM less than or equal to 10 µm in diameter (PM_{10}) emissions from these sources are reported to account for about 19 percent of their total PM emissions (NAPA, 1995).

If crushing, breaking, or grinding operations occur at the plant, these may result in fugitive PM emissions (TNRCC, 1994). Also, fine particulate collected from the baghouses can be a source of fugitive emissions as the overflow PM is transported by truck (enclosed or tarped) for on-site disposal. At all HMA plants there may be PM and slight process fugitive volatile organic compound (VOC) emissions from the transport and handling of the hot-mix from the mixer to the storage silo and also from the load-out operations to the delivery trucks (EPA, 1994a). Small amounts of VOC emissions can also result from the transfer of liquid and gaseous fuels, although natural gas is normally transported in a pipeline (Gunkel, 1992, Wiese, 1995).

TABLE 3.2-1

TYPICAL HOT-MIX ASPHALT PLANT EMISSION CONTROL TECHNIQUES

Emission Source	Pollutant	Control Technique	Typical Efficiency (%)
Process	PM and PM_{10}	Cyclones	50 - 75[a,b]
		Multiple cyclones	90[c]
		Settling chamber	<50[b]
		Baghouse	99 - 99.97[a,d]
		Venturi scrubber	90 - 99.5[d,e]
	VOC	Dryer and combustion process modifications	37 - 86[f,g]
	SO_x	Limestone	50[b,e]
		Low sulfur fuel	80[c]
Fugitive dust	PM and PM_{10}	Paving and maintenance	60 - 99[g]
		Wetting and crusting agents	70[b] - 80[c]
		Crushed RAP material, asphalt shingles	70[h]

[a] Control efficiency dependent on particle size ratio and size of equipment.
[b] Source: Patterson, 1995c.
[c] Source: EIIP, 1995.
[d] Typical efficiencies at a hot-mix asphalt plant.
[e] Source: TNRCC, 1995.
[f] Source: Gunkel, 1992.
[g] Source: TNRCC, 1994.
[h] Source: Patterson, 1995a.



Emission Factors for Greenhouse Gas Inventories

Last Modified: February 13, 2024

Blue text indicates an update from the 2023 version of this document.

Typically, greenhouse gas emissions are reported in units of carbon dioxide equivalent (CO_2e). Gases are converted to CO_2e by multiplying by their global warming potential (GWP). In most cases, the emission factors listed in this document generally have not been converted to CO_2e. To do so, multiply the emissions by the corresponding GWP listed in the table below.

Gas	100-Year GWP
CH_4	28
N_2O	265

Source: Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5), 2013. See the source note to Table 11 for further explanation.

Notes:
These GWP values represent a change from the previous version of this document. In alignment with the U.S. Inventory of U.S. GHG Emissions and Sinks 1990-2021 Inventory Report, the recommended GWP values have been updated to Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5) values.

Table 1 Stationary Combustion

Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short
Coal and Coke							
Anthracite	25.09	103.69	11	1.6	2,602	276	40
Bituminous	24.93	93.28	11	1.6	2,325	274	40
Sub-bituminous	17.25	97.17	11	1.6	1,676	190	28
Lignite	14.21	97.72	11	1.6	1,389	156	23
Mixed (Commercial Sector)	21.39	94.27	11	1.6	2,016	235	34
Mixed (Electric Power Sector)	19.73	95.52	11	1.6	1,885	217	32
Mixed (Industrial Coking)	26.28	93.90	11	1.6	2,468	289	42
Mixed (Industrial Sector)	22.35	94.67	11	1.6	2,116	246	36
Coal Coke	24.80	113.67	11	1.6	2,819	273	40
Other Fuels - Solid							
Municipal Solid Waste	9.95	90.70	32	4.2	902	318	42
Petroleum Coke (Solid)	30.00	102.41	32	4.2	3,072	960	126
Plastics	38.00	75.00	32	4.2	2,850	1,216	160
Tires	28.00	85.97	32	4.2	2,407	896	118
Biomass Fuels - Solid							
Agricultural Byproducts	8.25	118.17	32	4.2	975	264	35
Peat	8.00	111.84	32	4.2	895	256	34
Solid Byproducts	10.39	105.51	32	4.2	1,096	332	44
Wood and Wood Residuals	17.48	93.80	7.2	3.6	1,640	126	63
	mmBtu per scf	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per scf	g CH_4 per scf	g N_2O per scf
Natural Gas							
Natural Gas	0.001026	53.06	1.0	0.10	0.05444	0.00103	0.00010
Other Fuels - Gaseous							
Blast Furnace Gas	0.000092	274.32	0.022	0.10	0.02524	0.000002	0.000009
Coke Oven Gas	0.000599	46.85	0.48	0.10	0.02806	0.000288	0.000060
Fuel Gas	0.001388	59.00	3.0	0.60	0.08189	0.004164	0.000833
Propane Gas	0.002516	61.46	3.0	0.60	0.15463	0.007548	0.001510
Biomass Fuels - Gaseous							
Landfill Gas	0.000485	52.07	3.2	0.63	0.025254	0.001552	0.000306
Other Biomass Gases	0.000655	52.07	3.2	0.63	0.034106	0.002096	0.000413
	mmBtu per gallon	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per gallon	g CH_4 per gallon	g N_2O per gallon
Petroleum Products							
Asphalt and Road Oil	0.158	75.36	3.0	0.60	11.91	0.47	0.09
Aviation Gasoline	0.120	69.25	3.0	0.60	8.31	0.36	0.07
Butane	0.103	64.77	3.0	0.60	6.67	0.31	0.06
Butylene	0.105	68.72	3.0	0.60	7.22	0.32	0.06
Crude Oil	0.138	74.54	3.0	0.60	10.29	0.41	0.08
Distillate Fuel Oil No. 1	0.139	73.25	3.0	0.60	10.18	0.42	0.08
Distillate Fuel Oil No. 2	0.138	73.96	3.0	0.60	10.21	0.41	0.08
Distillate Fuel Oil No. 4	0.146	75.04	3.0	0.60	10.96	0.44	0.09
Ethane	0.068	59.60	3.0	0.60	4.05	0.20	0.04
Ethylene	0.058	65.96	3.0	0.60	3.83	0.17	0.03
Heavy Gas Oils	0.148	74.92	3.0	0.60	11.09	0.44	0.09
Isobutane	0.099	64.94	3.0	0.60	6.43	0.30	0.06
Isobutylene	0.103	68.86	3.0	0.60	7.09	0.31	0.06
Kerosene	0.135	75.20	3.0	0.60	10.15	0.41	0.08
Kerosene-Type Jet Fuel	0.135	72.22	3.0	0.60	9.75	0.41	0.08
Liquefied Petroleum Gases (LPG)	0.092	61.71	3.0	0.60	5.68	0.28	0.06
Lubricants	0.144	74.27	3.0	0.60	10.69	0.43	0.09
Motor Gasoline	0.125	70.22	3.0	0.60	8.78	0.38	0.08
Naphtha (<401 deg F)	0.125	68.02	3.0	0.60	8.50	0.38	0.08
Natural Gasoline	0.110	66.88	3.0	0.60	7.36	0.33	0.07
Other Oil (>401 deg F)	0.139	76.22	3.0	0.60	10.59	0.42	0.08
Pentanes Plus	0.110	70.02	3.0	0.60	7.70	0.33	0.07
Petrochemical Feedstocks	0.125	71.02	3.0	0.60	8.88	0.38	0.08
Propane	0.091	62.87	3.0	0.60	5.72	0.27	0.05
Propylene	0.091	67.77	3.0	0.60	6.17	0.27	0.05
Residual Fuel Oil No. 5	0.140	72.93	3.0	0.60	10.21	0.42	0.08
Residual Fuel Oil No. 6	0.150	75.10	3.0	0.60	11.27	0.45	0.09
Special Naphtha	0.125	72.34	3.0	0.60	9.04	0.38	0.08
Unfinished Oils	0.139	74.54	3.0	0.60	10.36	0.42	0.08
Used Oil	0.138	74.00	3.0	0.60	10.21	0.41	0.08
Biomass Fuels - Liquid							
Biodiesel (100%)	0.128	73.84	1.1	0.11	9.45	0.14	0.01
Ethanol (100%)	0.084	68.44	1.1	0.11	5.75	0.09	0.01
Rendered Animal Fat	0.125	71.06	1.1	0.11	8.88	0.14	0.01
Vegetable Oil	0.120	81.55	1.1	0.11	9.79	0.13	0.01
Biomass Fuels - Kraft Pulping Liquor, by Wood Furnish							
North American Softwood		94.4	1.9	0.42			
North American Hardwood		93.7	1.9	0.42			
Bagasse		95.5	1.9	0.42			
Bamboo		93.7	1.9	0.42			
Straw		95.1	1.9	0.42			

Source:
Federal Register EPA; 40 CFR Part 98; e-CFR, (see link below). Table C-1 and Table C-2 (78 FR 71950, Nov. 29, 2013, as amended at 81 FR 89252, Dec. 9, 2016), Table AA-1 (78 FR 71965, Nov. 29, 2013).
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-98

Notes:
Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.
All CO_2 emission factors assume that 100 percent of the carbon content of the fuel is oxidized to CO_2, as is recommended by the Intergovernmental Panel on Climate Change (IPCC).
The CH_4 and N_2O emission factors provided represent emissions in terms of fuel type and by end-use sector (i.e., residential, commercial, industrial, electricity generation).
The factors represented in the table above represent combustion emissions only and do not represent upstream emissions.

Section 8

Map(s)

A map such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

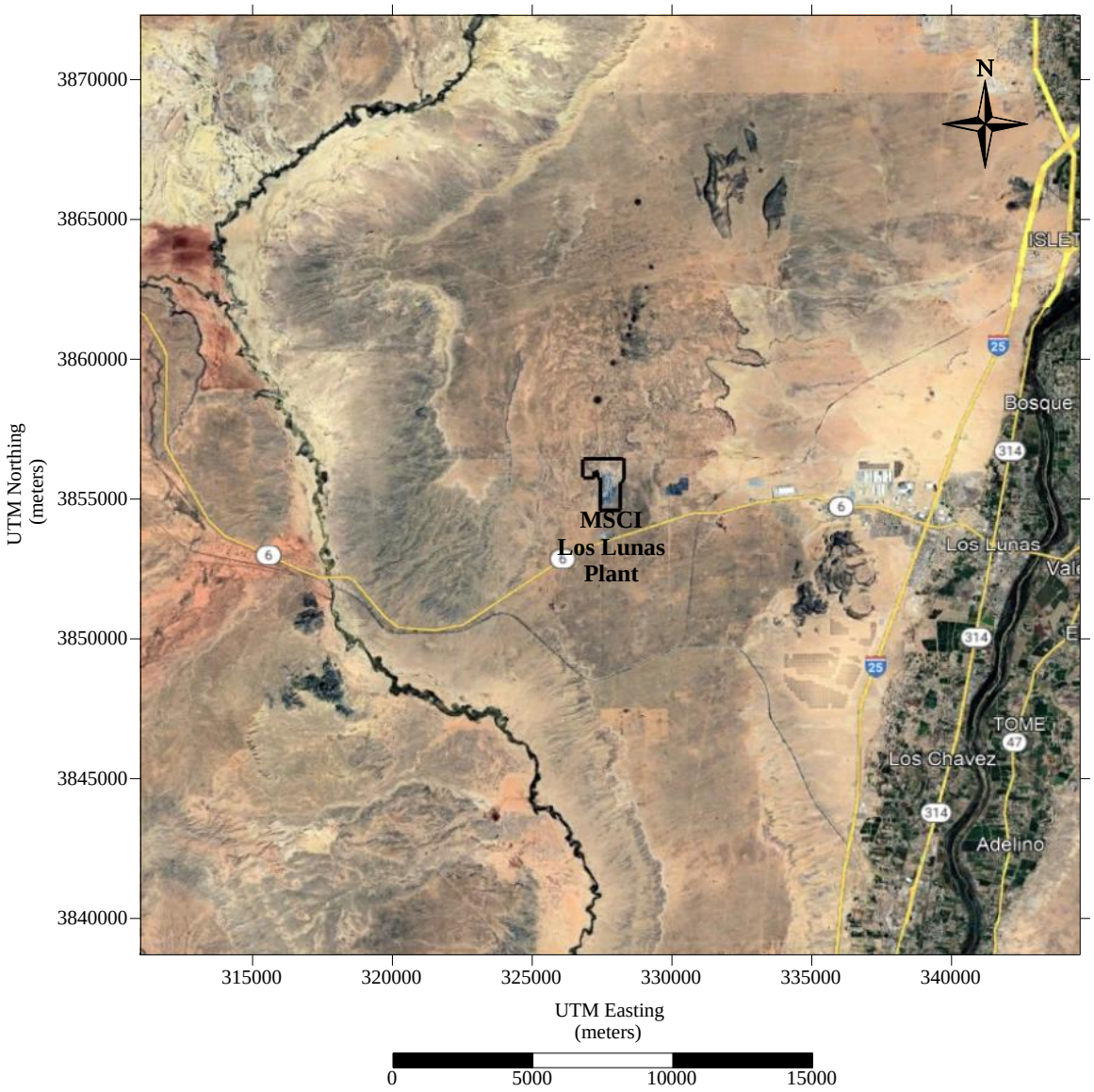


Figure 8-1: Aerial View of MSCI Los Lunas Plant and Surrounding Terrain

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)

(This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

☐ **I have read the AQB "Guidelines for Public Notification for Air Quality Permit Applications"**

This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant's Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

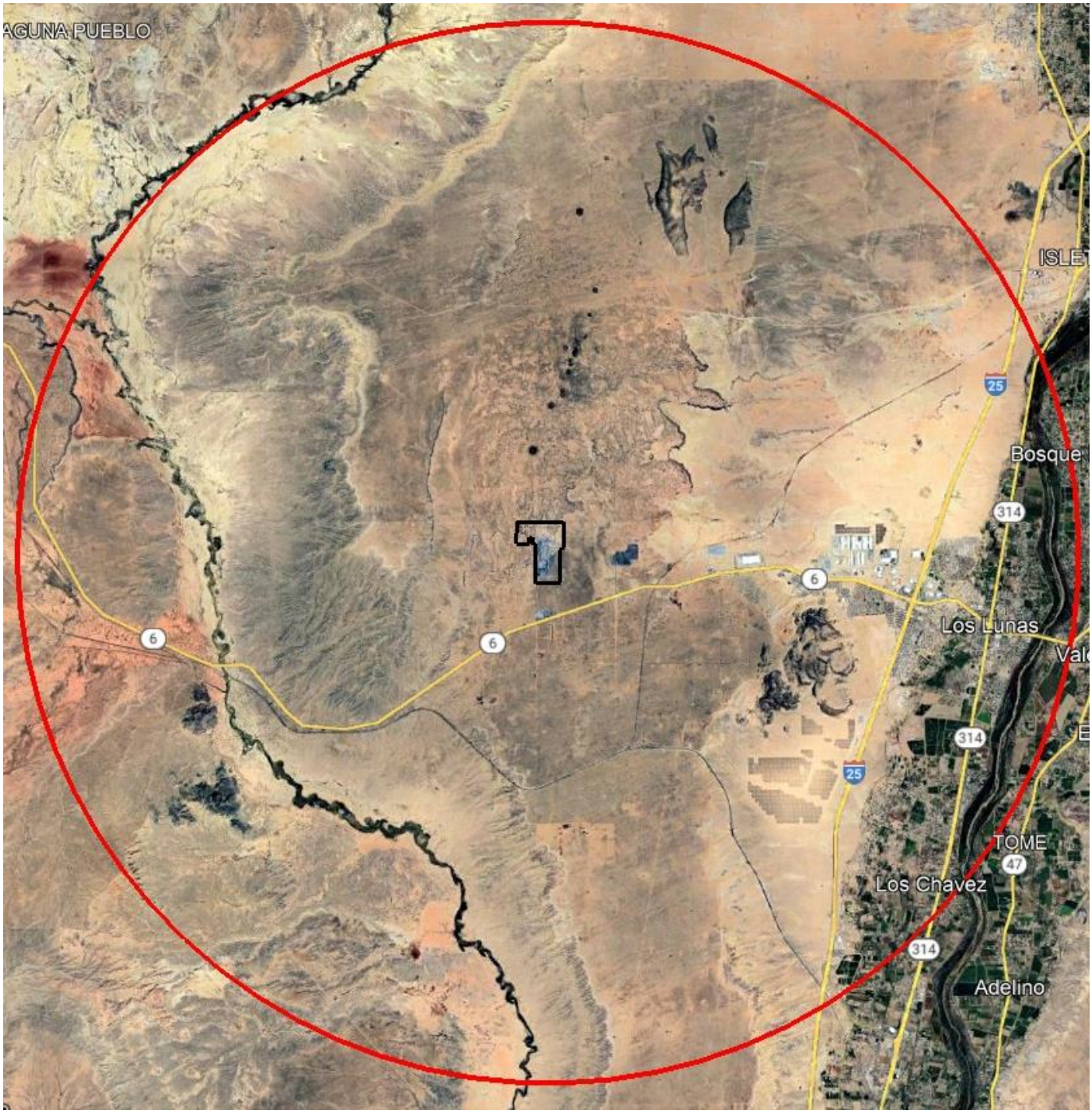
New Permit and **Significant Permit Revision** public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

1. **X** A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
2. **X** A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
3. **X** A copy of the property tax record (20.2.72.203.B NMAC).
4. **X** A sample of the letters sent to the owners of record.
5. **X** A sample of the letters sent to counties, municipalities, and Indian tribes.
6. **X** A sample of the public notice posted and a verification of the local postings.
7. **X** A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
8. **X** A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
9. **X** A copy of the classified or legal ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
10. **X** A copy of the display ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
11. **X** A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.

Figure 9-1: Ten-Mile Radius around Site



Government List within 10 Miles

GOVERNMENT ENTITY	GOVERNMENT REPRESENTATIVE	MAILADD	MCITY	STATE	ZIP
Village of Los Lunas	Gregory Martin, Village Administrator	660 Main St. NW	Los Lunas	NM	87031-8950
Village of Bosque Farms	Michael Limon, Clerk Administrator	PO Box 660	Peralta	NM	87042-0660
Township of Peralta	Kori Tayor, Town Clerk	PO Box 1830	Peralta	NM	87042-1830
Valencia County	Mike Milan, County Clerk	PO Box 969	Los Lunas	NM	87031-0969
Bernalillo County	Michelle Kavanaugh, County Clerk	PO Box 542	Albuquerque	NM	87103-0542
Isleta Pueblo	Eugene Jiron, Governor	PO Box 1290	Isleta	NM	87022-1290

Landowner List within 100 Feet (Within Los Lunas City Limits)

Acct_No	OWNNAME	MAILADD	MCITY	STATE	ZIP
R049978	4 DAUGHTERS CATTLE COMPANY LLC	3211 HIGHWAY 47	LOS LUNAS	NM	87031
R056076	ROCK AND RAIL LLC	3211 HIGHWAY 47	LOS LUNAS	NM	87031
R053213	WALTERS DONNA & ROBERT & KARDASINSKI DANNY & BARBARA	422 GRAND AVENUE	MONROVIA	CA	91016
R055770	SMITH GLEN D & MONTE BELL	777 WYOMING NE	ALBUQUERQUE	NM	87123
R049782	ALLEN HELEN L AKA SCHREIBER HELEN L	2338 SHADETREE LANE	SAN JOSE	CA	95131
R053288	KENNEDY DELBERT O	124 E MEEK ST	ABINGDON	IL	61410
R050483	CANO EMILY	1695 MURRAY LOOP	BOSQUE FARMS	NM	87068
R054555	NORRIS MARIE L	527 NOTRE DAME	GROSSE POINTE	MI	48230
R301853	ROCK AND RAIL LLC	3211 HIGHWAY 47	LOS LUNAS	NM	87031
R056311	TRIMBLE WILLIAM S	18230 SAN GABRIEL AVE	CERRITOS	CA	90703-8031
R065983	ROCK AND RAIL LLC	3211 HIGHWAY 47	LOS LUNAS	NM	87031
R056150	CEPO	PO BOX 125	SAN ANTONITO	NM	87047
R050095	BEETS EDWARD H & BEETS ROBERT NICHOLAS	PO BOX 65	ESCONDIDO	CA	92033
R056376	HASHIBA DAVID & HASHIBA WINNIE & ETAL	11508 MARAZION HILL CT	BAKERSFIELD	CA	93311
R050349	BOCEK THOMAS J A & BOCEK JULI TRUST	9164 HILLSIDE ROAD	BILOXI	MS	39532
R169114	ISLETA INDIAN RESERVATION	PO BOX 1290	ISLETA	NM	87022
R169113	ISLETA INDIAN RESERVATION	PO BOX 1290	ISLETA	NM	87022
R304429	ROCK AND RAIL LLC	3211 HIGHWAY 47	LOS LUNAS	NM	87031

September 18, 2025

CERTIFIED MAIL

Dear **[Neighbor/Environmental Director/county or municipal official]**

Mountain States Constructors (MSCI), Inc. announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the MSCI Los Lunas Plant, which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is September 26, 2025.

The address for the facility known as, MSCI Los Lunas Plant, is 701 State Highway 6, Los Lunas, NM 87031. The exact location of the MSCI Los Lunas Plant is at Latitude (decimal degrees): 34.831735 and Longitude (decimal degrees): -106.883123. The approximate location of this facility is 7.0 miles west-northwest of Los Lunas in Valencia County.

The function of the facility is to crush and screen aggregate material from an on-site quarry into usable construction material.

The facility consists of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant), 300 tph and 706,995 tpy air separator plant (screening plant), and 200 tph and 361,400 tpy recycled asphalt products (RAP) plant. The main plant will be powered by a 2288 horsepower (hp) (1600-kilowatt (kW)) diesel-fired engine. Pit plant #1 will be powered by a 1430 hp (1010 kW) diesel-fired engine. Pit plant #2 will be powered by a 2143 hp (1500 kW) diesel-fired engine. The air separator plant will be powered by a 265 hp (198 kW) diesel-fired engine. The RAP plant will be powered by a 415 hp (309 kW) diesel-fired engine. Raw aggregate material is obtained from an on-site quarry and processed by one of the three crushing and screening plants, then stored in onsite finish storage piles until transported from the facility to off-site sales. Recycled asphalt material will be delivered to the facility and stored in a storage pile until processed by the RAP plant. Processed RAP material will be used as input into a co-located hot mix asphalt plant for road construction projects.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and maximum tons per year (tpy) and may change slightly during the course of the Department's review:

Pollutant:	Maximum Pounds per hour	Maximum Tons per year
PM_{10}	88.0 pph	90.0 tpy
$PM_{2.5}$	15.0 pph	17.0 tpy
Sulfur Dioxide (SO_2)	2.3 pph	4.2 tpy
Nitrogen Oxides (NO_x)	56.9 pph	98.6 tpy
Carbon Monoxide (CO)	13.1 pph	23.0 tpy
Volatile Organic Compounds (VOC)	4.5 pph	8.2 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.27 pph	0.50 tpy
Toxic Air Pollutant (TAP)	0.0017 pph	0.0031 tpy
Green House Gas Emissions as Total CO_2e	n/a	13583 tpy

The maximum operating schedule for material processing is 13.5 hours per day (6 am to 7:30 pm) for the months of June and July; 13 hours per day (6 am to 7 pm) for the months of April, May, and August; 12.5 hours per day (6:30 am to 7 pm) for the month of September; 11 hours per day (7 am to 6 pm) for the month of March; 11 hours per day (6:30 am to 5:30 pm) for the month of October; 10.5 hours per day (7:30 am to 6 pm) for the month of February; 10.5 hours per day (7 am to 5:30 pm) for the month of November; and 9.5 hours per day (7:30 am to 5 pm) for the months of December and January, 7 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day. To allow for engine warmup, plant engines will be allowed to startup one hour prior to material processing.

The owner and/or operator mailing address for the Facility is:

Mountain States Constructors, Inc.
3601 Pan American Freeway NE #111
Albuquerque, New Mexico 87107

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

Sincerely,

Mountain States Constructors, Inc.

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SMITH GLEN D & MONTE BELL
777 WYOMING BLVD NE
ALBUQUERQUE, NM 87123

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TRIMBLE WILLIAM S
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CERRITOS, CA 90703-8031

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☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

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☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

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City,

BEETS EDWARD H & BEETS ROBERT NICHOLAS
PO BOX 65
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☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

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HASHIBA DAVID & HASHIBA WINNIE & ETAL
11508 MARAZION HILL CT
BAKERSFIELD, CA 93311-9496

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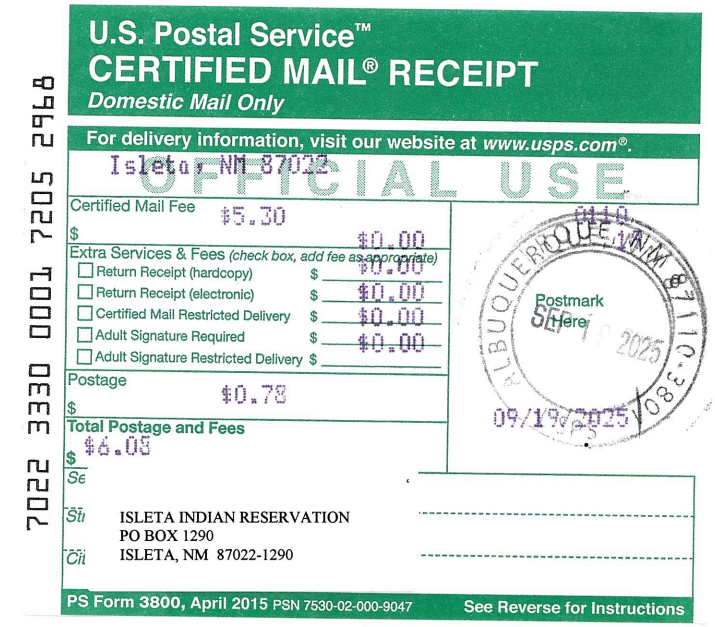
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9164 HILLSIDE ROAD

City, BILOXI, MS 39532-9644

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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$

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SEP 2025 Postmark Here
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Sti ISLETA INDIAN RESERVATION
PO BOX 1290

Cit ISLETA, NM 87022-1290

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Los Lunas, NM 87031

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Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0110 19

ALBUQUERQUE, NM 87110-3801 SEP 19 2025 USPS

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09/19/2025

Sent To: Village of Los Lunas
Street: Gregory Martin, Village Administrator
660 Main St. NW
City: Los Lunas, NM 87031-8950

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Peralta, NM 87042

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Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0110 19

ALBUQUERQUE, NM 87110-3801 SEP 19 2025 USPS

Postmark Here

09/19/2025

Sent To: Village of Bosque Farms
Street: Michael Limon, Clerk Administrator
PO Box 660
City: Peralta, NM 87042-0660

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7205 3057

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☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0110

ALBUQUERQUE, NM 87110-3801 SEP 19 2025 USPS

Postmark Here

09/19/2025

Sent To:
Street:
City: Township of Peralta
Kori Tayor, Town Clerk
PO Box 1830
Peralta, NM 87042-1830

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7205 3064

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☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

0110 19

ALBUQUERQUE, NM 87110-3801 SEP 19 2025 USPS

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09/19/2025

Sent To:
Street: Valencia County
Mike Milan, County Clerk
PO Box 969
City, Los Lunas, NM 87031-0969

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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For delivery information, visit our website at *www.usps.com®*.

Albuquerque, NM 87103

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Certified Mail Fee	$5.30
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
Total Postage and Fees	$6.08

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ALBUQUERQUE, NM 87110-3801 SEP 19 2025 USPS

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09/19/2025

Sent To:
Street: Bernalillo County
Michelle Kavanaugh, County Clerk
PO Box 542
City, Albuquerque, NM 87103-0542

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7205 3088

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☐ Adult Signature Restricted Delivery	$
Postage	$0.78
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ALBUQUERQUE, NM 87110-3801 SEP 19 2025 USPS

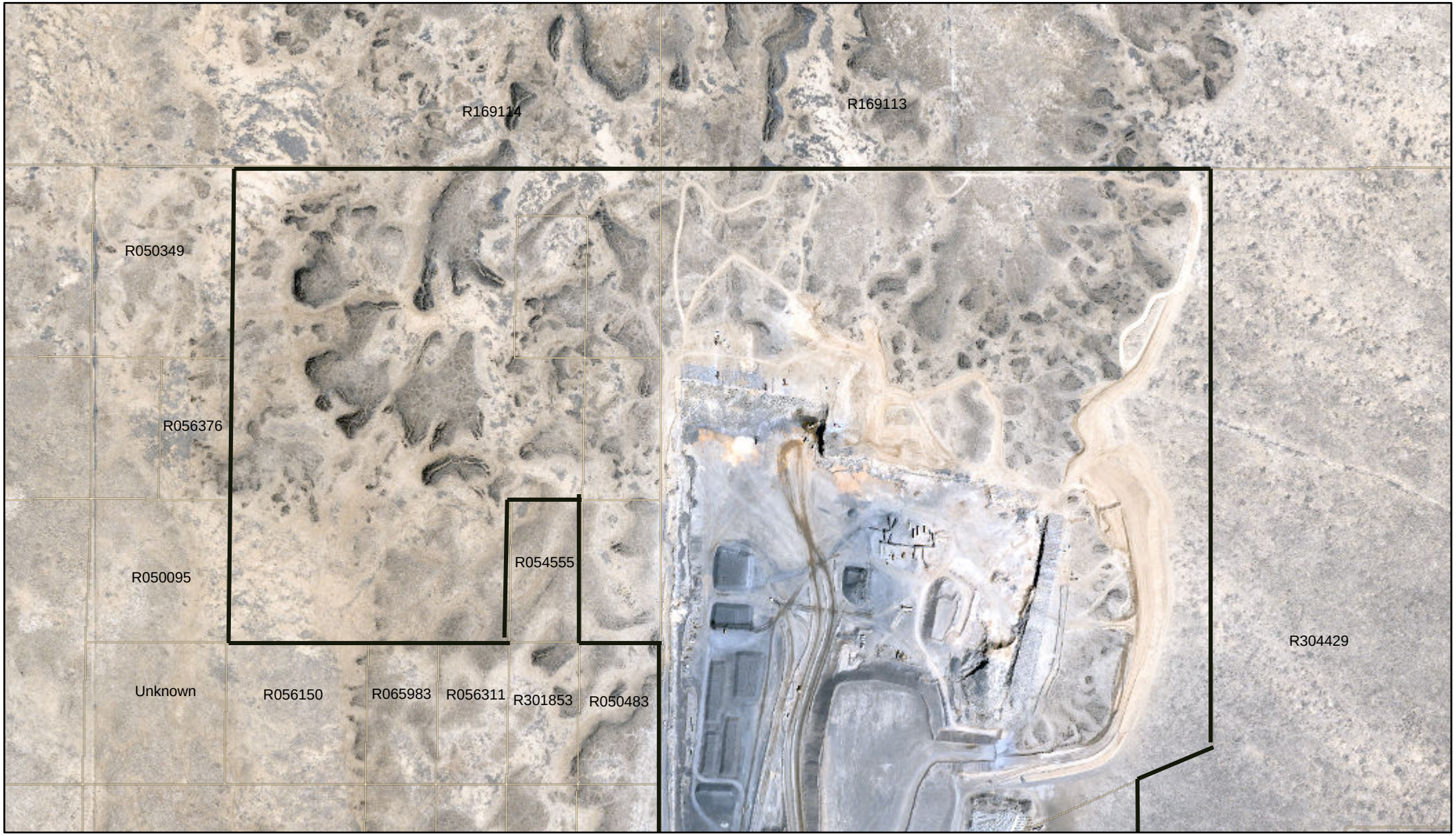
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09/19/2025

Sent To:
Street: Isleta Pueblo
Eugene Jiron, Governor
PO Box 1290
City, Isleta, NM 87022-1290

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Valencia County GIS Web Map



9/17/2025, 11:34:39 AM

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Rivers
Waterways
PointsOfInterest
Airport
BMX Park
Base Ball Field
Cemetery
Chamber of Commerce
Court
Fire Department
Golf
Gym
Law Enforcement
Library
Park
Penitentiary
Post Office
School
Sports Complex
Train Station
InterstateHighway
RailRoads
Roads
ValenciaCo

Valencia County

Valencia County GIS Web Map



9/17/2025, 11:19:54 AM

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

- Rivers
- Waterways

PointsOfInterest

- Airport
- BMX Park
- Base Ball Field
- Cemetery
- Chamber of Commerce
- Court
- Fire Department
- Golf
- Gym
- Law Enforcement
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Valencia County

NOTICE OF AIR QUALITY PERMIT APPLICATION

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The address for the facility known as, MSCI Los Lunas Plant, is 701 State Highway 6, Los Lunas, NM 87031. The exact location of the MSCI Los Lunas Plant is at Latitude (decimal degrees): 34.831735 and Longitude (decimal degrees): -106.883123. The approximate location of this facility is 7.0 miles west-northwest of Los Lunas in Valencia County.

The function of the facility is to crush and screen aggregate material from an on-site quarry into usable construction material.

The facility consists of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant), 300 tph and 706,995 tpy air separator plant (screening plant), and 200 tph and 361,400 tpy recycled asphalt products (RAP) plant. The main plant will be powered by a 2288 horsepower (hp) (1600-kilowatt (kW)) diesel-fired engine. Pit plant #1 will be powered by a 1430 hp (1010 kW) diesel-fired engine. Pit plant #2 will be powered by a 2143 hp (1500 kW) diesel-fired engine. The air separator plant will be powered by a 190 hp (142 kW) diesel-fired engine. The RAP plant will be powered by a 415 hp (309 kW) diesel-fired engine. Raw aggregate material is obtained from an on-site quarry and processed by one of the three crushing and screening plants, then stored in onsite finish storage piles until transported from the facility to off-site sales. Recycled asphalt material will be delivered to the facility and stored in a storage pile until processed by the RAP plant. Processed RAP material will be used as input into a co-located hot mix asphalt plant for road construction projects.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and maximum tons per year (tpy) and may change slightly during the course of the Department's review:

Pollutant: Maximum Pounds per hour Maximum Tons per year
PM 10 88.0 pph 90.0 tpy
PM 2.5 15.0 pph 17.0 tpy
Sulfur Dioxide (SO2) 2.3 pph 4.2 tpy
Nitrogen Oxides (NOx) 56.9 pph 98.6 tpy
Carbon Monoxide (CO) 13.1 pph 23.0 tpy
Volatile Organic Compounds (VOC) 4.5 pph 8.2 tpy
Total sum of all Hazardous Air Pollutants (HAPs) 0.27 pph 0.50 tpy
Toxic Air Pollutant (TAP) 0.0017 pph 0.0031 tpy
Green House Gas Emissions as Total CO2e n/a 13583 tpy

The maximum operating schedule for material processing is 13.5 hours per day (6 am to 7:30 pm) for the months of June and July; 13 hours per day (6 am to 7 pm) for the months of April, May, and August; 12.5 hours per day (6:30 am to 7 pm) for the month of September; 11 hours per day (7 am to 6 pm) for the month of March; 11 hours per day (6:30 am to 5:30 pm) for the month of October; 10.5 hours per day (7:30 am to 6 pm) for the month of February; 10.5 hours per day (7 am to 5:30 pm) for the month of November; and 9.5 hours per day (7:30 am to 5 pm) for the months of December and January, 7 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day. To allow for engine warmup, plant engines will be allowed to startup one hour prior to material processing.

The owner and/or operator mailing address for the Facility is:
Mountain States Constructors, Inc.
3601 Pan American Freeway NE #111
Albuquerque, New Mexico 87107

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attencion
Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo Mexico, acerca de las emisiones producidas por un establecimiento en esta area. Si usted desea informacion en espanol, por favor comuniquese con esa oficina al telefono 505-629-3395.

Notice of Non-Discrimination
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

News-Bulletin: September 18, 2025

Affidavit of Publication

STATE OF NEW MEXICO } SS
COUNTY OF VALENCIA }

Ad Cost:	$418.60
Ad Number:	289180
Account Number:	1111169
Classification:	NON-GOVERNMENT LEGALS

I, Bernadette Gonzales, the undersigned, Legal Representative of the Valencia County News-Bulletin, on oath, state that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, chapter 167, Session Laws of 1937, and payment of fees has been made of assessed and a copy of which is hereto attached, was published in said publication in the daily edition, 1 time on the following date:

September 18, 2025

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Legal Representative

Subscribed to and sworn to me this 18th day of September 2025.

David Lindsey Montoya
Notary Public
_____ County Bernalillo
ID#: 1140229
My commission expires: 04-26-2027

STATE OF NEW MEXICO
NOTARY PUBLIC
DAVID LINDSEY MONTOYA
COMMISSION NUMBER 1140229
EXPIRATION DATE 04-26-2027

Montrose Air Quality Services
MONTROSE AIR QUALITY SERVICES
9100 2ND STREET NW STE 200
ALBUQUERQUE, NM 87114

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PM_{10}	88.0 pph	90.0 tpy
$PM_{2.5}$	15.0 pph	17.0 tpy
Sulfur Dioxide (SO_2)	2.3 pph	4.2 tpy
Nitrogen Oxides (NO_x)	56.9 pph	98.6 tpy
Carbon Monoxide (CO)	13.1 pph	23.0 tpy
Volatile Organic Compounds (VOC)	4.5 pph	8.2 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.27 pph	0.50 tpy
Toxic Air Pollutant (TAP)	0.0017 pph	0.0031 tpy
Green House Gas Emissions as Total CO_2e	n/a	13583 tpy

The maximum operating schedule for material processing is 13.5 hours per day (6 am to 7:30 pm) for the months of June and July; 13 hours per day (6 am to 7 pm) for the months of April, May, and August; 12.5 hours per day (6:30 am to 7 pm) for the month of September; 11 hours per day (7 am to 6 pm) for the month of March; 11 hours per day (6:30 am to 5:30 pm) for the month of October; 10.5 hours per day (7:30 am to 6 pm) for the month of February; 10.5 hours per day (7 am to 5:30 pm) for the month of November; and 9.5 hours per day (7:30 am to 5 pm) for the months of December and January, 7 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day. To allow for engine warmup, plant engines will be allowed to startup one hour prior to material processing.

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3601 Pan American Freeway NE #111
Albuquerque, New Mexico 87107

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Affidavit of Publication

STATE OF NEW MEXICO } SS
COUNTY OF VALENCIA }

Ad Cost:	$1,349.41
Ad Number:	289310
Account Number:	1111169
Classification:	NON-GOVERNMENT LEGALS

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NOTARY PUBLIC
DAVID LINDSEY MONTOYA
COMMISSION NUMBER 1140229
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Albuquerque, New Mexico 87107

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

General Posting of Notices – Certification

I, ___Eric Brower_____, the undersigned, certify that on **9-10-2025,** posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the Village of Los Lunas of Valencia County, State of New Mexico on the following dates:

1. Facility entrance {9-10-2025}
2. {Village of Los Lunas, 660 Main St SW}{9-10-2025}
3. {State of NM Environment Dept, 475 Courthouse Rd SE Suite B}{9-10-2025}
4. {Valencia County Admin Office, 444 Luna Ave SE}{9-10-2025}

Signed this 10th day of September , 2025 ,

_____ ____9/10/2025__
Signature Date

___Eric Brower_____
Printed Name

_Project Manager_____
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

Facility Entrance to the

MSCI Los Lunas Plant

701 State Highway 6, Los Lunas, NM



NOTICE

Mountain States Constructors (MSC3), Inc. announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the MSC3 Los Lunas Plant, which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is September 26, 2025.

The address for the facility known as, MSC3 Los Lunas Plant, is 701 State Highway 6, Los Lunas, NM 87031. The exact location of the MSC3 Los Lunas Plant is at Latitude (decimal degrees): 34.813155 and Longitude (decimal degrees): -106.883123. The approximate location of this facility is 7.0 miles west-northwest of Los Lunas in Valencia County.

The function of the facility is to crush and screen aggregate material from an on-site quarry into usable construction material.

The facility consists of a 1000 ton per hour (tph) and 2,556,650 tons per year (tpy) main plant (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant), 300 tph and 706,995 tpy air separator plant (screening plant), and 200 tph and 361,800 tpy recycled asphalt pavement (RAP) plant. The main plant will be powered by a 2288 horsepower (hp) (1706 kW) diesel-fired engine. Pit plant #1 will be powered by a 1438 hp (1010 kW) diesel-fired engine. Pit plant #2 will be powered by a 2145 hp (1500 kW) diesel-fired engine. The air separator plant will be powered by a 190 hp (142 kW) diesel-fired engine. The RAP plant will be powered by a 413 hp (308 kW) diesel-fired engine. Raw aggregate material is obtained from an on-site quarry and processed by one of the three crushing and screening plants, then stored in onsite finish storage piles until transported from the facility to off-site sales. Recycled asphalt material will be delivered to the facility and stored in a storage pile until processed by the RAP plant. Processed RAP material will be used as input into a co-located hot mix asphalt plant for road construction projects.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and maximum tons per year (tpy) and may change slightly during the course of the Department's review:

Pollutant:	Maximum Pounds per hour	Maximum Tons per year
PM_{10}	88.0 pph	17.0 tpy
$PM_{2.5}$	15.0 pph	4.2 tpy
Sulfur Dioxide (SO_2)	3.3 pph	58.8 tpy
Nitrogen Oxides (NO_x)	36.9 pph	23.0 tpy
Carbon Monoxide (CO)	1.1 pph	9.2 tpy
Volatile Organic Compounds (VOC)	0.27 pph	6.50 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.0017 pph	0.0035 tpy
Toxic Air Pollutant (TAP)	n/a	11583 tpy
Green House Gas Emissions as Total CO_{2e}	n/a	

The maximum operating schedule for material processing is 13.5 hours per day (6 am to 7:30 pm) for the months of June and July; 13 hours per day (6 am to 7 pm) for the months of April, May, and August; 12.5 hours per day (6:30 am to 7 pm) for the month of September; 11 hours per day (7 am to 6 pm) for the month of March; 11 hours per day (6:30 am to 5:30 pm) for the month of October; 10.5 hours per day (7:30 am to 6 pm) for the month of February; 10.5 hours per day (7 am to 5:30 pm) for the month of November; and 9.5 hours per day (7:30 am to 5 pm) for the months of December and January; 7 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day. To allow for engine warmup, plant engines will be allowed to startup one hour prior to material processing.

The owner and/or operator mailing address for the Facility is:
Mountain States Constructors, Inc.
3601 Pan American Freeway NE #111
Albuquerque, New Mexico 87107

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager, New Mexico Environment Department, Air Quality Bureau, 525 Camino de los Marquez, Suite 1, Santa Fe, New Mexico, 87505-1816. Other comments and questions may be submitted verbally: (505) 476-4300. 1 800 224-7009.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

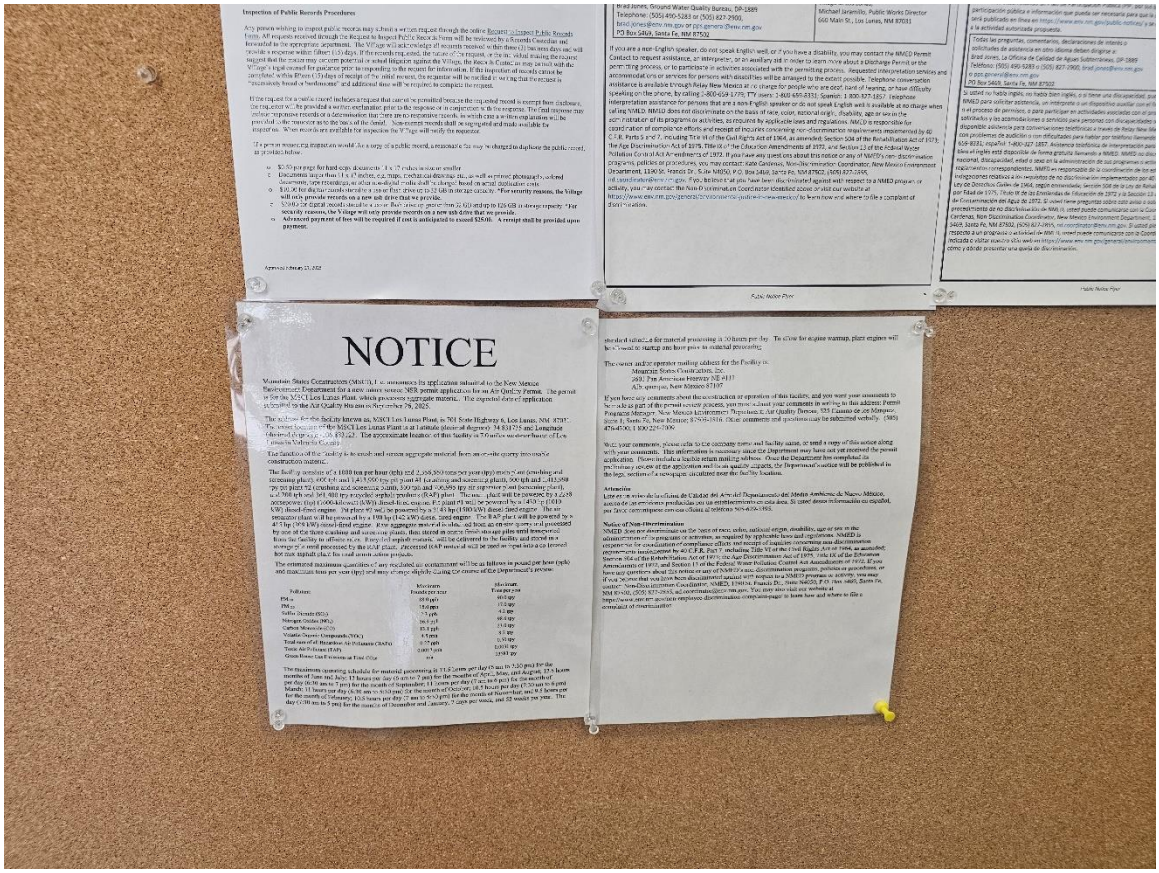
Attención
Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las siguientes peticiones por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3305.

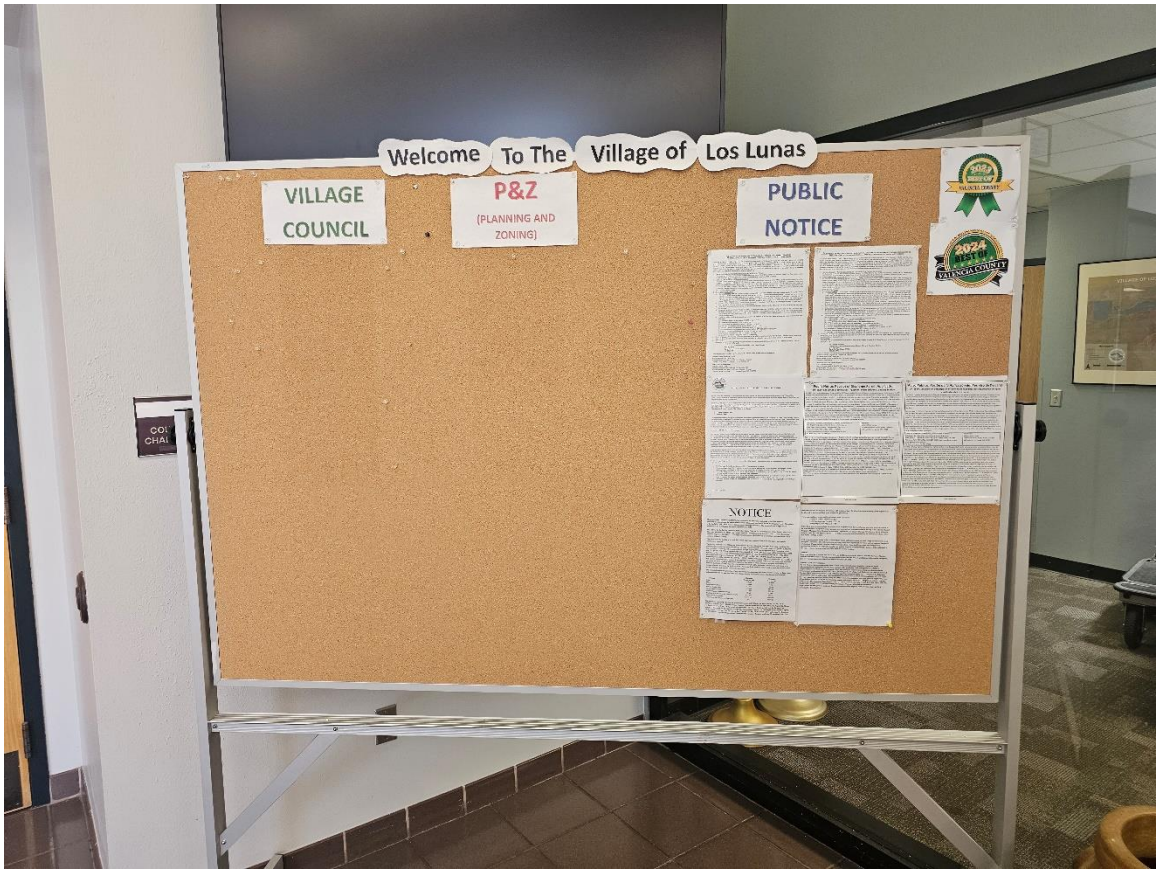
Notice of Non-Discrimination
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.epa.gov/ocr/publication-employer-discrimination-complaint-page to learn how and where to file a complaint of discrimination.



Village of Los Lunas

660 Main St SW, Los Lunas, NM

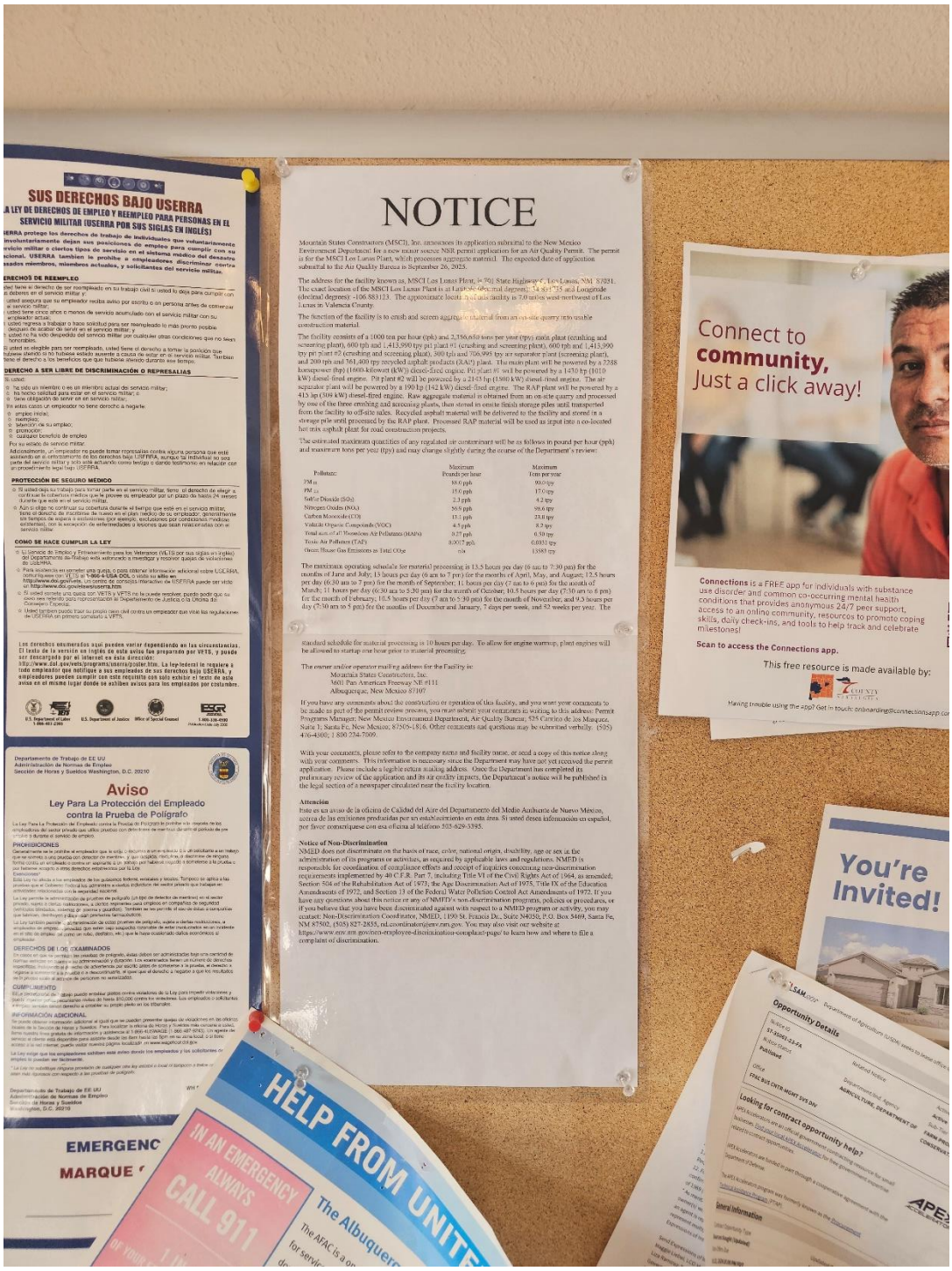

Inspection of Public Records Procedures
NOTICE


Welcome To The Village of Los Lunas
VILLAGE COUNCIL
P&Z
(PLANNING AND ZONING)
PUBLIC NOTICE
NOTICE


Los Lunas Administration Department

Valencia County Admin Office

444 Luna Ave SE, Los Lunas, NM



SUS DERECHOS BAJO USERRA

LA LEY DE DERECHOS DE EMPLEO Y REEMPLEO PARA PERSONAS EN EL SERVICIO MILITAR (USERRA POR SUS SIGLAS EN INGLÉS)

NOTICE

Mountain States Constructors (MSCI), Inc. announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the MSCI Los Lunas Plant, which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is September 26, 2025.

The address for the facility known as, MSCI Los Lunas Plant, is 301 State Highway 6, Los Lunas, NM 87031. The exact location of the MSCI Los Lunas Plant is at Latitude (decimal degrees) 34.8617° and Longitude (decimal degrees) -106.883123. The approximate location of this facility is 7.0 miles west-northwest of Los Lunas in Valencia County.

The function of the facility is to crush and screen aggregate material from an on-site quarry into usable construction material.

The facility consists of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant), 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant), 300 tph and 706,995 tpy air separator plant (screening plant), and 200 tph and 471,400 tpy recycled asphalt products (RAP) plant. The main plant will be powered by a 3288 horsepower (hp) (1600-kilowatt (kW)) diesel-fired engine. Pit plant #1 will be powered by a 1430 hp (1010 kW) diesel-fired engine. Pit plant #2 will be powered by a 2143 hp (1500 kW) diesel-fired engine. The air separator plant will be powered by a 190 hp (142 kW) diesel-fired engine. The RAP plant will be powered by a 413 hp (309 kW) diesel-fired engine. Raw aggregate material is obtained from an on-site quarry and processed by one of the three crushing and screening plants, then stored in onsite finish storage piles until transported from the facility to offsite sales. Recycled asphalt material will be delivered to the facility and stored in a storage pile until processed by the RAP plant. Processed RAP material will be used as input into a co-located hot mix asphalt plant for road construction projects.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and maximum tons per year (tpy) and may change slightly during the course of the Department's review:

Pollutant:	Maximum Pounds per hour	Maximum Tons per year
PM 10	34.9 pph	90.0 tpy
PM 2.5	15.0 pph	17.0 tpy
Sulfur Dioxide (SO2)	2.3 pph	4.2 tpy
Nitrogen Oxides (NOx)	56.9 pph	98.6 tpy
Carbon Monoxide (CO)	13.1 pph	23.0 tpy
Volatile Organic Compounds (VOC)	4.5 pph	8.2 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.37 pph	0.59 tpy
Toxic Air Pollutant (TAP)	0.0037 pph	0.0033 tpy
Green House Gas Emissions as Total CO2e	n/a	13583 tpy

The maximum operating schedule for material processing is 13.5 hours per day (6 am to 7:30 pm) for the months of June and July; 13 hours per day (6 am to 7 pm) for the months of April, May, and August; 12.5 hours per day (6:30 am to 7 pm) for the month of September; 11 hours per day (7 am to 6 pm) for the months of March; 11 hours per day (6:30 am to 5:30 pm) for the month of October; 10.5 hours per day (7:30 am to 6 pm) for the month of February; 10.5 hours per day (7 am to 5:30 pm) for the month of November; and 9.5 hours per day (7:30 am to 5 pm) for the months of December and January, 7 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day. To allow for engine warmup, plant engines will be allowed to startup one hour prior to material processing.

The owner and/or operator mailing address for the Facility is:
Mountain States Constructors, Inc.
3601 Pan American Freeway NE #111
Albuquerque, New Mexico 87107

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager, New Mexico Environment Department, Air Quality Bureau, 525 Camino de los Marquez, Suite 1, Santa Fe, New Mexico, 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and the air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención
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Aviso
Ley Para La Protección del Empleado contra la Prueba de Polígrafo

Connect to community, Just a click away!

Connections is a FREE app for individuals with substance use disorder and common co-occurring mental health conditions that provides anonymous 24/7 peer support, access to an online community, resources to promote coping skills, daily check-ins, and tools to help track and celebrate milestones!

Scan to access the Connections app.

This free resource is made available by:

You're Invited!

HELP FROM UNITE

IN AN EMERGENCY ALWAYS CALL 911

Opportunity Details

Looking for contract opportunity help?




VALENCIA
COUNTY
Administrative Offices
444 Luna Ave., Los Lunas, N.M. 87031

NMED

475 Courthouse Rd SE Suite B

Los Lunas, NM


NOTICE
NMED
New
Mexico
Environment
Department
PUBLIC NOTICES


NOTICE
NMED
PUBLIC NOTICES


STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT
475 COURT OUSE RD
CENTRAL NEW MEXICO COUNSELING SERVICES

PUBLIC SERVICE ANNOUNCEMENT

Mountain States Constructors (MSCI), Inc. announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the MSCI Los Lunas Plant, which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is September 26, 2025.

The address for the facility known as, MSCI Los Lunas Plant, is 701 State Highway 6, Los Lunas, NM 87031. The exact location of the MSCI Los Lunas Plant is at Latitude (decimal degrees): 34.831735 and Longitude (decimal degrees): -106.883123. The approximate location of this facility is 7.0 miles west-northwest of Los Lunas in Valencia County.

The function of the facility is to crush and screen aggregate material from an on-site quarry into usable construction material.

Public notices have been posted in the following locations for review by the public:

1. Valenica County Administration Offices at 444 Luna Ave SE, Los Lunas, NM;
2. Village of Los Lunas Office at 660 Main St. SW, Los Lunas, NM;
3. State of NM Environment Dept at 475 Courthouse Rd SE Suite B, Los Lunas, NM;
4. At the main entrance to the MSCI Los Lunas Plant at 701 State Highway 6, Los Lunas, NM.

The owner and/or operator mailing address for the Facility is:

Mountain States Constructors, Inc.
3601 Pan American Freeway NE #111
Albuquerque, New Mexico 87107

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico; 87505-1816
Telephone Number (505) 476-4300 or 1 800 224-7009

Submittal of Public Service Announcement – Certification

I, Paul Wade, the undersigned, certify that on September 18, 2025, submitted a public service announcement to KIOT Radio that serves the Village of Los Lunas, Valencia County, New Mexico, in which the source is proposed to be located and that KIOT Radio DID NOT RESPOND.

Signed this 18 day of September, 2025,

Paul Wade
Signature

September 18, 2025
Date

Paul Wade
Printed Name

Air Quality Consultant – Montrose Environmental Solutions, Inc.
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}



U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Albuquerque, NM 87110

OFFICIAL USE

Certified Mail Fee $5.30

$ $0.00

Extra Services & Fees (check box, add fee as appropriate) $0.00

- ☐ Return Receipt (hardcopy) $ $0.00
- ☐ Return Receipt (electronic) $ $0.00
- ☐ Certified Mail Restricted Delivery $ $0.00
- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $

Postage $0.78

$

Total Postage and Fees $6.08

$

ALBUQUERQUE, NM 87110-3801
SEP 1 2025 Postmark Here
USPS

Sent To

Street an KIOT FM Radio
8009 Marble Ave NE

City, Stai Albuquerque, NM 87110-7901

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7205 2883

September 18, 2025

KIOT FM Radio
8009 Marble Ave NE
Albuquerque, NM 87110-7901

CERTIFIED MAIL

Dear KIOT FM Radio:

SUBJECT: PSA Request - Proposed New Air Quality Construction Permit Mountain States Constructors, Inc. – MSCI Los Lunas Plant at 701 State Highway 6, Los Lunas, NM.

Attached is a copy of a public service announcement regarding a proposed new air quality construction permit application for Mountain States Constructors, Inc. – MSCI Los Lunas Plant. This announcement is being submitted by Montrose Environmental Solutions, Inc., Albuquerque, NM on behalf of Mountain States Constructors, Inc.

The announcement request is being made to fulfill the requirements of the New Mexico Environmental Department air quality permitting regulations. Please consider reading the attached announcement as a public service message.

If you have any questions or need additional information, please contact me at (505) 830-9680 ext 6 (voice), (505) 830-9678 (fax) or email at pwade@montrose-env.com.

Thank you.

Sincerely,

Paul Wade

Paul Wade
Senior Associate Engineer

Montrose Environmental Solutions, Inc.
9100 2nd St., Suite 200
Albuquerque, NM 87114-1664

T: 505.830.9680 ext. 6
F: 505.830.9678
Pwade@montrose-env.com
www.montrose-env.com

Section 10

Written Description of the Routine Operations of the Facility

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A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

The Mountain States Contractors, Inc.'s MSCI Los Lunas Plant consists of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant); 300 tph and 706,995 tpy air separator plant (screening plant); and 200 tph and 361,400 tpy recycled asphalt products (RAP crushing and screening) plant. Daily production rates are presented in Table 3-3.

Main Plant

The 1000 tph crushing and screening operation will include an aggregate quarry source, raw material surge piles, five (5) feeders, three (3) jaw crushers, two (2) surge bins, one (1) pre-screen, one (1) waste screen, two (2) cone crushers, two (2) 3-deck screens, thirty-seven (37) transfer conveyors, and nine (9) stacker conveyors. The crushing plant will be powered by a 2288 horsepower (hp), 1600 kilowatt (kW) diesel-fired engine (Unit 69E). The Main Plant consists of Emission Units 1 – 69E. Material from the raw material quarry (Unit 1) will be loaded (Unit 2) and transported by rock trucks (Unit 193) to the main plant main feeder (Unit 3). This material is processed first through a jaw crusher (Unit 4) to a surge bin (Unit 5) then sized in pre-screens (Units 6 and 7) to separate product from waste material (Unit 65). Waste material is haul to the waste pile (Unit 162) by rock trucks (Unit 193). Product material is then fed into one of two processing lines that consist of a feeder (Units 9 or 14), jaw crusher (Units 10 or 15), feeder (Units 11 or 16), cone crusher (Units 12 or 17), and 3-deck screen (Units 13 or 18). Oversized material from the 3-deck screen is recycled back to the cone crusher. Transfer conveyors between processing equipment includes Emission Units 19 – 55. Finish material (Units 59 – 64) is loaded into rock trucks and transported to finish piles (Unit 67) located along the main access road to the facility. From the finish storage piles, product is loaded (Unit 68) and transported by road haul trucks (Unit 193) from the facility to off-site sales. Figure 4-1 in Section 4 presents an equipment layout for the main plant. The engine hours of operation are presented in Table 3-1 in Section 3. The material processing hours of operation are presented in Table 3-2 in Section 3.

Pit Plant #1

The 600 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) pre-screen, one (1) cone crusher, one (1) VSI crusher, one (1) 3-deck screen, one (1) air separator, twenty-five (25) transfer conveyors, and five (5) stacker conveyors. The crushing plant will be powered by a 1604 hp (1010 kW) diesel-fired engine (Unit 111E). The Pit Plant #1 consists of Emission Units 70 – 111E. Material from the raw material quarry (Unit 70) will be loaded into the plant feeder (Unit 71). This material is processed first through a jaw crusher (Unit 72), surge bin (Unit 73) and pre-screen (Unit 74) to separate product (Units 105-108) from waste material (Unit 104). Waste material is haul to the waste pile (Unit 162) by rock trucks (Unit 193). Product material is crushed in the cone crusher (Unit 75) or sent to and crushed in the VSI crusher (Unit 76). From the cone and VSI crushers material is sent to be sized by the 3-deck screen (Unit 77). Oversized material from the 3-deck screen is recycled back to the VSI crusher. Part of the finished material from the 3-deck screen is sent to the air separator (Unit 78) for further size separation. Transfer

conveyors between processing equipment includes Emission Units 79 – 103. Finish material is loaded into finish piles (Unit 109) located along the pit plant road located in the facility quarry. From the finish storage piles, product is loaded (Unit 110) and transported by road haul trucks from the facility to off-site sales. Figure 4-2 in Section 4 presents an equipment layout for pit plant #1. The engine hours of operation are presented in Table 3-1 in Section 3. The material processing hours of operation are presented in Table 3-2 in Section 3.

Pit Plant #2

The 600 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) pre-screen, two (2) cone crushers, two (2) 3-deck screens, one (1) air separator, twenty-nine (29) transfer conveyors, and eight (8) stacker conveyors. The crushing plant will be powered by a 2153 hp (1500 kW) diesel-fired engine (Unit 161E). The Pit Plant #1 consists of Emission Units 112 – 161E. Material from the raw material quarry (Unit 112) will be loaded into the plant feeder (Unit 113). This material is processed first through a jaw crusher (Unit 114), surge bin (Unit 115) and pre-screen (Unit 116) to separate product Units 152 – 158) from waste material (Unit 151). Waste material is haul to the waste pile (Unit 162) by rock trucks (Unit 193). Product material is transported by conveyor (Unit 129) to a splitter conveyor (Unit 130) which will send the material to one of two lines. For each line material is sized in the cone crusher (Units 117 and 120). From the cone crusher, material is sent to the 3-deck screen (Units 118 and 121). Oversized material from the 3-deck screen is recycled back to the cone crusher. Part of the finished material from one of the 3-deck screen is sent to the air separator (Unit 119) for further size separation. Transfer conveyors between processing equipment includes Emission Units 122 – 150. Finish material is loaded into finish piles located along the pit plant road located in the facility quarry. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 4-3 in Section 4 presents an equipment layout for pit plant #2. The engine hours of operation are presented in Table 3-1 in Section 3. The material processing hours of operation are presented in Table 3-2 in Section 3.

Air Separator

The 300 tph air separator operation will include a source of crusher fines from processed aggregate for its material input, one (1) feeder, one (1) air separator, five (5) transfer conveyors, and two (2) stacker conveyors. The air separator will be powered by a 265 hp (198 kW) diesel-fired engine (Unit 175E), if not connected to the main plant power system. Processed crusher fines will be loaded into the plant feeder (Unit 163), then fed into the air separator (Units 164 and 165) for further sizing. Transfer conveyors between processing equipment includes Emission Units 166 – 170. Stack Conveyors (Units 171 and 172) drop the sized material in piles from the plant. Finish material (Unit 173) is loaded into rock trucks and transported to finish piles located along the main access road to the facility. From the finish storage piles, product is transported by road haul trucks (Unit 193) from the facility to off-site sales. Figure 4-4 in Section 4 presents an equipment layout for air separator. The engine hours of operation are presented in Table 3-1 in Section 3. The material processing hours of operation are presented in Table 3-2 in Section 3.

RAP Crushing and Screening Plant

The 200 tph recycled asphalt crushing and screening operation will include a raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) cone crusher, one (1) 2-deck screen, eight (8) transfer conveyors, and one (1) stacker conveyor. The RAP crushing plant will be powered by a 415 hp (306 kW) diesel-fired engine (Unit 192E). RAP material is brought in the facility in road haul trucks and stored in a RAP material storage pile (Unit 176) until loaded into the RAP plant feeder (Unit 177). This material is processed first through a VSI crusher (Unit 178), surge bin (Unit 179) and 2-deck screen (Unit 180) to produce sized RAP (Unit 190) to be used in the co-located HMA. Oversized material from the 2-deck screen sent to the cone crusher (Unit 181) then recycled back to the 2-deck screen. Transfer conveyors between processing equipment includes Emission Units 182 – 189. Recycled RAP material is loaded into a finish pile (Unit 191) until needed for the co-located HMA. The RAP crushing and screening plant will be permitted to operate for the months of March through October. Figure 4-5 in Section 4 presents an equipment layout for RAP crushing and screening plant. The RAP crushing and screening plant processing hours of operation are presented in Table 3-3 of Section 3.

As seen in Section 5, Figure 5-1 and 5-2, there are multiply truck routes and two types of material haul trucks, commercial road haul trucks and quarry (rock) trucks. Commercial road haul trucks are used to transport product from the site, haul RAP material in; and rock truck are used onsite to haul material from the quarry wall to the main plant, product from the main plant to the main plant finish piles, and waste material in the pit to the waste storage pile.

The entrance road to the site is paved until halfway up the east side of the southern loop road, see Figure 5-1. The exit to the site is paved from the north side of the southern loop road traveling west to the facility exit. All other roads will be unpaved and controlled with surfactants.

The following table describes the haul roads at the site and the maximum day number of trucks for each catagory. The maximum number of trucks per day that will be permitted for the site, including product trucks and RAP delivery trucks is 481 trucks. The total emissions from all truck traffic are included in Emission Unit 193 "Plant Haul Roads".

MSCI Los Lunas Haul Road Descriptions

Emission Source ID	Description	Truck Type	Max Trucks per Day
193	Main plant product haul trucks route entrance into site along the south side the southern loop paved road.	Commercial	255
	Main plant product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	
	Main plant product haul trucks route to main plant storage piles – unpaved road.	Commercial	
	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	153
	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	
	Pit plants product haul trucks route to the edge of the open pit.	Commercial	
	Pit plants product haul trucks route from the edge of the open pit to the pit plants storage piles.	Commercial	
	RAP delivery haul trucks route that enters and exits on the paved road from the facility entrance to the RAP storage pile.	Delivery	73
	Total road haul truck traffic entering and exiting site		**481**
	Rock truck route from the quarry wall to deliver raw material to the main plant surge pile.	Rock	207
	Rock truck route from edge of open pit to the main plant finish storage piles with product material to the main plant product piles.	Rock	145
	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes for the waste haul trucks to travel, the most conservative (longest) used for emission calculations and was used in the model.	Rock	93

Fugitive dust generated during aggregate processing will be controlled by the inherent moisture content of the material and a "Wet Dust Suppression System" to no more than 7% opacity at screening and conveyor transfer points and 12% opacity at crushing operations.

No fugitive dust controls are proposed for loading the feeders (3, 9, 11, 14, 16, 71, 113, 163, and 164), and material handling at the quarry material source (1, 70, and 112), storage piles (65, 67, 109, 159, 162 and 174) or truck loading (2, 66, 68, 110, 160 and 174).

No fugitive dust controls are proposed for the RAP Plant with the exception of accounting for the inherent properties of RAP with a coating of asphalt which captures small particles within the material. Based on EPA documents "EIIP – Preferred and Alternative Methods for Estimating Air Emissions from Hot-Mix-Asphalt Plants, Final Report, July 1996, Table 3.2-1 Fugitive Dust – Crushed RAP material" the inherent typical efficiency of the material is 70% (see Section 7).

The MSCI Los Lunas Plant will be permitted to allow co-location with one of the three MSCI HMA plant presently operating under NSR Permits 3171-M1, 4453, or 9720. To show compliance with NAAQS for operating any of the plants, an analysis of the worst-case operating parameters was used in the model. The maximum operating schedule for any one of the 3 permits is 24 hour per day operation for 365 days per year. MSCI will accept a permit condition in the new NSR permit for the MSCI Los Lunas Plant that restricts co-location with any NSR Permits 3171-M1, 4453, or 9720 HMA plants for less than a year. Additionally, any of the MSCI HMA plants can also co-locate under their existing GCP3 registrations. Any co-located HMA plant will operate under the terms and conditions of their individual NSR permit. Haul truck traffic for the co-located HMA plant to and from the site will travel on paved roads to the plant, with unpaved road controlled with surfactants around the HMA plant site itself. Location of the HMA plant site is shown on Figure 5-3 in Section 5.

Emission sources for the co-located HMA plant includes HMA drum and baghouse; plant main and standby generators; asphalt cement heater; mineral filler silo; asphalt storage silo; cold aggregate and RAP storage piles; cold aggregate delivery system (feeder scalping screen pugmill and conveyors); RAP delivery system (feeder, scalping screen, and conveyors).

Section 11

Source Determination

Source submitting under 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, Single Source Determination Guidance, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe)**:** MSCI Los Lunas Plant

B. Apply the 3 criteria for determining a single source:

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, OR surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

X Yes **☐ No**

Common Ownership or Control: Surrounding or associated sources are under common ownership or control as this source.

X Yes **☐ No**

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

X Yes **☐ No**

C. Make a determination:

X The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "**YES**" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "**NO**" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- **X** **a minor PSD source before and after this modification (if so, delete C and D below).**
- ☐ **a major PSD source before this modification. This modification will make this a PSD minor source.**
- ☐ **an existing PSD Major Source that has never had a major modification requiring a BACT analysis.**
- ☐ **an existing PSD Major Source that has had a major modification requiring a BACT analysis**
- ☐ **a new PSD Major Source after this modification.**

B. **This facility is not one of the listed 20.2.74.501 Table I – PSD Source Categories:**

a. **NOx: 99.6 TPY**
b. **CO: 23.8 TPY**
c. **VOC: 8.2 TPY**
d. **SOx: 4.2 TPY**
e. **PM: 235.0 TPY; Regulated: 50.7 TPY**
f. **PM10: 88.3 TPY**
g. **PM2.5: 15.6 TPY**
h. **Fluorides: 0.0 TPY**
i. **Lead: 0.0007 TPY**
j. **Sulfur compounds (listed in Table 2): 0.0 TPY**
k. **GHG: 13,443 TPY**

Section 13

Determination of State & Federal Air Quality Regulations

This section lists each state and federal air quality regulation that may apply to your facility and/or equipment that are stationary sources of regulated air pollutants.

Not all state and federal air quality regulations are included in this list. Go to the Code of Federal Regulations (CFR) or to the Air Quality Bureau's regulation page to see the full set of air quality regulations.

Required Information for Specific Equipment:
For regulations that apply to specific source types, in the 'Justification' column **provide any information needed to determine if the regulation does or does not apply**. **For example**, to determine if emissions standards at 40 CFR 60, Subpart IIII apply to your three identical stationary engines, we need to know the construction date as defined in that regulation; the manufacturer date; the date of reconstruction or modification, if any; if they are or are not fire pump engines; if they are or are not emergency engines as defined in that regulation; their site ratings; and the cylinder displacement.

Required Information for Regulations that Apply to the Entire Facility:
See instructions in the 'Justification' column for the information that is needed to determine if an 'Entire Facility' type of regulation applies (e.g. 20.2.70 or 20.2.73 NMAC).

Regulatory Citations for Regulations That Do Not, but Could Apply:
If there is a state or federal air quality regulation that does not apply, but you have a piece of equipment in a source category for which a regulation has been promulgated, you must **provide the low level regulatory citation showing why your piece of equipment is not subject to or exempt from the regulation. For example** if you have a stationary internal combustion engine that is not subject to 40 CFR 63, Subpart ZZZZ because it is an existing 2 stroke lean burn stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, your citation would be 40 CFR 63.6590(b)(3)(i). **We don't want a discussion of every non-applicable regulation, but if it is possible a regulation could apply, explain why it does not. For example,** if your facility is a power plant, you do not need to include a citation to show that 40 CFR 60, Subpart OOO does not apply to your non-existent rock crusher.

Regulatory Citations for Emission Standards:
For each unit that is subject to an emission standard in a source specific regulation, such as 40 CFR 60, Subpart OOO or 40 CFR 63, Subpart HH, include the low level regulatory citation of that emission standard. Emission standards can be numerical emission limits, work practice standards, or other requirements such as maintenance. **Here are examples:** a glycol dehydrator is subject to the general standards at 63.764C(1)(i) through (iii); an engine is subject to 63.6601, Tables 2a and 2b; a crusher is subject to 60.672(b), Table 3 and all transfer points are subject to 60.672(e)(1)

Federally Enforceable Conditions:
All federal regulations are federally enforceable. All Air Quality Bureau State regulations are federally enforceable except for the following: affirmative defense portions at 20.2.7.6.B, 20.2.7.110(B)(15), 20.2.7.11 through 20.2.7.113, 20.2.7.115, and 20.2.7.116; 20.2.37; 20.2.42; 20.2.43; 20.2.62; 20.2.63; 20.2.86; 20.2.89; and 20.2.90 NMAC. Federally enforceable means that EPA can enforce the regulation as well as the Air Quality Bureau and federally enforceable regulations can count toward determining a facility's potential to emit (PTE) for the Title V, PSD, and nonattainment permit regulations.

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVENT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: http://cfpub.epa.gov/adi/

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

Table for State Regulations:

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
20.2.7 NMAC	Excess Emissions	Yes	Facility	This facility is subject to emissions limits in a permit or numerical emissions standards in a federal or state regulation.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	69E, 111E, 161E, 175E, 192E	Units 21 and RR_ENG is limited to opacity of 20% per 20.2.61.109 NMAC.
20.2.70 NMAC	Operating Permits	No	Facility	The facility does not have potential to emit (PTE) of 100 tpy or more of any regulated air pollutant other than HAPs; and/or a HAPs PTE of 10 tpy or more for a single HAP or 25 or more tpy for combined HAPs
20.2.71 NMAC	Operating Permit Fees	No	Facility	If subject to 20.2.70 NMAC and your permit includes numerical ton per year emission limits, you are subject to 20.2.71 NMAC and normally applies to the entire facility.
20.2.72 NMAC	Construction Permits	Yes	Facility	MSCI is applicable to “Construction Permit” 20.2.72 NMAC.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	The facility is applicable to the Emissions Inventory Reporting per 20.2.73.300 NMAC since the facility is subject to 20.2.72.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	Facility	The facility is not a major PSD source
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This regulation applies to this facility since MSCI is applying for a permit pursuant to 20.2.72 NMAC.
20.2.77 NMAC	New Source Performance	Yes	4-64, 72-108, 114-158, 165-172, 178-190 175E, 192E	This is a stationary source which is subject to the requirements of 40 CFR Part 60, Subpart OOO or stationary sources subject to the requirements of 40 CFR Part 60, Subpart IIII.

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61.
20.2.80 NMAC	Stack Heights	No		No citation applicable.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	69E, 111E, 161E, 175E, 192E, 194	This facility is potentially subject to the requirements of 40 CFR Part 63, Subpart ZZZZ. This facility has a gasoline dispensing facility subject to the requirements of 40 CFR Part 63, Subpart CCCCCC, Unit 194.

Table for Applicable Federal Regulations:

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	Defined as applicable at 20.2.72, any national ambient air quality standard
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	4-64, 72-108, 114-158, 165-172, 178-190, 175E, 192E	Subparts IIII and OOO in 40 CFR 60 apply to this facility.
NSPS 40 CFR 60, Subpart 000	Standards of Performance for Nonmetallic Mineral Processing Plants	Yes	4-64, 72-108, 114-158, 165-172, 178-190	The provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	Yes	175E, 192E	If the plant is only located at the site for less than 12 months, the plant engine is defined by EPA as a “non-road” engine, and as such is not applicable to 40 CFR Part 60 Subpart IIII. If the plant operates at the site for more than 12 months, Units 175E and 192E would then be applicable to Subpart IIII.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	Units Subject to 40 CFR 61	Applies if any other Subpart in 40 CFR 61 applies.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	69E, 111E, 161E, 175E, 192E, 194	Applies if any other Subpart in 40 CFR 63 applies.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
MACT 40 CFR 63 Subpart CCCCCC	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities	Yes	194	This facility has a gasoline dispensing facility subject to the requirements of 40 CFR Part 63, Subpart CCCCCC, Unit 194. The fuel usage is less than 10,000 gallons per month and will follow the requirements found in 40 CFR Part 63.11116.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	69E, 111E, 161E, 175E, 192E	If the plant is only located at the site for less than 12 months, the plant engine is defined by EPA as a "non-road" engine, and as such is not applicable to 40 CFR Part 63 Subpart ZZZZ. If the plant operates at the site for more than 12 months, the engines would then be applicable to Subpart ZZZZ. If Units 175E and 192E meets the requirement of Subpart IIII it also meets the requirement of Subpart ZZZZ.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

☐ **Title V Sources** (20.2.70 NMAC)**:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

☒ **NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

☒ **Title V** (20.2.70 NMAC)**, NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

The preliminary operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown are as follows:

STARTUP AND SHUTDOWN PROCEDURES

Water Truck

Startup

Check water supply, inspect nozzles and open all associated valves before startup.

Shutdown

Inspect nozzles and close all associated valves after shutdown.

Processing Plant Water Spray Dust Suppression System

Startup

Daily visual inspection of water spray operation prior to material processing. All plant water sprays, required to maintain opacity limits to required levels, will be operational prior to material processing.

Shutdown

No additional requirements are proposed.

OPERATIONS PLAN

Water Truck Operation

A water truck to be operated, as needed, at plant site disturbed areas, storage piles, and haul truck traffic areas to prevent excess visible emissions. These activities include; unpaved haul roads, storage piles and active disturbed

areas. Water spray application rate will be determined based on the occurrence of visible dust and may vary depending on existing road conditions, traffic, wind, temperature, and precipitation.

Processing Plant Water Spray Dust Suppression System

Water spray dust suppression will be operated at all times when pertinent equipment is operating to maintain equipment opacity limits.

MAINTENANCE PLAN

Water Truck Maintenance

A safety check and equipment check will be conducted daily. Normal vehicle maintenance will be performed regularly or as needed.

Processing Plant Water Spray Dust Suppression Maintenance

Visual inspections will be made monthly to verify proper functioning of control equipment. When emissions are suspected to approach compliance values, equipment will be checked for problems and repaired.

No startup/shutdown emission rates are expected to be greater than what is proposed for normal operations of the plant. All controls will be operating and functioning correctly prior to the start of production.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

Construction Scenarios: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: www.env.nm.gov/air-quality/permitting-section-procedures-and-guidance/. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

In this section, under the bolded title “Construction Scenarios”, specify any information necessary to write these conditions, such as: conservative-realistic estimated time for completion of construction of the various units, whether simultaneous operation of old and new units is being requested (and, if so, modeled), whether the old units will be removed or decommissioned, any PSD ramifications, any temporary limits requested during phased construction, whether any increase in emissions is being requested as SSM emissions or will instead be handled as a separate Construction Scenario (with corresponding emission limits and conditions, etc.

NA

Section 16

Air Dispersion Modeling

1) Minor Source Construction (20.2.72 NMAC) and Prevention of Significant Deterioration (PSD) (20.2.74 NMAC) ambient impact analysis (modeling): Provide an ambient impact analysis as required at 20.2.72.203.A(4) and/or 20.2.74.303 NMAC and as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines found on the Planning Section's modeling website. If air dispersion modeling has been waived for one or more pollutants, attach the AQB Modeling Section modeling waiver approval documentation.
2) SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions during routine or predictable startup, shutdown, or maintenance (SSM) using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.
3) Title V (20.2.70 NMAC) ambient impact analysis: Title V applications must specify the construction permit and/or Title V Permit number(s) for which air quality dispersion modeling was last approved. Facilities that have only a Title V permit, such as landfills and air curtain incinerators, are subject to the same modeling required for preconstruction permits required by 20.2.72 and 20.2.74 NMAC.

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC). See #1 above. **Note:** Neither modeling nor a modeling waiver is required for VOC emissions.	X
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3 above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	

Check each box that applies:

☐ See attached, approved modeling **waiver for all** pollutants from the facility.

☐ See attached, approved modeling **waiver for some** pollutants from the facility.

☒ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.

☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.

☐ No modeling is required.

Universal Application 4

Air Dispersion Modeling Report

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-A: Identification

1	Name of facility:	MSCI Los Lunas Plant
2	Name of company:	Mountain States Constructors, Inc.
3	Current Permit number:	New Permit
4	Name of applicant's modeler:	Paul Wade
5	Phone number of modeler:	505-830-9680 x11703
6	E-mail of modeler:	pwade@montrose-env.com

16-B: Brief

1	Was a modeling protocol submitted and approved? Approved – 9/16/2025	Yes☒	No☐
2	Why is the modeling being done?	New Facility	
3	Describe the permit changes relevant to the modeling.		
	New Permit		
4	What geodetic datum was used in the modeling?	NAD83	
5	How long will the facility be at this location?	Permanent	
6	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes☐	No☒

7	Identify the Air Quality Control Region (AQCR) in which the facility is located	152	
8	List the PSD baseline dates for this region (minor or major, as appropriate).		
	NO2	03/26/1997	
	SO2	03/26/1997	
	PM10	03/26/1997	
	PM2.5	02/11/2013	
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).		
	None within 50 km		
10	Is the facility located in a non-attainment area? If so describe below	Yes☐	No☒
	N/A		
11	Describe any special modeling requirements, such as streamline permit requirements.		
	N/A		

16-C: Modeling History of Facility

Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers).

Pollutant	Latest permit and modification number that modeled the pollutant facility-wide.	Date of Permit	Comments
CO	New Permit		
NO_2	New Permit		
SO_2	New Permit		
H_2S	N/A		
PM2.5	New Permit		
PM10	New Permit		
Lead	New Permit		
Ozone (PSD only)	Not a PSD Source		
NM Toxic Air Pollutants (20.2.72.402 NMAC)	TAP Emissions less than threshold		

16-D: Modeling performed for this application

For each pollutant, indicate the modeling performed and submitted with this application.
Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative analysis were also performed.

Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.
CO	☒	☐	☐	☐	☐

	NO_2	☒	☒	☒	☐	☐
	SO_2	☒	☐	☐	☐	☐
	H_2S	☐	☐	☐	☐	☒
	PM2.5	☒	☒	☐	☐	☐
	PM10	☒	☒	☐	☐	☐
	Lead	☒	☐	☐	☐	☐
	Ozone	☐	☐	☐	☒	☐
	State air toxic(s) (20.2.72.402 NMAC)	☐	☐	☐	☒	☐

16-E: New Mexico toxic air pollutants modeling

1 List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application.

2 List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required.

Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor
N/A					

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes☒	No☐
	Version 24142		

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	07/02/2025

2 If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed.

PM10 and PM2.5 GCP emission sources were set to 71.25 tpy and 17.875 tpy, respectively.
GCP2 and GCP3 hours of operation were limited to daylight hours only. Two sources, 29977 “Shiver Redi-Mix GCP5-4340” and 25141 “Southway Construction Co. GCP2-3559” are no longer located at this site and their leases have expired, so they will not be relocating back to this site.

AQB Source ID	Description of Corrections
29977	Shiver Redi-Mix GCP5-4340 removed
25141	Southway Construction Co. GCP2-3559 removed

16-H: Building and structure downwash

1	How many buildings are present at the facility?	None	
2	How many above ground storage tanks are present at the facility?	6	
3	Was building downwash modeled for all buildings and tanks? If not explain why below.	Yes☐	No☒
	No tanks or buildings are located in an area where building downwash would affect point sources.		
4	Building comments		

16-I: Receptors and modeled property boundary

1	"Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area.		
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?	Yes☐	No☒
3	Are restricted area boundary coordinates included in the modeling files?	Yes☒	No☐

4 Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.

Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments
Very Fine	Cartesian	50 meters	Border	500 Meters	
Very Fine	Cartesian	100 meters	500 Meters	1 Kilometers	
Fine	Cartesian	250 meters	1 Kilometers	3 Kilometers	
Course	Cartesian	500 meters	3 Kilometers	5 Kilometers	
Course	Cartesian	1000 meters	10 Kilometers	50 Kilometers	

5	Describe receptor spacing along the fence line.
	25 Meters
6	Describe the PSD Class I area receptors.
	N/A

16-J: Modeling Scenarios

Identify, define, and describe all modeling scenarios. Examples of modeling scenarios include using different production rates, times of day, times of year, simultaneous or alternate operation of old and new equipment during transition periods, etc. Alternative operating scenarios should correspond to all parts of the Universal Application and should be fully described in Section 15 of the Universal Application (UA3).

1

The facility hours of operation for the Main Plant, Pit Plant #1, Pit Plant #2, and Air Separator are presented below in Tables 1 and 2. Table 1 hours below are for the Main Plant, Pit Plant #1, Pit Plant #2, and Air Separator engines, Units 69E, 111E, 116E and 175E. This allows for warm up of the engines before material processing. Table 2 presents the processing of material which will begin an hour after the engines are allowed to operate. The aggregate crushing plant will limit the daily throughput per month to the values listed in Table 3. For combustion modeling hours of operation are found in Table 1.

TABLE 1: MSCI Los Lunas Aggregate Plant Engine Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
6:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
7:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	10.5	11.5	12	14	14	14.5	14.5	14	13.5	12	11	10.5

TABLE 2: MSCI Los Lunas Aggregate Plant Processing Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0

2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
7:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	9.5	10.5	11	13	13	13.5	13.5	13	12.5	11	10	9.5

TABLE 3: Aggregate/Recycle Daily Production Rates

Month	Main Plant Tons Per Day	Pit Plant 1 Tons Per Day	Pit Plant 2 Tons Per Day	Air Separator Tons Per Day	RAP Plant Tons Per Day
January	5500	3300	3300	1650	0
February	5500	3300	3300	1650	0
March	7000	4200	4200	2100	1400
April	8000	4800	4800	2400	1400
May	8000	4800	4800	2400	1400
June	8000	4800	4800	2400	1600
July	8000	4800	4800	2400	1600
August	8000	4800	4800	2400	1600
September	8000	4800	4800	2400	1400
October	7500	4500	4500	2250	1400
November	7000	4200	4200	2100	0
December	5500	3300	3300	1650	0

Since the daily production rate is less than the proposed hours of operation running at maximum hourly production rate, four modeling scenarios will be performed for particulate emissions. The model hours are presented in Tables 4, 5, 6, and 7.

TABLE 4: MSCI Los Lunas Plant Scenario 1 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
7:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
2:00 PM	0	0	0	0	0	0	0	0	0.5	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

TABLE 5: MSCI Los Lunas Plant Scenario 2 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
8:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1

12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
3:00 PM	0	0	0	0	0	0	0	0	0.5	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

TABLE 6: MSCI Los Lunas Plant Scenario 3 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0.5	0
9:00 AM	0.5	0	1	1	1	0.5	0.5	1	1	1	1	0.5
10:00 AM	1	0.5	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	0	1	1	1	1	1	1	1	1	0.5	0.5	0
4:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
5:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

TABLE 7: MSCI Los Lunas Plant Scenario 4 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	1	1	0
11:00 AM	0.5	0	1	1	1	0.5	0.5	1	1	1	1	0.5
12:00 PM	1	0.5	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

MSCI Los Lunas RAP Crushing and Screening Plant will operate only the months of March through October as presented in Table 8.

TABLE 8: MSCI Los Lunas RAP Plant Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0.5	0.5	1	1	0.5	0	0	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0

8:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
9:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
10:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
11:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
2:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
3:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
4:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	11	12.5	12.5	13.5	13.5	12.5	12	11	0	0

Since the RAP daily production rate is less than the proposed hours of operation running at maximum hourly production rate, four modeling scenarios will be performed for particulate emissions. The model hours are presented in Tables 9, 10, 11, and 12.

TABLE 9: MSCI Los Lunas RAP Plant Scenario 1 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0.5	0.5	1	1	0.5	0	0	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
9:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
10:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
11:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	0.5	0.5	1	1	1	1	1	0	0
2:00 PM	0	0	0	0	0	0	0	0.5	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0

8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	7	7	7	8	8	8	7	7	0	0

TABLE 10: MSCI Los Lunas RAP Plant Scenario 2 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0.5	0.5	1	1	0.5	0	0	0	0
9:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
10:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
11:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
2:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
3:00 PM	0	0	1	0.5	0.5	1	1	1	1	1	0	0
4:00 PM	0	0	0	0	0	0	0	0.5	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	7	7	7	8	8	8	7	7	0	0

TABLE 11: MSCI Los Lunas RAP Plant Scenario 3 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0

8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	1	0	0	0.5	0.5	1	0	1	0	0
11:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
2:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
3:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
4:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
5:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
6:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	7	7	7	8	8	8	7	7	0	0

TABLE 12: MSCI Los Lunas RAP Plant Scenario 4 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	1	0	0	0.5	0.5	1	0	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
2:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
3:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
4:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0

11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	7	7	7	8	8	8	7	7	0	0

The MSCI Los Lunas Plant will be permitted to allow co-location with one of the three MSCI HMA plant presently operating under NSR Permits 3171-M1, 4453, or 9720. To show compliance with NAAQS for operating any of the plants, an analysis of the worst-case operating parameters was used in the model. The maximum operating schedule for any one of the 3 permits is 24 hour per day operation for 365 days per year at a maximum hourly throughput of 400 tph or 4800 tons per day. Modeling was performed using 12 scenarios where the HMA operated 12 hours in a day at maximum allowable emission rates. The 12 scenarios start with Scenario 1 that operates the first 12 hours of the day, then scenario 2 starts 2 hours later, then so on around the clock.

MSCI will accept a permit condition in the new NSR permit for the MSCI Los Lunas Plant that restricts co-location with a HMA plant for less than a year. Since the HMA plant will not operate continually for a year the HMA plant emission sources will not consume increment, so no PSD increment modeling will be performed for the co-location dispersion modeling analysis. Additionally, any of the MSCI HMA plants can also co-locate under their existing GCP3 registrations. Regardless of the model results, each HMA plant will operate under the terms and conditions of their individual NSR permit. Haul truck traffic to and from the site will travel on paved roads with unpaved road around the HMA site itself. Location of the HMA site is shown on Section 5 Figure 5-3.

Emission sources for the co-located HMA plant includes HMA drum and baghouse; plant main and standby generators; asphalt cement heater; mineral filler silo; asphalt storage silo; cold aggregate and RAP storage piles; cold aggregate delivery system (feeder scalping screen pugmill and conveyors); RAP delivery system (feeder, scalping screen, and conveyors).

TABLE 13: Co-Located HMA Modeled Sources

Model ID	Source Description
HMASTK	HMA Baghouse Stack
HMAGEN	HMA Plant Generator
HMASGEN	HMA Plant Standby Generator
HMAHEAT	HMA Asphalt Cement Heater
HMAFILL	HMA Mineral Filler Silo Loading
DRUMUNL	HMA Asphalt Silo Loading
HMASILO	HMA Asphalt Silo Unloading
HMAPILE1-6	HMA Storage Pile Handling 1-6
HMABIN	HMA Bin Loading
HMATP1	HMA Bin Unloading
HMASCR	HMA Scalping Screen
HMATP2	HMA Scalping Screen Unloading
HMAPUG	HMA Pug Mill
HMATP3	HMA Pug Mill Unloading
HMATP4	HMA Conveyor Transfer to Drum Conveyor
RAPBIN	HMA RAP Bin Loading
RAPTP1	HMA RAP Bin Unloading
HMARAPSCR	HMA RAP Screen
RAPTP2	HMA RAP Screen Unloading

		RAPTP3	HMA RAP Transfer Point
		HPR_0001-31	HMA Paved Entrance Road Volume 1-31
		HUR_0001-15	HMA Unpaved Haul Road Volume 1-15
2	Which scenario produces the highest concentrations? Why?		
	Scenario 4 produced the highest concentrations in particulate modeling. The later hours in the day have lower wind speeds with lower dispersion. PM10 24 hour – Scenario 4 Year 2026 PM10 24 hour with HMA – Scenario 4 PM2.5 24 hour – Scenario 4 PM2.5 Annual - Scenario 4 PM2.5 24 hour with HMA – Crusher Scenario 4. HMA Scenario 12 PM2.5 Annual with HMA - Crusher Scenario 4. HMA Scenario 11		
3	Were emission factor sets used to limit emission rates or hours of operation? (This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.)	Yes☒	No☐
4	If so, describe factors for each group of sources. List the sources in each group before the factor table for that group. (Modify or duplicate table as necessary. It's ok to put the table below section 16-K if it makes formatting easier.) Sources: See the discussion in 16-J.1.		
5	If hourly, variable emission rates were used that were not described above, describe them below.		
	No		
6	Were different emission rates used for short-term and annual modeling? If so describe below.	Yes☒	No☐
	For PM2.5 annual modeling an hourly factor was used to account for the difference in hourly throughput and annual throughput. Based on the facility operating at the daily throughput limits found in Table 3 above, this is equivalent for the main plant, pit plant #1, and pit plant #2 of 5,184,630 tons per year. Since the annual production limit is 2,618,500 tons per year and the production, based on maximum hourly production and maximum annual hours of 4380, an hourly factor of 0.54 (5,184,630 / 9,636,000) was used in the annual PM2.5 modeling.		

16-K: NO_2 Modeling

1	Which types of NO_2 modeling were used? Check all that apply.	
	☒	ARM2
	☐	100% NO_X to NO_2 conversion
	☒	PVMRM
	☐	OLM
	☐	Other:
2	Describe the NO_2 modeling.	
	ROI modeling was performed using the ARM2 method CIA and Culpability analysis used PVMRM Method	

For PVMRM, three inputs can be selected in the model, the ISR, the NO_2/NO_X equilibrium ratio for the ambient air, and the ambient ozone concentration. The ISR will be determined for each source or group of sources. The NO_2/NO_X equilibrium ratio will be the EPA default of 0.90. Ozone input will be from monitored ozone data collected from an approved monitoring station.

Based on EPA's ISR databases, a proposed conservative NO_2/NO_X ISR ratio for Diesel-fired RICE is 0.15. No data could be found for the co-located hot mix asphalt drum, so to be conservative, the EPA default ISR of 0.50 will be used. For co-located HMA heater combustion, to be conservative, the EPA default ISR of 0.50 will be used. For neighboring sources, since the ISR has a diminishing impact on ambient NO_2/NO_X ratios as a plume is transported farther downwind due to mixing and reaction towards background ambient NO_2/NO_X ratios, a default ISR of 0.30 based on the NMED Modeling Guidelines was used. Table 14 summarizes the ISR selected for each NO_X source in the NO_2 1-hour modeling.

TABLE 14: Summary of Selected ISR

Source Description	Selected ISR
Plant Generator/Engine (RICE)	0.15
HMA Drum Dryer Exhaust	0.50
HMA Asphalt Heater Exhaust	0.50
Neighboring Sources	0.30

Model Ozone Data

For OLM or PVMRM, modeling of the project-generated 1-hour NO_2 concentrations requires use of ambient monitored ozone concentrations. This ozone data was provided by the Albuquerque Environment Health Department Air Quality Program for the Del Norte monitoring station for the years 2014 – 2018.

3	Were default NO_2/NO_X ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not describe and justify the ratios used below.	Yes☐	No☒
4	Describe the design value used for each averaging period modeled.		
	1-hour: High eighth high Annual Highest Annual Average of Three Years:		

16-L: Ozone Analysis

1	NMED has performed a generic analysis that demonstrates sources that are minor with respect to PSD do not cause or contribute to any violations of ozone NAAQS. The analysis follows. The basis of the ozone SIL is documented in *Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program*, EPA, April 17, 2018 and associated documents. NMED accepts this SIL basis and incorporates it into this permit record by reference. Complete documentation of the ozone concentration analysis using MERPS is included in the New Mexico Air Quality Bureau Air Dispersion Modeling Guidelines.
2	The MERP values presented in Table 10 and Table 11 of the NM AQB Modeling Guidelines that produce the highest concentrations indicate that facilities emitting no more than 250 tons/year of NO_X and no more than 250 tons/year of VOCs will cause less formation of O_3 than the O_3 significance level.

	$$[O_3]_{8-hour} = \left(\frac{250 \frac{ton}{yr}}{340_{MERP_{NOX}}} + \frac{250 \frac{ton}{yr}}{4679_{MERP_{VOC}}} \right) \times 1.96\ \mu g/m^3$$ =1.546 µg/m³, which is below the significance level of 1.96 µg/m³. Sources that produce ozone concentrations below the ozone SIL do not cause or contribute to air contaminant levels exceeding the ozone NAAQS.

3	Does the facility emit at least 250 tons per year of NO_X or at least 250 tons per year of VOCs? Sources that emit at least 250 tons per year of NO_X or at least 250 tons per year of VOCs are covered by the analysis above and require an individual analysis.	Yes☐	No☒

5 For new PSD Major Sources or PSD major modifications, if MERPs were used to account for ozone fill out the information below. If another method was used describe below.

NO_X (ton/yr)	$MERP_{NOX}$	VOCs (ton/yr)	$MERP_{VOC}$	$[O_3]_{8\text{-hour}}$

16-M: Particulate Matter Modeling

1 Select the pollutants for which plume depletion modeling was used.

☐	PM2.5
☒	PM10
☐	None

2 Describe the particle size distributions used. Include the source of information.

PM_{10} emissions may be modeled using plume deposition. Plume deposition simulates the effect of gravity as particles "fall-out" from the plume to the ground as the plume travels downwind. Therefore, the farther the plume travels from the emission point to the receptor, the greater the effect of plume deposition and the greater the decrease in modeled impacts or concentrations. Particle size distribution, particle mass fraction, and particle density are required inputs to the model to perform this function.

Particle size distribution for fugitive road dust on unpaved roads; material handling fugitive emissions; and combustion will use the particle size distribution found in the NMED Modeling Section approved values.

The mass-mean particle diameters were calculated using the formula:

$$d = ((d^3_1 + d^2_1 d_2 + d_1 d^2_2 + d^3_2) / 4)^{1/3}$$

Where: d = mass-mean particle diameter
d_1 = low end of particle size category range
d_2 = high end of particle size category range

Representative average particle densities were obtained from NMED accepted values.

Material	Density (g/cm^3)	Reference
Road Dust - MSCI and Co-Located HMA	2.5	NMED Value
Lime – Co-Located HMA	3.3	NMED Value
HMA Asphalt – Co-Located HMA	1.5	NMED Value
Combustion – MSCI and Co-Located HMA	1.5	NMED Value
Fugitive Dust – MSCI and Co-Located HMA	2.5	NMED Value

The size distribution for PM_{10} emission sources are presented in Tables 15-19.

TABLE 15: Road Vehicle Fugitive Dust Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 – 2.5	1.57	25.0	2.5
2.5 – 10	6.91	75.0	2.5

Based on NMED Model Guideline – June 2024 (Vehicle Fugitive)

TABLE 16: Combustion Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	100.0	1.5

Based on NMED Model Guideline – June 2024 (Combustion)

TABLE 17: Material Handling (Fugitive) Dust Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	7.8	2.5
2.5 – 5	3.88	27.0	2.5
5 – 10	7.77	65.2	2.5

Based on NMED Model Guideline – June 2024 (Coal Handling)

For Co-Located HMA Plant:

TABLE 18: Co-Located Lime Baghouse Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)

PM10			
0-2.5	1.57	25	3.3
2.5-10	6.91	75	3.3

Based on NMED Model Guideline – June 2024 (Lime Silo)

TABLE 19 Co-Located Asphalt Baghouse and Stack Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0-1.0	0.63	50.0	1.5
1.0-2.5	1.85	19.0	1.5
2.5-10	6.92	31.0	1.5

Based on NMED Model Guideline – June 2024 (Asphalt Baghouse)

3	Does the facility emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2? Sources that emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2 are considered to emit significant amounts of precursors and must account for secondary formation of PM2.5.	Yes☒	No☐
4	Was secondary PM modeled for PM2.5?	Yes☒	No☐

5 If MERPs were used to account for secondary PM2.5 fill out the information below. If another method was used describe below.

Pollutant	NO_X	SO_2		$[PM2.5]_{24\text{-hour}}$
$MERP_{annual}$	130260	53898		0.00017
$MERP_{24\text{-hour}}$	42498	9753		$[PM2.5]_{annual}$
Emission rate (ton/yr)	99.6	4.2		0.0033

16-N: Setback Distances

1 Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.

For the main plant, pit plant #1, pit plant #2, and air separator, these sources are located within the open pit where the particulate emissions are combined and input into the dispersion model as an open pit source. So long as the plants stay in the open pit, they are able to move around within the open pit.

2 Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.

This facility will not relocate

16-O: PSD Increment and Source IDs

1

The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below. Yes☐ No☒

Unit Number in UA-2	Unit Number in Modeling Files
Unit 193 – Emission Calculations MPPI_	MPPI_
Unit 193 – Emission Calculations MPPO_	MPPO_
Unit 193 – Emission Calculations MPUP_	MPUP_
Unit 193 – Emission Calculations PTIn_	PTIn_
Unit 193 – Emission Calculations PTOt_	PTOt_
Unit 193 – Emission Calculations PTUP_	PTUP_
Unit 193 – Emission Calculations PTUP_2	QUARRY (Part of Open Pit Source)
Unit 193 – Emission Calculations QRTP_	QRTP_
Unit 193 – Emission Calculations QRTP_2	QUARRY (Part of Open Pit Source)
Unit 193 – Emission Calculations QRTP_3	QUARRY (Part of Open Pit Source)
Unit 193 – Emission Calculations QRTP_4	QUARRY (Part of Open Pit Source)
Unit 193 – Emission Calculations WUPO_	WUPO_
Unit 193 – Emission Calculations RAP_	RAP_

2

The emission rates in the Tables 2-E and 2-F should match the ones in the modeling files. Do these match? If not, explain why below. Yes☐ No☒

Hourly model emission rates for material handling sources (Emissions calculated using AP-42 Section 13.2.4) are calculated using annual average windspeed for Albuquerque 2001-2011.

Permit ID	Model ID	Source Description	Permit Emission Rate		Modeled Emission Rate	
			PM10 Lb/Hr	PM2.5 Lb/Hr	PM10 Lb/Hr	PM2.5 Lb/Hr
1	Quarry	Quarry Material	3.12153	0.47269	2.09695	0.31754
2		Quarry Truck Loading	3.12153	0.47269	2.09695	0.31754
3		MP Feeder (Quarry Truck Unload)	3.12153	0.47269	2.09695	0.31754
9		MP Line 1 Jaw Crusher Feeder	1.09254	0.16544	0.73393	0.11114
11		MP Line 1 Feeder	1.09254	0.16544	0.73393	0.11114
14		MP Line 2 Jaw Crusher Feeder	1.09254	0.16544	0.73393	0.11114
16		MP Line 2 Feeder	1.09254	0.16544	0.73393	0.11114
56		MP Stacker Conveyor to Storage Pile	0.28103	0.04256	0.18879	0.02859
57		MP Stacker Conveyor to Waste Storage Pile	0.28103	0.04256	0.18879	0.02859
58		MP Conveyor Stacker to Surge Pile	1.31147	0.19859	0.88100	0.13341
59		MP Line 1 Stacker Conveyor to Pile	0.28103	0.04256	0.18879	0.02859
60		MP Line 1 Stacker Conveyor to Pile	0.18735	0.02837	0.12586	0.01906
61		MP Line 1 Stacker Conveyor to Pile	0.18735	0.02837	0.12586	0.01906
62		MP Line 2 Stacker Conveyor to Pile	0.28103	0.04256	0.18879	0.02859
63		MP Line 2 Stacker Conveyor to Pile	0.18735	0.02837	0.12586	0.01906

64		MP Line 2 Stacker Conveyor to Pile	0.18735	0.02837	0.12586	0.01906
65		MP Waste Storage Pile	0.93646	0.14181	0.62908	0.09526
66		MP Quarry Truck Loading - Product	2.18507	0.33088	1.46786	0.22228
67	67	MP Finish Product Storage Pile	2.18507	0.33088	1.46786	0.22228
68	68	MP Product Truck Loading - Finish Pile	2.18507	0.33088	1.46786	0.22228
70	Quarry	Quarry Material - Pit Plant 1	1.87292	0.28361	1.25817	0.19052
71		Pit Plant 1 Feeder	1.87292	0.28361	1.25817	0.19052
104		Waste Stacker Conveyor Drop to Pile	0.33723	0.05107	0.22654	0.03431
105		Pit Plant 1 Stacker Conveyor to Pile	0.33723	0.05107	0.22654	0.03431
106		Pit Plant 1 Stacker Conveyor to Pile	0.22482	0.03404	0.15103	0.02287
107		Pit Plant 1 Stacker Conveyor to Pile	0.28103	0.04256	0.18879	0.02859
108		Pit Plant 1 Stacker Conveyor to Pile	0.28103	0.04256	0.18879	0.02859
109		Pit Plant 1 Finish Product Storage Pile	1.31104	0.19853	0.88072	0.13337
110		Pit Plant 1 Product Truck Loading - Finish Pile	1.31104	0.19853	0.88072	0.13337
112	Quarry	Quarry Material - Pit Plant 2	1.87292	0.28361	1.25817	0.19052
113		Pit Plant 2 Feeder	1.87292	0.28361	1.25817	0.19052
151		Waste Stacker Conveyor Drop to Pile	0.33723	0.05107	0.22654	0.03431
152		Pit Plant 2 Stacker Conveyor to Pile	0.11241	0.01702	0.07551	0.01144
153		Pit Plant 2 Stacker Conveyor to Pile	0.11241	0.01702	0.07551	0.01144
154		Pit Plant 2 Stacker Conveyor to Pile	0.08993	0.01362	0.06041	0.00915
155		Pit Plant 2 Stacker Conveyor to Pile	0.07869	0.01192	0.05286	0.00800
156		Pit Plant 2 Stacker Conveyor to Pile	0.16862	0.02553	0.11327	0.01715
157		Pit Plant 2 Stacker Conveyor to Pile	0.11241	0.01702	0.07551	0.01144
158		Pit Plant 2 Stacker Conveyor to Pile	0.11241	0.01702	0.07551	0.01144
159		Pit Plant 2 Finish Product Storage Pile	1.31104	0.19853	0.88072	0.13337
160		Pit Plant 2 Product Truck Loading - Finish Pile	1.31104	0.19853	0.88072	0.13337
162	162	Waste Storage Pile (Main+Pit1+Pit2)	2.06021	0.31197	1.38399	0.20957
163	Quarry	AS Feeder	0.93646	0.14181	0.62908	0.09526
164		AS Plant Feeder	0.93646	0.14181	0.62908	0.09526
171		AS Plant Stacker Conveyor to Pile 1	0.05621	0.00851	0.03776	0.00572
172		AS Plant Stacker Conveyor to Pile 2	0.50585	0.07660	0.33982	0.05146
173		AS Plant Finish Pile	0.93646	0.14181	0.62908	0.09526
174		AS Plant Product Truck Loading - Finish Pile	0.93646	0.14181	0.62908	0.09526

	176	176	RAP Plant Raw Material Source	0.18729	0.02836	0.12582	0.01905
	177	177	RAP Plant Feeder/Hopper	0.18729	0.02836	0.12582	0.01905
	190	190	RAP Plant Stacker Conveyor to Pile	0.18729	0.02836	0.12582	0.01905
	191	191	RAP Plant Finish Product Storage Pile	0.18729	0.02836	0.12582	0.01905

3	Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources been modeled?	Yes☐	No☒

4 Which units consume increment for which pollutants?

Unit ID	NO_2	SO_2	PM10	PM2.5
1 - 68			X	X
69E	X	X	X	X
70 - 110			X	X
111E	X	X	X	X
112-160			X	X
161E	X	X	X	X
162 - 174			X	X
175E	X	X	X	X
176 - 191			X	X
192E	X	X	X	X
193			X	X

5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).	

6	Are all the actual installation dates included in Table 2A of the application form, as required? This is necessary to verify the accuracy of PSD increment modeling. If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☒	No☐

16-P: Flare Modeling

1 For each flare or flaring scenario, complete the following

	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)
	N/A			

16-Q: Volume and Related Sources

1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines? If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☐	No☒
	Describe the determination of sigma-Y and sigma-Z for fugitive sources.		

2	For storage piles the volume model inputs were based on the outline of the pile and a release height of 8 feet or a sigma-Z of 8ft*2/2.15 for Unit 67 (Main Plant Finish Pile), Unit 176 (RAP Plant Raw Material Storage), and Unit 191 (RAP Plant Finish Product Storage Pile). For waste material storage pile (Unit 162) the model input is based on the outline of the pile and a release height of 8 feet or a sigma-Z of 8ft*2/2.15. All others (Volume Sources) followed standard dimensions from Air Quality Bureau (AQB) Modeling Guidelines.
3	Describe how the volume sources are related to unit numbers. Or say they are the same.
	Same
4	Describe any open pits.
	The open pit source is equivalent to the volume of the actual quarry that will be operated at the extent of the quarry in the future to the north boundary. The width of the pit is 640 meters, length 980 meters and depth 10 meters. The volume is 6,272,000 square meters.
5	Describe emission units included in each open pit.
	Main plant Units 1-66, Pit Plant #1 Units 70-110, Pit Plant #2 Units 112-160, Air Separator Plant Units 163-173. Parts of haul roads Units 163; PTUP_2, QRTP_2, QRTP_3, and QRTP_4.

16-R: Background Concentrations

1	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the data that was used.	Yes☐	No☒
	CO: Del Norte High School (350010023)		
	NO_2: Del Norte High School (350010023)		
	PM2.5: Del Norte High School (350010023)		
	PM10: Del Norte High School (350010023)		
	SO_2: Del Norte High School (350010023)		
	Other:		
	Comments: Backgrounds used for both the initial site and relocation sites were provided by the Bernalillo County/City of Albuquerque Air Quality Program, the operator the Del Norte High School Monitoring Station (350010023).		
2	Were background concentrations refined to monthly or hourly values? If so describe below.	Yes☐	No☒

16-S: Meteorological Data

1	Was NMED provided meteorological data used? If so select the station used. Albuquerque	Yes☐	No☒
2	If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.
	Provided by the Albuquerque/Bernalillo County Air Quality Program

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes☒	No☐
2	What was the source of the terrain data?		
	USGS National Elevation Data (NED)		

16-U: Modeling Files

1

Describe the modeling files: ROI modeling included all sources at the proposed MSCI Los Lunas Plant, CIA modeling for NO2 1 hour included all MSCI Los Lunas sources and significant neighboring sources, CIA modeling for NO2 Annual included MSCI Los Lunas Plant, significant neighboring sources and regional background, CIA modeling for PM10 24 hour included MSCI Los Lunas Plant, significant neighboring sources and regional background, and CIA modeling for PM2.5 24 hour and annual included MSCI Los Lunas Plant, significant neighboring sources and regional background. PSD Class II Increment modeling for NO2 annual modeling included all MSCI Los Lunas sources plus neighboring increment consumers, PM10 24-hour modeling included all MSCI Los Lunas sources plus neighboring increment consumers, PM2.5 24 hour and annual modeling included all MSCI Los Lunas sources plus neighboring increment consumers.

Co-location with one of the three HMA NSR permit operated by MSCI was modeled to show compliance with NAQQS. The HMA plant will not be located at the site for more than 12 months, so no PSD Increment modeling was performed. CIA modeling for NO2 1 hour included all MSCI Los Lunas sources, co-located HMA plant, and significant neighboring sources, CIA modeling for NO2 Annual included MSCI Los Lunas Plant, co-located HMA plant, significant neighboring sources and regional background, CIA modeling for PM10 24 hour included MSCI Los Lunas Plant, co-located HMA plant, significant neighboring sources and regional background, and CIA modeling for PM2.5 24 hour and annual included MSCI Los Lunas Plant, co-located HMA plant, significant neighboring sources and regional background.

For most of the particulate modeling, the model hours of operation for November were 7 AM to 5:30 PM at a daily throughput of 7000 tons per day. Each PM10 model with plume depletion took 2 to 3 days to run or 6 hours through a paid service. After all model runs were completed, it showed an exceedance in MSCI Los Lunas Plant Scenario 4 for the PM10 24-hour Increment result for year 2018. When the timeframe was reduced from 7 AM to 5 PM the model results for MSCI Los Lunas Plant Scenario 4 for the PM10 24-hour Increment result for year 2018 showed compliance with the PM10 PSD Increment Limit. Since this is the only model that showed an exceedance and all other model results showed compliance, none of the other models were rerun. The longer timeframe for November increases the late evening hours, so showing compliance with the PSD 24-hour Class II Increment Limit with the longer timeframe is more conservative. The permit limit timeframe for November will still be 7 AM to 5:00 PM.

File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
MSCI Los Lunas Combust ROI	CO, NO2, SO2	ROI
MSCI Los Lunas PMROIS1	PM10 and PM2.5 Scenario 1	ROI
MSCI Los Lunas PMROIS2	PM10 and PM2.5 Scenario 2	ROI
MSCI Los Lunas PMROIS3	PM10 and PM2.5 Scenario 3	ROI
MSCI Los Lunas PMROIS4	PM10 and PM2.5 Scenario 4	ROI
MSCI Los Lunas NO2 1 Hour CIA	NO2 1 Hour	Cumulative
MSCI Los Lunas NO2 1 Hour CIA Max	NO2 1 Hour	Culpability Analysis
MSCI Los Lunas NO2 Annual CIA	NO2 Annual	Cumulative
MSCI Los Lunas PM10CIAS1	PM10 24 Hour Scenario 1	Cumulative
MSCI Los Lunas PM10CIAS2	PM10 24 Hour Scenario 2	Cumulative
MSCI Los Lunas PM10CIAS3	PM10 24 Hour Scenario 3	Cumulative

	MSCI Los Lunas PM10CIAS4	PM10 24 Hour Scenario 4	Cumulative
	MSCI Los Lunas PM25CIAS1	PM2.5 24 Hour Scenario 1	Cumulative
	MSCI Los Lunas PM25CIAS2	PM2.5 24 Hour Scenario 2	Cumulative
	MSCI Los Lunas PM25CIAS3	PM2.5 24 Hour Scenario 3	Cumulative
	MSCI Los Lunas PM25CIAS4	PM2.5 24 Hour Scenario 4	Cumulative
	MSCI Los Lunas PM25CIAS1 24hr	PM2.5 24 Hour Scenario 1	Cumulative
	MSCI Los Lunas PM25CIAS2 24hr	PM2.5 24 Hour Scenario 2	Cumulative
	MSCI Los Lunas PM25CIAS3 24hr	PM2.5 24 Hour Scenario 3	Cumulative
	MSCI Los Lunas PM25CIAS4 24hr	PM2.5 24 Hour Scenario 4	Cumulative
	MSCI Los Lunas PM25CIAS1 Annual	PM2.5 Annual Scenario 1	Cumulative
	MSCI Los Lunas PM25CIAS2 Annual	PM2.5 Annual Scenario 2	Cumulative
	MSCI Los Lunas PM25CIAS3 Annual	PM2.5 Annual Scenario 3	Cumulative
	MSCI Los Lunas PM25CIAS4 Annual	PM2.5 Annual Scenario 4	Cumulative
		With Co-located HMA	
	MSCI Los Lunas NO2 1 Hour HMA CIA	NO2 1 Hour with HMA	Cumulative
	MSCI Los Lunas NO2 1 Hour HMA CIA Max	NO2 1 Hour with HMA	Culpability Analysis
	MSCI Los Lunas NO2 Annual HMA CIA	NO2 1 Hour with HMA	Cumulative
	MSCI Los Lunas PM10CIAS1_HMA_S2	PM10 24 Hour Scenario 1 HMA Scenario 2	Cumulative
	MSCI Los Lunas PM10CIAS1_HMA_S3	PM10 24 Hour Scenario 1 HMA Scenario 3	Cumulative
	MSCI Los Lunas PM10CIAS1_HMA_S4	PM10 24 Hour Scenario 1 HMA Scenario 4	Cumulative
	MSCI Los Lunas PM10CIAS2_HMA_S5	PM10 24 Hour Scenario 2 HMA Scenario 5	Cumulative
	MSCI Los Lunas PM10CIAS2_HMA_S6	PM10 24 Hour Scenario 2 HMA Scenario 6	Cumulative
	MSCI Los Lunas PM10CIAS2_HMA_S7	PM10 24 Hour Scenario 2 HMA Scenario 7	Cumulative
	MSCI Los Lunas PM10CIAS3_HMA_S8	PM10 24 Hour Scenario 3 HMA Scenario 8	Cumulative
	MSCI Los Lunas PM10CIAS3_HMA_S9	PM10 24 Hour Scenario 3 HMA Scenario 9	Cumulative
	MSCI Los Lunas PM10CIAS3_HMA_S10	PM10 24 Hour Scenario 3 HMA Scenario 10	Cumulative
	MSCI Los Lunas PM10CIAS4_HMA_S11	PM10 24 Hour Scenario 4 HMA Scenario 11	Cumulative
	MSCI Los Lunas PM10CIAS4_HMA_S12	PM10 24 Hour Scenario 4 HMA Scenario 12	Cumulative
	MSCI Los Lunas PM10CIAS4_HMA_S1	PM10 24 Hour Scenario 4 HMA Scenario 13	Cumulative
	MSCI Los Lunas PM25CIAS1_HMA_S2 24HR	PM25 24 Hour Scenario 1 HMA Scenario 2	Cumulative
	MSCI Los Lunas PM25CIAS1_HMA_S3 24HR	PM25 24 Hour Scenario 1 HMA Scenario 3	Cumulative
	MSCI Los Lunas PM25CIAS1_HMA_S4 24HR	PM25 24 Hour Scenario 1 HMA Scenario 4	Cumulative
	MSCI Los Lunas PM25CIAS2_HMA_S5 24HR	PM25 24 Hour Scenario 2 HMA Scenario 5	Cumulative
	MSCI Los Lunas PM25CIAS2_HMA_S6 24HR	PM25 24 Hour Scenario 2 HMA Scenario 6	Cumulative
	MSCI Los Lunas PM25CIAS2_HMA_S7 24HR	PM25 24 Hour Scenario 2 HMA Scenario 7	Cumulative
	MSCI Los Lunas PM25CIAS3_HMA_S8 24HR	PM25 24 Hour Scenario 3 HMA Scenario 8	Cumulative
	MSCI Los Lunas PM25CIAS3_HMA_S9 24HR	PM25 24 Hour Scenario 3 HMA Scenario 9	Cumulative
	MSCI Los Lunas PM25CIAS3_HMA_S10 24HR	PM25 24 Hour Scenario 3 HMA Scenario 10	Cumulative
	MSCI Los Lunas PM25CIAS4_HMA_S11 24HR	PM25 24 Hour Scenario 4 HMA Scenario 11	Cumulative
	MSCI Los Lunas PM25CIAS4_HMA_S12 24HR	PM25 24 Hour Scenario 4 HMA Scenario 12	Cumulative
	MSCI Los Lunas PM25CIAS4_HMA_S1 24HR	PM25 24 Hour Scenario 4 HMA Scenario 13	Cumulative
	MSCI Los Lunas PM25CIAS1_HMA_S2 Annual	PM25 Annual Scenario 1 HMA Scenario 2	Cumulative
	MSCI Los Lunas PM25CIAS1_HMA_S3 Annual	PM25 Annual Scenario 1 HMA Scenario 3	Cumulative
	MSCI Los Lunas PM25CIAS1_HMA_S4 Annual	PM25 Annual Scenario 1 HMA Scenario 4	Cumulative
	MSCI Los Lunas PM25CIAS2_HMA_S5 Annual	PM25 Annual Scenario 2 HMA Scenario 5	Cumulative
	MSCI Los Lunas PM25CIAS2_HMA_S6 Annual	PM25 Annual Scenario 2 HMA Scenario 6	Cumulative
	MSCI Los Lunas PM25CIAS2_HMA_S7 Annual	PM25 Annual Scenario 2 HMA Scenario 7	Cumulative
	MSCI Los Lunas PM25CIAS3_HMA_S8 Annual	PM25 Annual Scenario 3 HMA Scenario 8	Cumulative
	MSCI Los Lunas PM25CIAS3_HMA_S9 Annual	PM25 Annual Scenario 3 HMA Scenario 9	Cumulative

	MSCI Los Lunas PM25CIAS3_HMA_S10 Annual	PM25 Annual Scenario 3 HMA Scenario 10	Cumulative
	MSCI Los Lunas PM25CIAS4_HMA_S11 Annual	PM25 Annual Scenario 4 HMA Scenario 11	Cumulative
	MSCI Los Lunas PM25CIAS4_HMA_S12 Annual	PM25 Annual Scenario 4 HMA Scenario 12	Cumulative
	MSCI Los Lunas PM25CIAS4_HMA_S1 Annual	PM25 Annual Scenario 4 HMA Scenario 13	Cumulative

16-V: PSD New or Major Modification Applications

1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis. Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?	Yes☐	No☒
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes☐	No☒
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.		
	N/A		
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
	N/A		
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes☐	No☐
	N/A		

16-W: Modeling Results

1	If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.	Yes☒	No☐
	For NO2 1 hour model for both the MSCI Los Lunas Plant operating alone or with the co-located HMA exceedances were found near neighboring sources. A culpability analysis was done for all receptors above 188 ug/m3. Racking for the model was between 8 and 50, with ranking 36 the maximum for neighboring source. For both models, at receptors above the NO2 1 hour NAAQS, the contribution was less than 7.52 ug/m3 from MSCI sources.		
2	Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary.		

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
CO 1hr	60.6	NA	NA	NA	NA	SIL – 2000	3.0	327833.9	3856471.3	1651.28
CO 8hr	18.2	NA	NA	NA	NA	SIL – 500	3.6	327809.3	3856471.9	1651.12
NO2 1hr	50.0	102.3	NA	NA	102.3	188.0	54.4	327809.3	3856471.9	1651.12
NO2 Annual	6.2	6.5	NA	18.0	24.5	94.0	46.0	327858.5	3856470.8	1651.61
NO2 Annual Class 2	6.2	6.4	NA	NA	6.4	25.0	25.6	327858.5	3856470.8	1651.61
PM10 24hr	28.8	29.1	NA	22.3	51.4	150.0	34.3	327447.1	3854798.2	1633.60
PM10 24hr Class 2	28.78	28.83	NA	NA	28.83	30.0	96.1	327447.1	3854798.2	1633.60
PM10 Yr Class 2	7.45	7.50	NA	NA	7.50	17.0	44.1	327446.6	3854773.6	1633.59
PM2.5 24hr	2.97	3.0	0.0033	14.3	17.3	35.0	49.4	327467.5	3855784.4	1640.78
PM2.5 Yr	0.55	0.81	0.00017	5.2	6.0	9.0	66.7	328055.4	3856466.7	1653.65
PM2.5 24hr Class 2	4.6	4.8	0.0033	NA	4.8	9.0	53.3	327563.3	3856477.0	1650.81
PM2.5 Yr Class 2	0.55	0.63	0.00017	NA	0.63	4.0	15.8	328055.4	3856466.7	1653.65
SO2 1hr	10.97	10.97	NA	NA	10.97	196.4	5.6	327467.5	3855784.4	1640.78
SO2 3hr	8.45	NA	NA	NA	NA	SIL – 25.0	33.8	327467.5	3855784.4	1640.78
SO2 24hr	2.45	NA	NA	NA	NA	SIL – 5.0	49.0	327467.5	3855784.4	1640.78
SO2 Annual	0.19	NA	NA	NA	NA	SIL – 1.0	19.0	327858.5	3856470.8	1651.61
Lead Quarterly	0.00006	NA	NA	NA	NA	SIL – 0.03	0.2	327467.5	3855784.4	1640.78
With Co-located HMA										
NO2 1hr include HMA	174.1	174.2	NA	NA	174.2	188.0	92.7	327448.6	3854872.2	1632.82

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
NO2 Annual include HMA	6.2	6.5	NA	18.0	24.5	94.0	46.0	327858.5	3856470.8	1651.61
PM10 24hr include HMA	60.2	68.7	NA	22.3	91.0	150.0	60.7	327447.1	3854798.2	1633.60
PM2.5 24hr include HMA	12.88	13.2	0.0033	14.3	27.5	35.0	78.6	327448.6	3854872.2	1632.82
PM2.5 Yr include HMA	2.44	2.7	0.00017	5.2	7.9	9.0	87.8	327449.1	3854896.8	1632.83
SO2 1hr include HMA	20.06	20.06	NA	NA	20.06	196.4	10.2	327466.0	3855710.4	1640.87

16-X: Summary/conclusions

	A statement that modeling requirements have been satisfied and that the permit can be issued.
1	Dispersion modeling was performed for the new permit application for MSCI's NSR (MSCI Los Lunas Plant). All facility pollutants with ambient air quality standards and PSD Increment standards were modeled to show compliance with those standards. All results of this modeling showed the facility in compliance with applicable ambient air quality standards.

DISPERSION MODEL PROTOCOL
FOR MOUNTAIN STATES CONSTRUCTORS, INC.
MSCI LOS LUNAS PLANT
NSR MINOR SOURCE PERMIT APPLICATION

Los Lunas, New Mexico

PREPARED FOR

Mountain States Constructors, Inc.

Dated September 12, 2025

Prepared by

Montrose Environmental Solutions, Inc.

MONTROSE
ENVIRONMENTAL

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1.0 INTRODUCTION

This dispersion modeling analysis will be conducted by Montrose Environmental Solutions, Inc. (Montrose) on behalf of Mountain States Constructors, Inc. (MSCI), to evaluate ambient air quality impacts from the MSCI Los Lunas Plant, as part of a minor source NSR permitting action. The facility will consist of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant); 300 tph and 706,995 tpy air separator plant (screening plant); and 200 tph and 361,400 tpy recycled asphalt products (RAP crushing and screening) plant.

The objective of this modeling evaluation is to predict if, operating at requested maximums, the facility operations would result in ambient air concentrations for nitrogen dioxide, (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter; both 10 microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$); would exceed the New Mexico and federal ambient air quality standards, NMAAQS and NAAQS respectively. Since MSCI Los Lunas Plant is a minor source for NSR permitting and is located in AQCR 152, where the minor source baseline date has been triggered for NO_2 (03/26/1997), SO_2 (03/26/1997), PM_{10} (03/26/1997), and $PM_{2.5}$ (02/11/2013), a PSD II Increment analysis will be performed. No Class I area is located within 50 km of the site, so no Class 1 Increment analysis will be performed.

The dispersion modeling will be conducted using the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Dispersion Model (AERMOD), Version 24142. This model is recommended by EPA for determining Class II impacts within 50 km of the source being assessed. Additionally, AERMOD was developed to handle complex terrain. The objective of this evaluation is to determine whether ambient air concentrations from the maximum operation of the facility for nitrogen dioxide, (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter; both 10 microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$); are below Class II federal and state ambient air quality standards (NAAQS and NMAAQS) found in 40 CFR part 50 and the state of New Mexico's air quality regulation 20.2.3 NMAC from MSCI Los Lunas Plant emission sources.

1.1 FACILITY DESCRIPTION

MSCI Los Lunas Plant is a proposed site that will operate an aggregate/recycle asphalt crushing and screening operation. At present, MSCI GCP-2-3164 is registered to operate at the site. Once the new NSR permit is issued, GCP-2-3164 will be relocated. The facility will consist of a 1000 ton per hour (tph) and 2,356,650 tons per year (tpy) main plant (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #1 (crushing and screening plant); 600 tph and 1,413,990 tpy pit plant #2 (crushing and screening plant); 300 tph and 706,995 tpy air separator plant (screening plant); and 200 tph and 361,400 tpy recycled asphalt products (RAP crushing and screening) plant. Daily production rates are presented in Table 4.

1.1.1 MSCI Los Lunas Main Plant

The 1000 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, five (5) feeders, three (3) jaw crushers, two (2) surge bins, one (1) pre-screen, one (1) waste screen, two (2) cone crushers, two (2) 3-deck screens, thirty-seven (37) transfer conveyors, and nine (9) stacker conveyors. The crushing plant will be powered by a 2288 horsepower (hp), 1600 kilowatt (kW) diesel-fired engine. Material from the raw material quarry will be loaded and transported by rock trucks to the main plant main feeder. This material is processed first through a jaw crusher and pre-screens to separate product from waste material. Waste material is haul to the waste pile by rock trucks. Product material is then fed into one of two processing lines that each consist of a feeder, jaw crusher, cone crusher, and 3-deck screen. Oversized material from the 3-deck screen is recycled back to the cone crusher. Finish material is loaded into rock trucks and transported to finish piles located along the main access road to the facility. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 1 presents an equipment layout for the main plant. The engine hours of operation are presented below in Table 1. The material processing hours of operation are presented below in Table 2.

1.1.2 MSCI Los Lunas Pit Plant #1

The 600 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) pre-screen, one (1) cone crusher, one (1) VSI crusher, one (1) 3-deck screen, one (1) air separator, twenty-five (25) transfer conveyors, and five (5) stacker conveyors. The crushing plant will be powered by a 1430 hp (1010 kW) diesel-fired engine. Material from the raw material quarry will be loaded into the plant feeder. This material is processed first through a jaw crusher, surge bin and pre-screen to separate product from waste material. Waste material is haul to the waste pile by rock trucks. Product material is sized in the cone crusher or sent to and sized in the VSI crusher. From the cone and VSI crushers material is sent to the 3-deck screen. Oversized material from the 3-deck screen is recycled back to the VSI crusher. Part of the finished material from the 3-deck screen is sent to the air separator for further size separation. Finish material is loaded into finish piles located along the pit plant road located in the facility quarry. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 1 presents an equipment layout for pit plant #1. The engine hours of operation are presented below in Table 1. The material processing hours of operation are presented below in Table 2.

1.1.3 MSCI Los Lunas Pit Plant #2

The 600 tph crushing and screening operation will include an aggregate quarry source, raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) pre-screen, two (2) cone crushers, two (2) 3-deck screens, one (1) air separator, twenty-nine (29) transfer conveyors, and eight (8) stacker conveyors. The crushing plant will be powered by a 2153 hp (1500 kW) diesel-fired engine. Material from the raw material quarry will be loaded into the plant feeder. This material is processed first through a jaw crusher, surge bin and pre-screen to separate

product from waste material. Waste material is haul to the waste pile by rock trucks. Product material is transported by conveyor to a splitter conveyor which will send the material to one of two lines. For each line material is sized in the cone crusher. From the cone crusher, material is sent to the 3-deck screen. Oversized material from the 3-deck screen is recycled back to the cone crusher. Part of the finished material from one of the 3-deck screen is sent to the air separator for further size separation. Finish material is loaded into finish piles located along the pit plant road located in the facility quarry. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 1 presents an equipment layout for pit plant #2. The engine hours of operation are presented below in Table 1. The material processing hours of operation are presented below in Table 2.

1.1.4 MSCI Los Lunas Air Separator Plant

The 300 tph air separator operation will include a source of crusher fines from processed aggregate for its material input, one (1) feeder, one (1) air separator, five (5) transfer conveyors, and two (2) stacker conveyors. The air separator will be powered by a 190 hp (142 kW) diesel-fired engine, if not connected to the main plant power system. Processed crusher fines will be loaded into the plant feeder, then fed into the air separator for further sizing. Finish material is loaded into rock trucks and transported to finish piles located along the main access road to the facility. From the finish storage piles, product is transported by road haul trucks from the facility to off-site sales. Figure 1 presents an equipment layout for air separator. The engine hours of operation are presented below in Table 1. The material processing hours of operation are presented below in Table 2.

The first hour of each day will be limited to starting and warming up of the engines, see Table 1. After the first hour, material processing can occur, see Table 2.

TABLE 1: MSCI Los Lunas Aggregate Plant Engine Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
6:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
7:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	10.5	11.5	12	14	14	14.5	14.5	14	13.5	12	11	10.5

TABLE 2: MSCI Los Lunas Aggregate Plant Processing Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
7:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	9.5	10.5	11	13	13	13.5	13.5	13	12.5	11	10	9.5

1.1.5 MSCI Los Lunas RAP Crushing and Screening Plant

The 200 tph recycled asphalt crushing and screening operation will include a raw material surge pile, one (1) feeder, one (1) jaw crusher, one (1) surge bin, one (1) cone crusher, one (1) 2-deck screen, eight (8) transfer conveyors, and one (1) stacker conveyor. The RAP crushing plant will be powered by a 415 hp (306 kW) diesel-fired engine. RAP material is brought in the facility in road haul trucks and stored in a RAP material storage pile until loaded into the RAP plant feeder. This material is processed first through a jaw crusher, surge bin and 2-deck screen to produce sized RAP to be used in the co-located HMA. Oversized material from the 2-deck screen sent to the cone crusher then recycled back to the 2-deck screen. Recycled RAP material is loaded into a finish pile until needed for the co-located HMA. The RAP crushing and screening plant will be permitted to operate for the months of March through October. Figure 4-5 in Section 4 presents an equipment layout for RAP crushing and screening plant. The RAP crushing and screening plant processing hours of operation are presented below in Table 3.

TABLE 3: MSCI Los Lunas RAP Plant Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0.5	0.5	1	1	0.5	0	0	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
9:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
10:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
11:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
12:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
1:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
2:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
3:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
4:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	11	12.5	12.5	13.5	13.5	12.5	12	11	0	0

TABLE 4: Aggregate/Recycle Daily Production Rates

Month	Main Plant Tons Per Day	Pit Plant 1 Tons Per Day	Pit Plant 2 Tons Per Day	Air Separator Tons Per Day	RAP Plant Tons Per Day
January	5500	3300	3300	1650	0
February	5500	3300	3300	1650	0
March	7000	4200	4200	2100	1400
April	8000	4800	4800	2400	1400
May	8000	4800	4800	2400	1400
June	8000	4800	4800	2400	1600
July	8000	4800	4800	2400	1600
August	8000	4800	4800	2400	1600
September	8000	4800	4800	2400	1400
October	7500	4500	4500	2250	1400
November	7000	4200	4200	2100	0
December	5500	3300	3300	1650	0

Since the daily production rate is less than the proposed hours of operation running at maximum hourly production rate, four modeling scenarios will be performed for particulate emissions. The model hours are presented in Tables 5, 6, 7 and 8.

TABLE 5: MSCI Los Lunas Plant Scenario 1 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
7:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
2:00 PM	0	0	0	0	0	0	0	0	0.5	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

TABLE 6: MSCI Los Lunas Plant Scenario 2 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	1	1	1	1	1	0.5	0.5	0	0
8:00 AM	0.5	0.5	1	1	1	1	1	1	1	1	1	0.5
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
3:00 PM	0	0	0	0	0	0	0	0	0.5	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

TABLE 7: MSCI Los Lunas Plant Scenario 3 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0.5	0
9:00 AM	0.5	0	1	1	1	0.5	0.5	1	1	1	1	0.5
10:00 AM	1	0.5	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	0	1	1	1	1	1	1	1	1	0.5	0.5	0
4:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
5:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

TABLE 8: MSCI Los Lunas Plant Scenario 4 Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	1	1	0
11:00 AM	0.5	0	1	1	1	0.5	0.5	1	1	1	1	0.5
12:00 PM	1	0.5	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	1	1	1	1	1	1	1	1	0.5	0	0
6:00 PM	0	0	0	1	1	1	1	1	1	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.5	5.5	7	8	8	8	8	8	8	7.5	7	5.5

As seen in Figure 2, there are multiply truck routes and two types of material haul trucks, commercial haul trucks and quarry (rock) trucks. Commercial haul trucks are used to transport product from the site, haul RAP material in, and rock truck are used onsite to haul material from the quarry wall to the main plant, product from the main plant to the main plant finish piles, and waste material in the pit to the waste storage pile.

The entrance road to the site is paved until halfway up the east side of the southern loop road, see Figure 2. The exit to the site is paved from the north side of the southern loop road traveling west to the facility exit. All other roads will be unpaved and controlled with surfactants.

The following table describes the haul roads at the site and if they are operating in the quarry and are included in the open pit modeled source emission rate input into the model. The total emissions from all truck traffic is included in Emission Unit 193 “Plant Haul Roads”.

TABLE 9: MSCI Los Lunas Haul Road Descriptions

Model ID	Description	Truck Type	Open Pit Emission Source
MPPI_	Main plant product haul trucks route entrance into site along the south side the southern loop paved road.	Commercial	No
MPPO_	Main plant product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	No
MPUP_	Main plant product haul trucks route to main plant storage piles – unpaved road.	Commercial	No
PTIn_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	No
PTOt_	Pit plants product haul trucks route exit from site along the north side the southern loop paved road.	Commercial	No
PTUP_	Pit plants product haul trucks route to the edge of the open pit.	Commercial	No
QUARRY	Pit plants product haul trucks route from the edge of the open pit to the pit plants storage piles.	Commercial	Yes
QRTP_	Rock truck route from edge of open pit to the main plant finish storage piles with product material to the main plant product piles.	Rock	No
QUARRY	Rock truck route from the quarry wall to deliver raw material to the main plant surge pile.	Rock	Yes
QUARRY	Rock truck route from main plant to the edge of open pit with product material to the main plant product piles.	Rock	Yes
QUARRY	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes for the waste haul trucks to travel, the most conservative (longest) for emission calculations and was used in the model.	Rock	Yes
WUPO_	Rock truck route from the waste piles at the 3 plants to the waste storage pile. There are two separate routes for the waste haul trucks to travel, the most conservative (longest) for emission calculations and was used in the model.	Rock	No
RAP_	RAP delivery haul trucks route that enters and exits on the paved road from the facility entrance to the RAP storage pile.	Delivery	No

1.2 FACILITY IDENTIFICATION AND LOCATION

MSCI Los Lunas Plant address is 701 State Highway 6, Los Lunas, NM 87031. The exact location of the MSCI Los Lunas Plant is at Latitude (decimal degrees): 34.831735 and Longitude (decimal degrees): -106.883123. The approximate location of this facility is 7.0 miles west-northwest of Los Lunas in Valencia County. The UTM Coordinates of the facility are 327,800 meters East and 3,856,000 meters North, Zone 13, with NAD83 datum at an elevation of approximately 5,390 feet above mean sea level.

Figure 1 below presents a layout of the site showing the relative locations of the facility equipment, roads and storage piles. Figure 2 shows an overview of the site and relative locations of finish storage piles and haul roads.

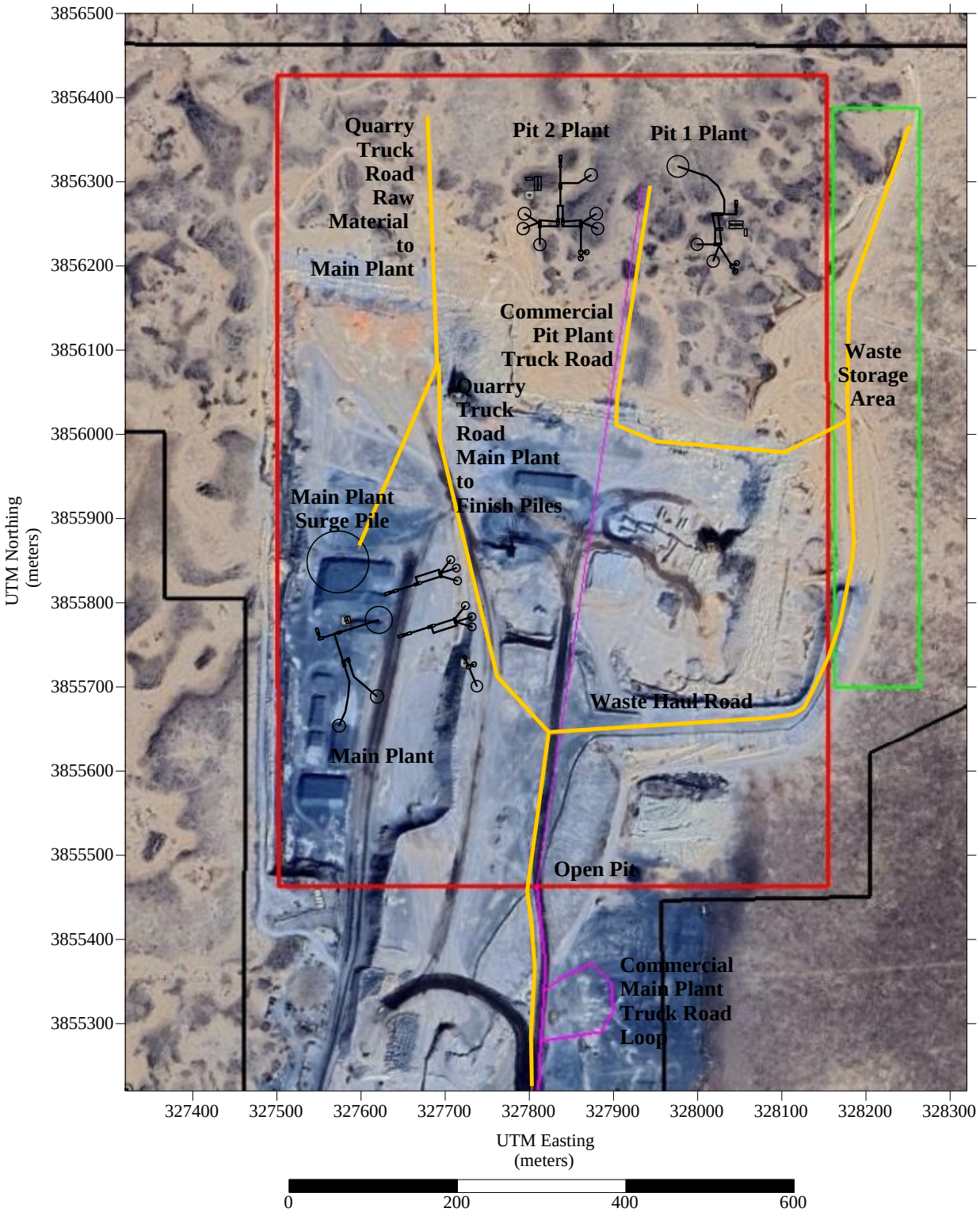


Figure 1: MSCI's Los Lunas Plant Aerial View with Equipment Location

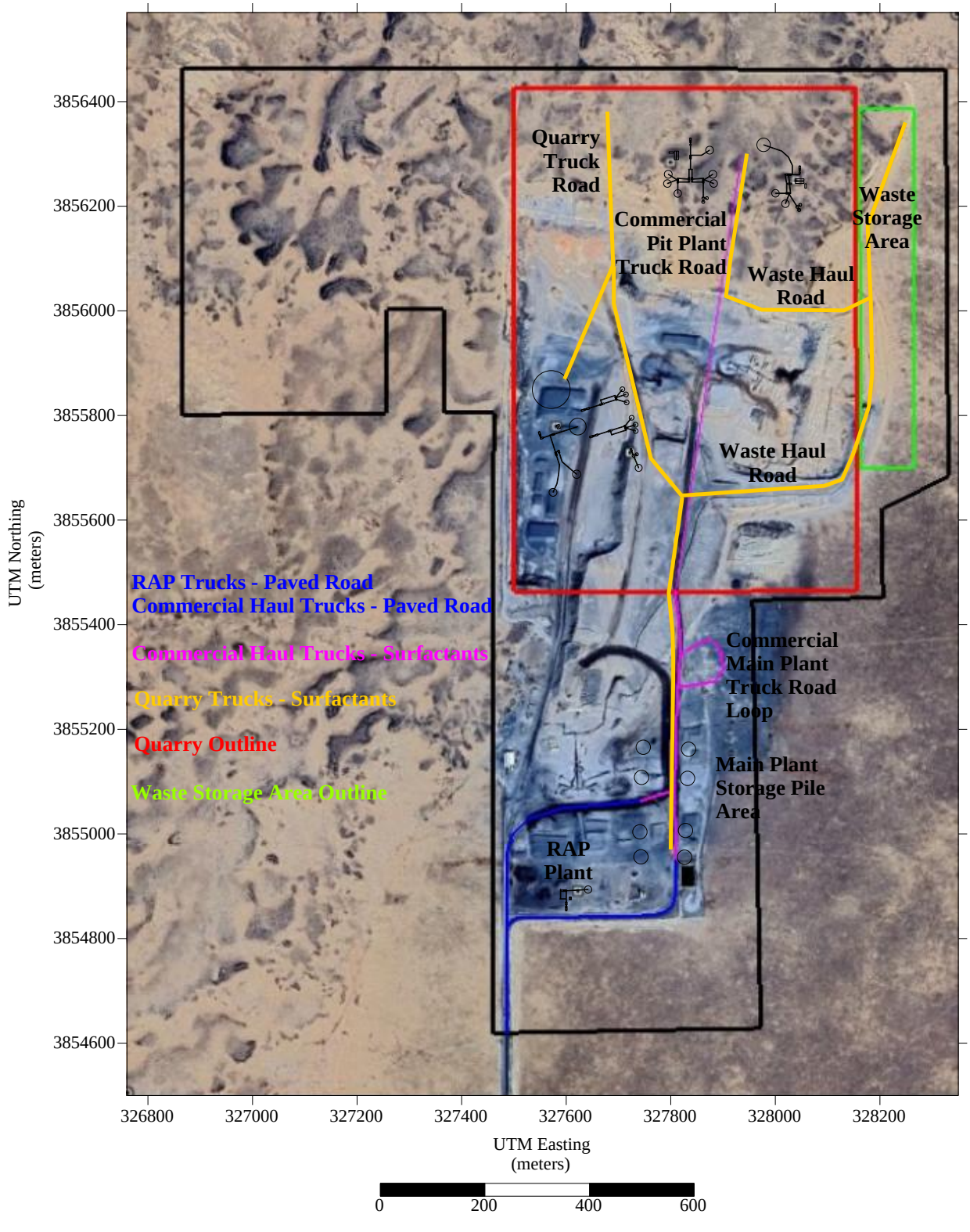


Figure 2: MSCI's Los Lunas Plant Aerial View with Storage Pile and Haul Road Locations

1.3 CO-LOCATED HMA PLANT

The MSCI Los Lunas Plant will be permitted to allow co-location with one of the three MSCI HMA plant presently operating under NSR Permits 3171-M1, 4453, or 9720. To show compliance with NAAQS for operating any of the plants, an analysis of the worst-case operating parameters was used in the model. The maximum operating schedule for any one of the 3 permits is 24 hour per day operation for 365 days per year. MSCI will accept a permit condition in the new NSR permit for the MSCI Los Lunas Plant that restricts co-location with a HMA plant for less than a year. Since the HMA plant will not operate continually for a year the HMA plant emission sources will not consume increment, so no PSD increment modeling will be performed for the co-location dispersion modeling analysis. Additionally, any of the MSCI HMA plants can also co-locate under their existing GCP3 registrations. Regardless of the model results, each HMA plant will operate under the terms and conditions of their individual NSR permit. Haul truck traffic to and from the site will travel on paved roads with unpaved road around the HMA site itself. Location of the HMA site is shown on Figure 3 below.

Emission sources for the co-located HMA plant includes HMA drum and baghouse; plant main and standby generators; asphalt cement heater; mineral filler silo; asphalt storage silo; cold aggregate and RAP storage piles; cold aggregate delivery system (feeder scalping screen pugmill and conveyors); RAP delivery system (feeder, scalping screen, and conveyors).

TABLE 10: Co-Located HMA Modeled Sources

Model ID	Source Description
HMASTK	HMA Baghouse Stack
HMAGEN	HMA Plant Generator
HMASGEN	HMA Plant Standby Generator
HMAHEAT	HMA Asphalt Cement Heater
HMAFILL	HMA Mineral Filler Silo Loading
DRUMUNL	HMA Asphalt Silo Loading
HMASILO	HMA Asphalt Silo Unloading
HMAPILE1-6	HMA Storage Pile Handling 1-6
HMABIN	HMA Bin Loading
HMATP1	HMA Bin Unloading
HMASCR	HMA Scalping Screen
HMATP2	HMA Scalping Screen Unloading
HMAPUG	HMA Pug Mill
HMATP3	HMA Pug Mill Unloading
HMATP4	HMA Conveyor Transfer to Drum Conveyor
RAPBIN	HMA RAP Bin Loading
RAPTP1	HMA RAP Bin Unloading
HMARAPSCR	HMA RAP Screen
RAPTP2	HMA RAP Screen Unloading
RAPTP3	HMA RAP Transfer Point
HPR_0001-31	HMA Paved Entrance Road Volume 1-31
HUR_0001-15	HMA Unpaved Haul Road Volume 1-15

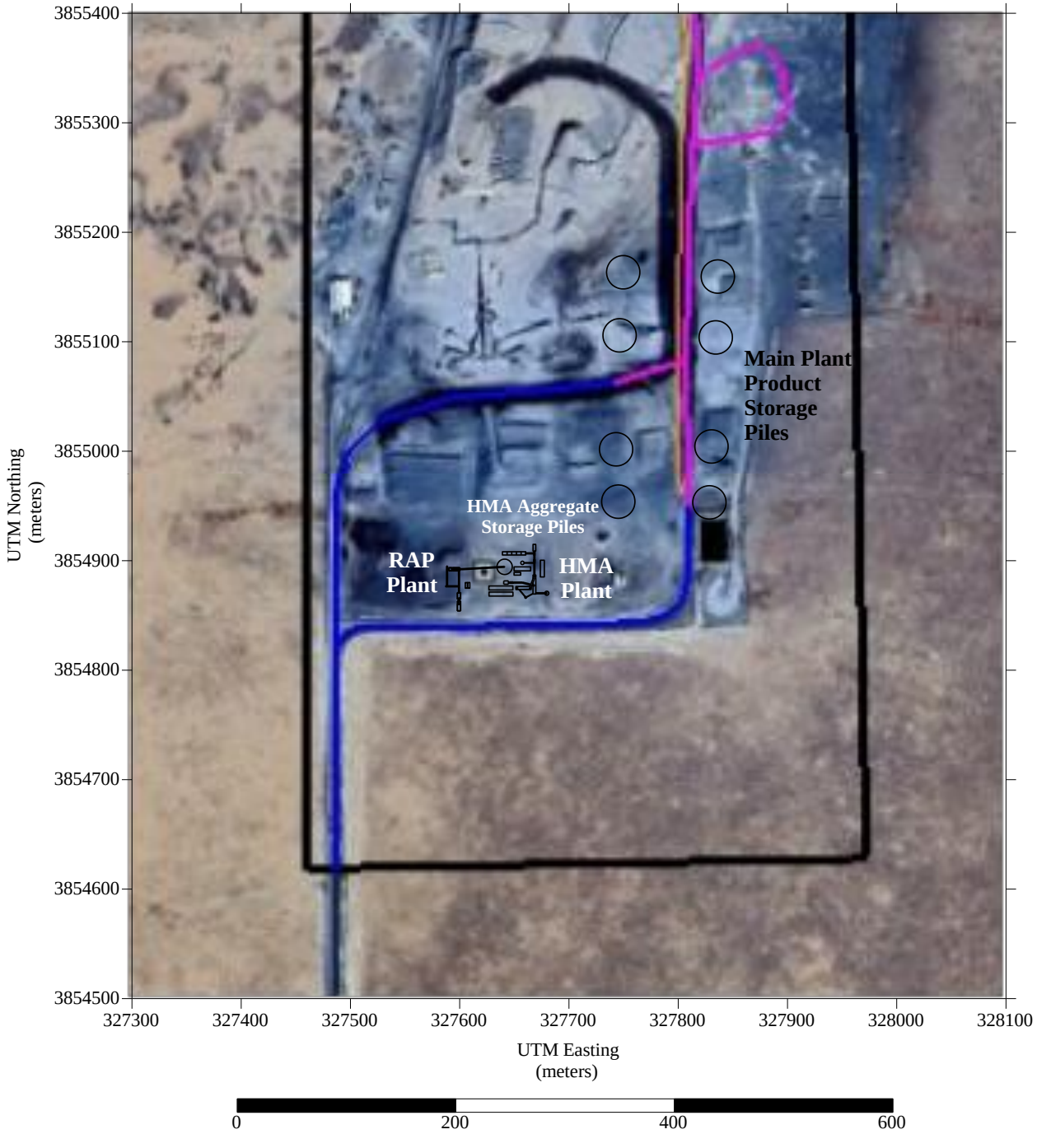


Figure 3: MSCI's Los Lunas Plant Aerial View with HMA Location

2.0 SIGNIFICANT MONITORING AIR QUALITY IMPACT ANALYSIS

This section identifies the technical approach and dispersion model inputs that will be used for the Class II federal and State ambient air quality standards and Class II Increment impacts for this stationary source. NMED AQB requires that all applicable criteria pollutant emissions be modeled using the most recent versions of US EPA's approved models and be compared with National Ambient Air Quality Standards (NAAQS), and New Mexico Ambient Air Quality Standards (NMAAQS). Table 11 shows the NAAQS and NMAAQS (without footnotes) that the source's ambient impacts must meet in order to demonstrate compliance. Table 11 also lists the Class II Significant Impact Levels (SILs) which are used to assess whether a source has a significant impact at downwind receptors. Table 12 lists all standards for which modeling is not required by NMED AQB.

The dispersion modeling analysis will be performed to estimate concentrations resulting from the operation of the MSCI Los Lunas Plant using the maximum hourly emission rates while all emission sources are operating. The modeling will determine maximum off-site concentrations for nitrogen dioxide, (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter with aerodynamic diameter less than 10 micrometers (PM_{10}) and particulate matter with aerodynamic diameter less than 2.5 micrometers ($PM_{2.5}$), for comparison with modeling significance levels, and national/New Mexico ambient air quality standards (AAQS). Additionally, modeling will determine maximum off-site concentrations for PM_{10} 24 hour and annual average increment limits. The modeling will follow the guidance and protocols outlined in the New Mexico Air Quality Bureau "Air Dispersion Modeling Guidelines" (Revised June 2024) and the most up to date EPA's *Guideline on Air Quality Models*.

Initial site modeling will be performed with MSCI Los Lunas Plant sources only to determine pollutant and averaging periods that exceeds pollutant SILs. If initial modeling for any pollutant and averaging period exceeds the SILs, then cumulative modeling will be performed for those pollutants and averaging periods and will include significant neighboring sources along with background ambient concentrations as defined in the NMED's modeling guidelines. For the PSD Class II Increment analysis, MSCI Los Lunas Plant sources and neighboring increment consuming source within 50 kilometers will be included.

TABLE 11: National and New Mexico Ambient Air Quality Standard Summary

Pollutant	Avg. Period	Sig. Lev. ($\mu g/m^3$)	Class I Sig. Lev. ($\mu g/m^3$)	NAAQS	NMAAQS	PSD Increment Class I	PSD Increment Class II
CO	8-hour	500		9,000 ppb(1)	8,700 ppb(2)		
	1-hour	2,000		35,000 ppb(1)	13,100 ppb(2)		
NO_2	annual	1.0	0.1	53 ppb(3)	50 ppb(2)	2.5 $\mu g/m^3$	25 $\mu g/m^3$
	24-hour	5.0			100 ppb(2)		
	1-hour	7.52		100 ppb(4)			
$PM_{2.5}$	annual	0.13	0.05	9 $\mu g/m^3$(5)		1 $\mu g/m^3$	4 $\mu g/m^3$
	24-hour	1.2	0.27	35 $\mu g/m^3$(6)		2 $\mu g/m^3$	9 $\mu g/m^3$
PM_{10}	annual	1.0	0.2			4 $\mu g/m^3$	17 $\mu g/m^3$
	24-hour	5.0	0.3	150 $\mu g/m^3$(7)		8 $\mu g/m^3$	30 $\mu g/m^3$
SO_2	annual	1.0	0.1		20 ppb(2)	2 $\mu g/m^3$	20 $\mu g/m^3$
	24-hour	5.0	0.2		100 ppb(2)	5 $\mu g/m^3$	91 $\mu g/m^3$
	3-hour	25.0	1.0	500 ppb(1)		25 $\mu g/m^3$	512 $\mu g/m^3$
	1-hour	7.8		75 ppb(8)			

Standards converted from ppb to $\mu g/m^3$ use a reference temperature of 25° C and a reference pressure of 760 millimeters of mercury.
(1) Not to be exceeded more than once each year.
(2) Not to be exceeded.
(3) Annual mean.
(4) 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
(5) Annual mean, averaged over 3 years.
(6) 98th percentile, averaged over 3 years.
(7) Not to be exceeded more than once per year on average over 3 years.
(8) 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.

TABLE 12: Standards for Which Modeling Is Not Required by NMED AQB.

Standard not Modeled	Surrogate that Demonstrates Compliance
CO 8-hour NAAQS	CO 8-hour NMAAQS
CO 1-hour NAAQS	CO 1-hour NMAAQS
NO_2 annual NAAQS	NO_2 annual NMAAQS
NO_2 24-hour NMAAQS	NO_2 1-hour NAAQS
O_3 8-hour	Regional modeling
SO_2 annual NMAAQS	SO_2 1-hour NAAQS
SO_2 24-hour NMAAQS	SO_2 1-hour NAAQS
SO_2 3-hour NAAQS	SO_2 1-hour NAAQS

2.1 DISPERSION MODEL SELECTION

The dispersion modeling will be conducted using the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Dispersion Model (AERMOD), Version 24142. This model is recommended by EPA for determining Class II impacts within 50 km of the source being assessed. Additionally, AERMOD was developed to handle complex terrain. In this analysis, AERMOD will be used to estimate pollutant ambient air concentrations of NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ from the MSCI Los Lunas Plant emission sources.

AERMOD is a Gaussian plume dispersion model that is based on planetary boundary layer principles for characterizing atmospheric stability. The model evaluates the non-Gaussian vertical behavior of plumes during convective conditions with the probability density function and the superposition of several Gaussian plumes. AERMOD modeling system has three components: AERMAP, AERMET, and AERMOD. AERMAP is the terrain preprocessor program. AERMET is the meteorological data preprocessor. AERMOD includes the dispersion modeling algorithms and was developed to handle simple and complex terrain issues using improved algorithms. AERMOD uses the dividing streamline concept to address plume interactions with elevated terrain.

AERMOD will be run using all the regulatory default options including use of stack-tip downwash, buoyancy-induced dispersion, calms processing routines, upper-bound downwash concentrations for super-squat buildings, default wind speed profile exponents, vertical potential temperature gradients, and no use of gradual plume rise. Beta version options include the use of flat terrain mode for fugitive ground release sources. The model incorporated local terrain into the calculations for point sources and neighboring sources only.

2.2 BUILDING WAKE EFFECT

AERMOD can account for building downwash and cavity zone effects. Evaluation of building downwash on adjacent stack sources is deemed necessary, since most (if not all) of the stack source heights may be below Good Engineering Practice (GEP) heights. The formula for GEP height estimation is:

$$H_s = H_b + 1.50L_b$$

where: H_s = GEP stack height

H_b = building height

L_b = the lesser building dimension of the height, length, or width

The effects of aerodynamic downwash due to buildings and other structures will be accounted for by using wind direction-specific building parameters calculated by the USEPA-approved Building Parameter Input Program Prime (BPIP-Prime (*Version 04274*)) and the algorithms included in the AERMOD air dispersion model. No buildings are located at the site that will cause building wake effects for facility point sources.

2.3 METEOROLOGICAL DATA

The meteorological data input file to be used in this dispersion modeling analysis is Albuquerque met data covering years 2014 through 2018 (AERMET version 23132 dated 06/11/2025) available from the Albuquerque Environment Health Department Air Quality Program.

2.4 RECEPTORS AND TOPOGRAPHY

For each pollutant, the radius of significant impact around the facility is established using a Cartesian grid. A 25-meter grid spacing is used for the facility boundary receptors. A 50-meter spacing and 100-meter spacing are extended to 500-meters and 1-km beyond the facility boundary, respectively from the facility boundary in each direction for a very fine grid resolution. Receptors for a fine grid resolution are placed with 250-meter spacing to a distance of 2.5-km from the facility boundary. Receptors for a course grid resolution are placed with 500-meter, and 1000-meter spacing to a distance of 5-km and 50-km, respectively from the facility boundary.

All model receptors will be preprocessed using the AERMAP software (*Version 24142*) associated with AERMOD. The AERMAP software establishes a base elevation and a height scale for each receptor location. The height scale is a measure of the receptor's location and base elevation and its relation to the terrain feature that has the greatest influence in dispersion for that receptor. AERMAP will be processed using U.S. Geological Survey (USGS) national elevation data (NED). Output from AERMAP will be used as input to the AERMOD runstream file for each model run. The AERMAP domain will be large enough to encompass the 10 percent slope factor required for calculating the controlling hill height.

2.5 MODELED EMISSION SOURCES INPUTS

MSCI Los Lunas Plant proposes to operate for material processing is 13.5 hours per day (6 am to 7:30 pm) for the months of June and July; 13 hours per day (6 am to 7 pm) for the months of April, May, and August; 12.5 hours per day (6:30 am to 7 pm) for the month of September; 11 hours per day (7 am to 6 pm) for the month of March; 11 hours per day (6:30 am to 5:30 pm) for the month of October; 10.5 hours per day (7:30 am to 6 pm) for the month of February; 10 hours per day (7 am to 5 pm) for the month of November; and 9.5 hours per day (7:30 am to 5 pm) for the months of December and January, 7 days per week, and 52 weeks per year. For the main plant, pit plant #1, pit plant #2, and air separator engines will be permitted to allow for an additional hour in the morning for engine warmup. To represent the worst-case modeling scenario, the maximum hourly emission rates were modeling using four operating scenarios as found in Tables 5 – 8.

2.5.1 MSCI Los Lunas Plant Road Vehicle Traffic Model Inputs

The unpaved road fugitive dust for truck traffic is modeled as a line of volume sources. The AQB's approved procedure for Modeling Haul Roads was followed to develop modeling input parameters for unpaved haul roads. Volume source characterization followed the steps described in the Air Quality Bureau's Guidelines (Tables 42 and 43).

2.5.2 MSCI Los Lunas Plant Waste Pile Area Source Model Inputs

Waste storage pile was input into the model as an area source. Model input for waste storage pile have an initial vertical height of 2.27 meters (16 feet/2.15) and a release height of 2.44 meters (8 feet).

2.5.3 MSCI Los Lunas Plant Material Handling Volume Source Model Inputs

Material handling and processing will follow the procedure found in AQB's Modeling Guidelines for Fugitive Equipment Sources (Table 41).

2.5.4 MSCI Los Lunas Plant Material Handling Point Source Model Inputs

For exhaust from engines, the release height will be the height from the ground to the exhaust exit height. The stack diameter will be determined by measuring the stack. Stack temperature and flow rate (stack velocity) will be determined from manufacturer's data or conservative parameters.

2.6 PARTICLE SIZE DISTRIBUTION

PM_{10} emissions may be modeled using plume deposition. Plume deposition simulates the effect of gravity as particles "fall-out" from the plume to the ground as the plume travels downwind. Therefore, the farther the plume travels from the emission point to the receptor, the greater the effect of plume deposition and the greater the decrease in modeled impacts or concentrations. Particle size distribution, particle mass fraction, and particle density are required inputs to the model to perform this function.

Particle size distribution for fugitive road dust on unpaved roads; material handling fugitive emissions; and combustion will use the particle size distribution found in the NMED Modeling Section approved values.

The mass-mean particle diameters were calculated using the formula:

$$d = ((d^3_1 + d^2_1 d_2 + d_1 d^2_2 + d^3_2) / 4)^{1/3}$$

Where: d = mass-mean particle diameter
d_1 = low end of particle size category range
d_2 = high end of particle size category range

Representative average particle densities were obtained from NMED accepted values.

Material	Density (g/cm^3)	Reference
Road Dust - MSCI and Co-Located HMA	2.5	NMED Value
Lime – Co-Located HMA	3.3	NMED Value

HMA Asphalt – Co-Located HMA	1.5	NMED Value
Combustion – MSCI and Co-Located HMA	1.5	NMED Value
Fugitive Dust – MSCI and Co-Located HMA	2.5	NMED Value

The size distribution for PM_{10} emission sources are presented in Tables 13-17.

TABLE 13: Road Vehicle Fugitive Dust Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 – 2.5	1.57	25.0	2.5
2.5 – 10	6.91	75.0	2.5

Based on NMED Model Guideline – June 2024 (Vehicle Fugitive)

TABLE 14: Combustion Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	100.0	1.5

Based on NMED Model Guideline – June 2024 (Combustion)

TABLE 15: Material Handling (Fugitive) Dust Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	7.8	2.5
2.5 – 5	3.88	27.0	2.5
5 – 10	7.77	65.2	2.5

Based on NMED Model Guideline – June 2024 (Coal Handling)

For Co-Located HMA Plant:

TABLE 16: Co-Located Lime Baghouse Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0-2.5	1.57	25	3.3
2.5-10	6.91	75	3.3

Based on NMED Model Guideline – June 2024 (Lime Silo)

TABLE 17: Co-Located Asphalt Baghouse and Stack Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0-1.0	0.63	50.0	1.5
1.0-2.5	1.85	19.0	1.5
2.5-10	6.92	31.0	1.5

Based on NMED Model Guideline – June 2024 (Asphalt Baghouse)

2.7 PM2.5 SECONDARY EMISSIONS MODELING

Particulate matter includes both "primary" PM, which is directly emitted into the air, and "secondary" PM, which forms in the atmosphere from chemical reactions involving primary gaseous emissions of precursor air contaminants. Primary PM consists of carbon (soot)—emitted from cars, trucks, heavy equipment, forest fires, and burning waste—and crustal material from unpaved roads, stone crushing, construction sites, and metallurgical operations. Secondary PM forms in the atmosphere from gases. Some of these reactions require sunlight and/or water vapor. Secondary PM includes:

- Sulfates formed from SO_2 emissions from power plants and industrial facilities;
- Nitrates formed from NO_X emissions from cars, trucks, industrial facilities, and power plants; and
- Carbon formed from reactive organic gas (ROG or VOC) emissions from cars, trucks, industrial facilities, forest fires, and biogenic sources such as trees.

AERMOD does not account for secondary formation of $PM_{2.5}$ for near-field modeling. Any secondary contribution of the MSCI source emissions is not explicitly accounted for in the model results. While representative background monitoring data for $PM_{2.5}$ should adequately account for secondary contribution from existing background sources, the MSCI assessment of their potential contribution to cumulative impacts as secondary $PM_{2.5}$ was performed based on guidance from the NMED Modeling Section and using prescribed equations. The permit application for MSCI's MSCI Los Lunas Plant emissions of precursors include:

- NO_X – 98.6 tons per year (above SER)
- SO_2 – 4.2 tons per year (below SER)
- Volatile Organic Compounds (VOC) – 8.4 tons per year (below SER)
- Particulate Matter with an aerodynamic diameter of 2.5 micron or less ($PM_{2.5}$) – 15.5 tons per year (above SER).

Since NO_X and $PM_{2.5}$ precursor emissions are above the significant emission rate (SER), $PM_{2.5}$ secondary emission concentration analysis will be performed.

2.8 NO2 MODELING

The AERMOD model predicts ground-level concentrations of any generic pollutant without chemical transformations. Thus, the modeled NO_X emission rate will give ground-level modeled concentrations of NO_X. NAAQS values are presented as NO_2.

EPA has a three-tier approach to modeling NO_2 concentrations.

- Tier I – total conversion, or all NOx = NO_2
- Tier II –Ambient Ratio Method 2 (ARM2)
- Tier III – case-by-case detailed screening methods, such as OLM and Plume Volume Molar Ratio Method (PVMRM) and NO_2/NO_X in-stack ratio

Initial modeling will be performed using both Tier I and Tier II methodologies. If these modeling iterations demonstrate that less conservative methods for determining 1-hour and annual NO_2 compliance would be needed for this project, then ambient impact of 1-hour and annual NOx predicted by the model will use Tier III – OLM or PVMRM.

For OLM or PVMRM, three inputs can be selected in the model, the ISR, the NO_2/NO_X equilibrium ratio for the ambient air, and the ambient ozone concentration. The ISR will be determined for each source or group of sources. The NO_2/NO_X equilibrium ratio will be the EPA default of 0.90. Ozone input will be from monitored ozone data collected from an approved monitoring station.

Based on EPA's ISR databases, a proposed conservative NO_2/NO_X ISR ratio for Diesel-fired RICE is 0.15. No data could be found for a hot mix asphalt drum, so to be conservative, the EPA default ISR of 0.50 will be used. For heater combustion, to be conservative, the EPA default ISR of 0.50 will be used. For neighboring sources, since the ISR has a diminishing impact on ambient NO_2/NO_X ratios as a plume is transported farther downwind due to mixing and reaction towards background ambient NO_2/NO_X ratios, a default ISR of 0.30 based on the NMED Modeling Guidelines will be used. Table 18 summarizes the ISR selected for each NO_X source in the NO_2 1-hour modeling.

TABLE 18: Summary of Selected ISR

Source Description	Selected ISR
Plant Generator/Engine (RICE)	0.15
HMA Drum Dryer Exhaust	0.50
HMA Asphalt Heater Exhaust	0.50
Neighboring Sources	0.30

Model Ozone Data

For OLM or PVMRM, modeling of the project-generated 1-hour NO_2 concentrations requires use of ambient monitored ozone concentrations. This ozone data was provided by the Albuquerque

Environment Health Department Air Quality Program for the Del Norte monitoring station for the years 2014 – 2018.

2.9 SIGNIFICANT NEIGHBORING BACKGROUND SOURCES

For all Cumulative Impact Analysis (CIA) combustion emissions above the SILs, NO_2 1 Hour CIA dispersion modeling will include regional monitored background. NO_2 Annual CIA and PSD dispersion modeling will include all significant neighboring sources within 50 kilometers of the MSCI Los Lunas Plant and regional monitored background. PM_{10} and $PM_{2.5}$ CIA and PSD particulate dispersion modeling will include all significant neighboring sources within 10 kilometers of the MSCI Los Lunas Plant and regional monitored background. These sources will be obtained from the NMED AQB's Merge Master program.

2.10 REGIONAL BACKGROUND CONCENTRATIONS

Ambient background concentrations represent the contribution of pollutant sources that are not included in the modeling analysis, including naturally occurring sources. If the modeled concentration of a criteria pollutant is above the modeling significance level, the background concentration for each criteria pollutant will be added to the maximum modeled concentration to calculate the total estimated pollutant concentration for comparison with the AAQS.

The ambient background concentrations are listed in the Air Quality Bureau Guidelines for NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$. For NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$, MSCI is proposing using the January 3, 2025 background concentrations from the Bernalillo County/City of Albuquerque Air Quality Program.

	$PM_{2.5}$ ($\mu g/m^3$)	**PM_{10} ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**CO ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**
1 Hour			83.1	1870	13.1
8 Hour				1336	
24 Hour	14.3	22.3			
Annual	5.4		18.0		0.0

Attachment

City of Albuquerque Environmental Health Department Air Quality Program Background Values for Air Dispersion Modeling as of January 3, 2025

City of Albuquerque Environmental Health Department Air Quality Program
Background Values for Air Dispersion Modeling as of January 3, 2025

CO

Del Norte

1-hr: **1870** µg/m^3

8hr: **1336** µg/m^3

NO2

Del Norte

1-hr: **83.1** µg/m^3

Annual: **18** µg/m^3

SO2

Del Norte

1-hr: **13.1** µg/m^3

24-hr: 0

Annual: 0

PM2.5

Del Norte

24-hr: **14.3** µg/m^3

Annual: **5.4** µg/m^3

PM10

Del Norte

24-hr: **22.3** µg/m^3

Outlook

FW: [EXTERNAL] Modeling Protocol for Mountain States Constructors, Inc Los Lunas Plant

From Fong, Bryant, ENV <bryant.fong@env.nm.gov>
Date Tue 9/16/2025 2:39 PM
To Paul Wade <pwade@montrose-env.com>
Cc Mustafa, Sufi A., ENV <sufi.mustafa@env.nm.gov>

1 attachment (1 MB)
MSCI Los Lunas Model Protocol 091225.pdf;

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You don't often get email from bryant.fong@env.nm.gov. Learn why this is important

Paul –

I was forwarded your modeling protocol to review.

There are no comments. The modeling protocols appear to meet guidelines. Please proceed with modeling.

Bryant Fong
Environmental Scientist / Air Dispersion Modeler
New Mexico Environment Department / Air Quality Bureau
525 Camino de los Marquez, Suite 1
Sante Fe, NM 87505
bryant.fong@env.nm.gov
TEL: 505-660-3981

From: Paul Wade <pwade@montrose-env.com>
Sent: Friday, September 12, 2025 3:26 PM
To: Szkoda, Roman, ENV <roman.szkoda@env.nm.gov>; Mustafa, Sufi A., ENV <sufi.mustafa@env.nm.gov>
Cc: neil@msconstructors.com
Subject: [EXTERNAL] Modeling Protocol for Mountain States Constructors, Inc Los Lunas Plant

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Sufi
Mountain States is preparing to submit a new NSR permit application for their aggregate operation west of Los Lunas. Presently the site is operating under a GCP2 which will be removed once the new permit has been issued. Please let me know if you have any questions or comments on the modeling protocol.

Thanks

Paul Wade
Senior Associate Engineer
Montrose Environmental Solutions, Inc.
Albuquerque, NM I US Mountain Time
Office: +1-505-830-9680 x6 | Mobile:
pwade@montrose-env.com |www.montrose-env.com
Office Location:
9100 2nd Street NW, Suite 200
Albuquerque, NM 87114-1664

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Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

Compliance Test History Table

Unit No.	Test Description	Test Date
4-64, 72-108, 114-158, 165-172, 178-190	New Permitted Facility – Subpart OOO	TBD
69E	New Permitted Facility – Engine Greater Than 180 HP	Previous Stack Test 11/17/2023
111E	New Permitted Facility – Engine Greater Than 180 HP	Previous Stack Test 02/25/2019
161E	New Permitted Facility – Engine Greater Than 180 HP	Previous Stack Test 07/08/2021
175E	New Permitted Facility – Engine Greater Than 180 HP – Subpart IIII	TBD
192E	New Permitted Facility – Engine Greater Than 180 HP – Subpart IIII	TBD

Section 20

Other Relevant Information

Other relevant information. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

No other relevant information.

Section 22: Certification

Company Name: Mountain States Constructors, Inc

I, Neil Jackson, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 23rd day of September, 2025, upon my oath or affirmation, before a notary of the State of New Mexico.

*Signature

9-23-2025
Date

Neil Jackson
Printed Name

Vice President
Title

Scribed and sworn before me on this 23 day of September, 2025.

My authorization as a notary of the State of New Mexico expires on the 20th day of October, 2025.

STATE OF NEW MEXICO
NOTARY PUBLIC
Dominic A DeHerrera Jr.
Commission No. 1119304
October 20, 2025

Notary's Signature

9/23/25
Date

DOMINIC A DEHERRERA JR.
Notary's Printed Name

*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.

Vendor NM ENVIRON New Mexico Environmental Check 172571 09/23/25

Trx No	Invoice No	Inv Date	Job/Description	Gross	Discount	Check Amount
261649	092323-Appli	09/23/25	Section 3 Applicat	500.00		500.00
				500.00	0.00	500.00

DOCUMENT CONTAINS COLOR BACKGROUND, VISIBLE FIBERS, TONER GRIP, AND WATERMARK PAPER - HOLD TO LIGHT TO VIEW

MOUNTAIN STATES CONSTRUCTORS, INC.
GENERAL ACCOUNT
3601 PAN AMERICAN FREEWAY, NE, #111
ALBUQUERQUE, NM 87107
(505) 292-0108

BMO Harris Bank
BMO Harris Bank, N.A.
Chicago, Illinois
2-28/710

172571

172571

**********FIVE HUNDRED DOLLARS AND 00 CENTS**********

DATE	AMOUNT
09/23/25	**********500.00

PAY TO THE ORDER OF:
NEW MEXICO ENVIRONMENTAL
AIR QUALITY BUREAU
525 CAMINO DE LOS MARQUEZ#1
SANTA FE NM 87505

AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE

HEAT GLANCE IF BACK COLORED SPOT DISAPPEARS DOCUMENT IS AUTHENTIC

⑈172571⑈ ⑆071000288⑆ 29500552 4⑈

Air Permit Application
Compliance History Disclosure Form

Pursuant to Subsection 74-2-7(S) of the New Mexico Air Quality Control Act ("AQCA"), NMSA §§ 74-2-1 to -17, the New Mexico Environment Department ("Department") may deny any permit application or revoke any permit issued pursuant to the AQCA if, within ten years immediately preceding the date of submission of the permit application, the applicant met any one of the criteria outlined below. In order for the Department to deem an air permit application administratively complete, or issue an air permit for those permits without an administrative completeness determination process, the applicant must complete this Compliance History Disclosure Form as specified in Subsection 74-2-7(P). An existing permit holder (permit issued prior to June 18, 2021) shall provide this Compliance History Disclosure Form to the Department upon request.

Permittee/Applicant Company Name		**Expected Application Submittal Date**
Mountain States Constructors, Inc.		September 23, 2025
Permittee/Company Contact	**Phone**	**Email**
Eric Brower	505-238-1537	ericb@msconstructors.com

	Within the 10 years preceding the expected date of submittal of the application, has the permittee or applicant:	
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes ☒ No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes ☒ No
3	Been convicted of a felony related to environmental crime in any court of any state or the United States?	☐ Yes ☒ No
4	Been convicted of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud in any court of any state or the United States?	☐ Yes ☒ No
5a	Constructed or operated any facility for which a permit was sought, including the current facility, without the required air quality permit(s) under 20.2.70 NMAC, 20.2.72 NMAC, 20.2.74 NMAC, 20.2.79 NMAC, or 20.2.84 NMAC?	☐ Yes ☒ No
5b	If "No" to question 5a, go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: a. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Department; or b. The operator of the facility estimated that the facility's emissions would not require an air permit, **and** the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	☐ Yes ☐ No
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes ☒ No
7	For each "yes" answer, please provide an explanation and documentation.	

MONTROSE
AIR QUALITY SERVICES

September 24, 2025

New Mexico Environment Department
Air Quality Bureau
Permits Section
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87507-3313

Subject: Permit Application for MSCI Los Lunas Plant

To Whom it May Concern:

Attached please find two (2) hardcopies of the 20.2.72 NMAC Permit Application for Mountain States Constructors Inc's MSCI Los Lunas Plant. This letter is attached to the application copy that has the original notarized signature page (Section 22), along with an application submittal fee of $500.

Mountain States Contractors, Inc. (MSCI) is applying for a new 20.2.72 NMAC air quality permit for an aggregate crushing and screening facility operated within the Village of Los Lunas, county of Valencia, state of New Mexico. The site presently operates under General Permit 2 registration GCP-2-3164, which will be relocated once the new NSR permit is approved. Regulation governing this permit application is 20.2.72.200.A(1) NMAC.

Please let me know if you have questions or need additional information. I can be reached at (505) 830-9680 ext 6. The Mountain States Constructors, Inc. contact is Neil Jackson who can be reached at (505) 238-1537.

Sincerely,

Paul Wade
Sr. Engineer
Montrose Air Quality Services, LLC

Cc: Neil Jackson, MSCI

Montrose Air Quality Services, LLC
9100 2nd Street NW Suite 200
Albuquerque, NM 87114-1664

T: 505.830.9680 ext. 6
F: 505.830.9678
Pwade@montrose-env.com
www.montrose-env.com