20.2.72 NMAC
NEW NSR AIR QUALITY
PERMIT APPLICATION

For

SHORT LINE, LLC

LAS VEGAS HMA & CRUSHER
HMA PLANT
Las Vegas, NM

PREPARED BY
MONTROSE ENVIRONMENTAL SOLUTIONS, LLC
ALBUQUERQUE, NM
OCTOBER 2023

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.: 1060 in the amount of $500.00

☒ 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(1) 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:	Updating Permit/NOI #:
1	Facility Name: Las Vegas HMA	Plant primary SIC Code (4 digits): 2951	
		Plant NAIC code (6 digits): 324121	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): 1109 Airport Road, Las Vegas, NM		
2	Plant Operator Company Name: Short Line, LLC	Phone/Fax: 505-892-5400/	
a	Plant Operator Address: PO Box 1499, Peralta, NM 87042		

b	Plant Operator's New Mexico Corporate ID or Tax ID: 03-543893-00-2	
3	Plant Owner(s) name(s): Short Line, LLC	Phone/Fax: 505-892-5400/
a	Plant Owner(s) Mailing Address(s):PO Box 1499, Peralta, NM 87042	
4	Bill To (Company): Short Line, LLC	Phone/Fax: 505-892-5400/
a	Mailing Address: PO Box 1499, Peralta, NM 87042	E-mail:shortlinellc@yahoo.com
5	☐ Preparer: ☒ Consultant: Paul Wade, Montrose Environmental Solutions, Inc.	Phone/Fax: 505-830-9680 x6/505-830-9678
a	Mailing Address: 9100 2nd Street NW, Suite 200, Albuquerque, NM 87114-1664	E-mail: pwade@montrose-env.com
6	Plant Operator Contact: Beverly Zastrow	Phone/Fax: 505-892-5400/
a	Address: PO Box 1499, Peralta, NM 87042	E-mail: shortlinellc@yahoo.com
7	Air Permit Contact: Beverly Zastrow	Title: Managing Member
a	E-mail: shortlinellc@yahoo.com	Phone/Fax: 505-892-5400/
b	Mailing Address: PO Box 1499, Peralta, NM 87042	
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	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
3	Is the facility currently shut down? ☐ Yes ☒ No	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	Hourly: 120 TPH	Daily: 1,740 TPD	Annually: 200,000 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	Hourly: 120 TPH	Daily: 1,740 TPD	Annually: 200,000 TPY

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): 35.63118	Longitude (decimal degrees): -105.196918	County: San Miguel	Elevation (ft): 6510
2	UTM Zone: ☐ 12 or ☒ 13	Datum: ☒ NAD 83 ☐ WGS 84		
a	UTM E (in meters, to nearest 10 meters): 482.17	UTM N (in meters, to nearest 10 meters): 3,943.06		
3	Name and zip code of nearest New Mexico town: Las Vegas, 87701			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of I-25 and Highway 250 (Airport Road) travel east on Highway 250 for 0.33 miles to the site entrance.			
5	The facility is 2.5 miles northeast of Las Vegas			
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: Las Vegas, San Miguel County			
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: Pecos Wilderness Area – 12.9 km			
9	Name nearest Class I area: Pecos Wilderness Area			
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 12.90 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: 0.11 miles			
12	Method(s) used to delineate the Restricted Area: Fencing and Gate with Signage "**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? **Las Vegas Crusher, New Permit**			

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 ($\frac{\text{hours}}{\text{day}}$): Daylight	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 4380			
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: Sunrise	XAM ☐PM	End: Sunset	☐AM XPM			
3	Month and year of anticipated start of construction: After Permit is Issued						
4	Month and year of anticipated construction completion: After Permit is Issued						
5	Month and year of anticipated startup of new or modified facility: After Permit is Issued						
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:		NOV Tracking No:
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_____, Email_____ Phone number _____.

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.
AGGPILE	Cold Aggregate Storage Pile	NA	NA	NA	120 tons/hr	120 tons/hr	NA 2024	NA NA	30500203	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
1	Cold Aggregate Two - 3 Feed Bin Loading	TBD	TBD	TBD	30 CuYd/Bin	120 tons/hr	1983 2024	NA NA	30500216	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
2	Cold Aggregate Feed Bin Unloading (Conveyor)	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	C1 NA	30500217	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
3	Conveyor	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	C1 NA	30500217	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
4	Scalping Screen	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	C2 NA	30500204	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
5	Scalping Screen Unloading (Conveyor)	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	C1 NA	30500217	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
6	Conveyor Transfer to Slinger Conveyor	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	C1 NA	30500217	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
7	Drum Dryer/Mixer	Bituma	200	TBD	120 tons/hr	120 tons/hr	1983 2024	C4 1	30500201	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
8	Drum Mixer Unloading (Incline Conveyor)	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	NA NA	30500221	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
9	Asphalt Silo Unloading	TBD	TBD	TBD	120 tons/hr	120 tons/hr	1983 2024	NA NA	30500213	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
10	Asphalt Heater	TBD	TBD	TBD	1.2 mmBTU	1.2 mmBTU	1983 2024	NA 2	30500208	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
11	Asphalt Cement Storage Tanks (2)	TBD	TBD	TBD	30,000 gallons each	30,000 gallons each	1983 2024	NA NA	30500212	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufact-urer'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 Classi-fication Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
12	Plant Generator	CAT	1412T	8IAI6212	676 hp; 504 kW	676 hp; 504 kW	Mar-96 2024	NA 3	30500299	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	
13	Haul Road Traffic	NA	NA	NA	66 trucks/day	66 trucks/day	NA 2024	C3 NA	30602011	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
YARD	HMA Yard	NA	NA	NA	120 tons/hr	120 tons/hr	NA 2024	NA NA	30502014	☐ Existing (unchanged) ☐ To be Removed ☑ 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.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]	For Each Piece of Equipment, Check Onc
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]	
T3	Burner Fuel Tank	NA	NA	10,000 Gallons	20.2.72.202.B.2.a	1983	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			NA	10,000 Gallons	NA	2024	
T4	Diesel Fuel Tank	NA	NA	10,000 Gallons	20.2.72.202.B.2.a	1983	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			NA	10,000 Gallons	NA	2024	
T5	Evotherm Storage Tank	NA	NA	5,000 Gallons	NA	2024	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			NA	5,000 Gallons	1.a	2024	
T6	Water Storage Tank	NA	NA	5,000 Gallons	NA	2024	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			NA	5,000 Gallons	1.a	2024	
							☐ Existing (unchanged) ☐ To be Removed ☐ 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
							☐ Existing (unchanged) ☐ To be Removed ☐ 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
							☐ Existing (unchanged) ☐ To be Removed ☐ 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
							☐ Existing (unchanged) ☐ To be Removed ☐ 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	1983	Particulate	2, 3, 5, 6	PM - 95.33%	AP-42 11.19.2 Emission Factors
C2	Screen - Wet Dust Suppression System	1983	Particulate	4	PM - 91.20%	AP-42 11.19.2 Emission Factors
C3	Unpaved Roads - Base Course and Water	TBD	Particulate	13	PM - 80%	NMED Policy
C4	Drum Mixer Baghouse	2024	Particulate	7	PM - 99.88%	AP-42 11.1 Emission Factors

[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
AGGPILE									0.78	3.42	0.37	1.62	0.056	0.24				
1									0.78	3.42	0.37	1.62	0.056	0.24				
2									0.34	1.48	0.12	0.54	0.019	0.084				
3									0.34	1.48	0.12	0.54	0.019	0.084				
4									2.82	12.35	0.98	4.30	0.15	0.65				
5									0.34	1.48	0.12	0.54	0.019	0.084				
6									0.34	1.48	0.12	0.54	0.019	0.084				
7	6.60	28.91	15.60	68.33	3.84	16.82	6.96	30.48	3360	14717	780	3416	187.8	822.6	0.0062	0.027	0.0018	0.0079
8			0.27	1.16	2.74	12.00			0.0969	0.42	0.0969	0.42	0.0969	0.42	0.00018	0.00077		
9			0.30	1.33	0.93	4.09			0.09835	0.43	0.09835	0.43	0.09835	0.43	0.00018	0.00077		
10	0.19	0.82	0.047	0.21	0.0032	0.014	0.067	0.29	0.019	0.082	0.019	0.082	0.019	0.082			1.1E-05	4.7E-05
11					0.017	0.073												
12	6.76	29.59	3.89	17.03	0.36	1.56	0.24	1.07	0.22	0.97	0.22	0.97	0.22	0.97			4.0E-05	1.8E-04
13									12.97	45.92	3.31	11.70	0.33	1.17				
YARD			0.042	0.19	0.13	0.58												
Totals	13.54	59.32	20.15	88.24	8.02	35.13	7.27	31.84	3379	14790	786	3440	188.9	827.1	0.0066	0.029	0.0019	0.0081

[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
AGGPILE									0.78	0.65	0.37	0.31	0.056	0.047				
1									0.78	0.65	0.37	0.31	0.056	0.047				
2									0.016	0.013	0.0052	0.0043	0.0015	0.0012				
3									0.016	0.013	0.0052	0.0043	0.0015	0.0012				
4									0.25	0.21	0.083	0.070	0.0056	0.0047				
5									0.016	0.013	0.0052	0.0043	0.0015	0.0012				
6									0.016	0.013	0.0052	0.0043	0.0015	0.0012				
7	6.60	5.50	15.60	13.00	3.84	3.20	6.96	5.80	3.96	3.30	2.76	2.30	2.76	2.30	0.0062	0.0052	0.0018	0.0015
8			0.27	0.22	2.74	2.28			0.097	0.081	0.097	0.081	0.097	0.081	0.00018	0.00015		
9			0.30	0.25	0.93	0.78			0.098	0.082	0.098	0.082	0.098	0.082	0.00018	0.00015		
10	0.19	0.82	0.047	0.21	0.0032	0.014	0.067	0.29	0.019	0.082	0.019	0.082	0.019	0.082			1.1E-05	4.7E-05
11					0.017	0.073												
12	6.76	14.79	3.89	8.52	0.36	0.78	0.24	0.53	0.22	0.49	0.22	0.49	0.22	0.49			4.0E-05	8.7E-05
13									2.59	1.75	0.66	0.45	0.066	0.045				
YARD			0.042	0.04	0.13	0.11												
Totals	13.54	21.12	20.15	22.23	8.02	7.24	7.27	6.62	8.86	7.34	4.70	4.18	3.39	3.18	0.0066	0.0055	0.0019	0.0016

[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

☑ 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)			
1	7	H	No	21	270	416.7		21	58.95	3.00
2	10	H	Yes	10	120	31.42		trace	40.00	1.00
3	12	H	No	14	900	69.81		trace	200.00	0.67

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		Asphalt Fumes ☐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
1	7	1.26	1.05	1.44	1.20														
2	10	0.0014	0.0031																
3	12	0.029	0.063																
	8			0.042	0.035														
	9			0.020	0.016														
	11			0.00038	0.0017														
	YARD			0.0020	0.0017														
Totals:		1.29	1.11	1.50	1.25														

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
7	On-Spec Burner Fuel Oil/#2 Diesel	purchased commercial	140353/129488	180 gallons	300,000 gallons	0.5	
10	#2 Diesel	purchased commercial	129488	9.4 gallons	82,344 gallons	0.05	
12	#2 Diesel	purchased commercial	129488	34.3 gallons	150,234 gallons	0.05	

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	3-05-002-12	Hot Oil Asphalt Cement Unit 11	Hot Oil Asphalt Cement	9.22	105	350	0.0347	350	0.0347
T2	3-05-002-12	Hot Oil Asphalt Cement Unit 11	Hot Oil Asphalt Cement	9.22	105	350	0.0347	350	0.0347
T3	3-05-002-98	Burner Fuel Oil	Burner Fuel Oil	7.88	130	58.54	0.0062	65.66	0.0079
T4	3-05-002-98	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079

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	1983	Hot Oil Asphalt Cement	NA	FX	714.29	113.55	3.66	2.42	OT (Yellow)	OT (Yellow)	Good	1,301,518	43.38
T2	2024	Hot Oil Asphalt Cement	NA	FX	714.29	113.55	3.66	2.42	OT (Yellow)	OT (Yellow)	Good	1,301,518	43.38
T3	1983	Burner Fuel Oil	NA	FX	238.10	37.85	2.44	1.95	OT (Yellow)	OT (Yellow)	Good	300,000	30.00
T4	1983	Diesel Fuel	NA	FX	238.10	37.85	2.44	1.95	OT (Yellow)	OT (Yellow)	Good	232,578	23.26

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)**
Aggregate	Aggregate	Solid	112.8 TPH	Asphalt	Aggregate, Evotherm, Asphalt Cement	Solid	120 TPH
Asphalt Cement	Asphalt Cement	Heated Liquid	7.2 TPH				
Evotherm	Evother	Liquid	0.12 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
NA									

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
7	Differential Pressure	Baghouse inlet and outlet	inches of water	2 - 6 inches	Annual	Calibrate	Datalogger	1 min

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										
7	mass GHG	3300													3300	
	CO_2e	3300														3300
10	mass GHG	857	0.035	0.0070											857	
	CO_2e	857	0.87	2.07												860
12	mass GHG	1703													1703	
	CO_2e	1703														1703
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
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	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO2e															
Total	mass GHG														5860	
	CO_2e															5863

[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.

Short Line, LLC (Short Line) is applying for a new 20.2.72 NMAC air quality permit for a 120 tons per hour (tph) hot mix asphalt plant to be operated within county of San Miguel, state of New Mexico. Regulation governing this permit application is 20.2.72.200.A(1) NMAC.

Short Line has retained Montrose Environmental Solutions, LLC (Montrose) to assist with the permit application. The plant will be identified as Las Vegas HMA & Crusher and will be located at 1109 Airport Road in Las Vegas, NM, 87701.

HMA Plant

The 120 tph hot mix asphalt plant will include; aggregate storage piles, two 3-bin cold aggregate feeders, scalping screen, drum dryer/mixer with baghouse, incline conveyor, asphalt silo, asphalt heater, four (4) transfer conveyors, Evotherm storage tank, and two (2) asphalt cement storage tanks. Evotherm promotes adhesion by acting as both a liquid antistrip and a warm mix asphalt (WMA). Evotherm is an easy-to-handle, pumpable liquid that contains no regulated HAPs or TAPs components. The HMA plant will be powered with a 504 kW (676 horsepower (hp)) generator. Processed asphalt will be transported from the HMA plant to off-site sales. The HMA plant will limit processing rates to 120 tph and 200,000 tpy. HMA processing hours will be limited to daylight hours only. The hours of operation are presented below in Table 3-1.

TABLE 3-1: HMA Production 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	0	0
6:00 AM	0	0.5	1	1	1	1	1	1	1	1	0.5	0
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	0.5	1	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	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

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

No SSM emissions are predicted for this permit application. All control systems will be operational prior to the start or shutdown of asphalt production or aggregate processing. Maintenance will be performed during period with no production.

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.

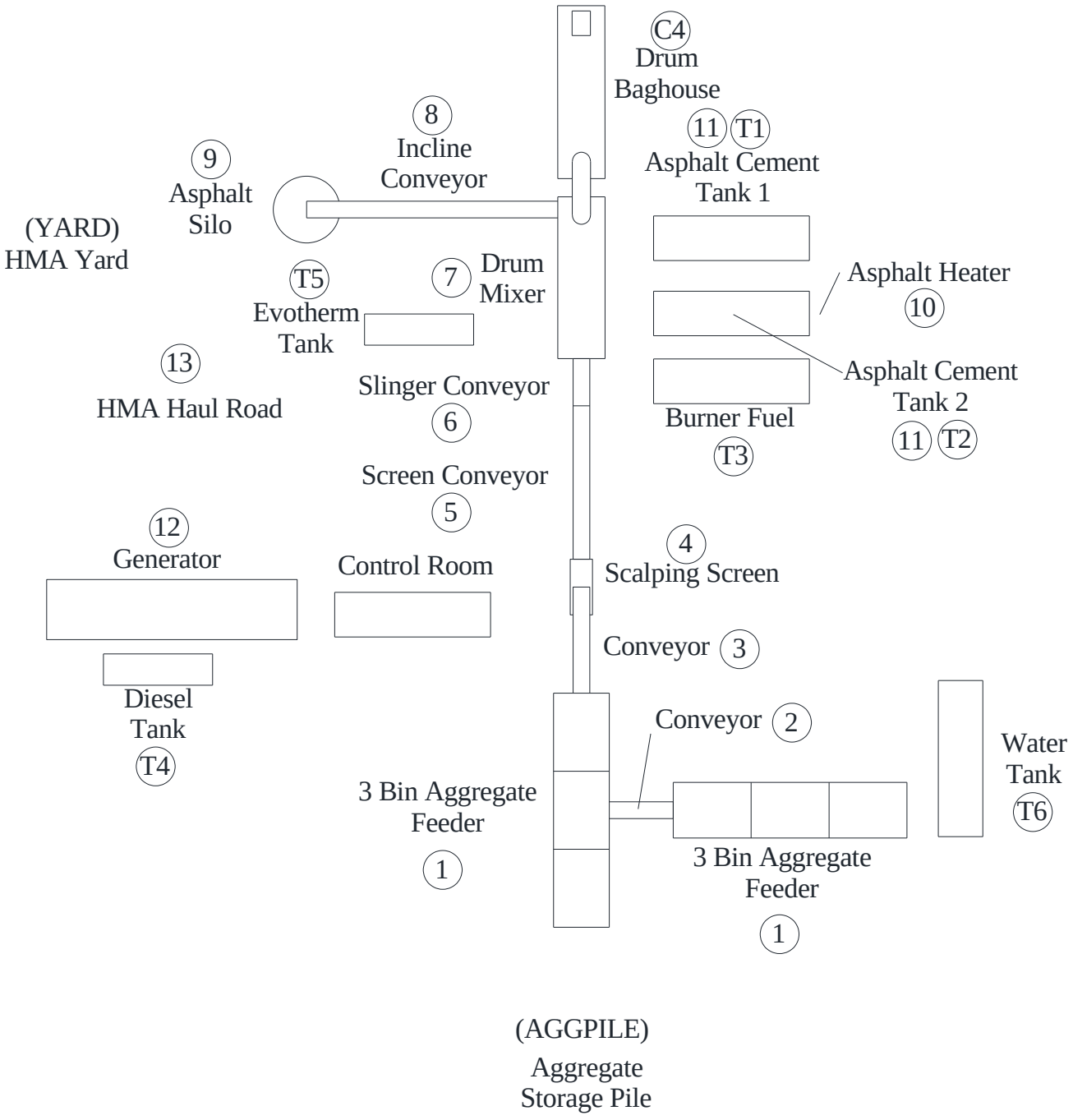

Figure 4-1: Short Line HMA Plant Process Flow Diagram

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.

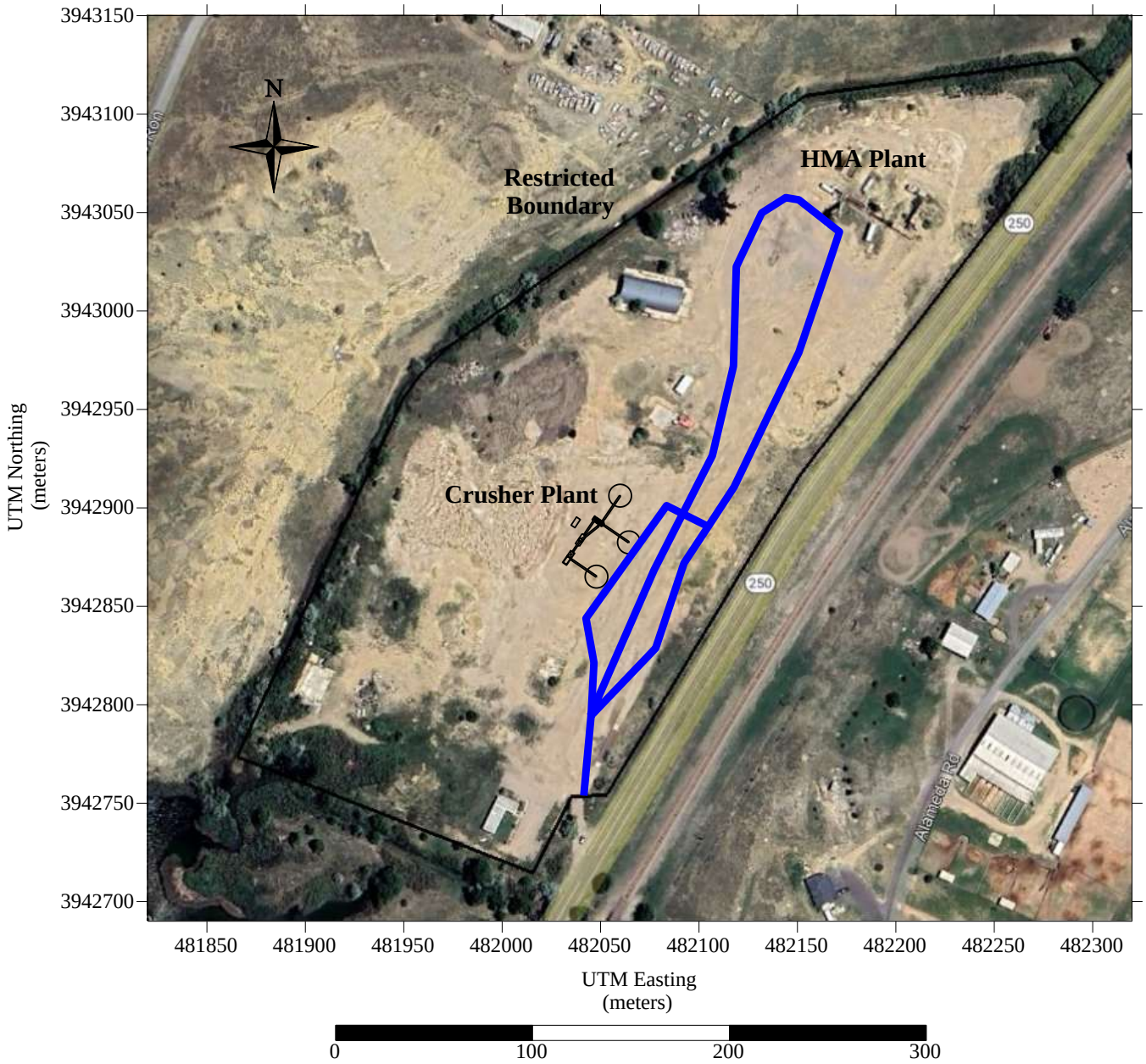

Figure 5-1: Location of Short Line HMA Plant and Surrounding Area

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.

Hot Mix Asphalt Plant

Pre-Control Particulate Emission Rates (Units AGGPILE, 1, 2, 3, 4, 5, 6)

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

To estimate material handling pre-control particulate emissions rates for screening, pugmill, 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 pre-control particulate emission rates for aggregate handling operations (aggregate and RAP piles/ loading cold and RAP 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 (PM = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining emission rate is based on the average wind speed for Las Vegas Airport (1996 – 2006), of 11.4 mph (see Section 7) and the NMED default moisture content of 2 percent.

Maximum hourly asphalt production is 120 tons per hour. Virgin aggregate/Asphalt cement ratios used in estimating material handling particulate emission rates is equal to 94.0/6.0.

Aggregate Storage Piles and Cold Feed Bin Loading Emission Equation:

Maximum Emission Factor

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

E_{PM} (lbs/ton) = $0.74 \times 0.0032 \times (11.4/5)^{1.3} / (2/2)^{1.4}$

E_{PM10} (lbs/ton) = $0.35 \times 0.0032 \times (11.4/5)^{1.3} / (2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = $0.053 \times 0.0032 \times (11.4/5)^{1.3} / (2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00691 lbs/ton;

E_{PM10} (lbs/ton) = 0.00327 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00050 lbs/ton

AP-42 Emission Factors:

All Bin Unloading and Conveyor Transfers = Uncontrolled Conveyor Transfer Point Emission Factor
Screening = Uncontrolled Screening Emission Factor
Pugmill Loading and Unloading = Uncontrolled 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)
Uncontrolled Screening	0.02500	0.00870	0.00132
Uncontrolled Screen Unloading, Feed Bin Unloading, and Conveyor Transfers	0.00300	0.00110	0.00017
Uncontrolled Aggregate Storage Piles, Cold Aggregate Feeder Loading	0.00691	0.00327	0.00050

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:

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

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)
AGGPILE	Cold Aggregate Storage Pile	112.8	0.78	3.42	0.37	1.62	0.06	0.24
1	Cold Aggregate Feed Bin Loading	112.8	0.74	2.66	0.35	1.26	0.05	0.19
2	Cold Aggregate Feed Bin Unloading (Conveyor)	112.8	0.34	1.48	0.12	0.54	0.019	0.084
3	Conveyor Transfer	112.8	0.34	1.48	0.12	0.54	0.019	0.084
4	Scalping Screen	112.8	2.82	12.4	0.98	4.30	0.15	0.65
5	Scalping Screen Unloading (Conveyor)	112.8	0.34	1.48	0.12	0.54	0.019	0.084
6	Conveyor Transfer to Slinger Conveyor	112.8	0.34	1.48	0.12	0.54	0.019	0.084
		TOTALS	**5.70**	**24.35**	**2.20**	**9.34**	**0.33**	**1.42**

HMA Plant Haul Truck Travel (Unit 13)

Haul truck travel emissions were estimated using AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads" emission equation. The haul road to the plant will be unpaved. See Figure 5-1 for identification of haul road. Table 6-2 summarizes the emission rate for each haul truck category.

Unpaved Roads Plant HMA

AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads"

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

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 (26.5 tons – 15 tons truck, 23 tons load)

p = number of days with at least 0.01 in of precip. (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

Vehicle Dust Control 0%

Trucks per Hour
Evotherm Trucks = 0.004 truck per hour average
Asphalt Cement Trucks = 0.3 truck per hour average
Asphalt Trucks = 5.2 truck per hour average

Trucks per Year (Uncontrolled)
Evotherm Trucks = 33 truck per year
Asphalt Cement Trucks = 2742 truck per year
Asphalt Trucks = 45704 truck per year

VMT =Vehicle Miles Traveled

Evotherm Trucks	Unpaved – 0.34083 miles per vehicle
Asphalt Cement Trucks	Unpaved – 0.34083 miles per vehicle
Aggregate Trucks	Unpaved – 0.34083 miles per vehicle

Miles Traveled
HMA Plant Unpaved – 1.88620 miles per hour; 16,523 miles per year

Reduction in emissions due to precipitation was only accounted for in the annual emission rate. Particulate emission rate per vehicle mile traveled for each particle size category is:

Hourly Emission Rate Factor Uncontrolled
PM = 6.8769 lbs/VMT
PM10 = 1.7527 lbs/VMT
PM2.5 = 0.1753 lbs/VMT

Annual Emission Rate Factor Uncontrolled
PM = 5.5581 lbs/annual VMT
PM10 = 1.4165 lbs/annual VMT
PM2.5 = 0.1417 lbs/annual VMT

Table 6-2: Pre-Controlled Haul Road Fugitive Dust Emission Rates

Process Unit Description	Process Rate	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)
Evotherm Truck Emissions	0.00127 miles/hr; 11 miles/yr	0.0087	0.031	0.0022	0.0079	0.00022	0.00079
Asphalt Cement Truck Emissions	0.10669 miles/hr; 935 miles/yr	0.73	2.60	0.19	0.66	0.019	0.066
Asphalt Truck Emissions Paved	1.77823 miles/hr; 15,577 miles/yr	12.23	43.29	3.12	11.03	0.31	1.10
	Total	**12.97**	**45.92**	**3.31**	**11.70**	**0.33**	**1.17**

Drum Mix Hot Mix Asphalt Plant (Unit 7, 8, 9, 11)

Drum mix hot mix asphalt plant uncontrolled emissions were estimated using AP-42, Section 11.1 "Hot Mix Asphalt Plants" (revised 03/04), tables 11.1.3, 7, 8 and 14 emission equations. The drum dryer will be permitted to combust on-spec recycled oil or No 2 Diesel. Hourly emission rates are based on maximum hourly asphalt production (120 tph) and maximum annual emission rates are based on operating 8760 hours per year. To determine missing $PM_{2.5}$ emission factor the sum of uncontrolled filterable from Table 11.1-4 plus uncontrolled organic and inorganic condensable in Table 11.1-3 was used. Silo filling and plant loadout emission factors were calculated using the default value of –0.5 for asphalt volatility (V) and a tank temperature setting of 350˚ F for HMA mix temperature (T).

Silo Filling

Total PM	$EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$
TOC	$EF = 0.0504(-V)e^{((0.0251)(T + 460) - 20.43)}$
CO	$EF = 0.00488(-V)e^{((0.0251)(T + 460) - 20.43)}$

Plant Loadout

Total PM	$EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$
TOC	$EF = 0.0172(-V)e^{((0.0251)(T + 460) - 20.43)}$
CO	$EF = 0.00558(-V)e^{((0.0251)(T + 460) - 20.43)}$

Yard emissions were found in AP-42 Section 11.1.2.5. TOC emission equation is 0.0011 lbs/ton of asphalt produced and CO is equal to the TOC emission rate times 0.32.

Emissions of VOCs (TOCs) from the asphalt cement storage tanks were determined with EPA's TANK 4.0.9d program and the procedures found in EPA's "Emission Factor Documentation for AP-42 Section 11.1 (12/2000) Section 4.4.5" for input to the TANK program.

AP-42 Section 11.1 Table 11.1-3, -4, -7, -8, and -14 Uncontrolled Emission Factors:

Process Unit	Pollutant	Emission Factor (lbs/ton)
Drum Mixer	NO_X	0.055
	CO	0.13
	SO_2	0.058
	VOC	0.032
	TOC	0.044
	PM	28.0
	PM_{10}	6.5
	$PM_{2.5}$	1.565
	CO_2	33.0
Silo Filling	CO	0.002210012
	TOC	0.022824716
	PM	0.000807515
	PM_{10}	0.000807515
	$PM_{2.5}$	0.000807515
Plant Loadout	CO	0.002527022
	TOC	0.007789387
	PM	0.000819549
	PM_{10}	0.000819549
	$PM_{2.5}$	0.000819549
Yard	CO	0.000352
	TOC	0.0011

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 6-3: Pre-Controlled Hot Mix Plant Emission Rates

Process Unit Number	Process Unit Description	Pollutant	Average Hourly Process Rate (tons/hour)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
7	Asphalt Drum Dryer/Mixer	NO_X	120	6.60	28.91
		CO	120	15.60	68.33
		SO_2	120	6.96	30.48
		VOC	120	3.84	16.82
		PM	120	3360.0	14716.8
		PM_{10}	120	780.0	3416.4
		$PM_{2.5}$	120	187.8	822.6
		CO_2	120	3960	17345
8	Silo Filling (Drum Mixer Unloading)	CO	120	0.27	1.16
		TOC	120	2.74	12.00
		PM	120	0.10	0.42
		PM_{10}	120	0.10	0.42
		$PM_{2.5}$	120	0.10	0.42
9	Plant Loadout (Asphalt Silo Unloading)	CO	120	0.30	1.33
		TOC	120	0.93	4.09
		PM	120	0.10	0.43
		PM_{10}	120	0.10	0.43
		$PM_{2.5}$	120	0.10	0.43
11	Asphalt Cement Storage Tanks (2)	TOC	30,000 gallons each	0.017	0.073
YARD	HMA YARD	TOC	120	0.13	0.58
		CO	120	0.042	0.19

Controlled Particulate Emission Rates (Units AGGPILE, 1, 2, 3, 4, 5, 6)

No controls or emission reductions for combustion emissions (NO_x, CO, SO_2, VOC, or TOC) are proposed for the drum dryer (7), unloading the drum mixer (8), asphalt silo (9), main plant generator (12), and asphalt heater (10) with the exception of limiting annual production rates for production equipment.

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

No fugitive dust controls or emission reductions are proposed for the aggregate storage piles (Unit AGGPILE), loading of the cold aggregate feed bins (Unit 1) with the exception of limiting annual production rates.

Fugitive dust control for unloading the cold aggregate feed bins onto the cold aggregate feed bin conveyor (Unit 2) and conveyor transfer (Unit 3) will be controlled, as needed, with enclosures and/or water sprays at the exit of the feed bins. It is estimated that these methods will control to an efficiency of 95.3 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 scalping screen (Unit 4) will be controlled, as needed, with enclosures and/or water sprays. It is estimated that these methods will control to an efficiency of 91.2 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 unloading the scalping screen (Unit 5), and transfer from the scale conveyor to the sling conveyor (Unit 6), as needed, with enclosures and/or water sprays. It is estimated that these methods will control to an efficiency of 95.3 percent per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Particulate emissions from the drum dryer/mixer (Unit 7) will be controlled with a baghouse dust collector (C3) on the exhaust vent. It is estimated that this method will control to an efficiency of 99.88 percent per AP42 Section 11.1, Table 11.1-3 “controlled emission factor vs. uncontrolled emission factor”. Baghouse fines are sent to a dust box. Additional emission reductions include limiting annual production rates.

No fugitive controls or emission reductions are proposed for unloading the drum dryer/mixer or asphalt silo (Units 8 and 9) with the exception of limiting annual production rates. No fugitive controls are proposed for yard emissions (Unit YARD) or asphalt storage tanks (Unit 11).

To estimate material handling control particulate emissions rates for 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 pre-control particulate emission rates for aggregate handling operations (aggregate storage piles and cold aggregate 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 (PM = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining emission rate is based on the average wind speed for Las Vegas Airport (1996 – 2006), of 11.4 mph (see Section 7) and the NMED default moisture content of 2 percent.

Maximum hourly asphalt production is 120 tons per hour. Virgin aggregate/Asphalt cement ratios used in estimating material handling particulate emission rates is equal to 94.0/6.0. Annual emissions in tons per year (tpy) were calculated assuming an annual production throughput of 200,000 tons of asphalt per year.

Aggregate Storage Piles and Cold Feed Bin Loading Emission Equation:

Maximum 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 $(11.4/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11.4/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11.4/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00691 lbs/ton;

E_{PM10} (lbs/ton) = 0.00327 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00050 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
Scalping Screen 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)
Feed Bin Unloading	0.00014	0.00005	0.000013
Controlled Screening	0.00220	0.00074	0.00005
Transfer Conveyor	0.00014	0.00005	0.000013
Uncontrolled Aggregate Storage Piles, Cold Aggregate Bin Loading Max	0.00691	0.00327	0.00050

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:

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

Table 6-4 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)
AGGPILE	Cold Aggregate Storage Pile	112.8	0.78	0.65	0.37	0.31	0.056	0.047
1	Cold Aggregate Feed Bin Loading	112.8	0.74	0.51	0.35	0.24	0.053	0.036
2	Cold Aggregate Feed Bin Unloading (Conveyor)	112.8	0.016	0.013	0.0052	0.0043	0.0015	0.0012
3	Conveyor Transfer	112.8	0.016	0.013	0.0052	0.0043	0.0015	0.0012
4	Scalping Screen	112.8	0.25	0.21	0.083	0.070	0.0056	0.0047
5	Scalping Screen Unloading (Conveyor)	112.8	0.016	0.013	0.0052	0.0043	0.0015	0.0012
6	Conveyor Transfer to Slinger Conveyor	112.8	0.016	0.013	0.0052	0.0043	0.0015	0.0012
		TOTALS	**1.84**	**1.42**	**0.83**	**0.63**	**0.12**	**0.092**

Controlled Haul Truck Travel (Unit 13)

Haul truck travel emissions were estimated using AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads" emission equation. All other haul roads throughout the plant are unpaved that will be controlled with surfactants or millings, and water. Haul road traffic emission rates controlled by surfactants or millings, and water have applied a control efficiency of 90%. See Figure 5-1 for identification of haul road. Table 6-17 summarizes the emission rate for each haul truck category.

Unpaved Roads Plant HMA

AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads"

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

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 (26.5 tons – 15 tons truck, 23 tons load)

p = number of days with at least 0.01 in of precip. (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

Vehicle Dust Control 80% (base course and watering)

Trucks per Hour
Evotherm Trucks = 0.004 truck per hour average
Asphalt Cement Trucks = 0.3 truck per hour average
Asphalt Trucks = 5.2 truck per hour average

Trucks per Year (Controlled)
Evotherm Trucks = 6.2 truck per year
Asphalt Cement Trucks = 522 truck per year
Asphalt Trucks = 8,696 truck per year

VMT =Vehicle Miles Traveled
Evotherm Trucks Unpaved – 0.34083 miles per vehicle
Asphalt Cement Trucks Unpaved – 0.34083 miles per vehicle
Aggregate Trucks Unpaved – 0.34083 miles per vehicle

Miles Traveled
HMA Plant Unpaved – 1.88620 miles per hour; 3,144 miles per year

Reduction in emissions due to precipitation was only accounted for in the annual emission rate. Particulate emission rate per vehicle mile traveled for each particle size category is:

Hourly Emission Rate Factor with Base Course and Watering 80% Control
PM = 1.3754 lbs/VMT
PM10 = 0.3505 lbs/VMT
PM2.5 = 0.0351 lbs/VMT

Annual Emission Rate Factor with Base Course and Watering 80% Control
PM = 1.1116 lbs/annual VMT
PM10 = 0.2833 lbs/annual VMT
PM2.5 = 0.0283 lbs/annual VMT

Table 6-5: Controlled Haul Road Fugitive Dust Emission Rates

Process Unit Description	Process Rate	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)
Evotherm Truck Emissions	0.00127 miles/hr; 2 miles/yr	0.0017	0.0012	0.00045	0.00030	0.000045	0.000030
Asphalt Cement Truck Emissions	0.10669 miles/hr; 178 miles/yr	0.15	0.10	0.037	0.025	0.0037	0.0025
Asphalt Truck Emissions Paved	1.77823 miles/hr; 2,964 miles/yr	2.45	1.65	0.62	0.42	0.062	0.042
	Total	**2.59**	**1.75**	**0.66**	**0.45**	**0.066**	**0.045**

Drum Mix Hot Mix Asphalt Plant (Unit 7, 8, 9, 11)

Particulate emissions from the drum dryer/mixer (Unit 7) will be controlled with a baghouse dust collector (C5) on the exhaust vent. This dust collector consists of filter bags and a fan that draws all the drum mixer exhaust through the dust collector. It is estimated that this method will control to an efficiency of 99.88 percent per AP42 Section 11.1, Table 11.1-3. Additional emission reductions include limiting annual production rates. No fugitive controls are proposed for unloading the drum dryer/mixer or asphalt silo (Unit 8 & 9) with the exception of limiting annual production rates. No fugitive controls are proposed for yard emissions (Unit YARD) or asphalt storage tank (Unit 11) emissions.

Drum mix hot mix asphalt plant controlled emissions were estimated using AP-42, Section 11.1 "Hot Mix Asphalt Plants" (revised 03/04), tables 11.1-3, -4, -7, -8 and -14 emission rates for all pollutants. The drum dryer will be permitted to combust on-spec recycled oil. Hourly emission rates are based on maximum hourly asphalt production (400 tph) and maximum annual asphalt production rates of 1,000,000 tons. To determine missing $PM_{2.5}$ emission factor the sum of uncontrolled filterable from Table 11.1-4 plus uncontrolled organic and inorganic condensable in Table 11.1-3 was used. Silo filling and plant loadout emission factors were calculated using the default value of –0.5 for asphalt volatility (V) and a tank temperature setting of 350˚ F for HMA mix temperature (T).

Silo Filling

Total PM	$EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$
TOC	$EF = 0.0504(-V)e^{((0.0251)(T + 460) - 20.43)}$
CO	$EF = 0.00488(-V)e^{((0.0251)(T + 460) - 20.43)}$

Plant Loadout

Total PM	$EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$
TOC	$EF = 0.0172(-V)e^{((0.0251)(T + 460) - 20.43)}$
CO	$EF = 0.00558(-V)e^{((0.0251)(T + 460) - 20.43)}$

Yard emissions were found in AP-42 Section 11.1.2.5. TOC emission equation is 0.0011 lbs/ton of asphalt produced and CO is equal to the TOC emission rate times 0.32.

Emissions of VOCs (TOCs) from the asphalt cement storage tanks were determined with EPA's TANK 4.0.9d program and the procedures found in EPA's "Emission Factor Documentation for AP-42 Section 11.1 (12/2000) Section 4.4.5" for input to the TANK program.

AP-42 Section 11.1 Table 11.1-3, -4, -7, -8, and -14 Controlled Emission Factors:

Process Unit	Pollutant	Emission Factor (lbs/ton)
Drum Mixer	NO_X	0.055
	CO	0.13
	SO_2	0.058
	VOC	0.032
	TOC	0.044
	PM	0.033
	PM_{10}	0.023
	$PM_{2.5}$	0.023
	CO_2	33.0
Silo Filling	CO	0.002210012
	TOC	0.022824716
	PM	0.000807515
	PM_{10}	0.000807515
	$PM_{2.5}$	0.000807515
Plant Loadout	CO	0.002527022
	TOC	0.007789387
	PM	0.000819549
	PM_{10}	0.000819549
	$PM_{2.5}$	0.000819549
Yard	CO	0.000352
	TOC	0.0011

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 6-6: Controlled Hot Mix Plant Emission Rates

Process Unit Number	Process Unit Description	Pollutant	Average Hourly Process Rate (tons/hour)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
7	Asphalt Drum Dryer/Mixer	NO_X	120	6.60	5.50
		CO	120	15.60	13.00
		SO_2	120	6.96	5.80
		VOC	120	3.84	5.50
		PM	120	3.96	3.30
		PM_{10}	120	2.76	2.30
		$PM_{2.5}$	120	2.76	2.30
		CO_2	120	3960	3300
8	Silo Filling (Drum Mixer Unloading)	CO	120	0.27	0.22
		TOC	120	2.74	2.28
		PM	120	0.10	0.081
		PM_{10}	120	0.10	0.081
		$PM_{2.5}$	120	0.10	0.081
9	Plant Loadout (Asphalt Silo Unloading)	CO	120	0.30	0.25
		TOC	120	0.93	0.78
		PM	120	0.10	0.082
		PM_{10}	120	0.10	0.082
		$PM_{2.5}$	120	0.10	0.082
11	Asphalt Cement Storage Tanks (2)	TOC	30,000 gallons each	0.017	0.073
YARD	HMA YARD	TOC	120	0.13	0.11
		CO	120	0.042	0.035

Diesel-Fired Asphalt Heater (Unit 10)

One diesel asphalt heater (Unit 10) heats the asphalt oil before it is mixed with the aggregate in the drum dryer/mixer. The unit is rated at 1,200,000 Btu/hr. The estimated hourly diesel combusted is 9.4 gal/hr. Emissions of nitrogen oxides (NO_X), carbon monoxides (CO), sulfur dioxide (SO_2), hydrocarbons (VOC) and particulate (PM) are estimated using AP-42 Section 1.3 (9/98). Sulfur content of diesel will not exceed 0.05%. No controls are proposed for the fuel asphalt heater. Uncontrolled annual emissions in tons per year (tpy) were calculated assuming operation of 8760 hours per year. Controlled annual emissions in tons per year (tpy) were calculated assuming operation of 8760 hours per year.

AP-42 Emission Factors: Section 1.4

Diesel Emission Factors

Pollutant	Emission Factor
Nitrogen Oxides	20 lbs/1000 gallons
Carbon Monoxides	5.00 lbs/1000 gallons
Particulate	0.34 lbs/1000 gallons
Hydrocarbons	142S lbs/1000 gallons S = %sulfur
Sulfur Dioxides	2.00 lbs/1000 gallons
Carbon Dioxide	73.96 kg CO_2 per mmBTU
CH_4	3.00 g CH_4 per mmBTU
N_2O	0.60 g N_2O per mmBTU

The following equation was used to calculate the hourly emission rate for asphalt heater pollutant (NO_X, CO, VOC, PM):

Emission Rate (lbs/hr) = EF (lbs/1000 gal) * fuel usage (gal/hr)

The following equation was used to calculate the hourly emission rate for asphalt heater pollutant (SO_2):

Emission Rate (lbs/hr) = 142 * Sulfur Content (0.05%) * fuel usage (9.4 gal/hr) / 1000 gal/hr

The following equation was used to calculate the hourly emission rate for asphalt heater pollutant (CO_2, CH_4, N_2O):

Emission Rate (lbs/hr) = 73.96 kg * fuel usage (120000 BTU) / 1000000 BTU * 2.20462 lbs/kg
Emission Rate (lbs/hr) = 3.00 g * fuel usage (120000 BTU) / 1000000 BTU * 0.00220462 lbs/g
Emission Rate (lbs/hr) = 0.60 g * fuel usage (120000 BTU) / 1000000 BTU * 0.0020462 lbs/g

The following equation was used to calculate the annual emission rate for asphalt heater pollutant (NO_X, CO, VOC, PM, SO_2, CO_2):

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

Table 6-7: Pre-Controlled Combustion Emission Rates for Asphalt Heater

Process Unit Number	Pollutant	Fuel Usage (gal/hr)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
10	NO_X	9.4	0.19	0.82
	CO	9.4	0.047	0.21
	VOC	9.4	0.0032	0.014
	SO_2	9.4	0.067	0.29
	PM	9.4	0.019	0.082
	CO_2	9.4	195.7	857.0
	CH_4	9.4	0.0079	0.035
	N_2O	9.4	0.0016	0.0070
	CO_2e	9.4	195.7	857.1

Table 6-8: Controlled Combustion Emission Rates for Asphalt Heater

Process Unit Number	Pollutant	Fuel Usage (scf/hr)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
10	NO_X	9.4	0.19	0.82
	CO	9.4	0.047	0.21
	VOC	9.4	0.0032	0.014
	SO_2	9.4	0.067	0.29
	PM	9.4	0.019	0.082
	CO_2	9.4	195.7	857.0
	CH_4	9.4	0.0079	0.035
	N_2O	9.4	0.0016	0.0070
	CO_2e	9.4	195.7	857.1

Estimates for 676 hp HMA Plant Main Diesel-Fired Engine (NO_X, CO, SO_2, VOC, PM, and CO_2) (Unit 12)

A 676 horsepower (hp), 504 kilowatt (kW) engine (Unit 12) provides power to the HMA plant. Emission rates for NO_X + NMHC, CO, PM and NMHC are based on EPA AP-42 Tier 2 emission factors. NO_X is 95% of NO_X + NMHC and NMHC is 5% of NO_X + NMHC. Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 0.05% fuel content and a fuel usage rate of 34.3 gal/hr. CO_2 emission rates are found in AP-42 Section 3.3. Uncontrolled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 8760 hours per year. Controlled annual emissions in tons per year (tpy) were calculated assuming operation of 4380 hours per year.

Tier 2:

Pollutant	Emission Factor (g/kW-hr)
NMHC + NO_X	6.40
Nitrogen Oxide (NOx)	6.08
Carbon Monoxides (CO)	3.50
Particulate (PM)	0.20
Hydrocarbons (VOC)	0.32

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 87.4 gallons per hour, a fuel density of 7.1 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

$$\text{Emission Rate (lbs/hr)} = \frac{34.2 \text{ gallons}}{\text{hr}} \left| \frac{7.1 \text{ lbs}}{\text{gallon}} \right| \frac{0.0005 \text{ lbs Sulfur}}{\text{lbs of fuel}} \left| \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}} \right.$$

Emission Rate (lbs/hr) = 0.24 lbs/hr

Carbon Dioxide emissions were estimated using AP-42 Table 3.3-1 emission factor of 1.15 lbs/hp-hr.

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 6-9: Pre-Controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
12	NO_X	676	6.76	29.59
	CO	676	3.89	17.03
	SO_2	676	0.24	1.07
	VOC	676	0.36	1.56
	PM	676	0.22	0.97
	CO_2	676	777.4	3405.0

Table 6-10: Controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
12	NO_X	676	6.76	14.79
	CO	676	3.89	8.52
	SO_2	676	0.24	0.53
	VOC	676	0.36	0.78
	PM	676	0.22	0.49
	CO_2	676	777.4	1702.5

Table 6-11 Summary of Uncontrolled NOx, CO, SO_2, and PM HMA Emission Rates

Uncontrolled 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
AGGPILE	Cold Aggregate Storage Pile	-	-	-	-	-	-	-	-	0.78	3.42	0.37	1.62	0.06	0.24
1	Cold Aggregate Feed Bin Loading	-	-	-	-	-	-	-	-	0.74	2.66	0.35	1.26	0.05	0.19
2	Cold Aggregate Feed Bin Unloading (Conveyor)	-	-	-	-	-	-	-	-	0.34	1.48	0.12	0.54	0.019	0.084
3	Conveyor Transfer	-	-	-	-	-	-	-	-	0.34	1.48	0.12	0.54	0.019	0.084
4	Scalping Screen	-	-	-	-	-	-	-	-	2.82	12.4	0.98	4.30	0.15	0.65
5	Scalping Screen Unloading (Conveyor)	-	-	-	-	-	-	-	-	0.34	1.48	0.12	0.54	0.019	0.084
6	Conveyor Transfer to Slinger Conveyor	-	-	-	-	-	-	-	-	0.34	1.48	0.12	0.54	0.019	0.084
7	Drum Dryer/Mixer	6.6	28.9	15.6	68	7.0	30	3.8	16.8	3360	14717	780	3416	188	823
8	Drum Mixer Unloading (Incline Conveyor)	-	-	0.27	1.16	-	-	2.74	12.0	0.10	0.42	0.10	0.42	0.10	0.42
9	Asphalt Silo Unloading (Asphalt Silo)	-	-	0.30	1.33	-	-	0.93	4.1	0.10	0.43	0.10	0.43	0.10	0.43
10	Asphalt Heater	0.19	0.82	0.047	0.21	0.067	0.29	0.0032	0.014	0.019	0.082	0.019	0.082	0.019	0.082
11	Asphalt Cement Storage Tanks (2)	-	-	-	-	-	-	0.017	0.073	-	-	-	-	-	-
12	Plant Generator	6.76	29.59	3.89	17.03	0.24	1.07	0.36	1.56	0.22	0.97	0.22	0.97	0.22	0.97
13	Haul Road Traffic	-	-	-	-	-	-	-	-	12.97	45.92	3.31	11.70	0.33	1.17
YARD	HMA Yard	-	-	0.04	0.19	-	-	0.13	0.58	-	-	-	-	-	-
Total		**13.5**	**59.3**	**20.1**	**88.2**	**7.27**	**31.8**	**8.02**	**35.1**	**3379**	**14789**	**786**	**3439**	**188.9**	**827.1**

Table 6-12 Summary of Requested Allowable NOx, CO, SO_2, and PM HMA 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
AGGPILE	Cold Aggregate Storage Pile									0.78	0.65	0.37	0.31	0.056	0.047
1	Cold Aggregate Feed Bin Loading									0.74	0.51	0.35	0.24	0.053	0.036
2	Cold Aggregate Feed Bin Unloading (Conveyor)									0.016	0.013	0.0052	0.0043	0.0015	0.0012
3	Conveyor Transfer									0.016	0.013	0.0052	0.0043	0.0015	0.0012
4	Scalping Screen									0.25	0.21	0.083	0.070	0.0056	0.0047
5	Scalping Screen Unloading (Conveyor)									0.016	0.013	0.0052	0.0043	0.0015	0.0012
6	Conveyor Transfer to Slinger Conveyor									0.016	0.013	0.0052	0.0043	0.0015	0.0012
7	Drum Dryer/Mixer	6.6	5.5	15.6	13.0	7.0	5.8	3.8	3.2	4.0	3.3	2.76	2.3	2.76	2.3
8	Drum Mixer Unloading (Incline Conveyor)			0.27	0.22			2.74	2.28	0.10	0.08	0.10	0.08	0.10	0.08
9	Asphalt Silo Unloading (Asphalt Silo)			0.30	0.25			0.93	0.78	0.10	0.08	0.10	0.08	0.10	0.08
10	Asphalt Heater	0.19	0.82	0.047	0.21	0.067	0.29	0.0032	0.014	0.019	0.082	0.019	0.082	0.019	0.082
11	Asphalt Cement Storage Tanks (2)							0.017	0.073						
12	Plant Generator	6.76	14.79	3.89	8.52	0.24	0.53	0.36	0.78	0.22	0.49	0.22	0.49	0.22	0.49
13	Haul Road Traffic									2.59	1.75	0.66	0.45	0.066	0.045
YARD	HMA Yard			0.04	0.04			0.13	0.11						
Total		**13.54**	**21.12**	**20.15**	**22.23**	**7.27**	**6.62**	**8.02**	**7.24**	**8.83**	**7.19**	**4.68**	**4.11**	**3.38**	**3.17**

Estimates for State Toxic Air Pollutants (Asphalt Fumes)

The Hot Mix Asphalt Plant (HMA) drum dryer/mixer, asphalt silo loading, asphalt silo unloading, yard emissions, and heated asphalt cement storage tank are sources of asphalt fumes listed in the NMED's 20.2.72 NMAC, 502 "Toxic Air Pollutants and Emissions", Table A. Emissions of asphalt fumes from the drum dryer/mixer are based on PM organic condensable emission factors found in AP-42 Section 11.1, Table 11.1-3 (0.012 pounds per ton x 120 tons/hr) from the drum dryer/mixer baghouse stack or 1.44 pounds per hour/1.20 tons per year.

Emissions of asphalt fumes from the asphalt silo loading (Unit 9), asphalt plant unloading (Unit 10), yard (asphalt transported in asphalt trucks-Unit YARD), and hot oil asphalt storage tanks (Unit 11) assumed that the emissions of concern from the silo filling, plant loadout, hot oil asphalt storage tanks, and yard asphalt fumes sources are the PAH HAPs plus other semi-volatile HAPs from the particulate (PM) organics and the volatile organic HAPs from the Total Organic Compounds (TOC). These two combined make up asphalt fume emissions from the silo filling, plant loadout, hot oil asphalt storage tanks, and yard sources. Using information found in AP-42 Section 11.1, Tables 11.1-14, 15, and 16 were reviewed and the following emission equations or emission factors were used to estimate asphalt fumes emissions from silo filling, silo unloading, hot oil asphalt storage tanks, and yard.

<u>Drum Loadout</u>
Asphalt Fumes EF = $0.00036(-V)e^{((0.0251)(T+460)-20.43)}$

<u>Silo Filling</u>
Asphalt Fumes EF = $0.00078(-V)e^{((0.0251)(T+460)-20.43)}$

<u>Asphalt Storage Tanks</u>
Asphalt Fumes EF = VOC emissions from TANKs * 1.3%

<u>Yard</u>
Asphalt Fumes EF = 0.0000165 lbs/ton of asphalt loaded

Silo filling and plant loadout emission factors were calculated using the default value of –0.5 for asphalt volatility (V) and a tank temperature setting of 350˚ F for HMA mix temperature (T). Inputting these values in to the equations gives you a pound per ton value of 0.000807515 lbs/ton and 0.000819549 lbs/ton or asphalt fumes emission rates of 0.042 pounds/hour/0.035 tons/yr and 0.020 pounds per hour/0.016 tons/yr (120 tph of asphalt production).

Emissions of asphalt fumes from the Yard were based on 1.5 percent of the TOC emission. Yard emission factors are found in AP-42 Section 11.1.2.5. TOC emission factor is 0.0011 lbs/ton of asphalt produced. Asphalt fumes emissions are 0.0000165 lbs/ton of asphalt produced or 0.0020 pounds per hour and 0.0017 tons/yr (120 tph of asphalt production).

Emissions of asphalt fumes from the asphalt cement storage (2) tanks (Unit 11) were determined with EPA's TANK 4.0.9d program and the procedures found in EPA's "Emission Factor Documentation for AP-42 Section 11.1 (12/2000) Section 4.4.5" for input to the TANK program. The annual VOC emissions for working and breathing losses from two 30,000 gallon tank were estimated at 258.42 pounds per year or 0.030 pounds per hour. Based on 1.3 percent of the VOC emissions (0.030 pounds per hour total from both tanks), the asphalt fumes emission rate is 0.00038 pounds per hour and 0.0017 tons/yr.

Total asphalt fumes from the HMA plant is 1.50 pounds per hour and 1.25 tons per year.

Estimates for Hydrogen Sulfide Pollutants

The Hot Mix Asphalt Plant (HMA) drum dryer/mixer, asphalt silo loading, and asphalt silo unloading are sources of hydrogen sulfide (H_2S) listed as a state regulated ambient air quality standard. Emission factors of H_2S from the drum dryer/mixer, asphalt silo loading, and asphalt silo unloading are based on a 2001 study performed by the North Carolina Division of Air Quality and the city of Salisbury, NC. From the study the H_2S emission factors from these sources are:

Process Unit Number	Process Unit Description	H_2S Emission Factor
7	Drum Dryer/Mixer and Baghouse	0.0000518 lbs/ton
8	Drum Mixer Unloading	0.000001460 lbs/ton
9	Asphalt Silo Unloading	0.000001460 lbs/ton

Table 6-13: Controlled Hot Mix Plant Emission Rates

Process Unit Number	Process Unit Description	Pollutant	Average Hourly Process Rate (tons/hour)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
7	Drum Dryer/Mixer and Baghouse	H_2S	120	0.0062	0.0052
8	Drum Mixer Unloading	H_2S	120	0.00018	0.00015
9	Asphalt Silo Unloading	H_2S	120	0.00018	0.00015
			Total H_2S	**0.0066**	**0.0055**

Estimates for Federal HAPs Air Pollutants

The Hot Mix Asphalt Plant (HMA) drum dryer (Unit 7), main plant generator (Unit 12), and asphalt heater (Unit 11) are sources of HAPs as it appears in Section 112 (b) of the 1990 CAAA. Emissions of HAPs were determined for the drum mixer using AP-42 Section 11.1 Tables 11.1-10, 11.1-12. Emissions of HAPs were determined for the plant generators using AP-42 Section 3.3 Table 3.3-2; Section 1.3 Table 1.3-10. Emissions of HAPs were determined for the asphalt heater using AP-42 Section 1.4.

The following tables summarize the HAPs emission rates from the drum mixer, main plant generator, and asphalt heater. Total combined HAPs emissions from MSCI HMA Plant is 4.27 pounds per hour and 5.25 tons per year.

Table 6-14: HAPs Emission Rates from the Drum Dryer/Mixer (7)

EPA HAPS Emissions Drum Mixer Hot Mix Asphalt Plant with Fabric Filter

Average Hourly Production Rate:	120	tons per hour
Yearly Production Rate:	200000	tons per year

Type of Fuel:	Waste Fuel Oil
Emission Factors	AP-42 Section 11.1 Tables 11.1-10, 11.1-12

Non-PAH HAPS	CAS#		Emission Factor (lbs/ton)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetaldehyde	75-07-0		1.3E-03	0.156000	0.130000
Acrolein	107-02-8		2.6E-05	0.003120	0.002600
Benzene	71-43-2		3.9E-04	0.046800	0.039000
Ethylbenzene	100-41-4		2.4E-04	0.028800	0.024000
Formaldehyde	50-00-0		3.1E-03	0.372000	0.310000
Hexane	110-54-3		9.2E-04	0.110400	0.092000
Isooctane	540-84-1		4.0E-05	0.004800	0.004000
Methyl Ethyl Ketone	78-93-3		2.0E-05	0.002400	0.002000
Propionaldehyde	123-38-6		1.3E-04	0.015600	0.013000
Quinone	106-51-4		1.6E-04	0.019200	0.016000
Methyl chorlform	71-55-6		4.8E-05	0.005760	0.004800
Toluene	108-88-3		2.9E-03	0.348000	0.290000
Xylene	1330-20-7		2.0E-04	0.024000	0.020000
		Total Non-PAH HAPS	9.5E-03	1.136880	0.947400

PAH HAPS	CAS#		Emission Factor (lbs/ton)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
2-Methylnaphthalene	91-57-6		1.7E-04	0.020400	0.017000
Acenaphthene	83-32-9		1.4E-06	0.000168	0.000140
Acenaphthylene	208-96-8		2.2E-05	0.002640	0.002200
Anthracene	120-12-7		3.1E-06	0.000372	0.000310
Benzo(a)anthracene	56-55-3		2.1E-07	0.000025	0.000021
Benzo(a)pyrene	50-32-8		9.8E-09	0.000001	0.000001
Benzo(b)fluoranthene	205-99-2		1.0E-07	0.000012	0.000010
Benzo(b)pyrene	192-97-2		1.1E-07	0.000013	0.000011
Benzo(g,h,l)perylene	191-24-2		4.0E-08	0.000005	0.000004
Benzo(k)fluoranthene	207-08-9		4.1E-08	0.000005	0.000004
Chrysene	218-01-9		1.8E-07	0.000022	0.000018
Fluoranthene	206-44-0		6.1E-07	0.000073	0.000061
Fluorene	86-73-7		1.1E-05	0.001320	0.001100
Indeno(1,2,3-cd)pyrene	193-39-5		7.0E-09	0.000001	0.000001
Naphthalene	91-20-3		6.5E-04	0.078000	0.065000
Perylene	198-55-0		8.8E-09	0.000001	0.000001
Phenanthrene	85-01-8		2.3E-05	0.002760	0.002300
Pyrene	129-00-0		3.0E-06	0.000360	0.000300
		Total PAH HAPS	8.8E-04	0.106178	0.088482

HAPS Metals		Emission Factor (lbs/ton)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		5.6E-07	0.000067	0.000056
Beryllium		0.0E+00	0.000000	0.000000
Cadmium		4.1E-07	0.000049	0.000041
Chromium		5.5E-06	0.000660	0.000550
Cobalt		2.6E-08	0.000003	0.000003
Hexavalent Chromium		4.5E-07	0.000054	0.000045
Lead		1.5E-05	0.001800	0.001500
Manganese		7.7E-06	0.000924	0.000770
Mercury		2.6E-06	0.000312	0.000260
Nickel		6.3E-05	0.007560	0.006300
Phosphorus		2.8E-05	0.003360	0.002800
Selenium		3.5E-07	0.000042	0.000035
	Total Metals HAPS	1.2E-04	0.014832	0.012360
	Total HAPS		**1.25789**	**1.04824**

Table 6-15: HAPs Emission Rates from the Main Plant Generator (12)

Horsepower Rating:	676	horsepower	
Fuel Usage:	34.3	gallons/hr	
MMBtu/hr:	4.3904	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	4.3904E-06	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	4380	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)
Acetaldehyde	75-07-0	7.67E-04	0.003367	0.007375
Acrolein	107-02-8	9.25E-05	0.000406	0.000889
Benzene	71-43-2	9.33E-04	0.004096	0.008971
1,3-Butadiene	106-99-0	3.91E-05	0.000172	0.000376
Formaldehyde	50-00-0	1.18E-03	0.005181	0.011346
Propylene	115-07-1	2.58E-03	0.011327	0.024807
Toluene	108-88-3	4.09E-04	0.001796	0.003933
Xylene	1330-20-7	2.85E-04	0.001251	0.002740
	Total Non-PAH HAPS	6.29E-03	0.027596	0.060436

PAH HAPS	CAS#	Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9	1.42E-06	0.000006	0.000014
Acenaphthylene	208-96-8	5.06E-06	0.000022	0.000049
Anthracene	120-12-7	1.87E-06	0.000008	0.000018
Benzo(a)anthracene	56-55-3	1.68E-06	0.000007	0.000016
Benzo(a)pyrene	50-32-8	1.88E-07	0.000001	0.000002
Benzo(b)fluoranthene	205-99-2	9.91E-08	0.000000	0.000001
Benzo(a)pyrene	192-97-2	1.55E-07	0.000001	0.000001
Benzo(g,h,I)perylene	191-24-2	4.89E-07	0.000002	0.000005
Benzo(k)fluoranthene	207-08-9	1.55E-07	0.000001	0.000001
Dibenz(a,h)anthracene		5.83E-07	0.000003	0.000006
Chrysene	218-01-9	3.53E-07	0.000002	0.000003
Fluoranthene	206-44-0	7.61E-06	0.000033	0.000073
Fluorene	86-73-7	2.92E-05	0.000128	0.000281
Indeno(1,2,3-cd)pyrene	193-39-5	3.75E-07	0.000002	0.000004
Naphthalene	91-20-3	8.48E-05	0.000372	0.000815
Phenanthrene	85-01-8	2.94E-05	0.000129	0.000283
Pyrene	129-00-0	4.78E-06	0.000021	0.000046
	Total PAH HAPS	1.68E-04	0.000739	0.001617

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000018	0.000038
Beryllium		3	0.000013	0.000029
Cadmium		3	0.000013	0.000029
Chromium		3	0.000013	0.000029
Lead		9	0.000040	0.000087
Manganese		6	0.000026	0.000058
Mercury		3	0.000013	0.000029
Nickel		3	0.000013	0.000029
Selenium		15	0.000066	0.000144
	Total Metals HAPS	49	0.000215	0.000471
	Total HAPS		**0.02855**	**0.06252**

Table 6-16: HAPs Emission Rates from the Asphalt Heater (11)

Btu Rating	1.2	mmBtu/hr	(based on 128000 Btu/gallon)
Fuel Usage:	9.4	gallons/hr	
Btu x 10^-12/hr:	0.0000012	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	8760	hours per year	

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

Organic Compounds	CAS#	Emission Factor (lbs/10^3 gal)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9	2.11E-05	0.000000	0.000001
Acenaphthylene	208-96-8	2.53E-07	0.000000	0.000000
Anthracene	120-12-7	1.22E-06	0.000000	0.000000
Benzene	71-43-2	2.14E-04	0.000002	0.000009
Benzo(a)anthracene	56-55-3	4.01E-06	0.000000	0.000000
Benzo(b,k)fluoranthene	205-99-2	1.48E-06	0.000000	0.000000
Benzo(g,h,I)perylene	191-24-2	2.26E-06	0.000000	0.000000
Chrysene	218-01-9	2.38E-06	0.000000	0.000000
Dibenz(a,h)anthracene		1.67E-06	0.000000	0.000000
Ethylbenzene	100-41-4	6.36E-05	0.000001	0.000003
Fluoranthene	206-44-0	4.84E-06	0.000000	0.000000
Fluorene	86-73-7	4.47E-06	0.000000	0.000000
Formaldehyde	50-00-0	6.10E-02	0.000573	0.002511
Indeno(1,2,3-cd)pyrene	193-39-5	2.14E-06	0.000000	0.000000
Naphthalene	91-20-3	1.13E-03	0.000011	0.000047
Phenanthrene	85-01-8	1.05E-05	0.000000	0.000000
Pyrene	129-00-0	4.25E-06	0.000000	0.000000
Toluene	108-88-3	6.20E-03	0.000058	0.000255
Xylene	1330-20-7	1.09E-04	0.000001	0.000004
	Total Organic Compounds	6.88E-02	0.000647	0.002832

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000005	0.000021
Beryllium		3	0.000004	0.000016
Cadmium		3	0.000004	0.000016
Chromium		3	0.000004	0.000016
Lead		9	0.000011	0.000047
Manganese		6	0.000007	0.000032
Mercury		3	0.000004	0.000016
Nickel		3	0.000004	0.000016
Selenium		15	0.000018	0.000079
	Total Metals HAPS	49	0.000059	0.000258
	Total HAPS		**0.00135**	**0.00309**

Table 6-17 Summary of Requested Allowable HAPS, Asphalt Fumes, and H_2S Emission Rates for HMA Facility

Controlled Emission Totals						
Description	HAPS		Asphalt Fumes (State TAPS)		H_2S	
	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
HMA Plant	**1.29**	**1.11**	**1.50**	**1.25**	**0.0066**	**0.0055**

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	Asphalt Heater Combustion and HAPs Emission Factors
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-AP42S11-1	HMA Plant and HAPs Emission Factors
A-XXXX-7-AP42S11-19-2	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-WindspeedLasVegas	Las Vegas Airport Wind Speed Average
A-XXXX-7-Unit12Tier2	Unit 12: HMA Plant Main Engine
A-XXXX-7-ACTANK1	Unit 11: HMA Plant Asphalt Cement Storage Tank (#1)
A-XXXX-7-ACTANK2	Unit 11: HMA Plant Asphalt Cement Storage Tank (#2)
A-XXXX-7-HMAEI.xls	Short Line HMA 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.

11.1 Hot Mix Asphalt Plants

11.1.1 General[1-3,23, 392-394]

Hot mix asphalt (HMA) paving materials are a mixture of size-graded, high quality aggregate (which can include reclaimed asphalt pavement [RAP]), and liquid asphalt cement, which is heated and mixed in measured quantities to produce HMA. Aggregate and RAP (if used) constitute over 92 percent by weight of the total mixture. Aside from the amount and grade of asphalt cement used, mix characteristics are determined by the relative amounts and types of aggregate and RAP used. A certain percentage of fine aggregate (less than 74 micrometers [μm] in physical diameter) is required for the production of good quality HMA.

Hot mix asphalt paving materials can be manufactured by: (1) batch mix plants, (2) continuous mix (mix outside dryer drum) plants, (3) parallel flow drum mix plants, and (4) counterflow drum mix plants. This order of listing generally reflects the chronological order of development and use within the HMA industry.

In 1996, approximately 500 million tons of HMA were produced at the 3,600 (estimated) active asphalt plants in the United States. Of these 3,600 plants, approximately 2,300 are batch plants, 1,000 are parallel flow drum mix plants, and 300 are counterflow drum mix plants. The total 1996 HMA production from batch and drum mix plants is estimated at about 240 million tons and 260 million tons, respectively. About 85 percent of plants being manufactured today are of the counterflow drum mix design, while batch plants and parallel flow drum mix plants account for 10 percent and 5 percent respectively. Continuous mix plants represent a very small fraction of the plants in use ($\leq$0.5 percent) and, therefore, are not discussed further.

An HMA plant can be constructed as a permanent plant, a skid-mounted (easily relocated) plant, or a portable plant. All plants can have RAP processing capabilities. Virtually all plants being manufactured today have RAP processing capability. Most plants have the capability to use either gaseous fuels (natural gas) or fuel oil. However, based upon Department of Energy and limited State inventory information, between 70 and 90 percent of the HMA is produced using natural gas as the fuel to dry and heat the aggregate.

11.1.1.1 Batch Mix Plants –

Figure 11.1-1 shows the batch mix HMA production process. Raw aggregate normally is stockpiled near the production unit. The bulk aggregate moisture content typically stabilizes between 3 to 5 percent by weight.

Processing begins as the aggregate is hauled from the storage piles and is placed in the appropriate hoppers of the cold feed unit. The material is metered from the hoppers onto a conveyer belt and is transported into a rotary dryer (typically gas- or oil-fired). Dryers are equipped with flights designed to shower the aggregate inside the drum to promote drying efficiency.

As the hot aggregate leaves the dryer, it drops into a bucket elevator and is transferred to a set of vibrating screens, where it is classified into as many as four different grades (sizes) and is dropped into individual "hot" bins according to size. At newer facilities, RAP also may be transferred to a separate heated storage bin. To control aggregate size distribution in the final batch mix, the operator opens various hot bins over a weigh hopper until the desired mix and weight are obtained. Concurrent with the aggregate being weighed, liquid asphalt cement is pumped from a heated storage tank to an asphalt bucket, where it is weighed to achieve the desired aggregate-to-asphalt cement ratio in the final mix.

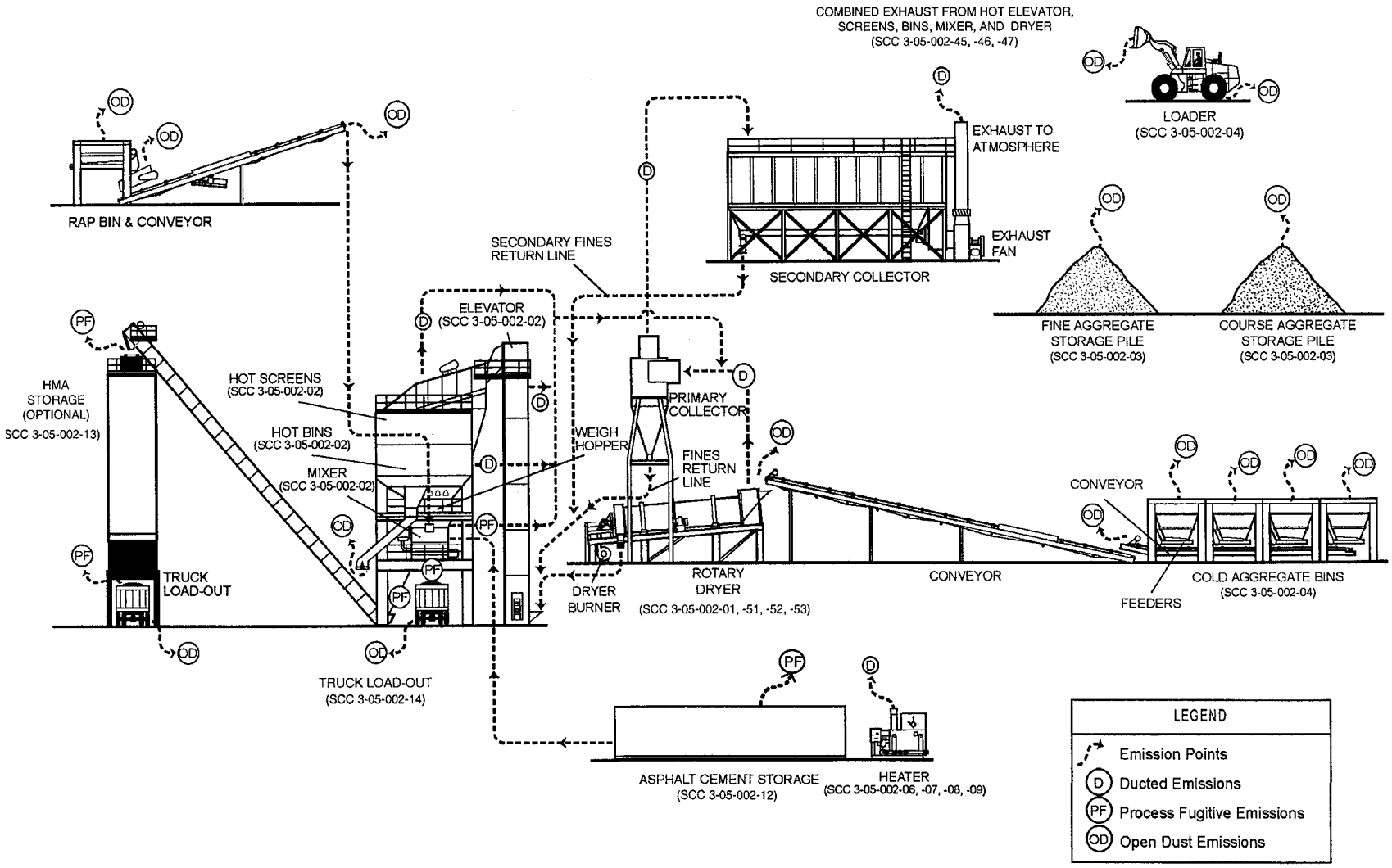

Figure 11.1-1. General process flow diagram for batch mix asphalt plants (source classification codes in parentheses).[3]

The aggregate from the weigh hopper is dropped into the mixer (pug mill) and dry-mixed for 6 to 10 seconds. The liquid asphalt is then dropped into the pug mill where it is mixed for an additional period of time. At older plants, RAP typically is conveyed directly to the pug mill from storage hoppers and combined with the hot aggregate. Total mixing time usually is less than 60 seconds. Then the hot mix is conveyed to a hot storage silo or is dropped directly into a truck and hauled to the job site.

11.1.1.2 Parallel Flow Drum Mix Plants –

Figure 11.1-2 shows the parallel flow drum mix process. This process is a continuous mixing type process, using proportioning cold feed controls for the process materials. The major difference between this process and the batch process is that the dryer is used not only to dry the material but also to mix the heated and dried aggregates with the liquid asphalt cement. Aggregate, which has been proportioned by size gradations, is introduced to the drum at the burner end. As the drum rotates, the aggregates, as well as the combustion products, move toward the other end of the drum in parallel. Liquid asphalt cement flow is controlled by a variable flow pump electronically linked to the new (virgin) aggregate and RAP weigh scales. The asphalt cement is introduced in the mixing zone midway down the drum in a lower temperature zone, along with any RAP and particulate matter (PM) from collectors.

The mixture is discharged at the end of the drum and is conveyed to either a surge bin or HMA storage silos, where it is loaded into transport trucks. The exhaust gases also exit the end of the drum and pass on to the collection system.

Parallel flow drum mixers have an advantage, in that mixing in the discharge end of the drum captures a substantial portion of the aggregate dust, therefore lowering the load on the downstream PM collection equipment. For this reason, most parallel flow drum mixers are followed only by primary collection equipment (usually a baghouse or venturi scrubber). However, because the mixing of aggregate and liquid asphalt cement occurs in the hot combustion product flow, organic emissions (gaseous and liquid aerosol) may be greater than in other asphalt mixing processes. Because data are not available to distinguish significant emissions differences between the two process designs, this effect on emissions cannot be verified.

11.1.1.3 Counterflow Drum Mix Plants –

Figure 11.1-3 shows a counterflow drum mix plant. In this type of plant, the material flow in the drum is opposite or counterflow to the direction of exhaust gases. In addition, the liquid asphalt cement mixing zone is located behind the burner flame zone so as to remove the materials from direct contact with hot exhaust gases.

Liquid asphalt cement flow is controlled by a variable flow pump which is electronically linked to the virgin aggregate and RAP weigh scales. It is injected into the mixing zone along with any RAP and particulate matter from primary and secondary collectors.

Because the liquid asphalt cement, virgin aggregate, and RAP are mixed in a zone removed from the exhaust gas stream, counterflow drum mix plants will likely have organic emissions (gaseous and liquid aerosol) that are lower than parallel flow drum mix plants. However, the available data are insufficient to discern any differences in emissions that result from differences in the two processes. A counterflow drum mix plant can normally process RAP at ratios up to 50 percent with little or no observed effect upon emissions.

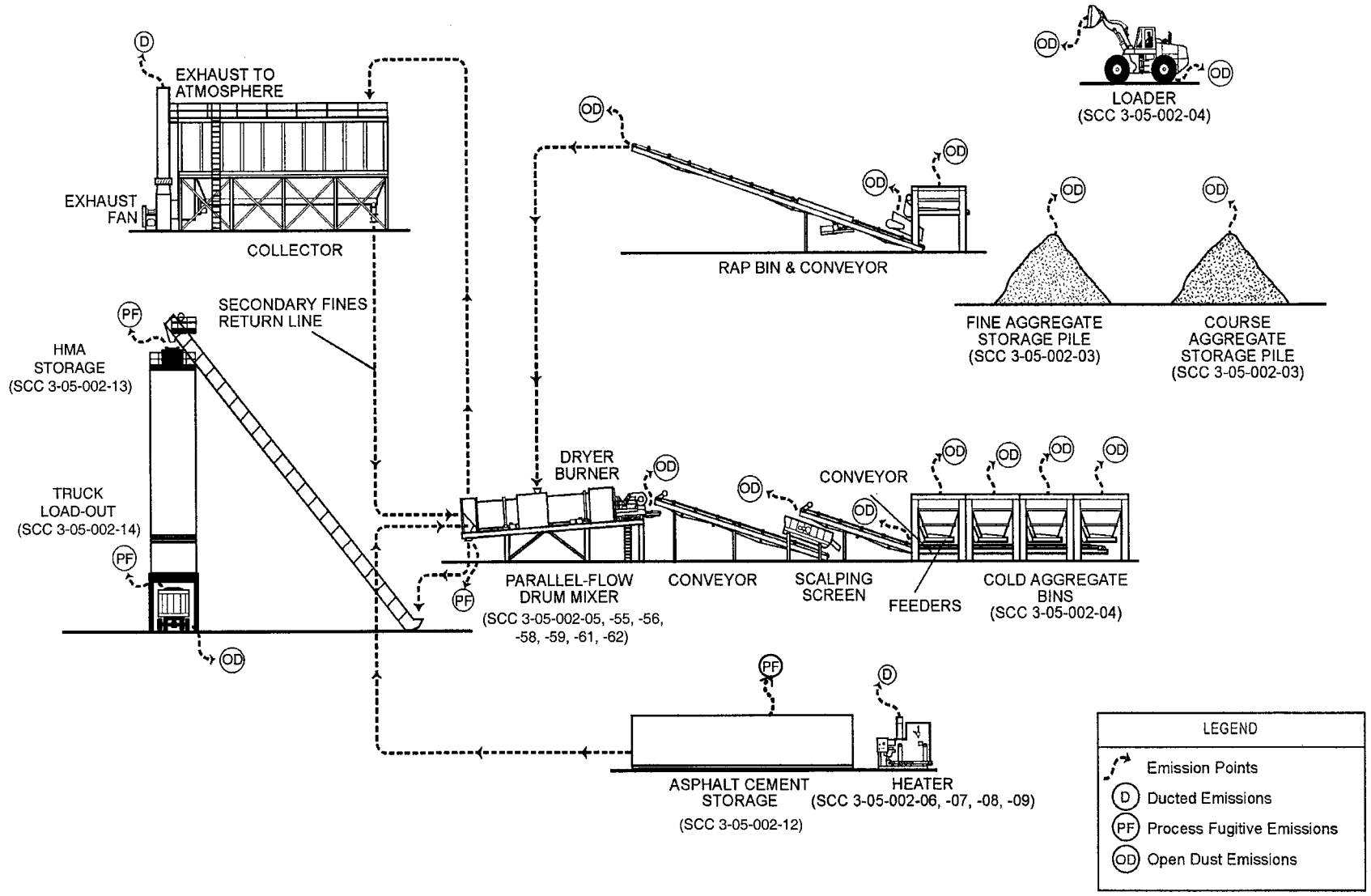

Figure 11.1-2. General process flow diagram for parallel-flow drum mix asphalt plants (source classification codes in parentheses).[3]

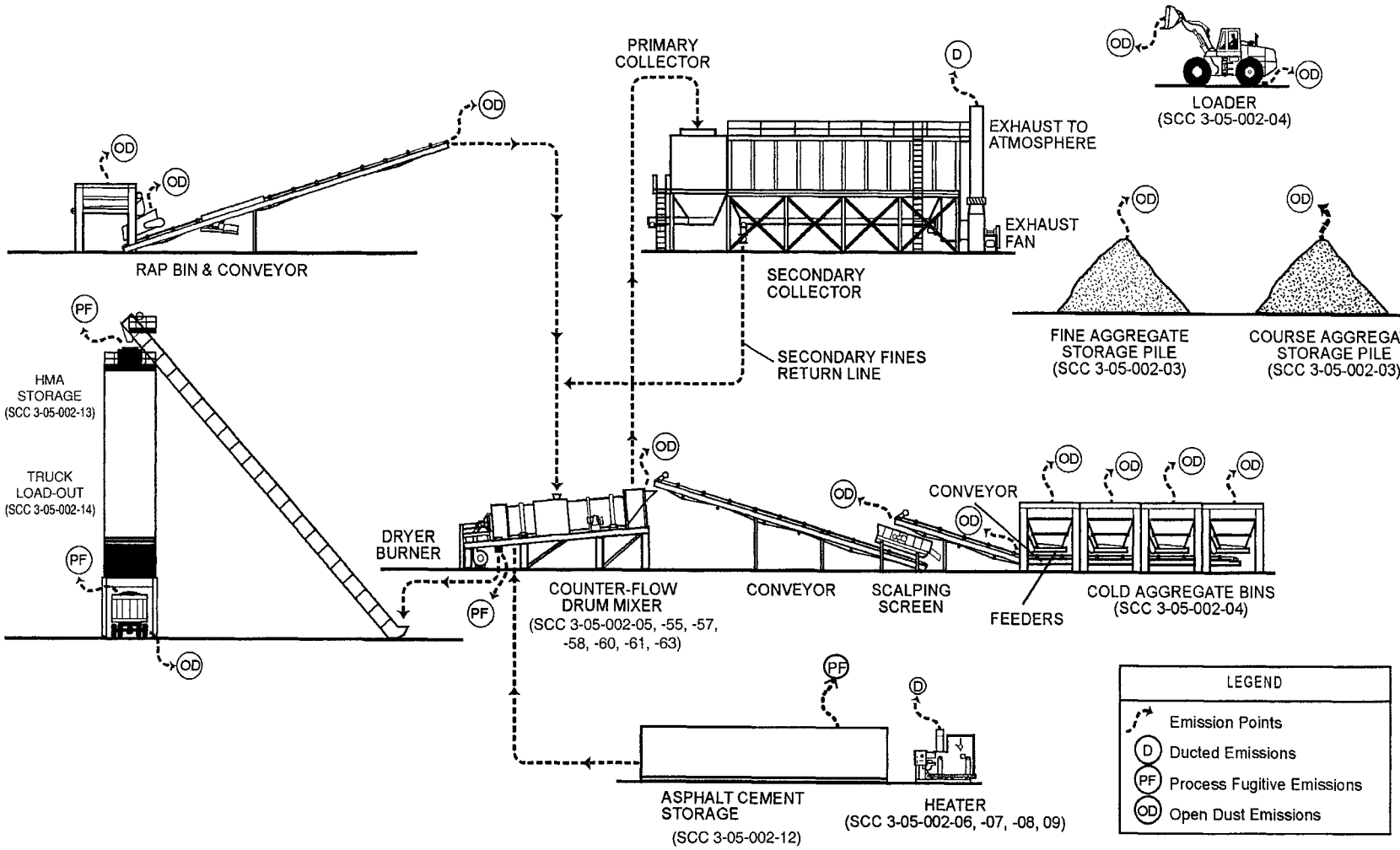

Figure 11.1-3. General process flow diagram for counter-flow drum mix asphalt plants (source classification codes in parentheses).[3]

11.1.1.4 Recycle Processes[393] –

In recent years, the use of RAP has been initiated in the HMA industry. Reclaimed asphalt pavement significantly reduces the amount of virgin rock and asphalt cement needed to produce HMA.

In the reclamation process, old asphalt pavement is removed from the road base. This material is then transported to the plant, and is crushed and screened to the appropriate size for further processing. The paving material is then heated and mixed with new aggregate (if applicable), and the proper amount of new asphalt cement is added to produce HMA that meets the required quality specifications.

11.1.2 Emissions And Controls[2-3,23]

Emissions from HMA plants may be divided into ducted production emissions, pre-production fugitive dust emissions, and other production-related fugitive emissions. Pre-production fugitive dust sources associated with HMA plants include vehicular traffic generating fugitive dust on paved and unpaved roads, aggregate material handling, and other aggregate processing operations. Fugitive dust may range from 0.1 μm to more than 300 μm in aerodynamic diameter. On average, 5 percent of cold aggregate feed is less than 74 μm (minus 200 mesh). Fugitive dust that may escape collection before primary control generally consists of PM with 50 to 70 percent of the total mass less than 74 μm. Uncontrolled PM emission factors for various types of fugitive sources in HMA plants are addressed in Sections 11.19.2, "Crushed Stone Processing", 13.2.1, "Paved Roads", 13.2.2, "Unpaved Roads", 13.2.3, "Heavy Construction Operations", and 13.2.4, "Aggregate Handling and Storage Piles." Production-related fugitive emissions and emissions from ducted production operations are discussed below. Emission points discussed below refer to Figure 11.1-1 for batch mix asphalt plants and to Figures 11.1-2 and 11.1-3 for drum mix plants.

11.1.2.1 Batch Mix Plants –

As with most facilities in the mineral products industry, batch mix HMA plants have two major categories of emissions: ducted sources (those vented to the atmosphere through some type of stack, vent, or pipe), and fugitive sources (those not confined to ducts and vents but emitted directly from the source to the ambient air). Ducted emissions are usually collected and transported by an industrial ventilation system having one or more fans or air movers, eventually to be emitted to the atmosphere through some type of stack. Fugitive emissions result from process and open sources and consist of a combination of gaseous pollutants and PM.

The most significant ducted source of emissions of most pollutants from batch mix HMA plants is the rotary drum dryer. The dryer emissions consist of water (as steam evaporated from the aggregate); PM; products of combustion (carbon dioxide [CO_2], nitrogen oxides [NO_x], and sulfur oxides [SO_x]); carbon monoxide (CO); and small amounts of organic compounds of various species (including volatile organic compounds [VOC], methane [CH_4], and hazardous air pollutants [HAP]). The CO and organic compound emissions result from incomplete combustion of the fuel. It is estimated that between 70 and 90 percent of the energy used at HMA plants is from the combustion of natural gas.

Other potential process sources include the hot-side conveying, classifying, and mixing equipment, which are vented either to the primary dust collector (along with the dryer gas) or to a separate dust collection system. The vents and enclosures that collect emissions from these sources are commonly called "fugitive air" or "scavenger" systems. The scavenger system may or may not have its own separate air mover device, depending on the particular facility. The emissions captured and transported by the scavenger system are mostly aggregate dust, but they may also contain gaseous organic compounds and a fine aerosol of condensed organic particles. This organic aerosol is created by the condensation of vapor into particles during cooling of organic vapors volatilized from the asphalt cement in the mixer (pug mill). The amount of organic aerosol produced depends to a large extent on the temperature of the asphalt cement and aggregate entering the pug mill. Organic vapor and its associated

aerosol also are emitted directly to the atmosphere as process fugitives during truck load-out, from the bed of the truck itself during transport to the job site, and from the asphalt storage tank. Both the low molecular weight organic compounds and the higher weight organic aerosol contain small amounts of HAP. The ducted emissions from the heated asphalt storage tanks include gaseous and aerosol organic compounds and combustion products from the tank heater.

The choice of applicable emission controls for PM emissions from the dryer and vent line includes dry mechanical collectors, scrubbers, and fabric filters. Attempts to apply electrostatic precipitators have met with little success. Practically all plants use primary dust collection equipment such as large diameter cyclones, skimmers, or settling chambers. These chambers often are used as classifiers to return collected material to the hot elevator and to combine it with the drier aggregate. To capture remaining PM, the primary collector effluent is ducted to a secondary collection device. Most plants use either a fabric filter or a venturi scrubber for secondary emissions control. As with any combustion process, the design, operation, and maintenance of the burner provides opportunities to minimize emissions of NO_x, CO, and organic compounds.

11.1.2.2 Parallel Flow Drum Mix Plants –

The most significant ducted source of emissions from parallel-flow drum mix plants is the rotary drum dryer. Emissions from the drum consist of water (as steam evaporated from the aggregate); PM; products of combustion; CO; and small amounts of organic compounds of various species (including VOC, CH_4, and HAP). The organic compound and CO emissions result from incomplete combustion of the fuel and from heating and mixing of the liquid asphalt cement inside the drum. Although it has been suggested that the processing of RAP materials at these type plants may increase organic compound emissions because of an increase in mixing zone temperature during processing, the data supporting this hypothesis are very weak. Specifically, although the data show a relationship only between RAP content and condensible organic particulate emissions, 89 percent of the variations in the data were the result of other unknown process variables.

Once the organic compounds cool after discharge from the process stack, some condense to form a fine organic aerosol or "blue smoke" plume. A number of process modifications or restrictions have been introduced to reduce blue smoke, including installation of flame shields, rearrangement of flights inside the drum, adjustments of the asphalt injection point, and other design changes.

11.1.2.3 Counterflow Drum Mix Plants –

The most significant ducted source of emissions from counterflow drum mix plants is the rotary drum dryer. Emissions from the drum consist of water (as steam evaporated from the aggregate); PM; products of combustion; CO; and small amounts of organic compounds of various species (including VOC, CH_4, and HAP). The CO and organic compound emissions result primarily from incomplete combustion of the fuel, and can also be released from the heated asphalt. Liquid asphalt cement, aggregate, and sometimes RAP, are mixed in a zone not in contact with the hot exhaust gas stream. As a result, kiln stack emissions of organic compounds from counterflow drum mix plants may be lower than parallel flow drum mix plants. However, variations in the emissions due to other unknown process variables are more significant. As a result, the emission factors for parallel flow and counterflow drum mix plants are the same.

11.1.2.4 Parallel and Counterflow Drum Mix Plants –

Process fugitive emissions associated with batch plant hot screens, elevators, and the mixer (pug mill) are not present in the drum mix processes. However, there are fugitive PM and VOC emissions from transport and handling of the HMA from the drum mixer to the storage silo and also from the load-out operations to the delivery trucks. Since the drum process is continuous, these plants have surge

bins or storage silos. The fugitive dust sources associated with drum mix plants are similar to those of batch mix plants with regard to truck traffic and to aggregate material feed and handling operations.

Table 11.1-1 presents emission factors for filterable PM and PM-10, condensable PM, and total PM for batch mix HMA plants. Particle size data for batch mix HMA plants, based on the control technology used, are shown in Table 11.1-2. Table 11.1-3 presents filterable PM and PM-10, condensable PM, and total PM emission factors for drum mix HMA plants. Particle size data for drum mix HMA plants, based on the control technology used, are shown in Table 11.1-4. Tables 11.1-5 and -6 present emission factors for CO, CO_2, NO_x, sulfur dioxide (SO_2), total organic compounds (TOC), formaldehyde, CH_4, and VOC from batch mix plants. Tables 11.1-7 and -8 present emission factors for CO, CO_2, NO_x, SO_2, TOC, CH_4, VOC, and hydrochloric acid (HCl) from drum mix plants. The emission factors for CO, NO_x, and organic compounds represent normal plant operations without scrutiny of the burner design, operation, and maintenance. Information provided in Reference 390 indicates that attention to burner design, periodic evaluation of burner operation, and appropriate maintenance can reduce these emissions. Table 11.1-9 presents organic pollutant emission factors for batch mix plants. Table 11.1-10 presents organic pollutant emission factors for drum mix plants. Tables 11.1-11 and -12 present metals emission factors for batch and drum mix plants, respectively. Table 11.1-13 presents organic pollutant emission factors for hot (asphalt) oil systems.

11.1.2.5 Fugitive Emissions from Production Operations –

Emission factors for HMA load-out and silo filling operations can be estimated using the data in Tables 11.1-14, -15, and -16. Table 11.1-14 presents predictive emission factor equations for HMA load-out and silo filling operations. Separate equations are presented for total PM, extractable organic PM (as measured by EPA Method 315), TOC, and CO. For example, to estimate total PM emissions from drum mix or batch mix plant load-out operations using an asphalt loss-on-heating of 0.41 percent and temperature of 290°F, the following calculation is made:

$$
\begin{aligned}
EF &= 0.000181 + 0.00141(-V)e^{((0.0251)(290 + 460) - 20.43)} \\
&= 0.000181 + 0.00141(-(-0.41))e^{((0.0251)(290 + 460) - 20.43)} \\
&= 0.000181 + 0.00141(0.41)e^{(-1.605)} \\
&= 0.000181 + 0.00141(0.41)(0.2009) \\
&= 0.000181 + 0.000116 \\
&= 0.00030 \text{ lb total PM/ton of asphalt loaded}
\end{aligned}
$$

Tables 11.1-15 and -16 present speciation profiles for organic particulate-based and volatile particulate-based compounds, respectively. The speciation profile shown in Table 11.1-15 can be applied to the extractable organic PM emission factors estimated by the equations in Table 11.1-14 to estimate emission factors for specific organic PM compounds. The speciation profile presented in Table 11.1-16 can be applied to the TOC emission factors estimated by the equations in Table 11.1-14 to estimate emission factors for specific volatile organic compounds. The derivations of the predictive emission factor equations and the speciation profiles can be found in Reference 1.

For example, to estimate TOC emissions from drum mix plant load-out operations using an asphalt loss-on-heating of 0.41 percent and temperature of 290°F, the following calculation is made:

$$
\begin{aligned}
EF &= 0.0172(-V)e^{((0.0251)(290 + 460) - 20.43)} \\
&= 0.0172(-(-0.41))e^{((0.0251)(290 + 460) - 20.43)} \\
&= 0.0172(0.41)e^{(-1.605)} \\
&= 0.0172(0.41)(0.2009) \\
&= 0.0014 \text{ lb TOC/ton of asphalt loaded}
\end{aligned}
$$

To estimate the benzene emissions from the same operation, use the TOC emission factor calculated above and apply the benzene fraction for load-out emissions from Table 11.1-16:

EF = 0.0014 (0.00052)
= 7.3×10^{-7} lb benzene/ton of asphalt loaded

Emissions from asphalt storage tanks can be estimated using the procedures described in AP-42 Section 7.1, Organic Liquid Storage Tanks, and the TANKS software. Site-specific data should be used for storage tank specifications and operating parameters, such as temperature. If site-specific data for Antoine's constants for an average asphalt binder used by the facility are unavailable, the following values for an average liquid asphalt binder can be used:

A = 75,350.06
B = 9.00346

These values should be inserted into the Antoine's equation in the following form:

$$\log_{10} P = \frac{-0.05223A}{T} + B$$

where:

P = vapor pressure, mm Hg
T = absolute temperature, Kelvin

The assumed average liquid molecular weight associated with these Antoine's constants is 1,000 atomic mass units and the average vapor molecular weight is 105. Emission factors estimated using these default values should be assigned a rating of E. Carbon monoxide emissions can be estimated by multiplying the THC emissions calculated by the TANKS program by 0.097 (the ratio of silo filling CO emissions to silo filling TOC emissions).

Vapors from the HMA loaded into transport trucks continue following load-out operations. The TOC emissions for the 8-minute period immediately following load-out (yard emissions) can be estimated using an emission factor of 0.00055 kg/Mg (0.0011 lb/ton) of asphalt loaded. This factor is assigned a rating of E. The derivation of this emission factor is described in Reference 1. Carbon monoxide emissions can be estimated by multiplying the TOC emissions by 0.32 (the ratio of truck load-out CO emissions to truck load-out THC emissions).

11.2.3 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. This and other documents can be found on the CHIEF Web Site at http://www.epa.gov/ttn/chief/, or by calling the Info CHIEF Help Desk at (919)541-1000.

December 2000

- All emission factors were revised and new factors were added. For selected pollutant emissions, separate factors were developed for distilate oil, No. 6 oil and waste oil fired dryers. Dioxin and Furan emission factors were developed for oil fired drum mix plants. Particulate, VOC and CO factors were developed for silo filling, truck load out and post truck load out operations at batch plants and drum mix plants. Organic species profiles were developed for silo filling, truck load out and post truck load out operations.

March 2004

- The emission factor for formaldehyde for oil fired hot oil heaters was revised. An emission factor for formaldehyde for gas fired hot oil heaters and emission factors for CO and CO_2 for gas and oil fired hot oil heaters were developed. (Table 11.1-13)

Table 11.1-1. PARTICULATE MATTER EMISSION FACTORS FOR BATCH MIX HOT MIX ASPHALT PLANTS[a]

Process	Filterable PM				Condensable PM[b]				Total PM			
	PM[c]	EMISSION FACTOR RATING	PM-10[d]	EMISSION FACTOR RATING	Inorganic	EMISSION FACTOR RATING	Organic	EMISSION FACTOR RATING	PM[e]	EMISSION FACTOR RATING	PM-10[f]	EMISSION FACTOR RATING
Dryer, hot screens, mixer[g] (SCC 3-05-002-45, -46, -47)												
Uncontrolled	32[h]	E	4.5	E	0.013[j]	E	0.0041[j]	E	32	E	4.5	E
Venturi or wet scrubber	0.12[k]	C	ND	NA	0.013[m]	B	0.0041[n]	B	0.14	C	ND	NA
Fabric filter	0.025[p]	A	0.0098	C	0.013[m]	A	0.0041[n]	A	0.042	B	0.027	C

[a] Factors are lb/ton of product. SCC = Source Classification Code. ND = no data. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Condensable PM is that PM collected using an EPA Method 202, Method 5 (analysis of "back-half" or impingers), or equivalent sampling train.

[c] Filterable PM is that PM collected on or before the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Particle size data from Reference 23 were used in conjunction with the filterable PM emission factors shown.

[e] Total PM is the sum of filterable PM, condensable inorganic PM, and condensable organic PM.

[f] Total PM-10 is the sum of filterable PM-10, condensable inorganic PM, and condensable organic PM.

[g] Batch mix dryer fired with natural gas, propane, fuel oil, waste oil, and coal. The data indicate that fuel type does not significantly effect PM emissions.

[h] Reference 5.

[j] Although no data are available for uncontrolled condensable PM, values are assumed to be equal to the controlled value measured.

[k] Reference 1, Table 4-19. Average of data from 16 facilities. Range: 0.047 to 0.40 lb/ton. Median: 0.049 lb/ton. Standard deviation: 0.11 lb/ton.

[m] Reference 1, Table 4-19. Average of data from 35 facilities. Range: 0.00073 to 0.12 lb/ton. Median: 0.0042 lb/ton. Standard deviation: 0.024 lb/ton.

[n] Reference 1, Table 4-19. Average of data from 24 facilities. Range: 0.000012 to 0.018 lb/ton. Median: 0.0026 lb/ton. Standard deviation: 0.0042 lb/ton.

[p] Reference 1, Table 4-19. Average of data from 89 facilities. Range: 0.0023 to 0.18 lb/ton. Median: 0.012 lb/ton. Standard deviation: 0.033 lb/ton.

Table 11.1-2. SUMMARY OF PARTICLE SIZE DISTRIBUTION FOR BATCH MIX DRYERS, HOT SCREENS, AND MIXERS[a]

EMISSION FACTOR RATING: E

Particle Size, μm[b]	Cumulative Mass Less Than or Equal to Stated Size (%)[c]		Emission Factors, lb/ton	
	Uncontrolled[d]	Fabric Filter	Uncontrolled[d]	Fabric Filter
1.0	ND	30[e]	ND	0.0075[e]
2.5	0.83	33[e]	0.27	0.0083[e]
5.0	3.5	36[e]	1.1	0.0090[e]
10.0	14	39[f]	4.5	0.0098[f]
15.0	23	47[e]	7.4	0.012[e]

[a] Emission factor units are lb/ton of HMA provided. Rounded to two significant figures. SCC 3-05-002-45, -46, -47. ND = no data available. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Aerodynamic diameter.

[c] Applies only to the mass of filterable PM.

[d] References 23, Table 3-36. The emission factors are calculated using the particle size data from this reference in conjunction with the filterable PM emission factor shown in Table 11.1-1.

[e] References 23, Page J-61. The emission factors are calculated using the particle size data from this reference in conjunction with the filterable PM emission factor shown in Table 11.1-1.

[f] References 23-24. The emission factors are calculated using the particle size data from these references in conjunction with the filterable PM emission factor shown in Table 11.1-1.

Table 11.1-3. PARTICULATE MATTER EMISSION FACTORS FOR DRUM MIX HOT MIX ASPHALT PLANTS[a]

Process	Filterable PM				Condensable PM[b]				Total PM			
	PM[c]	EMISSION FACTOR RATING	PM-10[d]	EMISSION FACTOR RATING	Inorganic	EMISSION FACTOR RATING	Organic	EMISSION FACTOR RATING	PM[e]	EMISSION FACTOR RATING	PM-10[f]	EMISSION FACTOR RATING
Dryer[g] (SCC 3-05-002-05,-55 to -63)												
Uncontrolled	28[h]	D	6.4	D	0.0074[j]	E	0.058[k]	E	28	D	6.5	D
Venturi or wet scrubber	0.026[m]	A	ND	NA	0.0074[n]	A	0.012[p]	A	0.045	A	ND	NA
Fabric filter	0.014[q]	A	0.0039	C	0.0074[n]	A	0.012[p]	A	0.033	A	0.023	C

[a] Factors are lb/ton of product. SCC = Source Classification Code. ND = no data. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Condensable PM is that PM collected using an EPA Method 202, Method 5 (analysis of "back-half" or impingers), or equivalent sampling train.

[c] Filterable PM is that PM collected on or before the filter of an EPA Method 5 (or equivalent) sampling train.

[d] Particle size data from Reference 23 were used in conjunction with the filterable PM emission factors shown.

[e] Total PM is the sum of filterable PM, condensable inorganic PM, and condensable organic PM.

[f] Total PM-10 is the sum of filterable PM-10, condensable inorganic PM, and condensable organic PM.

[g] Drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. The data indicate that fuel type does not significantly effect PM emissions.

[h] References 31, 36-38, 340.

[j] Because no data are available for uncontrolled condensable inorganic PM, the emission factor is assumed to be equal to the maximum controlled condensable inorganic PM emission factor.

[k] References 36-37.

[m] Reference 1, Table 4-14. Average of data from 36 facilities. Range: 0.0036 to 0.097 lb/ton. Median: 0.020 lb/ton. Standard deviation: 0.022 lb/ton.

[n] Reference 1, Table 4-14. Average of data from 30 facilities. Range: 0.0012 to 0.027 lb/ton. Median: 0.0051 lb/ton. Standard deviation: 0.0063 lb/ton.

[p] Reference 1, Table 4-14. Average of data from 41 facilities. Range: 0.00035 to 0.074 lb/ton. Median: 0.0046 lb/ton. Standard deviation: 0.016 lb/ton.

[q] Reference 1, Table 4-14. Average of data from 155 facilities. Range: 0.00089 to 0.14 lb/ton. Median: 0.010 lb/ton. Standard deviation: 0.017 lb/ton.

Table 11.1-4. SUMMARY OF PARTICLE SIZE DISTRIBUTION FOR DRUM MIX DRYERS[a]

EMISSION FACTOR RATING: E

Particle Size, μm[b]	Cumulative Mass Less Than or Equal to Stated Size (%)[c]		Emission Factors, lb/ton	
	Uncontrolled[d]	Fabric Filter	Uncontrolled[d]	Fabric Filter
1.0	ND	15[e]	ND	0.0021[e]
2.5	5.5	21[f]	1.5	0.0029[f]
10.0	23	30[g]	6.4	0.0042[g]
15.0	27	35[d]	7.6	0.0049[d]

[a] Emission factor units are lb/ton of HMA produced. Rounded to two significant figures. SCC 3-05-002-05, and 3-05-002-55 to -63. ND = no data available. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Aerodynamic diameter.

[c] Applies only to the mass of filterable PM.

[d] Reference 23, Table 3-35. The emission factors are calculated using the particle size data from this reference in conjunction with the filterable PM emission factor shown in Table 11.1-3.

[e] References 214, 229. The emission factors are calculated using the particle size data from these references in conjunction with the filterable PM emission factor shown in Table 11.1-3.

[f] References 23, 214, 229. The emission factors are calculated using the particle size data from these references in conjunction with the filterable PM emission factor shown in Table 11.1-3.

[g] Reference 23, 25, 229. The emission factors are calculated using the particle size data from these references in conjunction with the filterable PM emission factor shown in Table 11.1-3. EMISSION FACTOR RATING: D.

Table 11.1-5. EMISSION FACTORS FOR CO, CO_2, NO_x, AND SO_2 FROM BATCH MIX HOT MIX ASPHALT PLANTS[a]

Process	CO[b]	EMISSION FACTOR RATING	CO_2[c]	EMISSION FACTOR RATING	NO_x	EMISSION FACTOR RATING	SO_2[c]	EMISSION FACTOR RATING
Natural gas-fired dryer, hot screens, and mixer (SCC 3-05-002-45)	0.40	C	37[d]	A	0.025[e]	D	0.0046[f]	E
No. 2 fuel oil-fired dryer, hot screens, and mixer (SCC 3-05-002-46)	0.40	C	37[d]	A	0.12[g]	E	0.088[h]	E
Waste oil-fired dryer, hot screens, and mixer (SCC 3-05-002-47)	0.40	C	37[d]	A	0.12[g]	E	0.088[h]	E
Coal-fired dryer, hot screens, and mixer[j] (SCC 3-05-002-98)	ND	NA	37[d]	A	ND	NA	0.043[k]	E

[a] Emission factor units are lb per ton of HMA produced. SCC = Source Classification Code. ND = no data available. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] References 24, 34, 46-47, 49, 161, 204, 215-217, 282, 370, 378, 381. The CO emission factors represent normal plant operations without scrutiny of the burner design, operation, and maintenance. Information is available that indicates that attention to burner design, periodic evaluation of burner operation, and appropriate maintenance can reduce CO emissions. Data for dryers firing natural gas, No. 2 fuel oil, and No. 6 fuel oil were combined to develop a single emission factor because the magnitude of emissions was similar for dryers fired with these fuels.

[c] Emissions of CO_2 and SO_2 can also be estimated based on fuel usage and the fuel combustion emission factors (for the appropriate fuel) presented in AP-42 Chapter 1. The CO_2 emission factors are an average of all available data, regardless of the dryer fuel (emissions were similar from dryers firing any of the various fuels). Based on data for drum mix facilities, 50 percent of the fuel-bound sulfur, up to a maximum (as SO_2) of 0.1 lb/ton of product, is expected to be retained in the product, with the remainder emitted as SO_2.

[d] Reference 1, Table 4-20. Average of data from 115 facilities. Range: 6.9 to 160 lb/ton. Median: 32 lb/ton. Standard deviation: 22 lb/ton.

[e] References 24, 34, 46-47.

[f] References 46-47.

[g] References 49, 226.

[h] References 49, 226, 228, 385.

[j] Dryer fired with coal and supplemental natural gas or fuel oil.

[k] Reference 126.

Table 11.1-6. EMISSION FACTORS FOR TOC, METHANE, AND VOC FROM BATCH MIX HOT MIX ASPHALT PLANTS[a]

Process	TOC[b]	EMISSION FACTOR RATING	CH_4[c]	EMISSION FACTOR RATING	VOC[d]	EMISSION FACTOR RATING
Natural gas-fired dryer, hot screens, and mixer (SCC 3-05-002-45)	0.015[e]	D	0.0074	D	0.0082	D
No. 2 fuel oil-fired dryer, hot screens, and mixer (SCC 3-05-002-46)	0.015[e]	D	0.0074	D	0.0082	D
No. 6 fuel oil-fired dryer, hot screens, and mixer (SCC 3-05-002-47)	0.043[f]	E	0.0074	D	0.036	E

[a] Emission factor units are lb per ton of HMA produced. SCC = Source Classification Code. ND = no data available. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] TOC equals total hydrocarbons as propane, as measured with an EPA Method 25A or equivalent sampling train plus formaldehyde.

[c] References 24, 46-47, 49. Factor includes data from natural gas- and No. 6 fuel oil-fired dryers. Methane measured with an EPA Method 18 or equivalent sampling train.

[d] The VOC emission factors are equal to the TOC factors minus the methane emission factors; differences in values reported are due to rounding.

[e] References 24, 46-47, 155.

[f] Reference 49.

Table 11.1-7. EMISSION FACTORS FOR CO, CO_2, NO_x, AND SO_2 FROM DRUM MIX HOT MIX ASPHALT PLANTS[a]

Process	CO[b]	EMISSION FACTOR RATING	CO_2[c]	EMISSION FACTOR RATING	NO_x	EMISSION FACTOR RATING	SO_2[c]	EMISSION FACTOR RATING
Natural gas-fired dryer (SCC 3-05-002-55,-56,-57)	0.13	B	33[d]	A	0.026[e]	D	0.0034[f]	D
No. 2 fuel oil-fired dryer (SCC 3-05-002-58,-59,-60)	0.13	B	33[d]	A	0.055[g]	C	0.011[h]	E
Waste oil-fired dryer (SCC 3-05-002-61,-62,-63)	0.13	B	33[d]	A	0.055[g]	C	0.058[j]	B
Coal-fired dryer[k] (SCC 3-05-002-98)	ND	NA	33[d]	A	ND	NA	0.19[m]	E

[a] Emission factor units are lb per ton of HMA produced. SCC = Source Classification Code. ND = no data available. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] References 25, 44, 48, 50, 149, 154, 197, 214, 229, 254, 339-342, 344, 346, 347, 390. The CO emission factors represent normal plant operations without scrutiny of the burner design, operation, and maintenance. Information is available that indicates that attention to burner design, periodic evaluation of burner operation, and appropriate maintenance can reduce CO emissions. Data for dryers firing natural gas, No. 2 fuel oil, and No. 6 fuel oil were combined to develop a single emission factor because the magnitude of emissions was similar for dryers fired with these fuels.

[c] Emissions of CO_2 and SO_2 can also be estimated based on fuel usage and the fuel combustion emission factors (for the appropriate fuel) presented in AP-42 Chapter 1. The CO_2 emission factors are an average of all available data, regardless of the dryer fuel (emissions were similar from dryers firing any of the various fuels). Fifty percent of the fuel-bound sulfur, up to a maximum (as SO_2) of 0.1 lb/ton of product, is expected to be retained in the product, with the remainder emitted as SO_2.

[d] Reference 1, Table 4-15. Average of data from 180 facilities. Range: 2.6 to 96 lb/ton. Median: 31 lb/ton. Standard deviation: 13 lb/ton.

[e] References 44-45, 48, 209, 341, 342.

[f] References 44-45, 48.

[g] References 25, 50, 153, 214, 229, 344, 346, 347, 352-354.

[h] References 50, 119, 255, 340

[j] References 25, 299, 300, 339, 345, 351, 371-377, 379, 380, 386-388.

[k] Dryer fired with coal and supplemental natural gas or fuel oil.

[m] References 88, 108, 189-190.

Table 11.1-8. EMISSION FACTORS FOR TOC, METHANE, VOC, AND HCl FROM DRUM MIX HOT MIX ASPHALT PLANTS[a]

Process	TOC[b]	EMISSION FACTOR RATING	CH_4[c]	EMISSION FACTOR RATING	VOC[d]	EMISSION FACTOR RATING	HCl[e]	EMISSION FACTOR RATING
Natural gas-fired dryer (SCC 3-05-002-55, -56,-57)	0.044[f]	B	0.012	C	0.032	C	ND	NA
No. 2 fuel oil-fired dryer (SCC 3-05-002-58, -59,-60)	0.044[f]	B	0.012	C	0.032	C	ND	NA
Waste oil-fired dryer (SCC 3-05-002-61, -62,-63)	0.044[f]	E	0.012	C	0.032	E	0.00021	D

[a] Emission factor units are lb per ton of HMA produced. SCC = Source Classification Code. ND = no data available. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] TOC equals total hydrocarbons as propane as measured with an EPA Method 25A or equivalent sampling train plus formaldehyde.

[c] References 25, 44-45, 48, 50, 339-340, 355. Factor includes data from natural gas-, No. 2 fuel oil, and waste oil-fired dryers. Methane measured with an EPA Method 18 or equivalent sampling train.

[d] The VOC emission factors are equal to the TOC factors minus the sum of the methane emission factors and the emission factors for compounds with negligible photochemical reactivity shown in Table 11.1-10; differences in values reported are due to rounding.

[e] References 348, 374, 376, 379, 380.

[f] References 25, 44-45, 48, 50, 149, 153-154, 209-212, 214, 241, 242, 339-340, 355.

Table 11.1-9. EMISSION FACTORS FOR ORGANIC POLLUTANT EMISSIONS FROM BATCH MIX HOT MIX ASPHALT PLANTS[a]

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. Nos.
	CASRN	Name			
Natural gas- or No. 2 fuel oil-fired dryer, hot screens, and mixer with fabric filter (SCC 3-05-002-45,-46)	Non-PAH Hazardous Air Pollutants[b]				
	75-07-0	Acetaldehyde	0.00032	E	24,34
	71-43-2	Benzene	0.00028	D	24,34,46, 382
	100-41-4	Ethylbenzene	0.0022	D	24,46,47,49
	50-00-0	Formaldehyde	0.00074	D	24,34,46,47,49,226,382
	106-51-4	Quinone	0.00027	E	24
	108-88-3	Toluene	0.0010	D	24,34,46,47
	1330-20-7	Xylene	0.0027	D	24,46,47,49
		Total non-PAH HAPs	0.0075		
	PAH HAPs				
	91-57-6	2-Methylnaphthalene[c]	7.1×10^{-5}	D	24,47,49
	83-32-9	Acenaphthene[c]	9.0×10^{-7}	D	34,46,226
	208-96-8	Acenaphthylene[c]	5.8×10^{-7}	D	34,46,226
	120-12-7	Anthracene[c]	2.1×10^{-7}	D	34,46,226
	56-55-3	Benzo(a)anthracene[c]	4.6×10^{-9}	E	46,226
	50-32-8	Benzo(a)pyrene[c]	3.1×10^{-10}	E	226
	205-99-2	Benzo(b)fluoranthene[c]	9.4×10^{-9}	D	34,46,226
	191-24-2	Benzo(g,h,i)perylene[c]	5.0×10^{-10}	E	226
	207-08-9	Benzo(k)fluoranthene[c]	1.3×10^{-8}	E	34,226
	218-01-9	Chrysene[c]	3.8×10^{-9}	E	46,226
	53-70-3	Dibenz(a,h)anthracene[c]	9.5×10^{-11}	E	226
	206-44-0	Fluoranthene[c]	1.6×10^{-7}	D	34,46,47,226
	86-73-7	Fluorene[c]	1.6×10^{-6}	D	34,46,47,226
	193-39-5	Indeno(1,2,3-cd)pyrene[c]	3.0×10^{-10}	E	226
	91-20-3	Naphthalene	3.6×10^{-5}	D	34,46,47,49,226
	85-01-8	Phenanthrene[c]	2.6×10^{-6}	D	34,46,47,226
	129-00-0	Pyrene[c]	6.2×10^{-8}	D	34,46,226
		Total PAH HAPs	0.00011		
	Total HAPs		0.0076		
	Non-HAP organic compounds				
	100-52-7	Benzaldehyde	0.00013	E	24
	78-84-2	Butyraldehyde/ isobutyraldehyde	3.0×10^{-5}	E	24
	4170-30-3	Crotonaldehyde	2.9×10^{-5}	E	24
	66-25-1	Hexanal	2.4×10^{-5}	E	24
		Total non-HAPs	0.00019		

Table 11.1-9 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. Nos.
	CASRN	Name			
Waste oil-, drain oil-, or No. 6 fuel oil-fired dryer, hot screens, and mixer with fabric filter (SCC 3-05-002-47)	Non-PAH Hazardous Air Pollutants[b]				
	75-07-0	Acetaldehyde	0.00032	E	24,34
	71-43-2	Benzene	0.00028	D	24,34,46, 382
	100-41-4	Ethylbenzene	0.0022	D	24,46,47,49
	50-00-0	Formaldehyde	0.00074	D	24,34,46,47,49,226, 382
	106-51-4	Quinone	0.00027	E	24
	108-88-3	Toluene	0.0010	D	24,34,46,47
	1330-20-7	Xylene	0.0027	D	24,46,47,49
		Total non-PAH HAPs	0.0075		
	PAH HAPs[b]				
	91-57-6	2-Methylnaphthalene[c]	7.1×10^{-5}	D	24,47,49
	83-32-9	Acenaphthene[c]	9.0×10^{-7}	D	34,46,226
	208-96-8	Acenaphthylene[c]	5.8×10^{-7}	D	34,46,226
	120-12-7	Anthracene[c]	2.1×10^{-7}	D	34,46,226
	56-55-3	Benzo(a)anthracene[c]	4.6×10^{-9}	E	46,226
	50-32-8	Benzo(a)pyrene[c]	3.1×10^{-10}	E	226
	205-99-2	Benzo(b)fluoranthene[c]	9.4×10^{-9}	D	34,46,226
	191-24-2	Benzo(g,h,i)perylene[c]	5.0×10^{-10}	E	226
	207-08-9	Benzo(k)fluoranthene[c]	1.3×10^{-8}	E	34,226
	218-01-9	Chrysene[c]	3.8×10^{-9}	E	46,226
	53-70-3	Dibenz(a,h)anthracene[c]	9.5×10^{-11}	E	226
	206-44-0	Fluoranthene[c]	2.4×10^{-5}	E	49
	86-73-7	Fluorene[c]	1.6×10^{-6}	D	34,46,47,226
	193-39-5	Indeno(1,2,3-cd)pyrene[c]	3.0×10^{-10}	E	226
	91-20-3	Naphthalene	3.6×10^{-5}	D	34,46,47,49, 226
	85-01-8	Phenanthrene[c]	3.7×10^{-5}	E	49
	129-00-0	Pyrene[c]	5.5×10^{-5}	E	49
		Total PAH HAPs	0.00023		
	Total HAPs		0.0077		
	Non-HAP organic compounds				
	100-52-7	Benzaldehyde	0.00013	E	24
	78-84-2	Butyraldehyde/ isobutyraldehyde	3.0×10^{-5}	E	24
	4170-30-3	Crotonaldehyde	2.9×10^{-5}	E	24
	66-25-1	Hexanal	2.4×10^{-5}	E	24
		Total non-HAPs	0.00019		

[a] Emission factor units are lb/ton of hot mix asphalt produced. Factors represent uncontrolled emissions, unless noted. CASRN = Chemical Abstracts Service Registry Number. SCC = Source Classification Code. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Hazardous air pollutants (HAP) as defined in the 1990 Clean Air Act Amendments (CAAA).

[c] Compound is classified as polycyclic organic matter, as defined in the 1990 CAAA.

Table 11.1-10. EMISSION FACTORS FOR ORGANIC POLLUTANT EMISSIONS FROM DRUM MIX HOT MIX ASPHALT PLANTS[a]

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
Natural gas-fired dryer with fabric filter[b] (SCC 3-05-002-55, -56,-57)	Non-PAH hazardous air pollutants[c]				
	71-43-2	Benzene[d]	0.00039	A	25,44,45,50, 341, 342, 344-351, 373, 376, 377, 383, 384
	100-41-4	Ethylbenzene	0.00024	D	25,44,45
	50-00-0	Formaldehyde[e]	0.0031	A	25,35,44,45,50, 339-344, 347-349, 371-373, 384, 388
	110-54-3	Hexane	0.00092	E	339-340
	540-84-1	Isooctane (2,2,4-trimethylpentane)	4.0×10^{-5}	E	339-340
	71-55-6	Methyl chloroform[f]	4.8×10^{-5}	E	35
	108-88-3	Toluene	0.00015	D	35,44,45
	1330-20-7	Xylene	0.00020	D	25,44,45
		Total non-PAH HAPs	0.0051		
	PAH HAPs				
	91-57-6	2-Methylnaphthalene[g]	7.4×10^{-5}	D	44,45,48
	83-32-9	Acenaphthene[g]	1.4×10^{-6}	E	48
	208-96-8	Acenaphthylene[g]	8.6×10^{-6}	D	35,45,48
	120-12-7	Anthracene[g]	2.2×10^{-7}	E	35,48
	56-55-3	Benzo(a)anthracene[g]	2.1×10^{-7}	E	48
	50-32-8	Benzo(a)pyrene[g]	9.8×10^{-9}	E	48
	205-99-2	Benzo(b)fluoranthene[g]	1.0×10^{-7}	E	35,48
	192-97-2	Benzo(e)pyrene[g]	1.1×10^{-7}	E	48
	191-24-2	Benzo(g,h,i)perylene[g]	4.0×10^{-8}	E	48
	207-08-9	Benzo(k)fluoranthene[g]	4.1×10^{-8}	E	35,48
	218-01-9	Chrysene[g]	1.8×10^{-7}	E	35,48
	206-44-0	Fluoranthene[g]	6.1×10^{-7}	D	35,45,48
	86-73-7	Fluorene[g]	3.8×10^{-6}	D	35,45,48,163
	193-39-5	Indeno(1,2,3-cd)pyrene[g]	7.0×10^{-9}	E	48
	91-20-3	Naphthalene[g]	9.0×10^{-5}	D	35,44,45,48,163
	198-55-0	Perylene[g]	8.8×10^{-9}	E	48
	85-01-8	Phenanthrene[g]	7.6×10^{-6}	D	35,44,45,48,163
	129-00-0	Pyrene[g]	5.4×10^{-7}	D	45,48
		Total PAH HAPs	0.00019		

Table 11.1-10 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
Natural gas-fired dryer with fabric filter[b] (SCC 3-05-002-55, -56,-57) (cont.)	Total HAPs		0.0053		
	Non-HAP organic compounds				
	106-97-8	Butane	0.00067	E	339
	74-85-1	Ethylene	0.0070	E	339-340
	142-82-5	Heptane	0.0094	E	339-340
	763-29-1	2-Methyl-1-pentene	0.0040	E	339,340
	513-35-9	2-Methyl-2-butene	0.00058	E	339,340
	96-14-0	3-Methylpentane	0.00019	D	339,340
	109-67-1	1-Pentene	0.0022	E	339-340
	109-66-0	n-Pentane	0.00021	E	339-340
		Total non-HAP organics	0.024		
No. 2 fuel oil-fired dryer with fabric filter (SCC 3-05-002-58, -59,-60)	Non-PAH HAPs[c]				
	71-43-2	Benzene[d]	0.00039	A	25,44,45,50, 341, 342, 344-351, 373, 376, 377, 383, 384
	100-41-4	Ethylbenzene	0.00024	D	25,44,45
	50-00-0	Formaldehyde[e]	0.0031	A	25,35,44,45,50, 339-344, 347-349, 371-373, 384, 388
	110-54-3	Hexane	0.00092	E	339-340
	540-84-1	Isooctane (2,2,4-trimethylpentane)	4.0×10^{-5}	E	339-340
	71-55-6	Methyl chloroform[f]	4.8×10^{-5}	E	35
	108-88-3	Toluene	0.0029	E	25, 50, 339-340
	1330-20-7	Xylene	0.00020	D	25,44,45
		Total non-PAH HAPs	0.0078		
	PAH HAPs				
	91-57-6	2-Methylnaphthalene[g]	0.00017	E	50
	83-32-9	Acenaphthene[g]	1.4×10^{-6}	E	48
	208-96-8	Acenaphthylene[g]	2.2×10^{-5}	E	50
	120-12-7	Anthracene[g]	3.1×10^{-6}	E	50,162
	56-55-3	Benzo(a)anthracene[g]	2.1×10^{-7}	E	48
	50-32-8	Benzo(a)pyrene[g]	9.8×10^{-9}	E	48
	205-99-2	Benzo(b)fluoranthene[g]	1.0×10^{-7}	E	35,48
	192-97-2	Benzo(e)pyrene[g]	1.1×10^{-7}	E	48

Table 11.1-10 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
No. 2 fuel oil-fired dryer with fabric filter (SCC 3-05-002-58, -59,-60) (cont.)	191-24-2	Benzo(g,h,i)perylene[g]	4.0×10^{-8}	E	48
	207-08-9	Benzo(k)fluoranthene[g]	4.1×10^{-8}	E	35,48
	218-01-9	Chrysene[g]	1.8×10^{-7}	E	35,48
	206-44-0	Fluoranthene[g]	6.1×10^{-7}	D	35,45,48
	86-73-7	Fluorene[g]	1.1×10^{-5}	E	50,164
	193-39-5	Indeno(1,2,3-cd)pyrene[g]	7.0×10^{-9}	E	48
	91-20-3	Naphthalene[g]	0.00065	D	25,50,162,164
	198-55-0	Perylene[g]	8.8×10^{-9}	E	48
	85-01-8	Phenanthrene[g]	2.3×10^{-5}	D	50,162,164
	129-00-0	Pyrene[g]	3.0×10^{-6}	E	50
		Total PAH HAPs	0.00088		
		Total HAPs	0.0087		
	Non-HAP organic compounds				
	106-97-8	Butane	0.00067	E	339
	74-85-1	Ethylene	0.0070	E	339-340
	142-82-5	Heptane	0.0094	E	339-340
	763-29-1	2-Methyl-1-pentene	0.0040	E	339,340
	513-35-9	2-Methyl-2-butene	0.00058	E	339,340
	96-14-0	3-Methylpentane	0.00019	D	339,340
	109-67-1	1-Pentene	0.0022	E	339-340
	109-66-0	n-Pentane	0.00021	E	339-340
		Total non-HAP organics	0.024		

Table 11.1-10 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
Fuel oil- or waste oil-fired dryer with fabric filter (SCC 3-05-002-58, -59,-60,-61,-62, -63)	Dioxins				
	1746-01-6	2,3,7,8-TCDD[g]	$2.1x10^{-13}$	E	339
		Total TCDD[g]	$9.3x10^{-13}$	E	339
	40321-76-4	1,2,3,7,8-PeCDD[g]	$3.1x10^{-13}$	E	339
		Total PeCDD[g]	$2.2x10^{-11}$	E	339-340
	39227-28-6	1,2,3,4,7,8-HxCDD[g]	$4.2x10^{-13}$	E	339
	57653-85-7	1,2,3,6,7,8-HxCDD[g]	$1.3x10^{-12}$	E	339
	19408-24-3	1,2,3,7,8,9-HxCDD[g]	$9.8x10^{-13}$	E	339
		Total HxCDD[g]	$1.2x10^{-11}$	E	339-340
	35822-46-9	1,2,3,4,6,7,8-HpCDD[g]	$4.8x10^{-12}$	E	339
		Total HpCDD[g]	$1.9x10^{-11}$	E	339-340
	3268-87-9	Octa CDD[g]	$2.5x10^{-11}$	E	339
		Total PCDD[g]	$7.9x10^{-11}$	E	339-340
	Furans				
	51207-31-9	2,3,7,8-TCDF[g]	$9.7x10^{-13}$	E	339
		Total TCDF[g]	$3.7x10^{-12}$	E	339-340
		1,2,3,7,8-PeCDF[g]	$4.3x10^{-12}$	E	339-340
		2,3,4,7,8-PeCDF[g]	$8.4x10^{-13}$	E	339
		Total PeCDF[g]	$8.4x10^{-11}$	E	339-340
		1,2,3,4,7,8-HxCDF[g]	$4.0x10^{-12}$	E	339
		1,2,3,6,7,8-HxCDF[g]	$1.2x10^{-12}$	E	339
		2,3,4,6,7,8-HxCDF[g]	$1.9x10^{-12}$	E	339
		1,2,3,7,8,9-HxCDF[g]	$8.4x10^{-12}$	E	340
		Total HxCDF[g]	$1.3x10^{-11}$	E	339-340
		1,2,3,4,6,7,8-HpCDF[g]	$6.5x10^{-12}$	E	339
		1,2,3,4,7,8,9-HpCDF[g]	$2.7x10^{-12}$	E	339
		Total HpCDF[g]	$1.0x10^{-11}$	E	339-340
	39001-02-0	Octa CDF[g]	$4.8x10^{-12}$	E	339
		Total PCDF[g]	$4.0x10^{-11}$	E	339-340
		Total PCDD/PCDF[g]	$1.2x10^{-10}$	E	339-340

Table 11.1-10 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
Fuel oil- or waste oil-fired dryer (uncontrolled) (SCC 3-05-002-58, -59,-60,-61,-62, -63)	Hazardous air pollutants[c]				
	Dioxins				
		Total HxCDD[g]	$5.4x10^{-12}$	E	340
	35822-46-9	1,2,3,4,6,7,8-HpCDD[g]	$3.4x10^{-11}$	E	340
		Total HpCDD[g]	$7.1x10^{-11}$	E	340
	3268-87-9	Octa CDD[g]	$2.7x10^{-9}$	E	340
		Total PCDD[g]	$2.8x10^{-9}$	E	340
	Furans				
		Total TCDF[g]	$3.3x10^{-11}$	E	340
		Total PeCDF[g]	$7.4x10^{-11}$	E	340
		1,2,3,4,7,8-HxCDF[g]	$5.4x10^{-12}$	E	340
		2,3,4,6,7,8-HxCDF[g]	$1.6x10^{-12}$	E	340
		Total HxCDF[g]	$8.1x10^{-12}$	E	340
Fuel oil- or waste oil-fired dryer (uncontrolled) (SCC 3-05-002-58, -59,-60,-61,-62, -63) (cont.)		1,2,3,4,6,7,8-HpCDF[g]	$1.1x10^{-11}$	E	340
		Total HpCDF[g]	$3.8x10^{-11}$	E	340
		Total PCDF[g]	$1.5x10^{-10}$	E	340
		Total PCDD/PCDF[g]	$3.0x10^{-9}$	E	340

Table 11.1-10 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
Waste oil-fired dryer with fabric filter (SCC 3-05-002-61, -62,-63)	Non-PAH HAPs[c]				
	75-07-0	Acetaldehyde	0.0013	E	25
	107-02-8	Acrolein	2.6×10^{-5}	E	25
	71-43-2	Benzene[d]	0.00039	A	25,44,45,50,341,342, 344-351, 373, 376, 377, 383, 384
	100-41-4	Ethylbenzene	0.00024	D	25,44,45
	50-00-0	Formaldehyde[e]	0.0031	A	25,35,44,45,50,339-344,347-349,371-373, 384, 388
	110-54-3	Hexane	0.00092	E	339-340
	540-84-1	Isooctane (2,2,4-trimethylpentane)	4.0×10^{-5}	E	339-340
	78-93-3	Methyl Ethyl Ketone	2.0×10^{-5}	E	25
	123-38-6	Propionaldehyde	0.00013	E	25
	106-51-4	Quinone	0.00016	E	25
	71-55-6	Methyl chloroform[f]	4.8×10^{-5}	E	35
	108-88-3	Toluene	0.0029	E	25, 50, 339-340
	1330-20-7	Xylene	0.00020	D	25,44,45
		Total non-PAH HAPs	0.0095		
	PAH HAPs				
	91-57-6	2-Methylnaphthalene[g]	0.00017	E	50
	83-32-9	Acenaphthene[g]	1.4×10^{-6}	E	48
	208-96-8	Acenaphthylene[g]	2.2×10^{-5}	E	50
	120-12-7	Anthracene[g]	3.1×10^{-6}	E	50,162
	56-55-3	Benzo(a)anthracene[g]	2.1×10^{-7}	E	48
	50-32-8	Benzo(a)pyrene[g]	9.8×10^{-9}	E	48
	205-99-2	Benzo(b)fluoranthene[g]	1.0×10^{-7}	E	35,48
	192-97-2	Benzo(e)pyrene[g]	1.1×10^{-7}	E	48
	191-24-2	Benzo(g,h,i)perylene[g]	4.0×10^{-8}	E	48

Table 11.1-10 (cont.)

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. No.
	CASRN	Name			
Waste oil-fired dryer with fabric filter (SCC 3-05-002-61, -62,-63) (cont.)	207-08-9	Benzo(k)fluoranthene[g]	$4.1x10^{-8}$	E	35,48
	218-01-9	Chrysene[g]	$1.8x10^{-7}$	E	35,48
	206-44-0	Fluoranthene[g]	$6.1x10^{-7}$	D	35,45,48
	86-73-7	Fluorene[g]	$1.1x10^{-5}$	E	50,164
	193-39-5	Indeno(1,2,3-cd)pyrene[g]	$7.0x10^{-9}$	E	48
	91-20-3	Naphthalene[g]	0.00065	D	25,50,162,164
	198-55-0	Perylene[g]	$8.8x10^{-9}$	E	48
	85-01-8	Phenanthrene[g]	$2.3x10^{-5}$	D	50,162,164
	129-00-0	Pyrene[g]	$3.0x10^{-6}$	E	50
		Total PAH HAPs	0.00088		
		Total HAPs	0.010		
	Non-HAP organic compounds				
	67-64-1	Acetone[f]	0.00083	E	25
	100-52-7	Benzaldehyde	0.00011	E	25
	106-97-8	Butane	0.00067	E	339
	78-84-2	Butyraldehyde	0.00016	E	25
	4170-30-3	Crotonaldehyde	$8.6x10^{-5}$	E	25
	74-85-1	Ethylene	0.0070	E	339, 340
	142-82-5	Heptane	0.0094	E	339, 340
	66-25-1	Hexanal	0.00011	E	25
	590-86-3	Isovaleraldehyde	$3.2x10^{-5}$	E	25
	763-29-1	2-Methyl-1-pentene	0.0040	E	339, 340
	513-35-9	2-Methyl-2-butene	0.00058	E	339, 340
	96-14-0	3-Methylpentane	0.00019	D	339, 340
	109-67-1	1-Pentene	0.0022	E	339, 340
	109-66-0	n-Pentane	0.00021	E	339, 340
	110-62-3	Valeraldehyde	$6.7x10^{-5}$	E	25
		Total non-HAP organics	0.026		

[a] Emission factor units are lb/ton of hot mix asphalt produced. Table includes data from both parallel flow and counterflow drum mix dryers. Organic compound emissions from counterflow systems are expected to be less than from parallel flow systems, but the available data are insufficient to quantify

accurately the difference in these emissions. CASRN = Chemical Abstracts Service Registry Number. SCC = Source Classification Code. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Tests included dryers that were processing reclaimed asphalt pavement. Because of limited data, the effect of RAP processing on emissions could not be determined.

[c] Hazardous air pollutants (HAP) as defined in the 1990 Clean Air Act Amendments (CAAA).

[d] Based on data from 19 tests. Range: 0.000063 to 0.0012 lb/ton; median: 0.00030; Standard deviation: 0.00031.

[e] Based on data from 21 tests. Range: 0.0030 to 0.014 lb/ton; median: 0.0020; Standard deviation: 0.0036.

[f] Compound has negligible photochemical reactivity.

[g] Compound is classified as polycyclic organic matter, as defined in the 1990 CAAA. Total PCDD is the sum of the total tetra through octa dioxins; total PCDF is sum of the total tetra through octa furans; and total PCDD/PCDF is the sum of total PCDD and total PCDF.

Table 11.1-11. EMISSION FACTORS FOR METAL EMISSIONS FROM BATCH MIX HOT MIX ASPHALT PLANTS[a]

Process	Pollutant	Emission Factor, lb/ton	Emission Factor Rating	Reference Numbers
Dryer, hot screens, and mixer[b] (SCC 3-05-002-45,-46,-47)	Arsenic[c]	4.6×10^{-7}	D	34, 40, 226
	Barium	1.5×10^{-6}	E	24
	Beryllium[c]	1.5×10^{-7}	E	34, 226
	Cadmium[c]	6.1×10^{-7}	D	24, 34, 226
	Chromium[c]	5.7×10^{-7}	D	24, 34, 226
	Hexavalent chromium[c]	4.8×10^{-8}	E	34, 226
	Copper	2.8×10^{-6}	D	24, 34, 226
	Lead[c]	8.9×10^{-7}	D	24, 34, 226
	Manganese[c]	6.9×10^{-6}	D	24, 34, 226
	Mercury[c]	4.1×10^{-7}	E	34, 226
	Nickel[c]	3.0×10^{-6}	D	24, 34, 226
	Selenium[c]	4.9×10^{-7}	E	34, 226
	Zinc	6.8×10^{-6}	D	24, 34, 226

[a] Emission factor units are lb/ton of HMA produced. Emissions controlled by a fabric filter. SCC = Source Classification Code. To convert from lb/ton to kg/Mg, multiply by 0.5.

[b] Natural gas-, propane-, No. 2 fuel oil-, or waste oil-/drain oil-/No. 6 fuel oil-fired dryer. For waste oil-/drain oil-/No. 6 fuel oil-fired dryer, use a lead emission factor of 1.0×10^{-5} lb/ton (References 177 and 321, Emission factor rating: E) in lieu of the emission factor shown.

[c] Arsenic, beryllium, cadmium, chromium, hexavalent chromium, lead, manganese, mercury, nickel, and selenium are HAPs as defined in the 1990 CAAA.

Table 11.1-12. EMISSION FACTORS FOR METAL EMISSIONS FROM DRUM MIX HOT MIX ASPHALT PLANTS[a]

Process	Pollutant	Emission Factor, lb/ton	Emission Factor Rating	Reference Numbers
Fuel oil-fired dryer, uncontrolled (SCC 3-05-002-58, -59,-60)	Arsenic[b]	1.3×10^{-6}	E	340
	Barium	0.00025	E	340
	Beryllium[b]	0.0	E	340
	Cadmium[b]	4.2×10^{-6}	E	340
	Chromium[b]	2.4×10^{-5}	E	340
	Cobalt[b]	1.5×10^{-5}	E	340
	Copper	0.00017	E	340
	Lead[b]	0.00054	E	340
	Manganese[b]	0.00065	E	340
	Nickel[b]	0.0013	E	340
	Phosphorus[b]	0.0012	E	340
	Selenium[b]	2.4×10^{-6}	E	340
	Thallium	2.2×10^{-6}	E	340
	Zinc	0.00018	E	340
Natural gas- or propane-fired dryer, with fabric filter (SCC 3-05-002-55, -56,-57))	Antimony	1.8×10^{-7}	E	339
	Arsenic[b]	5.6×10^{-7}	D	25, 35, 339-340
	Barium	5.8×10^{-6}	E	25, 339-340
	Beryllium[b]	0.0	E	339-340
	Cadmium[b]	4.1×10^{-7}	D	25, 35, 162, 301, 339-340
	Chromium[b]	5.5×10^{-6}	C	25, 162-164, 301, 339-340
	Cobalt[b]	2.6×10^{-8}	E	339-340
	Copper	3.1×10^{-6}	D	25, 162-164, 339-340
	Hexavalent chromium[b]	4.5×10^{-7}	E	163
	Lead[b]	6.2×10^{-7}	E	35
	Manganese[b]	7.7×10^{-6}	D	25, 162-164, 339-340
	Mercury[b]	2.4×10^{-7}	E	35, 163
	Nickel[b]	6.3×10^{-5}	D	25, 163-164, 339-340
	Phosphorus[b]	2.8×10^{-5}	E	25, 339-340
	Silver	4.8×10^{-7}	E	25, 339-340
	Selenium[b]	3.5×10^{-7}	E	339-340
	Thallium	4.1×10^{-9}	E	339-340
	Zinc	6.1×10^{-5}	C	25, 35, 162-164, 339-340

Table 11.1-12 (cont.)

Process	Pollutant	Emission Factor, lb/ton	Emission Factor Rating	Reference Numbers
No. 2 fuel oil-fired dryer or waste oil/drain oil/No. 6 fuel oil-fired dryer, with fabric filter (SCC 3-05-002-58, -59,-60,-61,-62,-63)	Antimony	1.8×10^{-7}	E	339
	Arsenic[b]	5.6×10^{-7}	D	25, 35, 339-340
	Barium	5.8×10^{-6}	E	25, 339-340
	Beryllium[b]	0.0	E	339-340
	Cadmium[b]	4.1×10^{-7}	D	25, 35, 162, 301, 339-340
	Chromium[b]	5.5×10^{-6}	C	25, 162-164, 301, 339-340
	Cobalt[b]	2.6×10^{-8}	E	339-340
	Copper	3.1×10^{-6}	D	25, 162-164, 339-340
	Hexavalent chromium[b]	4.5×10^{-7}	E	163
	Lead[b]	1.5×10^{-5}	C	25, 162, 164, 178-179, 183, 301, 315, 339-340
	Manganese[b]	7.7×10^{-6}	D	25, 162-164, 339-340
	Mercury[b]	2.6×10^{-6}	D	162, 164, 339-340
	Nickel[b]	6.3×10^{-5}	D	25, 163-164, 339-340
	Phosphorus[b]	2.8×10^{-5}	E	25, 339-340
	Silver	4.8×10^{-7}	E	25, 339-340
	Selenium[b]	3.5×10^{-7}	E	339-340
	Thallium	4.1×10^{-9}	E	339-340
	Zinc	6.1×10^{-5}	C	25, 35, 162-164, 339-340

[a] Emission factor units are lb/ton of HMA produced. SCC = Source Classification Code. To convert from lb/ton to kg/Mg, multiply by 0.5. Emission factors apply to facilities processing virgin aggregate or a combination of virgin aggregate and RAP.

[b] Arsenic, beryllium, cadmium, chromium, hexavalent chromium, cobalt, lead, manganese, mercury, nickel, and selenium compounds are HAPs as defined in the 1990 CAAA. Elemental phosphorus also is a listed HAP, but the phosphorus measured by Method 29 is not elemental phosphorus.

Table 11.1-13. EMISSION FACTORS FOR HOT MIX ASPHALT HOT OIL SYSTEMS[a]

Process	Pollutant		Emission factor	Emission factor units	EMISSION FACTOR RATING	Reference
	CASRN	Name				
Hot oil system fired with natural gas (SCC 3-05-002-06)	630-08-0	Carbon monoxide	8.9×10^{-6}	lb/ft^3	C	395
	124-38-9	Carbon dioxide	0.20	lb/ft^3	C	395
	50-00-0	Formaldehyde	2.6×10^{-8}	lb/ft^3	C	395
Hot oil system fired with No. 2 fuel oil (SCC 3-05-002-08)	630-08-0	Carbon monoxide	0.0012	lb/gal	C	395
	124-38-9	Carbon dioxide	28	lb/gal	C	395
	50-00-0	Formaldehyde	3.5×10^{-6}	lb/gal	C	395
	83-32-9	Acenaphthene[b]	5.3×10^{-7}	lb/gal	E	35
	208-96-8	Acenaphthylene[b]	2.0×10^{-7}	lb/gal	E	35
	120-12-7	Anthracene[b]	1.8×10^{-7}	lb/gal	E	35
	205-99-2	Benzo(b)fluoranthene[b]	1.0×10^{-7}	lb/gal	E	35
	206-44-0	Fluoranthene[b]	4.4×10^{-8}	lb/gal	E	35
	86-73-7	Fluorene[b]	3.2×10^{-8}	lb/gal	E	35
	91-20-3	Naphthalene[b]	1.7×10^{-5}	lb/gal	E	35
	85-01-8	Phenanthrene[b]	4.9×10^{-6}	lb/gal	E	35
	129-00-0	Pyrene[b]	3.2×10^{-8}	lb/gal	E	35
	Dioxins					
	19408-74-3	1,2,3,7,8,9-HxCDD[b]	7.6×10^{-13}	lb/gal	E	35
	39227-28-6	1,2,3,4,7,8-HxCDD[b]	6.9×10^{-13}	lb/gal	E	35
		HxCDD[b]	6.2×10^{-12}	lb/gal	E	35
	35822-46-9	1,2,3,4,6,7,8-HpCDD[b]	1.5×10^{-11}	lb/gal	E	35
		HpCDD[b]	2.0×10^{-11}	lb/gal	E	35
	3268-87-9	OCDD[b]	1.6×10^{-10}	lb/gal	E	35
		Total PCDD	2.0×10^{-10}	lb/gal	E	35
	Furans					
		TCDF[b]	3.3×10^{-12}	lb/gal	E	35
		PeCDF[b]	4.8×10^{-13}	lb/gal	E	35
		HxCDF[b]	2.0×10^{-12}	lb/gal	E	35
		HpCDF[b]	9.7×10^{-12}	lb/gal	E	35
	67562-39-4	1,2,3,4,6,7,8-HpCDF[b]	3.5×10^{-12}	lb/gal	E	35
	39001-02-0	OCDF[b]	1.2×10^{-11}	lb/gal	E	35
		Total PCDF	3.1×10^{-11}	lb/gal	E	35
		Total PCDD/PCDF	2.3×10^{-10}	lb/gal	E	35

[a] Emission factor units are lb/gal of fuel consumed. To convert from pounds per standard cubic foot (lb/ft^3) to kilograms per standard cubic meter (kg/m^3), multiply by 16. To convert from lb/gal to kilograms per liter (kg/l), multiply by 0.12. CASRN = Chemical Abstracts Service Registry Number. SCC = Source Classification Code.

[b] Compound is classified as polycyclic organic matter, as defined in the 1990 Clean Air Act Amendments (CAAA). Total PCDD is the sum of the total tetra through octa dioxins; total PCDF is sum of the total tetra through octa furans; and total PCDD/PCDF is the sum of total PCDD and total PCDF.

Table 11.1-14. PREDICTIVE EMISSION FACTOR EQUATIONS FOR LOAD-OUT AND SILO FILLING OPERATIONS[a]

EMISSION FACTOR RATING: C

Source	Pollutant	Equation
Drum mix or batch mix plant load-out (SCC 3-05-002-14)	Total PM[b]	$EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$
	Organic PM[c]	$EF = 0.00141(-V)e^{((0.0251)(T + 460) - 20.43)}$
	TOC[d]	$EF = 0.0172(-V)e^{((0.0251)(T + 460) - 20.43)}$
	CO	$EF = 0.00558(-V)e^{((0.0251)(T + 460) - 20.43)}$
Silo filling (SCC 3-05-002-13)	Total PM[b]	$EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$
	Organic PM[c]	$EF = 0.00105(-V)e^{((0.0251)(T + 460) - 20.43)}$
	TOC[d]	$EF = 0.0504(-V)e^{((0.0251)(T + 460) - 20.43)}$
	CO	$EF = 0.00488(-V)e^{((0.0251)(T + 460) - 20.43)}$

[a] Emission factor units are lb/ton of HMA produced. SCC = Source Classification Code. To convert from lb/ton to kg/Mg, multiply by 0.5. EF = emission factor; V = asphalt volatility, as determined by ASTM Method D2872-88 "Effects of Heat and Air on a Moving Film of Asphalt (Rolling Thin Film Oven Test - RTFOT)," where a 0.5 percent loss-on-heating is expressed as "-0.5." Regional- or site-specific data for asphalt volatility should be used, whenever possible; otherwise, a default value of -0.5 should be used for V in these equations. T = HMA mix temperature in °F. Site-specific temperature data should be used, whenever possible; otherwise a default temperature of 325°F can be used. Reference 1, Tables 4-27 through 4-31, 4-34 through 4-36, and 4-38 through 4-41.

[b] Total PM, as measured by EPA Method 315 (EPA Method 5 plus the extractable organic particulate from the impingers). Total PM is assumed to be predominantly PM-2.5 since emissions consist of condensed vapors.

[c] Extractable organic PM, as measured by EPA Method 315 (methylene chloride extract of EPA Method 5 particulate plus methylene chloride extract of impinger particulate).

[d] TOC as propane, as measured with an EPA Method 25A sampling train or equivalent sampling train.

Table 11.1-15. SPECIATION PROFILES FOR LOAD-OUT, SILO FILLING, AND ASPHALT STORAGE EMISSIONS–ORGANIC PARTICULATE-BASED COMPOUNDS

EMISSION FACTOR RATING: C

Pollutant	CASRN[a]	Speciation Profile for Load-out and Yard Emissions[b] Compound/Organic PM[c]	Speciation Profile for Silo Filling and Asphalt Storage Tank Emissions Compound/Organic PM[c]
PAH HAPs			
Acenaphthene	83-32-9	0.26%	0.47%
Acenaphthylene	208-96-8	0.028%	0.014%
Anthracene	120-1207	0.070%	0.13%
Benzo(a)anthracene	56-55-3	0.019%	0.056%
Benzo(b)fluoranthene	205-99-2	0.0076%	ND[d]
Benzo(k)fluoranthene	207-08-9	0.0022%	ND[d]
Benzo(g,h,i)perylene	191-24-2	0.0019%	ND[d]
Benzo(a)pyrene	50-32-8	0.0023%	ND[d]
Benzo(e)pyrene	192-97-2	0.0078%	0.0095%
Chrysene	218-01-9	0.103%	0.21%
Dibenz(a,h)anthracene	53-70-3	0.00037%	ND[d]
Fluoranthene	206-44-0	0.050%	0.15%
Fluorene	86-73-7	0.77%	1.01%
Indeno(1,2,3-cd)pyrene	193-39-5	0.00047%	ND[d]
2-Methylnaphthalene	91-57-6	2.38%	5.27%
Naphthalene	91-20-3	1.25%	1.82%
Perylene	198-55-0	0.022%	0.030%
Phenanthrene	85-01-8	0.81%	1.80%
Pyrene	129-00-0	0.15%	0.44%
Total PAH HAPs		5.93%	11.40%
Other semi-volatile HAPs			
Phenol		1.18%	ND[d]

[a] Chemical Abstract Service Registry Number.
[b] Emissions from loaded trucks during the period between load-out and the time the truck departs the plant.
[c] Emission factor for compound is determined by multiplying the percentage presented for the compound by the emission factor for extractable organic particulate (organic PM) as determined from Table 11.1-14.
[d] ND = Measured data below detection limits.

Table 11.1-16. SPECIATION PROFILES FOR LOAD-OUT, SILO FILLING, AND ASPHALT STORAGE EMISSIONS–ORGANIC VOLATILE-BASED COMPOUNDS

EMISSION FACTOR RATING: C

Pollutant	CASRN	Speciation Profile for Load-Out and Yard Emissions Compound/TOC[a]	Speciation Profile for Silo Filling and Asphalt Storage Tank Emissions Compound/TOC (%)[a]
VOC[b]		94%[b]	100%
<u>Non-VOC/non-HAPs</u>			
Methane	74-82-8	6.5%	0.26%
Acetone	67-64-1	0.046%	0.055%
Ethylene	74-85-1	0.71%	1.1%
Total non-VOC/non-HAPS		7.3%	1.4%
<u>Volatile organic HAPS</u>			
Benzene	71-43-2	0.052%	0.032%
Bromomethane	74-83-9	0.0096%	0.0049%
2-Butanone	78-93-3	0.049%	0.039%
Carbon Disulfide	75-15-0	0.013%	0.016%
Chloroethane	75-00-3	0.00021%	0.0040%
Chloromethane	74-87-3	0.015%	0.023%
Cumene	92-82-8	0.11%	ND[c]
Ethylbenzene	100-41-4	0.28%	0.038%
Formaldehyde	50-00-0	0.088%	0.69%
n-Hexane	100-54-3	0.15%	0.10%
Isooctane	540-84-1	0.0018%	0.00031%
Methylene Chloride	75-09-2	0.0%[d]	0.00027%
MTBE	596899	0.0%[d]	ND[c]
Styrene	100-42-5	0.0073%	0.0054%
Tetrachloroethene	127-18-4	0.0077%	ND[c]
Toluene	100-88-3	0.21%	0.062%
1,1,1-Trichloroethane	71-55-6	0.0%[d]	ND[c]
Trichloroethene	79-01-6	0.0%[d]	ND[c]
Trichlorofluoromethane	75-69-4	0.0013%	ND[c]
m-/p-Xylene	1330-20-7	0.41%	0.2%
o-Xylene	95-47-6	0.08%	0.057%
Total volatile organic HAPs		1.5%	1.3%

Table 11.1-16 (cont.)

[a] Emission factor for compound is determined by multiplying the percentage presented for the compound by the emission factor for total organic compounds (TOC) as determined from Table 11.1-14.

[b] The VOC percentages are equal to 100 percent of TOC minus the methane, acetone, methylene chloride, and 1,1,1-trichloroethane percentages.

[c] ND = Measured data below detection limits. Additional compounds that were not detected are: acrylonitrile, allyl chloride, bromodichloromethane, bromoform, 1,3-butadiene, carbon tetrachloride, chlorobenzene, chloroform, dibromochloromethane, 1,2-dibromoethane, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,2-dichloropropane, cis-1,3-dichloropropene, trans-1,3-dichloropropene, 1,2-epoxybutane, ethyl acrylate, 2-hexanone, iodomethane, methyl methacrylate, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, vinyl acetate, vinyl bromide, and vinyl chloride

[d] Values presented as 0.0% had background concentrations higher than the capture efficiency-corrected measured concentration.

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.

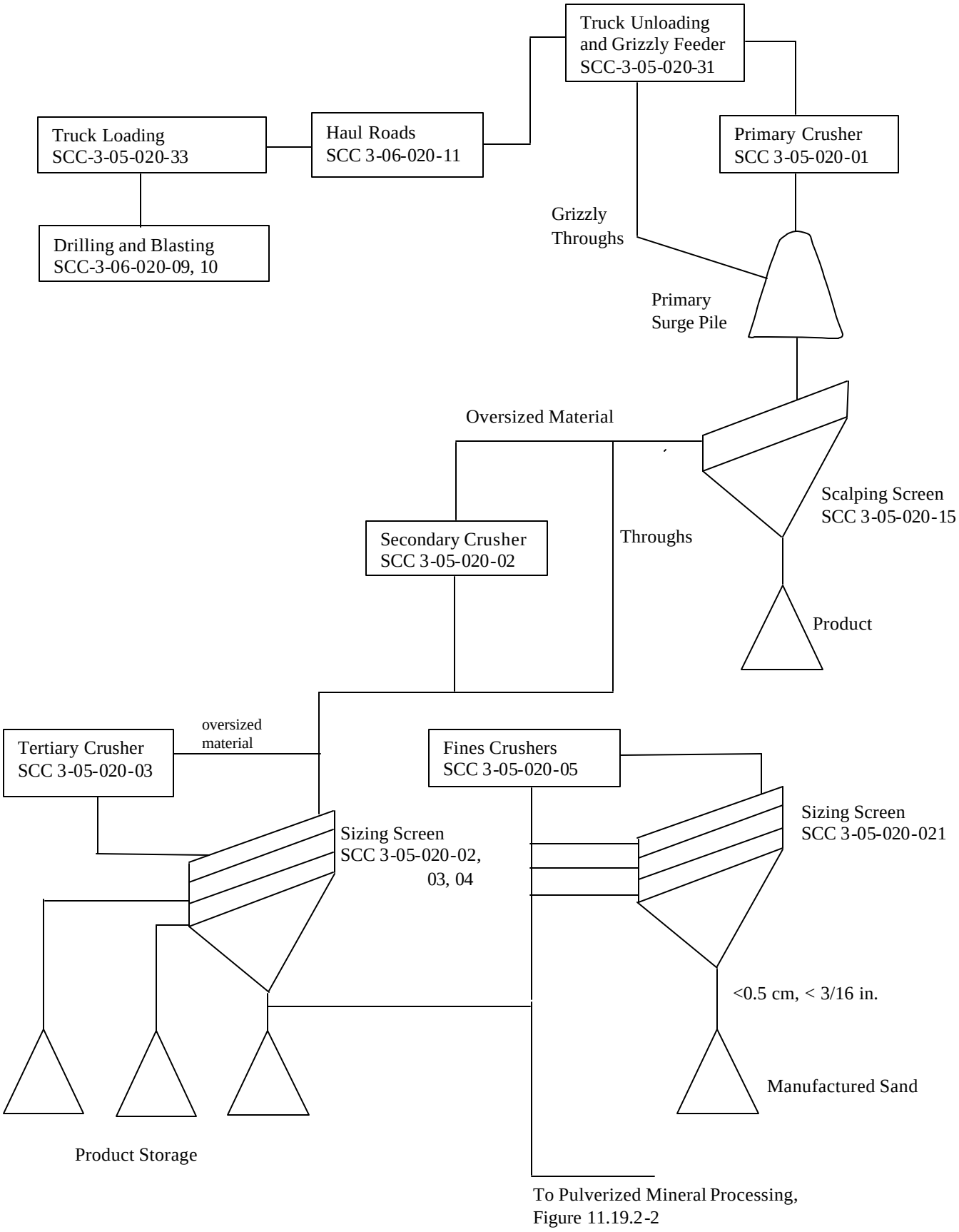

Figure 11.19.2-1. Typical stone processing plant

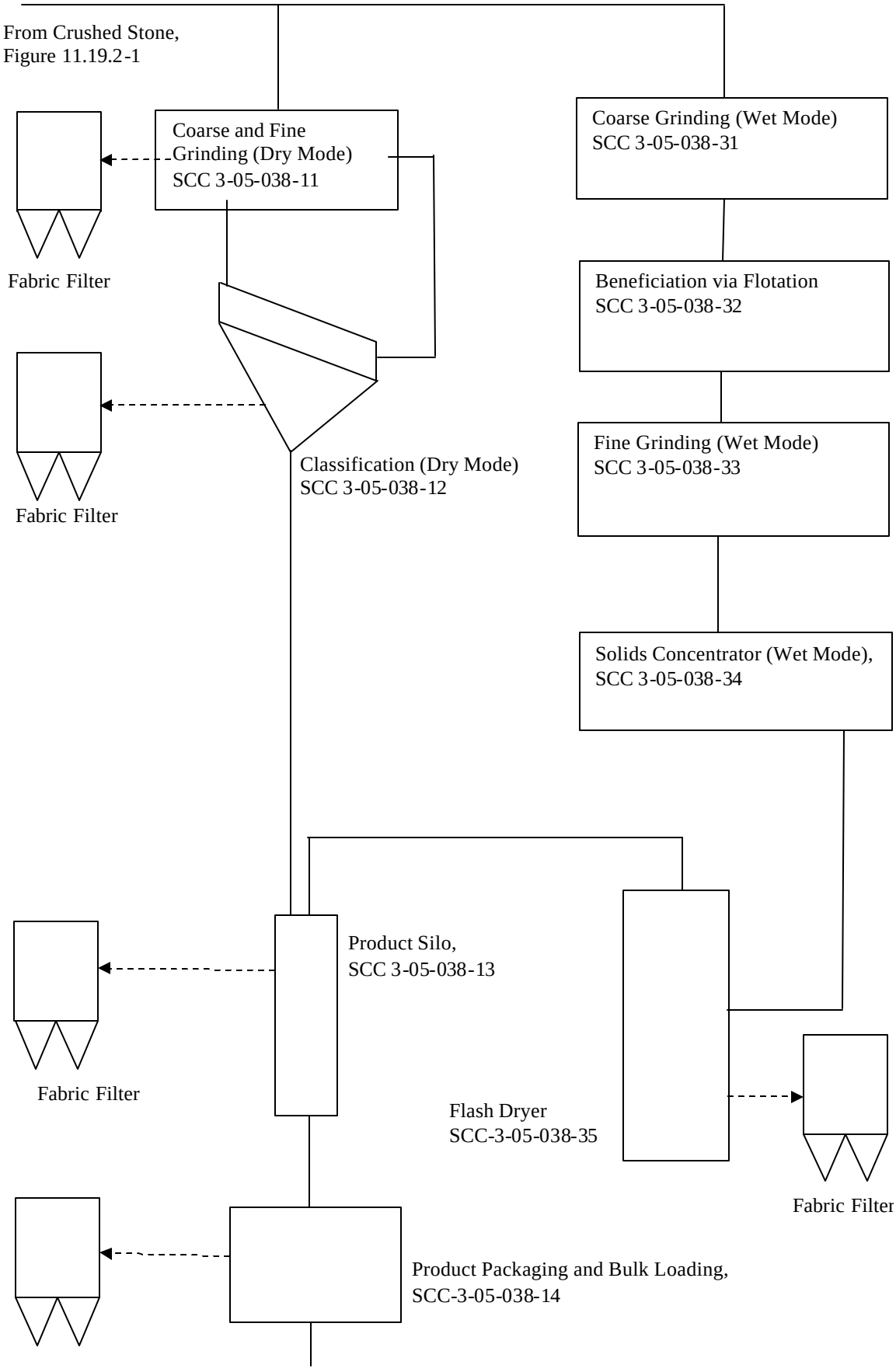

Figure 11.19.2-2 Flowchart for Pulverized Mineral Processing

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.

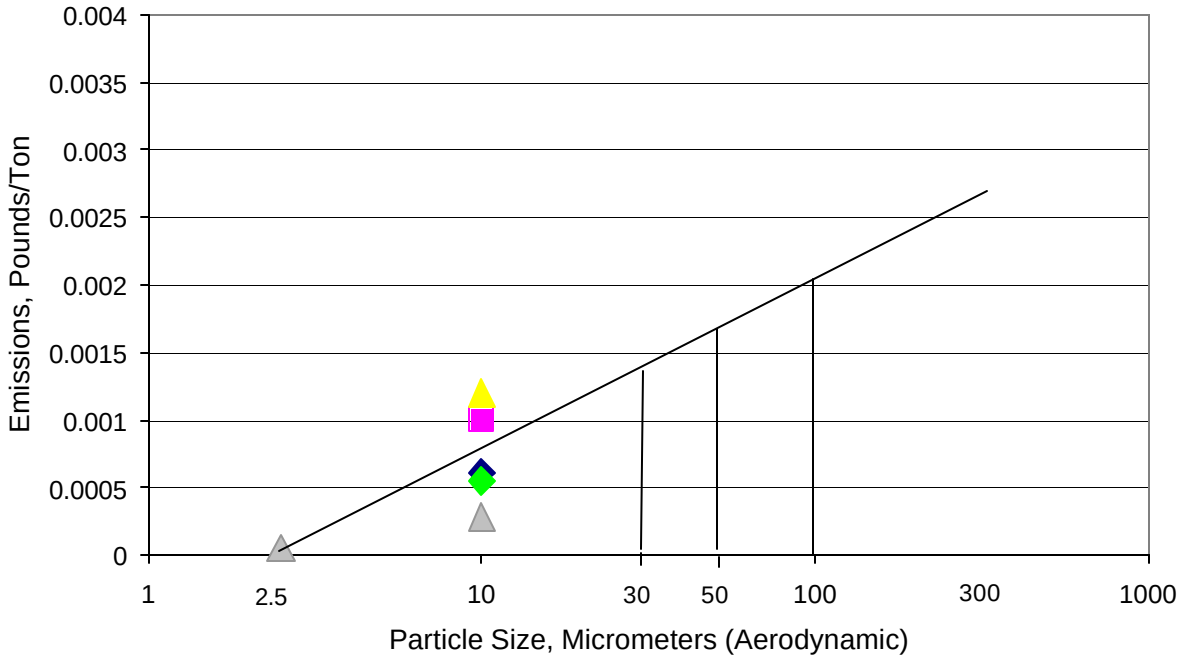

Figure 11-19-3. PM Emission Factor Calculation, Screening (Controlled)

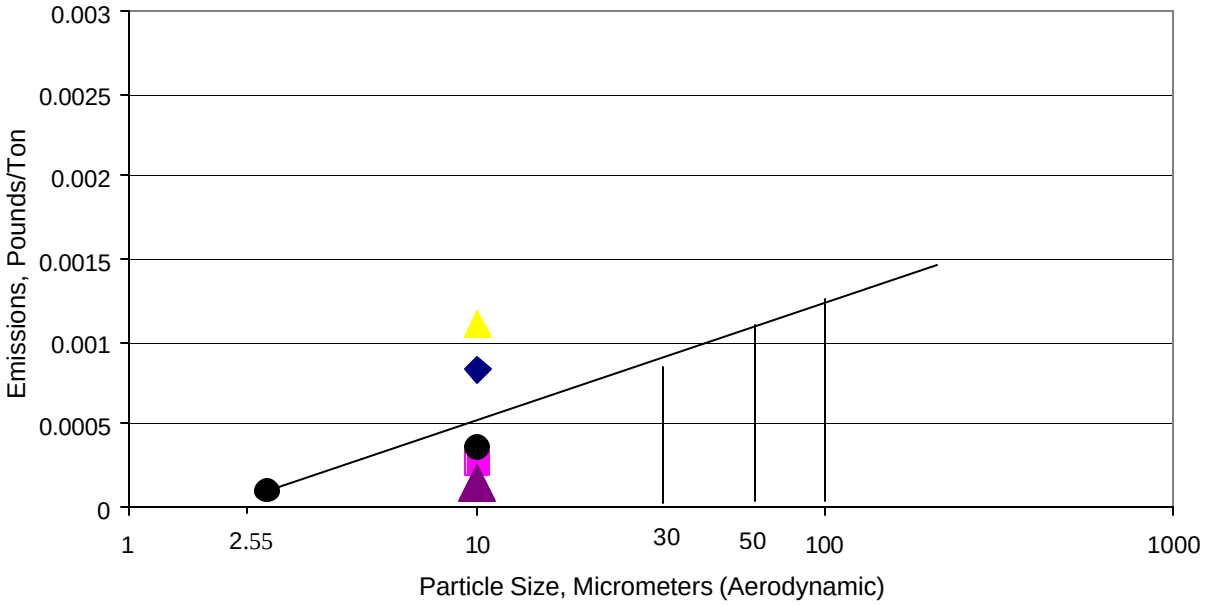

Figure 11.19-4. PM Emission Factor Calculation, Tertiary Crushing (Controlled)

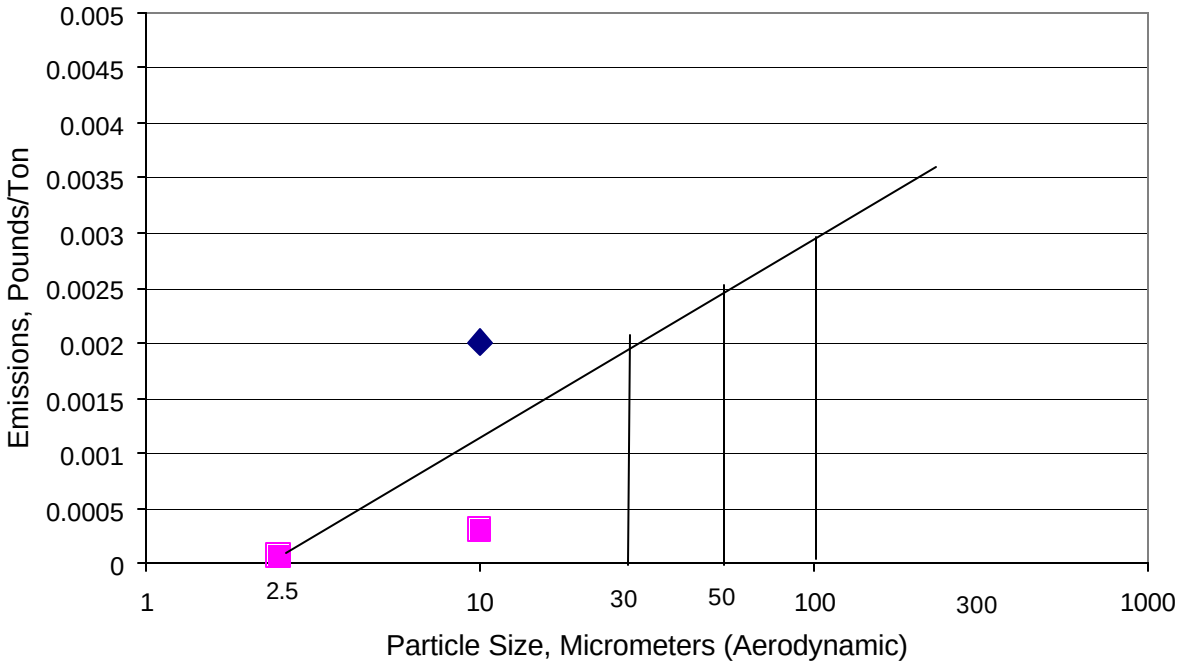

Figure 11-19.5. PM Emission Factor Calculation, Fines Crushing (Controlled)

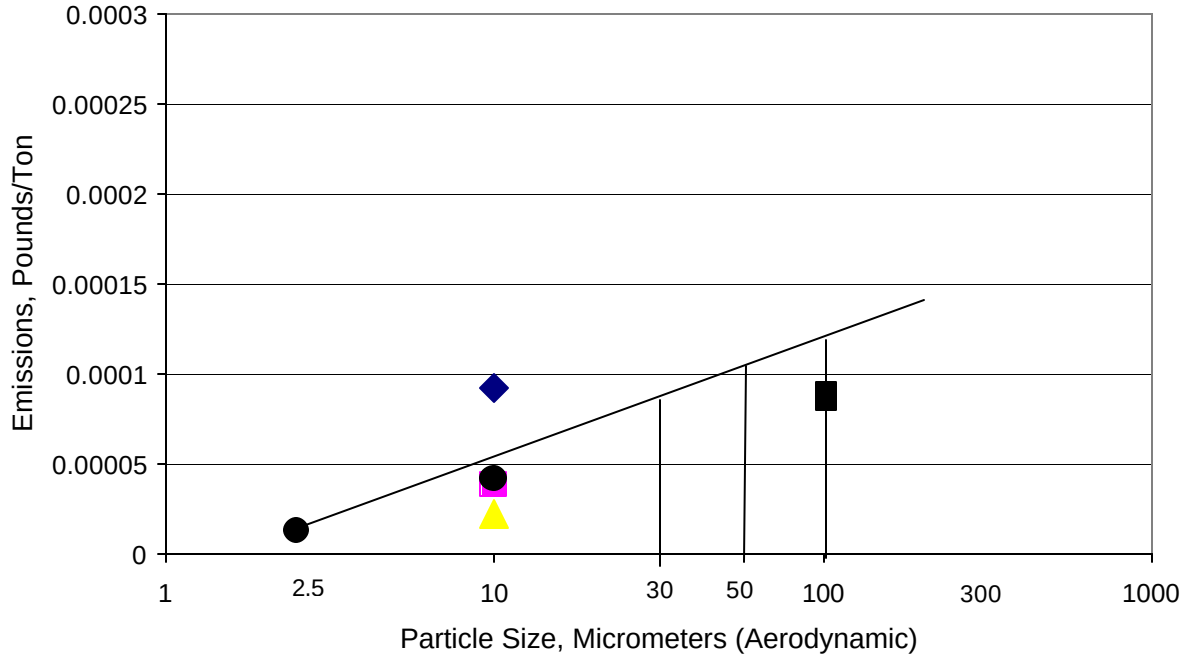

Figure 11.19-6. PM Emission Factor Calculation, Conveyor Transfer Points (Controlled)

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.

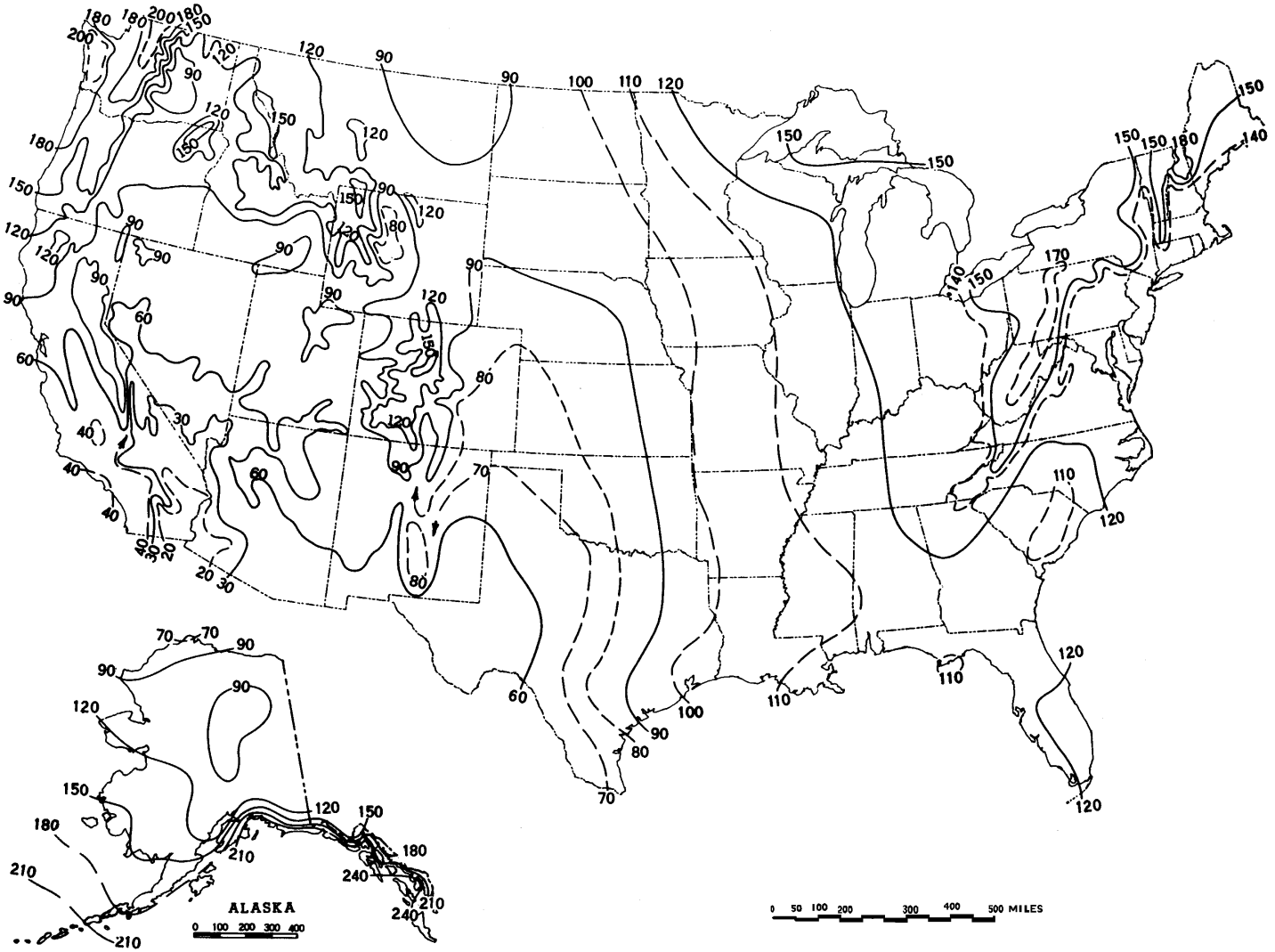

Figure 13.2.2-1. Mean number of days with 0.01 inch or more of precipitation in United States.

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.

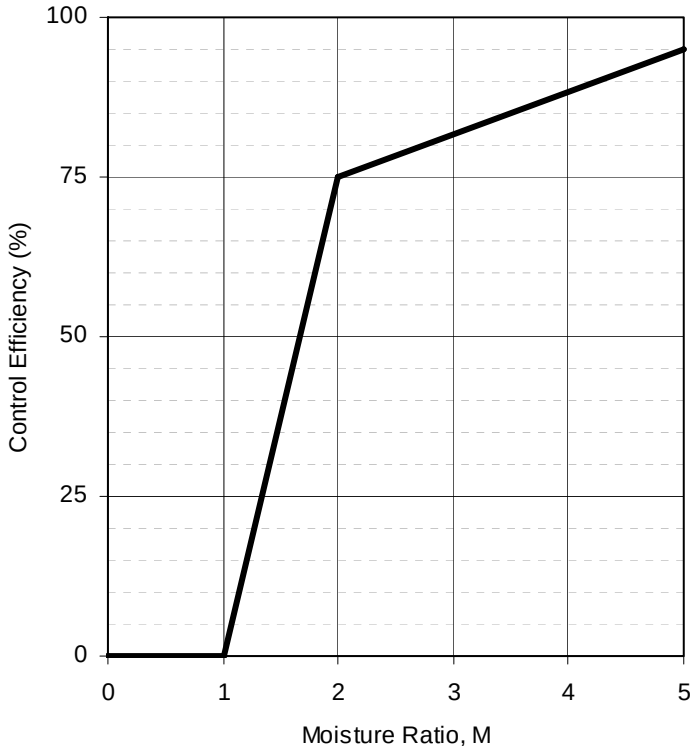

Figure 13.2.2-2. Watering control effectiveness for unpaved travel surfaces

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.

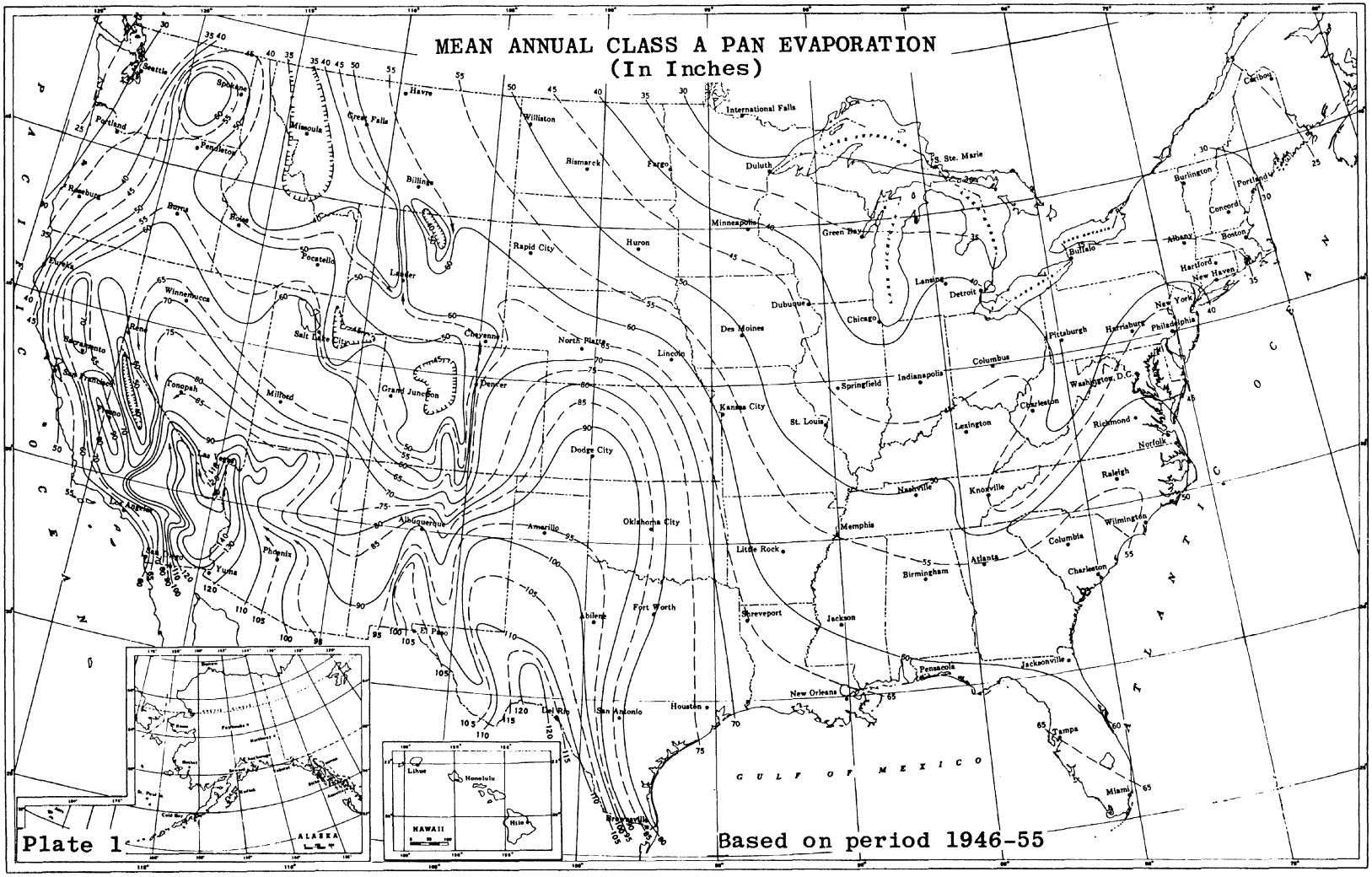

Figure 13.2.2-3. Annual evaporation data.

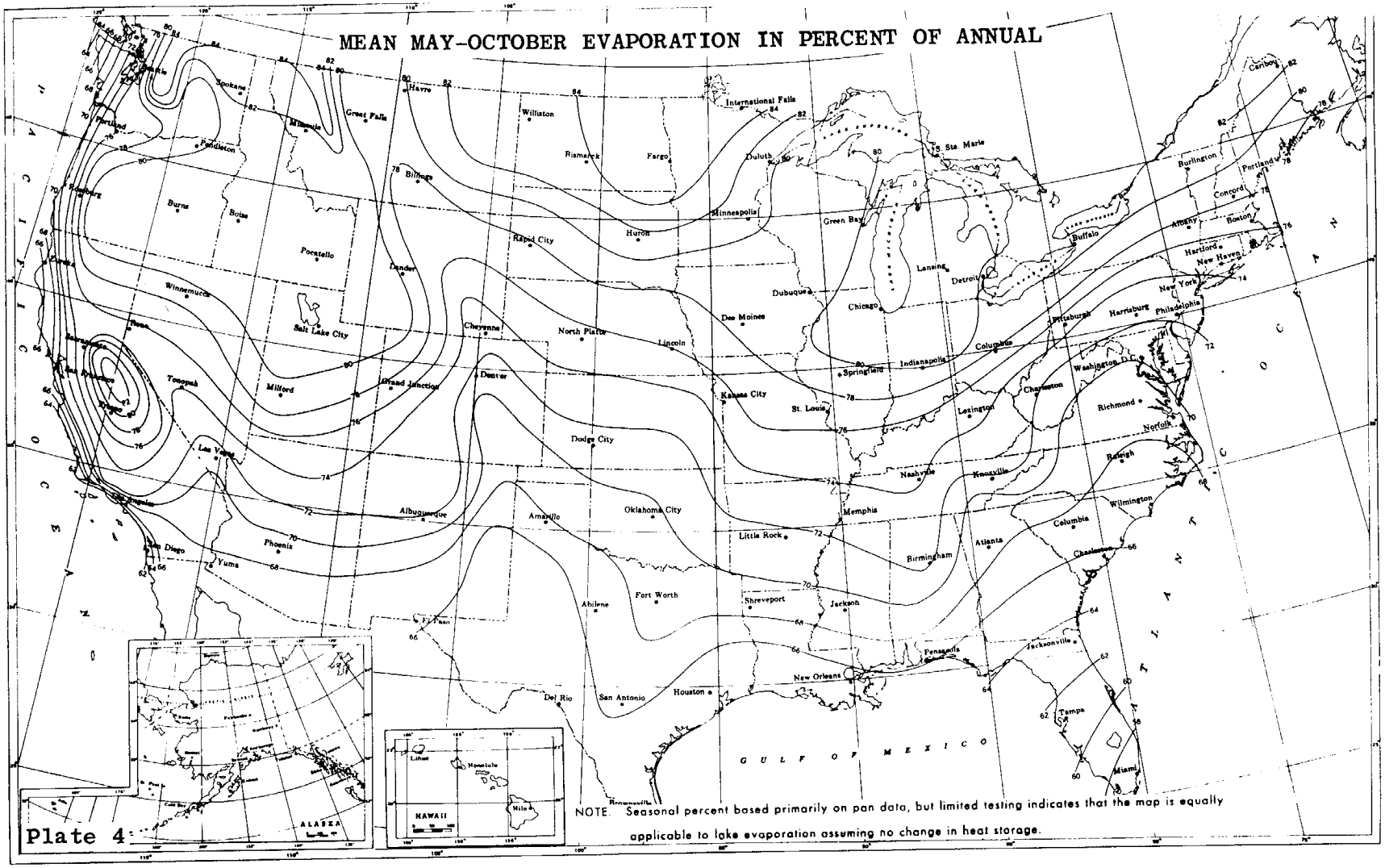

Figure 13.2.2-4. Geographical distribution of the percentage of evaporation occurring between May and October.

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.

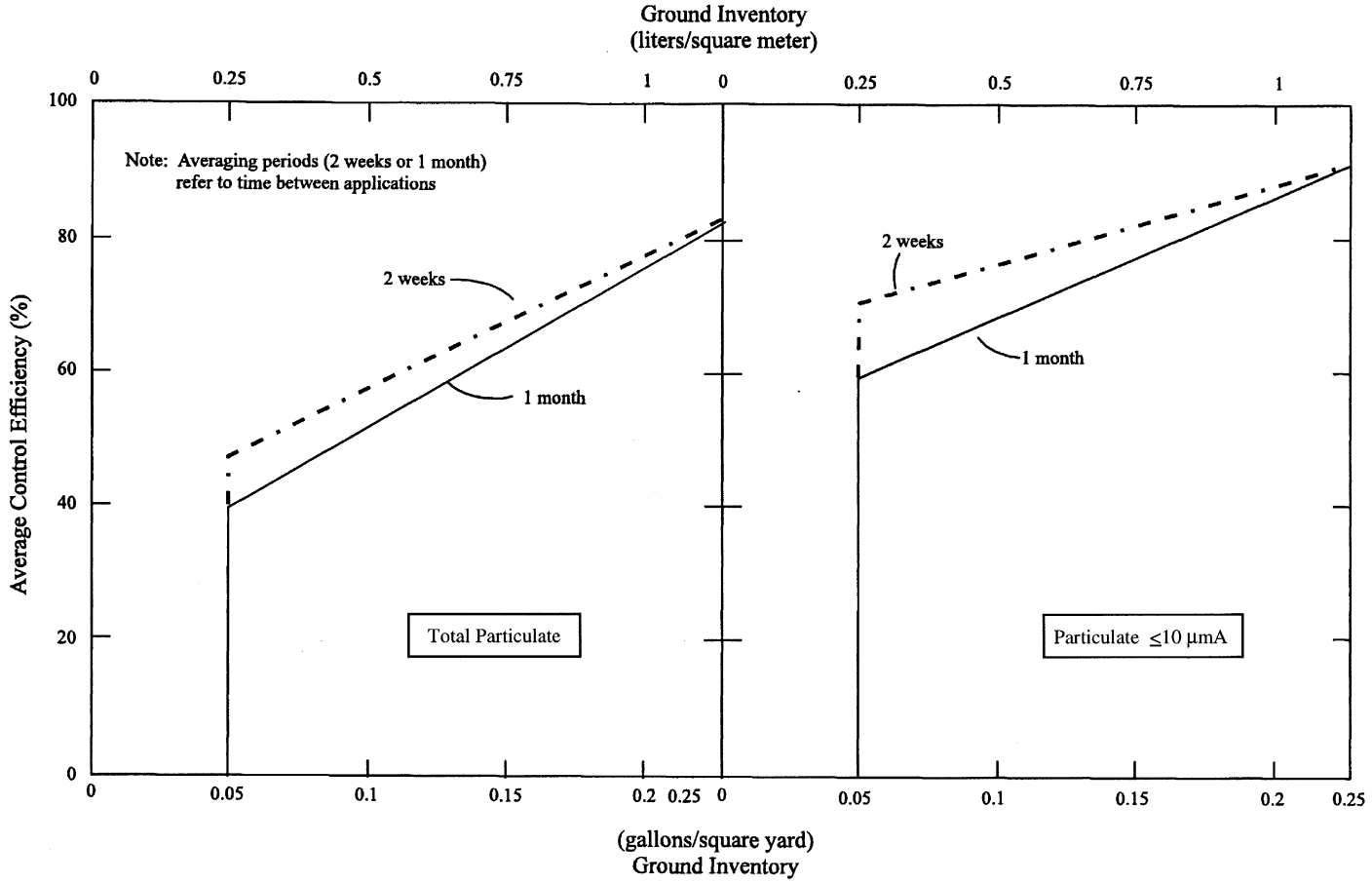

Figure 13.2.2-5. Average control efficiencies over common application intervals.

13.2.4 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]

References For Section 13.2.4

1. 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.

2. R. Bohn, *et al., Fugitive Emissions From Integrated Iron And Steel Plants*, EPA-600/2-78-050, U. S. Environmental Protection Agency, Cincinnati, OH, March 1978.

3. C. Cowherd, Jr., *et al., Iron And Steel Plant Open Dust Source Fugitive Emission Evaluation*, EPA-600/2-79-103, U. S. Environmental Protection Agency, Cincinnati, OH, May 1979.

4. *Evaluation Of Open Dust Sources In The Vicinity Of Buffalo, New York*, EPA Contract No. 68-02-2545, Midwest Research Institute, Kansas City, MO, March 1979.

5. C. Cowherd, Jr., and T. Cuscino, Jr., *Fugitive Emissions Evaluation*, MRI-4343-L, Midwest Research Institute, Kansas City, MO, February 1977.

6. T. Cuscino, Jr., *et al., Taconite Mining Fugitive Emissions Study*, Minnesota Pollution Control Agency, Roseville, MN, June 1979.

7. *Improved Emission Factors For Fugitive Dust From Western Surface Coal Mining Sources*, 2 Volumes, EPA Contract No. 68-03-2924, PEDCo Environmental, Kansas City, MO, and Midwest Research Institute, Kansas City, MO, July 1981.

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

AVERAGE WIND SPEED - MPH

STATION	ID	Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
ALAMOGORDO AIRPORT ASOS	KALM	1996-2006	5.1	6.3	7.1	7.9	7.1	6.9	6.1	5.3	5.2	5.2	5.0	5.0	6.0
ALAMOGORDO-HOLLOMAN AFB	KHMN	1996-2006	8.5	9.7	10.6	11.8	10.8	10.6	9.8	9.1	8.8	8.5	8.1	8.3	9.6
ALBUQUERQUE AP ASOS	KABQ	1996-2006	7.0	8.2	9.3	11.1	10.0	10.0	8.7	8.3	8.0	7.9	7.2	6.9	8.5
ALBUQUERQUE-DBLE EAGLE	KAEG	1999-2006	7.1	7.9	9.0	10.6	9.5	8.6	7.0	6.2	7.0	6.5	6.5	6.1	7.7
ARTESIA AIRPORT ASOS	KATS	1997-2006	7.8	9.1	10.1	10.9	10.2	9.9	7.8	6.9	7.6	7.8	7.6	7.4	8.5
CARLSBAD AIRPORT ASOS	KCNM	1996-2006	9.2	9.8	10.9	11.4	10.4	9.9	8.5	7.7	8.2	8.5	8.4	8.8	9.3
CLAYTON MUNI AP ASOS	KCAO	1996-2006	11.9	12.7	13.4	14.6	13.4	13.0	11.7	10.8	11.8	12.1	12.1	12.0	12.4
CLINES CORNERS	KCQC	1998-2006	16.2	16.1	15.7	16.9	14.6	13.5	10.6	10.1	11.8	13.3	15.0	16.0	14.1
CLOVIS AIRPORT AWOS	KCVN	1996-2006	12.3	12.3	13.4	13.8	12.4	11.9	9.7	8.9	9.7	10.9	11.6	12.2	11.6
CLOVIS-CANNON AFB	KCVS	1996-2006	12.5	12.6	13.6	13.8	12.2	12.5	10.7	10.0	10.2	11.3	11.7	12.4	12.0
DEMING AIRPORT ASOS	KDMN	1996-2006	8.7	9.7	10.9	12.0	10.6	10.1	8.9	8.1	8.4	8.2	8.5	8.1	9.3
FARMINGTON AIRPORT ASOS	KFMN	1996-2006	7.3	8.3	9.0	9.8	9.4	9.4	8.7	8.2	8.0	7.8	7.6	7.3	8.4
GALLUP AIRPORT ASOS	KGUP	1996-2006	5.7	6.9	7.8	10.0	9.0	8.8	6.9	6.0	6.5	6.1	5.6	5.3	7.0
GRANTS-MILAN AP ASOS	KGNT	1997-2006	7.8	8.8	9.6	10.9	10.0	9.8	8.1	7.2	7.9	8.4	8.0	7.6	8.7
HOBBS AIRPORT AWOS	KHOB	1996-2006	11.3	11.9	12.6	13.4	12.5	12.3	11.0	10.0	10.2	10.6	10.7	11.1	11.4
LAS CRUCES AIRPORT AWOS	KLRU	2000-2006	6.4	7.5	8.8	10.1	8.7	8.2	6.8	6.0	6.2	6.1	6.4	6.0	7.3
LAS VEGAS AIRPORT ASOS	KLVS	1996-2006	10.9	12.2	12.5	14.3	12.4	11.8	10.0	9.2	10.9	10.8	11.0	10.9	11.4
LOS ALAMOS AP AWOS	KLAM	2005-2006	3.9	5.7	7.5	8.1	7.1	7.3	5.3	4.8	5.7	5.1	4.4	3.2	5.4
RATON AIRPORT ASOS	KRTN	1998-2006	8.9	9.4	10.4	12.2	10.8	10.2	8.4	8.1	8.6	9.0	8.6	8.5	9.4
ROSWELL AIRPORT ASOS	KROW	1996-2006	7.4	8.9	9.9	11.1	10.3	10.2	8.8	7.9	8.3	8.0	7.5	7.3	8.8
RUIDOSO AIRPORT AWOS	KSRR	1996-2006	8.8	9.6	10.0	11.6	10.0	8.4	5.9	5.3	6.4	7.4	7.9	8.7	8.3
SANTA FE AIRPORT ASOS	KSAF	1996-2006	8.9	9.5	9.9	11.2	10.6	10.5	9.2	8.8	8.8	9.1	8.7	8.5	9.5
SILVER CITY AP AWOS	KSVC	1999-2006	8.1	8.7	9.9	10.8	10.2	9.9	8.5	7.2	6.9	7.6	7.9	7.7	8.5
TAOS AIRPORT AWOS	KSKX	1996-2006	5.8	6.5	7.7	9.1	8.6	8.5	7.1	6.6	6.7	6.6	6.0	5.7	7.0
TRUTH OR CONSEQ AP ASOS	KTCS	1996-2006	7.4	8.7	9.9	11.1	10.4	9.8	8.1	7.4	7.7	8.0	7.7	7.3	8.6
TUCUMCARI AIRPORT ASOS	KTCC	1999-2006	10.0	11.2	11.9	13.6	11.9	11.6	9.9	9.3	10.0	10.0	10.4	10.2	10.8

Nonroad Compression-Ignition Engines: Exhaust Emission Standards

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr)	NOx (g/kW-hr)	PM (g/kW-hr)	CO (g/kW-hr)	Smoke [a] (Percentage)	Useful Life (hours /years) [b]	Warranty Period (hours /years) [b]
Federal	kW < 8	1	2000-2004	-	10.5	-	1.0	8.0	20/15/50	3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	8.0			
		4	2008+	-	7.5	-	0.40 [c]	8.0			
	8 ≤ kW < 19	1	2000-2004	-	9.5	-	0.80	6.6		3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	6.6			
		4	2008+	-	7.5	-	0.40	6.6			
	19 ≤ kW < 37	1	1999-2003	-	9.5	-	0.80	5.5		5,000/7 [d]	3,000/5 [e]
		2	2004-2007	-	7.5	-	0.60	5.5			
		4	2008-2012	-	7.5	-	0.30	5.5			
			2013+	-	4.7	-	0.03	5.5			
	37 ≤ kW < 56	1	1998-2003	-	-	9.2	-	-		8,000/10	3,000/5
		2	2004-2007	-	7.5	-	0.40	5.0			
		3 [f]	2008-2011	-	4.7	-	0.40	5.0			
		4 (Option 1) [g]	2008-2012	-	4.7	-	0.30	5.0			
		4 (Option 2) [g]	2012	-	4.7	-	0.03	5.0			
		4	2013+	-	4.7	-	0.03	5.0			
	56 ≤ kW < 75	1	1998-2003	-	-	9.2	-	-			
		2	2004-2007	-	7.5	-	0.40	5.0			
		3	2008-2011	-	4.7	-	0.40	5.0			
		4	2012-2013 [h]	-	4.7	-	0.02	5.0			
			2014+ [i]	0.19	-	0.40	0.02	5.0			
	75 ≤ kW < 130	1	1997-2002	-	-	9.2	-	-			
		2	2003-2006	-	6.6	-	0.30	5.0			
		3	2007-2011	-	4.0	-	0.30	5.0			
		4	2012-2013 [h]	-	4.0	-	0.02	5.0			
			2014+	0.19	-	0.40	0.02	5.0			

Continued

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr	NOx (g/kW-hr	PM (g/kW-hr	CO (g/kW-hr)	Smoke [a] (Percentage)	Useful Life (hours /years) [b]	Warranty Period (hours /years) [b]
Federal	130 ≤ kW < 225	1	1996-2002	1.3 [j]	-	9.2	0.54	11.4	20/15/50	8,000/10	3,000/5
		2	2003-2005	-	6.6	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
	225 ≤ kW < 450	1	1996-2000	1.3 [j]	-	9.2	0.54	11.4			
		2	2001-2005	-	6.4	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
	450 ≤ kW < 560	1	1996-2001	1.3 [j]	-	9.2	0.54	11.4			
		2	2002-2005	-	6.4	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
	560 ≤ kW < 900	1	2000-2005	1.3 [j]	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
		4	2011-2014	0.40	-	3.5	0.10	3.5			
			2015+ [i]	0.19	-	3.5 [k]	0.04 [l]	3.5			
	kW > 900	1	2000-2005	1.3 [j]	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
		4	2011-2014	0.40	-	3.5 [k]	0.10	3.5			
			2015+ [i]	0.19	-	3.5 [k]	0.04 [l]	3.5			

Notes on following page.

Notes:

- For Tier 1, 2, and 3 standards, exhaust emissions of nitrogen oxides (NOx), carbon monoxide (CO), hydrocarbons (HC), and non-methane hydrocarbons (NMHC) are measured using the procedures in 40 Code of Federal Regulations (CFR) Part 89 Subpart E. For Tier 1, 2, and 3 standards, particulate matter (PM) exhaust emissions are measured using the California Regulations for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines.
- For Tier 4 standards, engines are tested for transient and steady-state exhaust emissions using the procedures in 40 CFR Part 1039 Subpart F. Transient standards do not apply to engines below 37 kilowatts (kW) before the 2013 model year, constant-speed engines, engines certified to Option 1, and engines above 560 kW.
- Tier 2 and later model naturally aspirated nonroad engines shall not discharge crankcase emissions into the atmosphere unless these emissions are permanently routed into the exhaust. This prohibition does not apply to engines using turbochargers, pumps, blowers, or superchargers.
- In lieu of the Tier 1, 2, and 3 standards for NOX, NMHC + NOX, and PM, manufacturers may elect to participate in the averaging, banking, and trading (ABT) program described in 40 CFR Part 89 Subpart C.

a Smoke emissions may not exceed 20 percent during the acceleration mode, 15 percent during the lugging mode, and 50 percent during the peaks in either mode. Smoke emission standards do not apply to single-cylinder engines, constant-speed engines, or engines certified to a PM emission standard of 0.07 grams per kilowatt-hour (g/kW-hr) or lower. Smoke emissions are measured using procedures in 40 CFR Part 86 Subpart I.

b Useful life and warranty period are expressed hours and years, whichever comes first.

c Hand-startable air-cooled direct injection engines may optionally meet a PM standard of 0.60 g/kW-hr. These engines may optionally meet Tier 2 standards through the 2009 model years. In 2010 these engines are required to meet a PM standard of 0.60 g/kW-hr.

d Useful life for constant speed engines with rated speed 3,000 revolutions per minute (rpm) or higher is 5 years or 3,000 hours, whichever comes first.

e Warranty period for constant speed engines with rated speed 3,000 rpm or higher is 2 years or 1,500 hours, whichever comes first.

f These Tier 3 standards apply only to manufacturers selecting Tier 4 Option 2. Manufacturers selecting Tier 4 Option 1 will be meeting those standards in lieu of Tier 3 standards.

g A manufacturer may certify all their engines to either Option 1 or Option 2 sets of standards starting in the indicated model year. Manufacturers selecting Option 2 must meet Tier 3 standards in the 2008-2011 model years.

h These standards are phase-out standards. Not more than 50 percent of a manufacturer's engine production is allowed to meet these standards in each model year of the phase out period. Engines not meeting these standards must meet the final Tier 4 standards.

i These standards are phased in during the indicated years. At least 50 percent of a manufacturer's engine production must meet these standards during each year of the phase in. Engines not meeting these standards must meet the applicable phase-out standards.

j For Tier 1 engines the standard is for total hydrocarbons.

k The NOx standard for generator sets is 0.67 g/kW-hr.

l The PM standard for generator sets is 0.03 g/kW-hr.

Citations: Code of Federal Regulations (CFR) citations:

- 40 CFR 89.112 = Exhaust emission standards
- 40 CFR 1039.101 = Exhaust emission standards for after 2014 model year
- 40 CFR 1039.102 = Exhaust emission standards for model year 2014 and earlier
- 40 CFR 1039 Subpart F = Exhaust emissions transient and steady state test procedures
- 40 CFR 86 Subpart I = Smoke emission test procedures
- 40 CFR 1065 = Test equipment and emissions measurement procedures

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification		
User Identification:	ShortLineAC1	
City:	Las Vegas	
State:	New Mexico	
Company:	Short Line LLC	
Type of Tank:	Horizontal Tank	
Description:	Short Line Asphalt Cement Tank 1	
Tank Dimensions		
Shell Length (ft):		52.00
Diameter (ft):		10.00
Volume (gallons):		30,000.00
Turnovers:		43.38
Net Throughput(gal/yr):		1,301,500.00
Is Tank Heated (y/n):	Y	
Is Tank Underground (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	Aluminum/Diffuse	
Shell Condition	Good	
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

Meteorological 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

ShortLineAC1 - Horizontal Tank
Las Vegas, 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
Asphalt Cement	All	350.00	350.00	350.00	350.00	0.0347	0.0347	0.0347	105.0000			1,000.00	Option 3: A=75350, B=9.00346

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

ShortLineAC1 - Horizontal Tank
Las Vegas, New Mexico

Annual Emission Calculations	
Standing Losses (lb):	0.0000
Vapor Space Volume (cu ft):	2,601.3188
Vapor Density (lb/cu ft):	0.0004
Vapor Space Expansion Factor:	0.0000
Vented Vapor Saturation Factor:	0.9909
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	2,601.3188
Tank Diameter (ft):	10.0000
Effective Diameter (ft):	25.7375
Vapor Space Outage (ft):	5.0000
Tank Shell Length (ft):	52.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0004
Vapor Molecular Weight (lb/lb-mole):	105.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Daily Avg. Liquid Surface Temp. (deg. R):	809.6700
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):	809.6700
Tank Paint Solar Absorptance (Shell):	0.6000
Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0347
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0347
Daily Avg. Liquid Surface Temp. (deg R):	809.6700
Daily Min. Liquid Surface Temp. (deg R):	809.6700
Daily Max. Liquid Surface Temp. (deg R):	809.6700
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9909
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0347
Vapor Space Outage (ft):	5.0000
Working Losses (lb):	72.7243
Vapor Molecular Weight (lb/lb-mole):	105.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Annual Net Throughput (gal/yr.):	1,301,500.0000
Annual Turnovers:	43.3833
Turnover Factor:	0.8582
Tank Diameter (ft):	10.0000
Working Loss Product Factor:	0.7500
Total Losses (lb):	72.7243

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

ShortLineAC1 - Horizontal Tank
Las Vegas, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Asphalt Cement	72.72	0.00	72.72

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification		
User Identification:	ShortLineAC2	
City:	Las Vegas	
State:	New Mexico	
Company:	Short Line LLC	
Type of Tank:	Horizontal Tank	
Description:	Short Line Asphalt Cement Tank 2	
Tank Dimensions		
Shell Length (ft):		52.00
Diameter (ft):		10.00
Volume (gallons):		30,000.00
Turnovers:		43.38
Net Throughput(gal/yr):		1,301,500.00
Is Tank Heated (y/n):	Y	
Is Tank Underground (y/n):	N	
Paint Characteristics		
Shell Color/Shade:	Aluminum/Diffuse	
Shell Condition	Good	
Breather Vent Settings		
Vacuum Settings (psig):		0.00
Pressure Settings (psig)		0.00

Meteorological 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

ShortLineAC2 - Horizontal Tank
Las Vegas, 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
Asphalt Cement	All	350.00	350.00	350.00	350.00	0.0347	0.0347	0.0347	105.0000			1,000.00	Option 3: A=75350, B=9.00346

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

ShortLineAC2 - Horizontal Tank
Las Vegas, New Mexico

Annual Emission Calculations	
Standing Losses (lb):	0.0000
Vapor Space Volume (cu ft):	2,601.3188
Vapor Density (lb/cu ft):	0.0004
Vapor Space Expansion Factor:	0.0000
Vented Vapor Saturation Factor:	0.9909
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	2,601.3188
Tank Diameter (ft):	10.0000
Effective Diameter (ft):	25.7375
Vapor Space Outage (ft):	5.0000
Tank Shell Length (ft):	52.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0004
Vapor Molecular Weight (lb/lb-mole):	105.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Daily Avg. Liquid Surface Temp. (deg. R):	809.6700
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):	809.6700
Tank Paint Solar Absorptance (Shell):	0.6000
Daily Total Solar Insulation Factor (Btu/sqft day):	1,765.3167
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0347
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0347
Daily Avg. Liquid Surface Temp. (deg R):	809.6700
Daily Min. Liquid Surface Temp. (deg R):	809.6700
Daily Max. Liquid Surface Temp. (deg R):	809.6700
Daily Ambient Temp. Range (deg. R):	27.9250
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9909
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0347
Vapor Space Outage (ft):	5.0000
Working Losses (lb):	72.7243
Vapor Molecular Weight (lb/lb-mole):	105.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0347
Annual Net Throughput (gal/yr.):	1,301,500.0000
Annual Turnovers:	43.3833
Turnover Factor:	0.8582
Tank Diameter (ft):	10.0000
Working Loss Product Factor:	0.7500
Total Losses (lb):	72.7243

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

ShortLineAC2 - Horizontal Tank
Las Vegas, New Mexico

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Asphalt Cement	72.72	0.00	72.72

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	

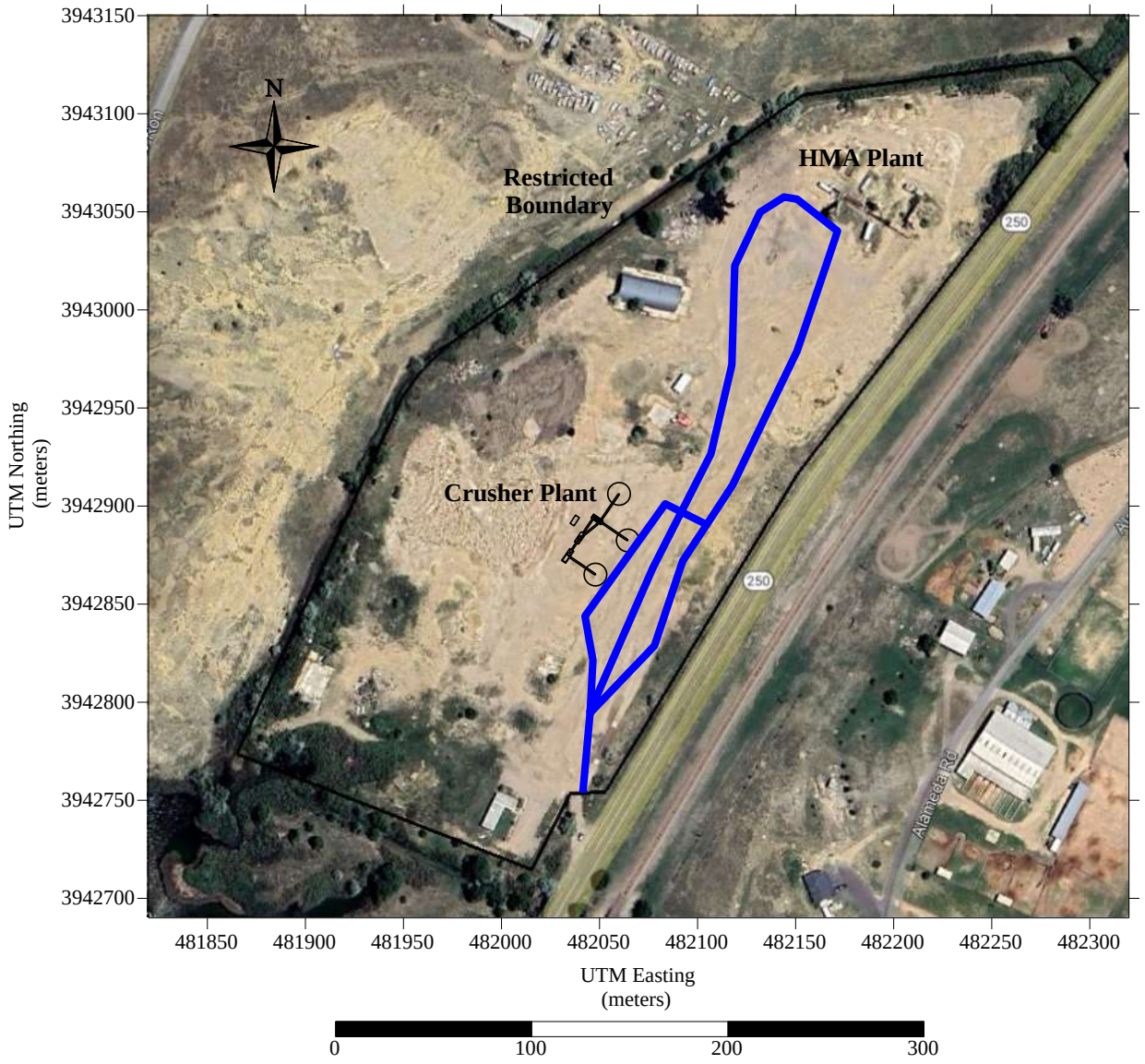

Figure 8-1: Location of Short Line HMA Plant and Surrounding Area

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")

X 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.

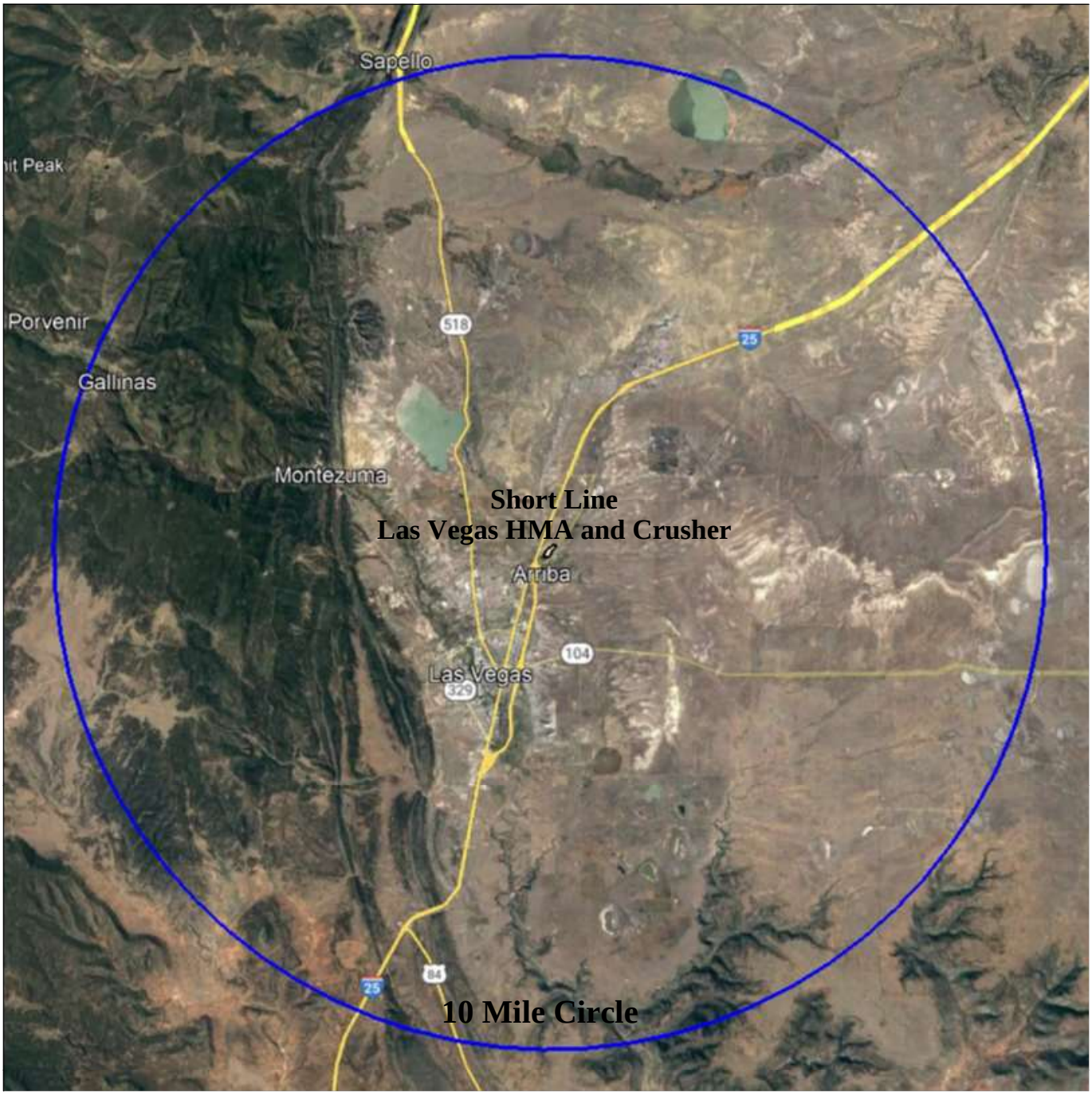

Figure 9-1: Ten-Mile Radius around Site

Government List within 10 Miles

San Miguel County	Connie M. Gallegos, County Clerk	518 Valencia St. County Annex Building	Las Vegas	NM	87701
City of Las Vegas	Casandra Fresquez, City Clerk	1700 N. Grand Avenue	Las Vegas	NM	87701

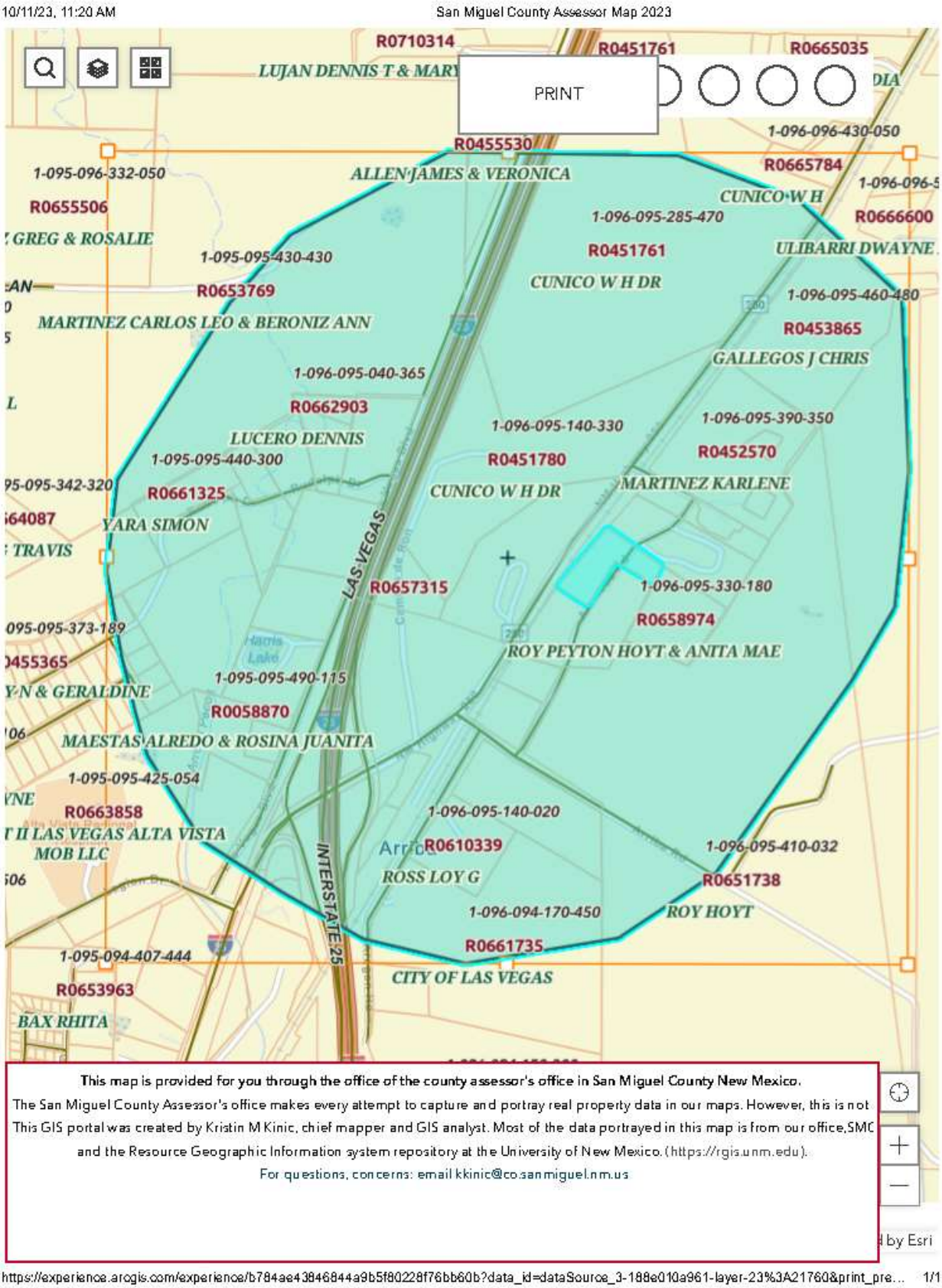

Figure 9-2: Half Mile Radius around Site

Acct_No	OWNNAME	MAILADD	MCITY	STATE	ZIP
R0058870	MAESTAS ALREDO & ROSINA JUANITA	PO BOX 152	LAS VEGAS	NM	87701
R0073511	MARTINEZ MATIAS JR & CONSUELO	300 SOUTH HIGHWAY 85	LAS VEGAS	NM	87701
R0451420	TRUJILLO JOHNNY A & LILLIAN M & LAW OFFICE OF DENNIS P	PO BOX 45311	RIO RANCHO	NM	87174
R0451761	CUNICO W H DR	57 CAMINO DE RON	LAS VEGAS	NM	87701
R0451780	CUNICO W H DR	57 CAMINO DE RON	LAS VEGAS	NM	87701
R0451861	MARTINEZ JOHN D & XIMENEZ ANDREA I	PO BOX 3600	LAS VEGAS	NM	87701
R0452570	MARTINEZ KARLENE	PO BOX 562	LAS VEGAS	NM	87701
R0452660	SAN MIGUEL HOSPITAL CORPORTION A NM CORP PROPERTY VALUATION SERVICES	14400 METCALF	OVERLAND PARK	KS	66223
R0453865	GALLEGOS J CHRIS	PO BOX 3	LAS VEGAS	NM	87701
R0454121	ROY ANITA MAE NAYLOR	PO BOX 515	LAS VEGAS	NM	87701
R0454220	PACHECO JACOBO E & VALERIE	PO BOX 300	MORA	NM	87732
R0454286	MARTINEZ MEGAN R	412 South Pacific St	LAS VEGAS	NM	87701
R0454730	LYSTER HARLAN K	PO Box 2546	Las Vegas	NM	87701
R0454740	RUDOLPH GENE L SR, JERRY & BERNICE	29 RUDOLPH DRIVE #9	LAS VEGAS	NM	87701
R0455362	ORTEGA-MATHIS PRESCILLA S & DYCKSON RAYMOND J	PO BOX 56	LAS VEGAS	NM	87701
R0455363	TAFOYA LEONOR	202 CHICO DRIVE	LAS VEGAS	NM	87701
R0455530	ALLEN JAMES & VERONICA	PO BOX 2735	LAS VEGAS	NM	87701
R0455810	VALDEZ PACOMIO & MARCELLA	582 SCHULTZ	GREEN RIVER	WY	82935
R0600364	TRUJILLO ANTHONY & PATRICIA	201 CHICO DRIVE	LAS VEGAS	NM	87701
R0610303	GONZALES RITA MARIE & ESPINOZA DARIAN MATTHEW	276 HARRIS ROAD	LAS VEGAS	NM	87701
R0610339	ROSS LOY G	PO Box 727	Springer	NM	87747
R0651509	LALA'S ENTERPRICES LLC	1409 4TH STREET	LAS VEGAS	NM	87701
R0651738	ROY HOYT	PO BOX 841	LAS VEGAS	NM	87701
R0653769	MARTINEZ CARLOS LEO & BERONIZ ANN	PO BOX 13	SAPELLO	NM	87745
R0653770	MADRID MARVIN D & REGINA A	205 1/2 CHICO DRIVE	LAS VEGAS	NM	87701
R0654835	ROSS KENNETH & VIVIAN D	PO Box 188	Las Vegas	NM	87701
R0654878	LUCERO DENNIS	14 B Rudolph Drive	LAS VEGAS	NM	87701
R0654993	MARTINEZ MARCIA A	274 HARRIS ROAD	LAS VEGAS	NM	87701
R0655097	LOS ALAMOS NATIONAL BANK	640 WEST LAMBERT ROAD	BREA	CA	92821
R0655954	HENSSLER ROBERT R	PO Box 4202	LAS VEGAS	NM	87701
R0655955	BOYD WILLIAM J & HEMMES VICKY L	17 ALMEDA ROAD	LAS VEGAS	NM	87701
R0657312	ROSS KENNETH & VIVIAN D	PO Box 188	Las Vegas	NM	87701
R0657320	MORA SAN MIGUEL ELECTRIC COOP	PO BOX 240	MORA	NM	87732
R0657363	CITY OF LAS VEGAS	1700 NORTH GRAND AVENUE	LAS VEGAS	NM	87701
R0658974	ROY PEYTON HOYT & ANITA MAE	PO BOX 515	LAS VEGAS	NM	87701

Acct_No	OWNNAME	MAILADD	MCITY	STATE	ZIP
R0658978	NEW MEXICO STATE HWY DEPT	28 BD INDUSTRIAL DR	LAS VEGAS	NM	87701
R0660617	RUDOLPH JERRY R & BERNICE	29 RUDOLPH DRIVE #9	LAS VEGAS	NM	87701
R0661325	YARA SIMON	4 Rudolph Dr	LAS VEGAS	NM	87701
R0661326	EBELL VINIA A & ZACRIAS J	PO BOX 337	MAXWELL	NM	87728
R0661428	IBARRA JOSEFINA PRIETO	PO BOX 3572	LAS VEGAS	NM	87701
R0661436	HENSSLER ROBERT R	PO Box 4202	LAS VEGAS	NM	87701
R0661735	CITY OF LAS VEGAS	1700 NORTH GRAND AVENUE	LAS VEGAS	NM	87701
R0662525	ROSS KENNETH & VIVIAN D	PO Box 188	LAS VEGAS	NM	87701
R0662903	LUCERO DENNIS, Care of LUCERO ANNETTE	14 B Rudolph Drive	LAS VEGAS	NM	87701
R0662980	LOS ALAMOS NATIONAL BANK	PO BOX 60	LOS ALAMOS	NM	87544
R0663616	RUDOLPH JERRY & BERNICE	29 RUDOLPH DRIVE #9	LAS VEGAS	NM	87701
R0664128	MASCARENAS ESEQUIEL	3505 ERNEST ROAD	LAS VEGAS	NM	87701
R0665713	PLATEAU TELECOMMUNICATIONS	PO BOX 1947	CLOVIS	NM	88102
R0666310	MARTINEZ MATT C & MARTHA L S	772 DORA CELESTE	LAS VEGAS	NM	87701
R0709744	STALLSMITH JUNE & ROY	PO Box 1147	LAS VEGAS	NM	87701
R0709745	GONZALES KARLENE & MARTINEZ JOHNNA	PO Box 562	LAS VEGAS	NM	87701

NOTICE

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.

The proposed Las Vegas HMA & Crusher facility includes a 120 ton per hour and 200,000 tons per year hot mix asphalt plant (HMA) producing asphalt for road paving. The proposed construction includes aggregate storage piles, two 3-bin cold aggregate feeders, scalping screen, drum dryer/mixer with baghouse, incline conveyor, asphalt silo, asphalt heater, four (4) transfer conveyors, Evotherm storage tank, and two (2) asphalt cement storage tanks. The HMA plant will be powered with a 504 kW (676 horsepower (hp)) generator.

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}	4.70 pph	4.18 tpy
$PM_{2.5}$	3.39 pph	3.18 tpy
Sulfur Dioxide (SO_2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NO_x)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
Volatile Organic Compounds (VOC)	8.03 pph	7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1.29 pph	1.11 tpy
Toxic Air Pollutant (TAP)	1.50 pph	1.25 tpy
Green House Gas Emissions as Total CO_2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:

Short Line, LLC
PO Box 1499
Peralta, NM 87042

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.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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, Beverly Zastrow, the undersigned, certify that on October 5, 2023, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the City of Las Vegas of San Miguel County, State of New Mexico on the following dates:

1. Facility entrance (10.5.23)
2. Kocina De Raphael - 610 Legion Dr., Las Vegas, NM 87701 (10.5.23)
3. USPS West Las Vegas, NM 87701 (10.5.23)
4. USPS Las Vegas, NM 87701 (10.5.23)

Signed this 6th day of October, 2023,

Beverly Zastrow, Managing Member

October 6, 2023


SALES OFFICE
SHIPPING AND
RECEIVING
NOTICE
NOTICE
NOTICE

KOCINA
DE
RAPHAEL

Kocina de Raphael

MAN ON THE RUN
HANDYMAN SERVICES
WE PROVIDE PROMPT, PROFESSIONAL HOME IMPROVEMENT SERVICES THROUGHOUT THE LAS VEGAS, NM AREA. WITH OVER 35 YEARS OF EXPERIENCE, WE HAVE WHAT IT TAKES TO DELIVER OUTSTANDING RESULTS.
HAVE ANY ERRANDS OR CHORES
JUST ASK!
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Save New M
DUKE
REALTY GROUP
INVEST IN PROPERTY!
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HOUSE FOR Sale IN 24 NM HWY 50 PECOS, NM
CALL: 5056528674
For all your landscape needs
NOTICE
NOTICE
Benefit Bingo
For Nikki Romero
OCTOBER 22, 2023
TECOLOTE COMMUNITY CENTER
1PM
COME JOIN US FOR BINGO $10 TO PLAY
GRAND PRIZE $100
AUCTION WILL ALSO TAKE PLACE
GET SNACKS FROM THE CONCESSION
ALL PROCEEDS WILL BE GOING TO ATTORNEY FEES TO HELP RE-OPEN HER MURDER CASE!
TRICK OR TREAT
Join us for some Trick or Treating fun at
Children, Youth & Families Department
STATE OF NEW MEXICO
2518 Ridge Runner Road Las Vegas, NM 87701
October 31, 2023, from 3pm until 5pm or until we run out of treats.
Open to the community
RESTROOMS FOR CUSTOMERS ONLY.

UNITED STATES
POST OFFICE

U.S. POST OFFICE
WEST LAS VEGAS. N. MEX
87701

NOTICE

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

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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	4.68 pph	4.31 tpy
PM 2.5	3.38 pph	3.17 tpy
Sulfur Dioxide (SO_2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NO_x)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
Volatile Organic Compounds (VOC)	8.03 pph	7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1.28 pph	1.06 tpy
Toxic Air Pollutant (TAP)	0.001 pph	0.001 tpy
Green House Gas Emission as Total CO_2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Short Line, LLC
PO Box 1499
Peralta, NM 87042

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.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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.

Atención
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.

UNITED STATES
POST OFFICE
LAS VEGAS
NEW MEXICO 87701

FACT: If the White House Office of Management and Budget's proposal to sell the USPS to corporations for private profit goes through, it will result in higher costs, reduced mail days, and the end of delivery to every address.

Go to usmailnotforsale.org or call 202-224-3121 to contact your members of Congress. Tell them you support your public Postal Service!

FACT: Multiple polls consistently rate the Postal Service as the most trusted U.S. agency. It rates highest among young adults.

FACT: Package volume is increasing. In these days of rising on-line shopping, the public Postal Service is as needed as ever.

The Public Postal

U.S.

services.

NOTICE

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for an aggregate crushing and screening plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Luna Energy Facility is at Zone 13, UTM Easting 482,040 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.

The proposed Las Vegas HMA & Crusher facility includes a 200 ton per hour aggregate crushing and screening plant. The proposed construction includes new and finish aggregate storage piles, aggregate feeder, primary crusher, secondary crusher, screen, nine (9) transfer conveyors, and three (3) stacker conveyors. The aggregate screening plant will be powered with a 261 kW (350 horsepower (hp)) generator and a 242 kW (325 hp) generator.

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	3.86 pph	8.49 tpy
PM 2.5	0.71 pph	1.39 tpy
Sulfur Dioxide (SO_2)	0.24 pph	0.53 tpy
Nitrogen Oxides (NO_x)	6.75 pph	14.78 tpy
Carbon Monoxide (CO)	3.88 pph	8.51 tpy
Volatile Organic Compounds (VOC)	0.36 pph	0.78 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.03 pph	0.06 tpy
Toxic Air Pollutant (TAP)	0.0002 pph	0.0004 tpy
Green House Gas Emissions as Total CO_2e	n/a	1,700 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Short Line, LLC
PO Box 1499
Peralta, NM 87042

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.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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.

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NOTICE

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Luna Energy Facility is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.

The proposed Las Vegas HMA & Crusher facility includes a 120 ton per hour and 200,000 tons per year hot mix asphalt plant (HMA) producing asphalt for road paving. The proposed construction includes aggregate storage piles, two 3-bin cold aggregate feeders, scalping screen, drum dryer/mixer with baghouse, incline conveyor, asphalt silo, asphalt heater, four (4) transfer conveyors, Evotherm storage tank, and two (2) asphalt cement storage tanks. The HMA plant will be powered with a 504 kW (676 horsepower (hp)) generator.

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	4.68 pph	4.11 tpy
PM 2.5	3.38 pph	3.17 tpy
Sulfur Dioxide (SO_2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NO_x)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
Volatile Organic Compounds (VOC)	8.03 pph	7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1.29 pph	1.06 tpy
Toxic Air Pollutant (TAP)	0.001 pph	0.001 tpy
Green House Gas Emissions as Total CO_2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:
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PO Box 1499
Peralta, NM 87042

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Craft
Saturday Octo
10:00 pm—
American
2300 Collins Dr, La

CELEBRATE YOUR HERITAGE!
August 4th – August 12
Hosted by the Las Vegas Citizens' Committee for Historic Preservation in multiple locations

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Invites you to
Week by joining
Aug. 4th
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To learn more about Refuge
please visit https://www.fws.
mora or call 505-248-6453
about Heritage Week, visit w
We hope to see you

October 5, 2023
Monthly Commissioner's Board Meeting Hillcrest 6:00
Board Members—Mayordomo, Dickey Martinez; Chair
Quintana,Treasurer, Don Monnheimer; Secretary, Linda
John Herrera, vice chair; Carlos Ortiz, member

Agenda
Call meeting to order
Establish Quorum
Approval of minutes from August 2, 2023

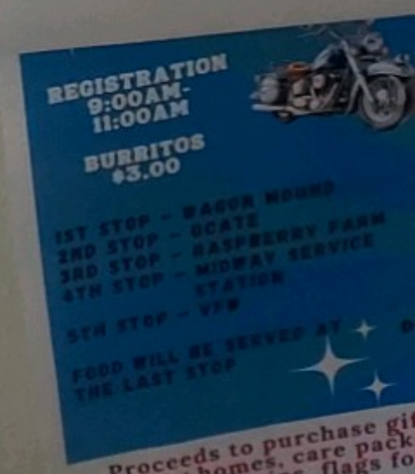
1. Sign Bylaws

2. Discussion on how to proceed with signature(s) on ap
for certification with state auditors office
2010-2019 2020-2022 2023

3. Approve application/ funds request from NM Acequia
Commission/Special Project Grant Program/Ashley Arella
initiated by Carlos Ortiz/Dickey Martinez

4. Ratify and approve execution of the contracts signed b
Michael Quintana on behalf of Acequia Madre de Los Ror
EQUIP 2018 748C30230D9 —8/7/2023
EQUIP 2018 748C302010W—6/13/2023

5. Resolution to authorize Commissioners, Don Monnheir
other member as signers at Community First Bank
Checking 1048902 Savings 36743
All other signers are to be removed
Two signatures are required for all checks that will be pres
for payment
Order a For Deposit Only Stamp
Order current check blanks
Order personalized deposit slips



October 20, 2023

CERTIFIED MAIL XXXX XXXX XXXX XXXX

Dear **[Neighbor/Environmental Director/county or municipal official]**

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.

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Pollutant:	Maximum Pounds per hour	Maximum Tons per year
PM_{10}	4.70 pph	4.18 tpy
$PM_{2.5}$	3.39 pph	3.18 tpy
Sulfur Dioxide (SO_2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NO_x)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
Volatile Organic Compounds (VOC)	8.03 pph	7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1.29 pph	1.11 tpy
Toxic Air Pollutant (TAP)	1.50 pph	1.25 tpy
Green House Gas Emissions as Total CO_2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:

Short Line, LLC
PO Box 1499
Peralta, NM 87042

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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.

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Sincerely,

Short Line, LLC

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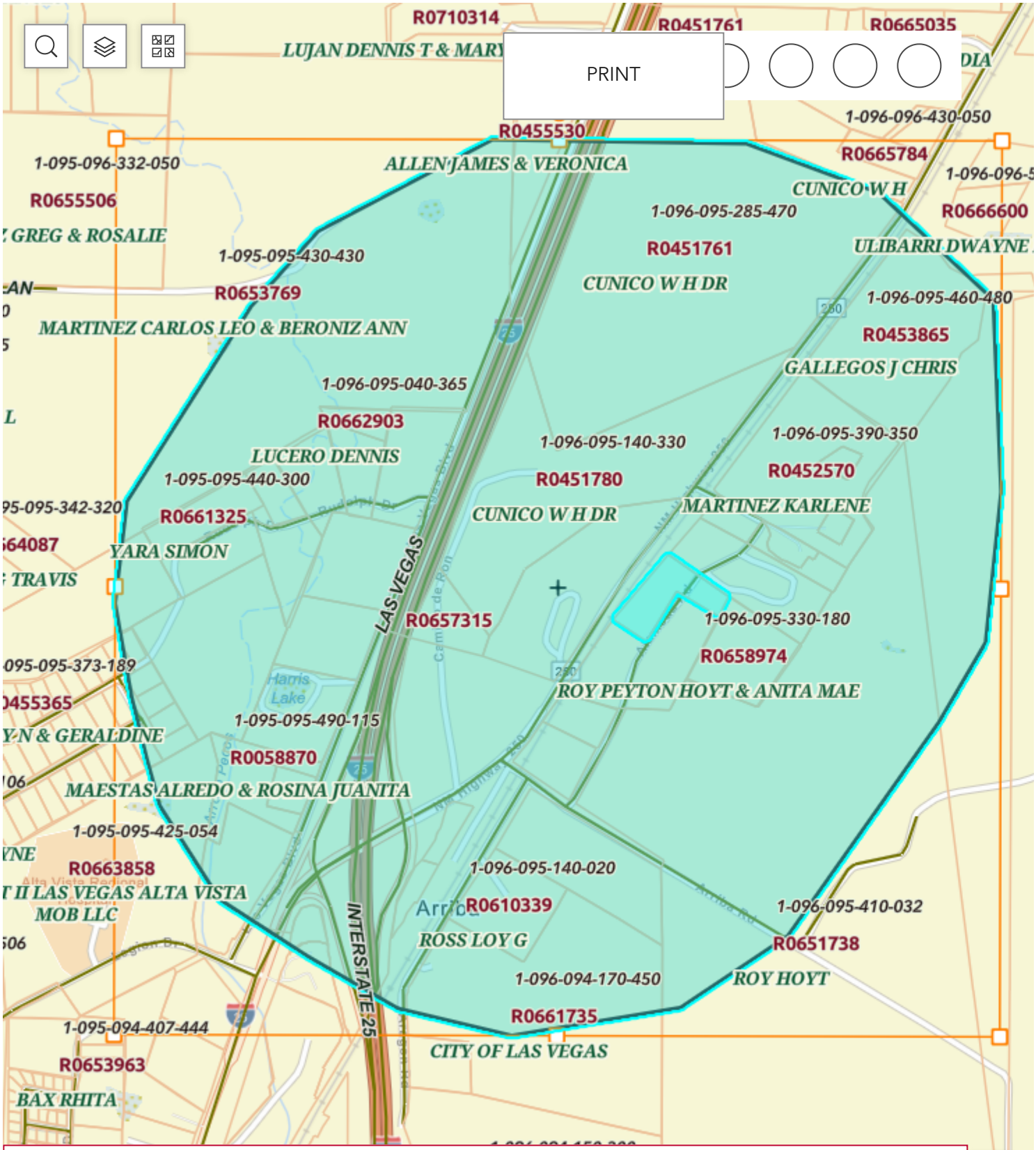
Government Entities within 10 Miles
October 2023

San Miguel County	Connie M. Gallegos, County Clerk	518 Valencia St. County Annex Building	Las Vegas	NM	87701
City of Las Vegas	Casandra Fresquez, City Clerk	1700 N. Grand Avenue	Las Vegas	NM	87701

ACCOUNTNO	NAME	ADDRESS1	CITY	STATE	ZIPCODE
R0661735	CITY OF LAS VEGAS	1700 NORTH GRAND AVENUE	LAS VEGAS	NM	87701
R0709745	GONZALES KARLENE & MARTINEZ JOHNNA	PO Box 562	LAS VEGAS	NM	87701
R0709744	STALLSMITH JUNE & ROY	PO Box 1147	LAS VEGAS	NM	87701
R0666310	MARTINEZ MATT C & MARTHA L S	772 DORA CELESTE	LAS VEGAS	NM	87701
R0665713	PLATEAU TELECOMMUNICATIONS	PO BOX 1947	CLOVIS	NM	88102
R0657363	CITY OF LAS VEGAS	1700 NORTH GRAND AVENUE	LAS VEGAS	NM	87701
R0658978	NEW MEXICO STATE HWY DEPT	28 BD INDUSTRIAL DR	LAS VEGAS	NM	87701
R0451861	MARTINEZ JOHN D & XIMENEZ ANDREA I	PO BOX 3600	LAS VEGAS	NM	87701
R0451761	CUNICO W H DR	57 CAMINO DE RON	LAS VEGAS	NM	87701
R0651509	LALA'S ENTERPRICES LLC	1409 4TH STREET	LAS VEGAS	NM	87701
R0654878	LUCERO DENNIS	14 B Rudolph Drive	LAS VEGAS	NM	87701
R0653769	MARTINEZ CARLOS LEO & BERONIZ ANN	PO BOX 13	SAPELLO	NM	87745
R0454740	RUDOLPH GENE L SR, JERRY & BERNICE	29 RUDOLPH DRIVE #9	LAS VEGAS	NM	87701
R0662980	LOS ALAMOS NATIONAL BANK	PO BOX 60	LOS ALAMOS	NM	87544
R0657312	ROSS KENNETH & VIVIAN D	PO Box 188	Las Vegas	NM	87701
R0657320	MORA SAN MIGUEL ELECTRIC COOP	PO BOX 240	MORA	NM	87732
R0658974	ROY PEYTON HOYT & ANITA MAE	PO BOX 515	LAS VEGAS	NM	87701
R0661436	HENSSLER ROBERT R	PO Box 4202	LAS VEGAS	NM	87701
R0073511	MARTINEZ MATIAS JR & CONSUELO	300 SOUTH HIGHWAY 85	LAS VEGAS	NM	87701
R0662525	ROSS KENNETH & VIVIAN D	PO Box 188	Las Vegas	NM	87701
R0651738	ROY HOYT	PO BOX 841	LAS VEGAS	NM	87701
R0664128	MASCARENAS ESEQUIEL	3505 ERNEST ROAD	LAS VEGAS	NM	87701
R0451780	CUNICO W H DR	57 CAMINO DE RON	LAS VEGAS	NM	87701
R0663616	RUDOLPH JERRY & BERNICE	29 RUDOLPH DRIVE #9	LAS VEGAS	NM	87701
R0662903	LUCERO DENNIS, Care of LUCERO ANNETTE	14 B Rudolph Drive	LAS VEGAS	NM	87701
R0660617	RUDOLPH JERRY R & BERNICE	29 RUDOLPH DRIVE #9	LAS VEGAS	NM	87701
R0453865	GALLEGOS J CHRIS	PO BOX 3	LAS VEGAS	NM	87701
R0455810	VALDEZ PACOMIO & MARCELLA	582 SCHULTZ	GREEN RIVER	WY	82935
R0454220	PACHECO JACOBO E & VALERIE	PO BOX 300	MORA	NM	87732
R0454121	ROY ANITA MAE NAYLOR	PO BOX 515	LAS VEGAS	NM	87701
R0655955	BOYD WILLIAM J & HEMMES VICKY L	17 ALMEDA ROAD	LAS VEGAS	NM	87701
R0655097	LOS ALAMOS NATIONAL BANK	640 WEST LAMBERT ROAD	BREA	CA	92821
R0661428	IBARRA JOSEFINA PRIETO	PO BOX 3572	LAS VEGAS	NM	87701
R0653770	MADRID MARVIN D & REGINA A	205 1/2 CHICO DRIVE	LAS VEGAS	NM	87701
R0455530	ALLEN JAMES & VERONICA	PO BOX 2735	LAS VEGAS	NM	87701
R0600364	TRUJILLO ANTHONY & PATRICIA	201 CHICO DRIVE	LAS VEGAS	NM	87701

ACCOUNTNO	NAME	ADDRESS1	CITY	STATE	ZIPCODE
R0454730	LYSTER HARLAN K	PO Box 2546	Las Vegas	NM	87701
R0610303	GONZALES RITA MARIE & ESPINOZA DARIAN MATTHEW	276 HARRIS ROAD	LAS VEGAS	NM	87701
R0661326	EBELL VINIA A & ZACRIAS J	PO BOX 337	MAXWELL	NM	87728
R0455363	TAFOYA LEONOR	202 CHICO DRIVE	LAS VEGAS	NM	87701
R0455362	ORTEGA-MATHIS PRESCILLA S & DYCKSON RAYMOND J	PO BOX 56	LAS VEGAS	NM	87701
R0661325	YARA SIMON	4 Rudolph Dr	LAS VEGAS	NM	87701
R0655954	HENSSLER ROBERT R	PO Box 4202	LAS VEGAS	NM	87701
R0451420	TRUJILLO JOHNNY A & LILLIAN M & LAW OFFICE OF DENNIS P	PO BOX 45311	RIO RANCHO	NM	87174
R0610339	ROSS LOY G	PO Box 727	Springer	NM	87747
R0654993	MARTINEZ MARCIA A	274 HARRIS ROAD	LAS VEGAS	NM	87701
R0454286	MARTINEZ MEGAN R	412 South Pacific St	LAS VEGAS	NM	87701
R0058870	MAESTAS ALREDO & ROSINA JUANITA	PO BOX 152	LAS VEGAS	NM	87701
R0452570	MARTINEZ KARLENE	PO BOX 562	LAS VEGAS	NM	87701
R0452660	SAN MIGUEL HOSPITAL CORPORTION A NM CORP PROPERTY VALUATION SERVICES	14400 METCALF	OVERLAND PARK	KS	66223
R0654835	ROSS KENNETH & VIVIAN D	PO Box 188	Las Vegas	NM	87701



This map is provided for you through the office of the county assessor's office in San Miguel County New Mexico.

The San Miguel County Assessor's office makes every attempt to capture and portray real property data in our maps. However, this is not

This GIS portal was created by Kristin M Kinic, chief mapper and GIS analyst. Most of the data portrayed in this map is from our office,SMC and the Resource Geographic Information system repository at the University of New Mexico. (https://rgis.unm.edu).

For questions, concerns: email kkinic@co.sanmiguel.nm.us

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- ☐ Certified Mail Restricted Delivery $ ____
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- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
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ALAMEDA STATION
OCT 20 2023
ALBUQUERQUE, NM 87114

Sent To: VALDEZ PACOMIO & MARCELLA
Street: 582 SCHULTZ
City, St: GREEN RIVER, WY 82935-5212

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

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- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here
ALAMEDA STATION
OCT 20 2023
ALBUQUERQUE, NM 87114

Sent To: City of Las Vegas
Street an: Casandra Fresquez, City Clerk
1700 N. Grand Avenue
City, Stat: Las Vegas, NM 87701-4731

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7022 3330 0001 7203 8153

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Postmark Here
ALAMEDA STATION
OCT 20 2023
ALBUQUERQUE, NM 87114

Sent To: San Miguel County
Street anc: Connie M. Gallegos, County Clerk
518 Valencia St.
City, State: County Annex Building
Las Vegas, NM 87701-4257

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7022 3330 0001 7203 8146

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
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- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here
ALAMEDA STATION
OCT 20 2023
ALBUQUERQUE, NM 87114

Sent To: TRUJILLO ANTHONY & PATRICIA
Street a: 201 CHICO DRIVE
City, St: LAS VEGAS, NM 87701-9511

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7020 2450 0000 3198 0584

U.S. Postal Service™
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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MARTINEZ JOHN D & XIMENEZ
Street an: ANDREA I
PO BOX 3600
City, Stai: LAS VEGAS, NM 87701-3600

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

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7020 2450 0000 3198 0577

Certified Mail Fee $ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage $ 0.63

Total Postage and Fees $ 4.98

Postmark Here

OCT 20 2023

Sent To MARTINEZ CARLOS LEO &
Street an BERONIZ ANN
PO BOX 13
City, Stat SAPELLO, NM 87745-0013

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

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7020 2450 0000 3198 0553

Certified Mail Fee $ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage $ 0.63

Total Postage and Fees $ 4.98

Postmark Here

OCT 20 2023

Sent To MAESTAS ALREDO & ROSINA
Street ar JUANITA
PO BOX 152
City, Sta LAS VEGAS, NM 87701-0152

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

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7020 2450 0000 3198 0560

Certified Mail Fee $ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage $ 0.60

Total Postage and Fees $ 4.98

Postmark Here

OCT 20 2023

Sent To MADRID MARVIN D & REGINA A
Street a 205 1/2 CHICO DRIVE
LAS VEGAS, NM 87701-9511
City, Sta

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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7020 2450 0000 3198 0546

Certified Mail Fee $ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage $ 0.63

Total Postage and Fees $ 4.98

Postmark Here

Sent To LYSTER HARLAN K
Street an PO Box 2546
Las Vegas, NM 87701-2546
City, State

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

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7020 2450 0000 3198 0539

Certified Mail Fee $ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage $ 0.63

Total Postage and Fees $ 4.98

Postmark Here

OCT 20 2023

Sent To LUCERO DENNIS, Care of LUCERO
Street ar ANNETTE
14 B Rudolph Drive
City, Sta LAS VEGAS, NM 87701-9404

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

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OFFICIAL USE

7020 2450 0000 3198 0522

Certified Mail Fee $ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage $ 0.63

Total Postage and Fees $ 4.98

Postmark Here

OCT 20 2023

Sent To LOS ALAMOS NATIONAL BANK
Street an 640 WEST LAMBERT ROAD
BREA, CA 92821-3139
City, Stat

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0515

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: LOS ALAMOS NATIONAL BANK
Street an: PO BOX 60
City, Stat: LOS ALAMOS, NM 87544-0060

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0508

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: LALA'S ENTERPRICES LLC
Street ar: 1409 4TH STREET
City, Sta: LAS VEGAS, NM 87701-4402

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0492

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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: IBARRA JOSEFINA PRIETO
Street an: PO BOX 3572
City, Stat: LAS VEGAS, NM 87701-3572

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0485

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: HENSSLER ROBERT R
Street a: PO Box 4202
City, Sta: LAS VEGAS, NM 87701-4202

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0478

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: GONZALES RITA MARIE &
Street ar: ESPINOZA DARIAN MATTHEW
City, Sta: 276 HARRIS ROAD
LAS VEGAS, NM 87701-4836

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0461

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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: GONZALES KARLENE & MARTINEZ
Street and: JOHNNA
PO Box 562
City, State: LAS VEGAS, NM 87701-0562

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0454

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee
$

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$

Total Postage and Fees
$

Postmark Here
OCT 20 2023

Sent To: GALLEGOS J CHRIS
Street and Apt. No., or PO Box No.: PO BOX 3
City, State, ZIP+4®: LAS VEGAS, NM 87701-0003

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0447

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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here
OCT 20 2023

Sent To: EBELL VINIA A & ZACRIAS J
Street and Apt. No., or PO Box No.: PO BOX 337
City, State, ZIP+4®: MAXWELL, NM 87728-0337

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0430

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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here
OCT 20 2023

Sent To: CUNICO W H DR
Street and Apt. No., or PO Box No.: 57 CAMINO DE RON
City, State, ZIP+4®: LAS VEGAS, NM 87701-3759

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0423

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here
OCT 20 2023

Sent To: CITY OF LAS VEGAS
Street and Apt. No., or PO Box No.: 1700 N. GRAND AVENUE
City, State, ZIP+4®: LAS VEGAS, NM 87701-4731

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0416

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here
OCT 20 2023

Sent To: BOYD WILLIAM J & HEMMES VICKY L
Street and Apt. No., or PO Box No.: 17 ALMEDA ROAD
City, State, ZIP+4®: LAS VEGAS, NM 87701-3996

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0409

U.S. Postal Service™
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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $
- ☐ Return Receipt (electronic) $
- ☐ Certified Mail Restricted Delivery $
- ☐ Adult Signature Required $
- ☐ Adult Signature Restricted Delivery $

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: ALLEN JAMES & VERONICA
Street and Apt. No., or PO Box No.: PO BOX 2735
City, State, ZIP+4®: LAS VEGAS, NM 87701-2735

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0607

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OFFICIAL USE

Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MARTINEZ MARCIA A
Street an: 274 HARRIS ROAD
City, Stat: LAS VEGAS, NM 87701-4836

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0591

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MARTINEZ KARLENE
Street and: PO BOX 562
City, State: LAS VEGAS, NM 87701-0562

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8207

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MARTINEZ MATT C & MARTHA L S
Street ar: 772 DORA CELESTE
City, Sta: LAS VEGAS, NM 87701-5109

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7020 2450 0000 3198 0614

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MARTINEZ MATIAS JR &
Street a: CONSUELO
City, Sta: 300 SOUTH HIGHWAY 85
LAS VEGAS, NM 87701-3873

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8221

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MASCARENAS ESEQUIEL
Street ar: 3505 ERNEST ROAD
City, Stat: LAS VEGAS, NM 87701-9540

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8214

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Certified Mail Fee
$ 4.35

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

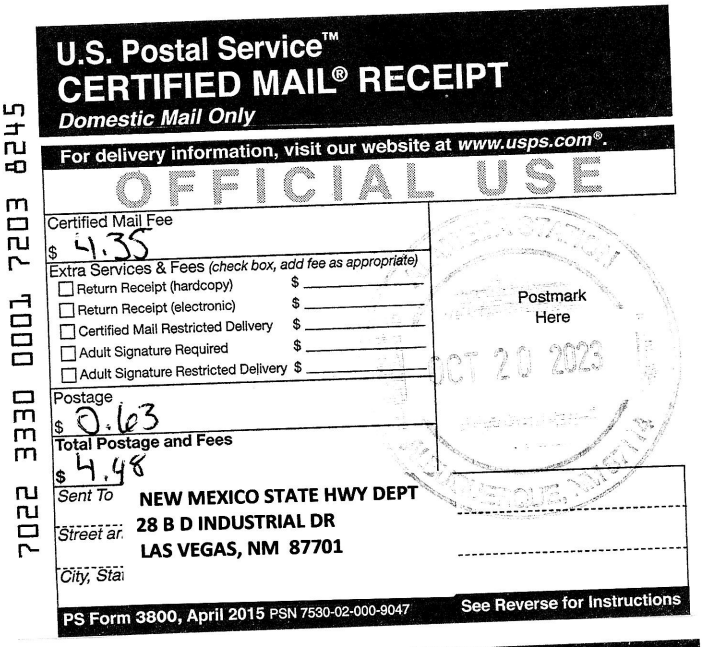
Postage
$ 0.63

Total Postage and Fees
$ 4.98

Postmark Here

Sent To: MARTINEZ MEGAN R
Street a: 412 South Pacific St
City, Sta: LAS VEGAS, NM 87701-3254

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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OFFICIAL USE

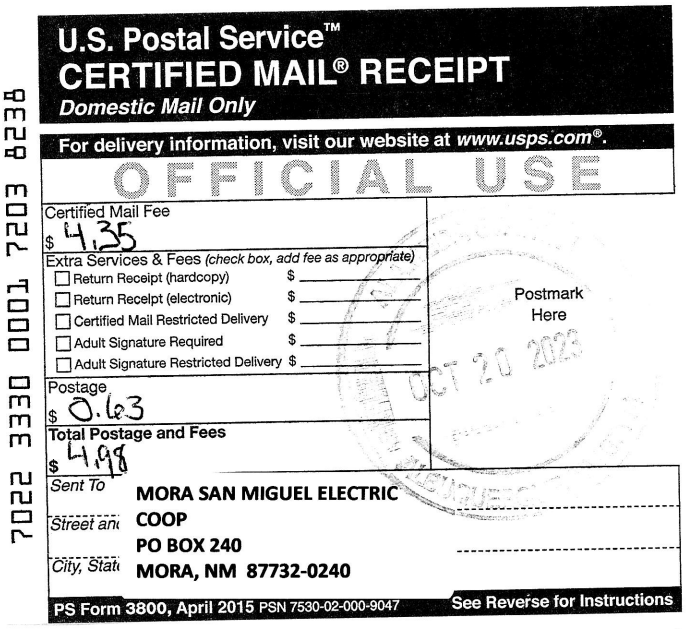
7022 3330 0001 7203 8245

Certified Mail Fee $ 4.35
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) $ ____
☐ Return Receipt (electronic) $ ____
☐ Certified Mail Restricted Delivery $ ____
☐ Adult Signature Required $ ____
☐ Adult Signature Restricted Delivery $ ____
Postage $ 0.63
Total Postage and Fees $ 4.98

Postmark Here
OCT 20 2023

Sent To: NEW MEXICO STATE HWY DEPT
Street ar: 28 B D INDUSTRIAL DR
City, Stai: LAS VEGAS, NM 87701

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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OFFICIAL USE

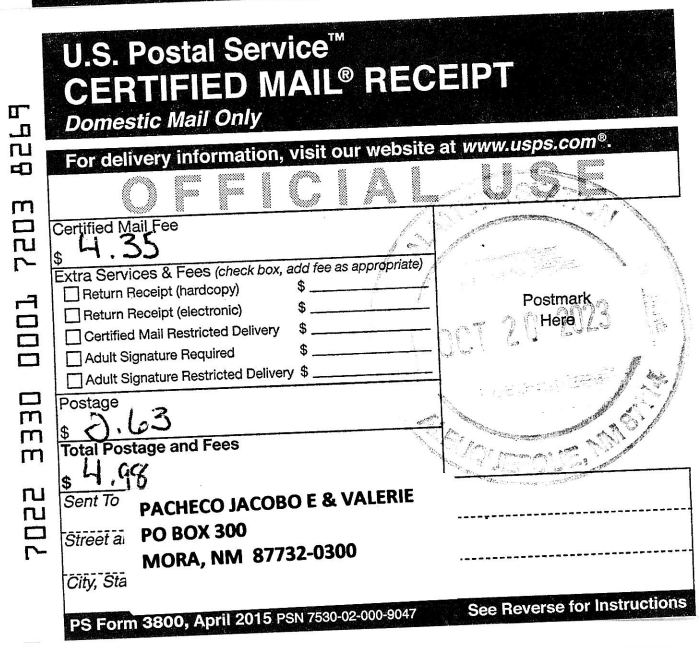
7022 3330 0001 7203 8238

Certified Mail Fee $ 4.35
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) $ ____
☐ Return Receipt (electronic) $ ____
☐ Certified Mail Restricted Delivery $ ____
☐ Adult Signature Required $ ____
☐ Adult Signature Restricted Delivery $ ____
Postage $ 0.63
Total Postage and Fees $ 4.98

Postmark Here
OCT 20 2023

Sent To: MORA SAN MIGUEL ELECTRIC
Street an: COOP
City, Stat: PO BOX 240
MORA, NM 87732-0240

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®.

OFFICIAL USE

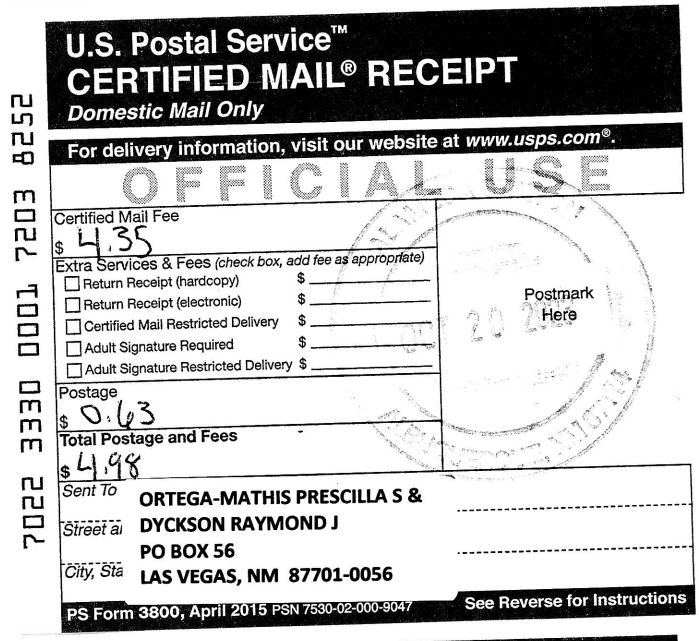
7022 3330 0001 7203 8269

Certified Mail Fee $ 4.35
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) $ ____
☐ Return Receipt (electronic) $ ____
☐ Certified Mail Restricted Delivery $ ____
☐ Adult Signature Required $ ____
☐ Adult Signature Restricted Delivery $ ____
Postage $ 0.63
Total Postage and Fees $ 4.98

Postmark Here
OCT 20 2023

Sent To: PACHECO JACOBO E & VALERIE
Street ai: PO BOX 300
City, Sta: MORA, NM 87732-0300

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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OFFICIAL USE

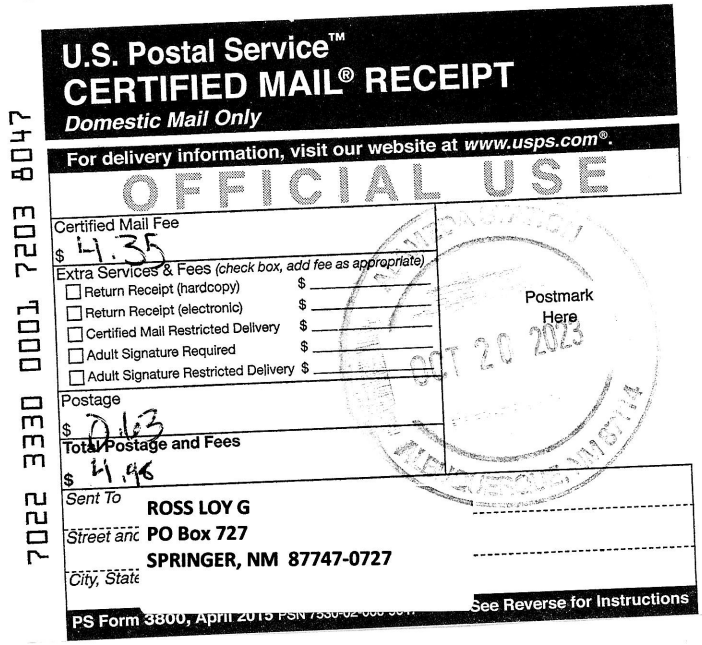
7022 3330 0001 7203 8252

Certified Mail Fee $ 4.35
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) $ ____
☐ Return Receipt (electronic) $ ____
☐ Certified Mail Restricted Delivery $ ____
☐ Adult Signature Required $ ____
☐ Adult Signature Restricted Delivery $ ____
Postage $ 0.63
Total Postage and Fees $ 4.98

Postmark Here
OCT 20 2023

Sent To: ORTEGA-MATHIS PRESCILLA S &
Street ai: DYCKSON RAYMOND J
City, Sta: PO BOX 56
LAS VEGAS, NM 87701-0056

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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7022 3330 0001 7203 8047

Certified Mail Fee $ 4.35
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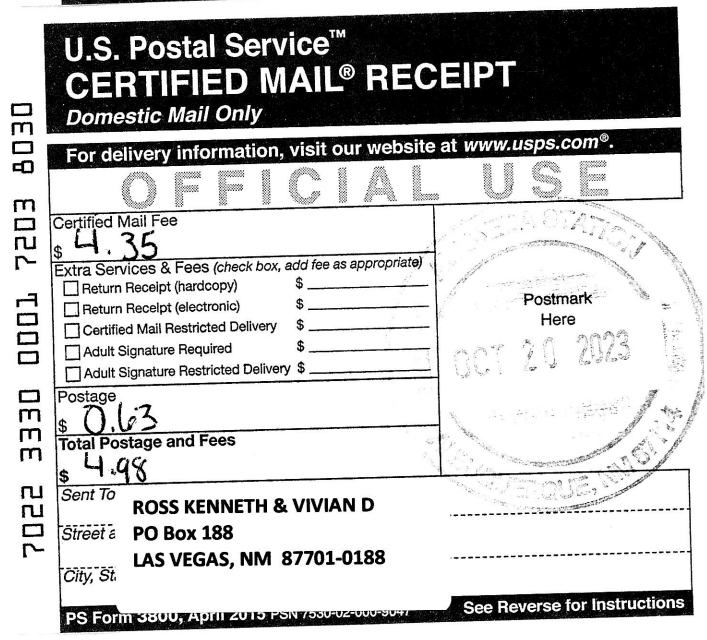
☐ Adult Signature Required $ ____
☐ Adult Signature Restricted Delivery $ ____
Postage $ 0.63
Total Postage and Fees $ 4.98

Postmark Here
OCT 20 2023

Sent To: ROSS LOY G
Street and: PO Box 727
City, State: SPRINGER, NM 87747-0727

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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☐ Return Receipt (electronic) $ ____
☐ Certified Mail Restricted Delivery $ ____
☐ Adult Signature Required $ ____
☐ Adult Signature Restricted Delivery $ ____
Postage $ 0.63
Total Postage and Fees $ 4.98

Postmark Here
OCT 20 2023

Sent To: ROSS KENNETH & VIVIAN D
Street a: PO Box 188
City, St: LAS VEGAS, NM 87701-0188

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

OCT 20 2023
Postmark Here
ALBUQUERQUE, NM 87113

Sent To: PLATEAU TELECOMMUNICATIONS
Street a: PO BOX 1947
City, Sta: CLOVIS, NM 88102-1947

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8061

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- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

OCT 20 2023
Postmark Here
ALBUQUERQUE, NM 87113

Sent To: ROY PEYTON HOYT & ANITA MAE
Street and: PO BOX 515
City, State: LAS VEGAS, NM 87701-0515

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8054

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- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ 0.63

Total Postage and Fees
$ 4.98

OCT 20 2023
Postmark Here
ALBUQUERQUE, NM 87113

Sent To: ROY HOYT
Street a: PO BOX 841
City, St: LAS VEGAS, NM 87701-0841

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8085

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- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

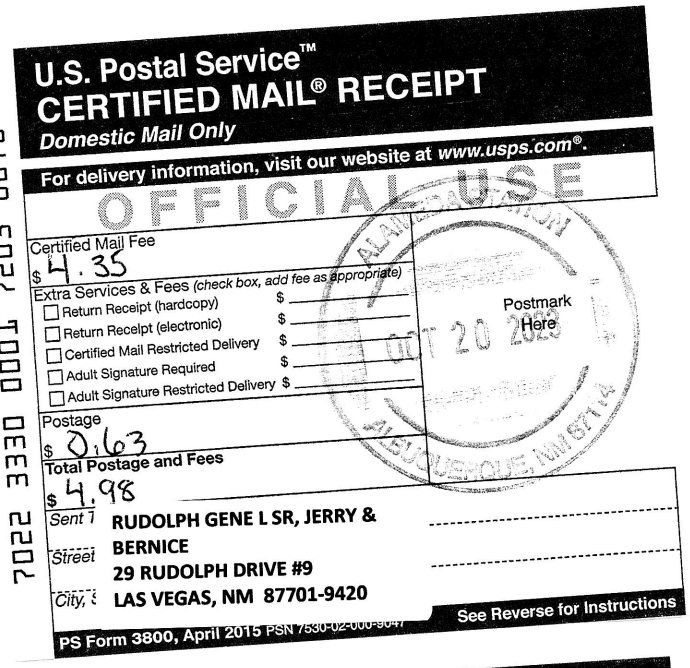
Postage
$ 0.63

Total Postage and Fees
$ 4.98

OCT 2 2023
Postmark Here
ALBUQUERQUE, NM 87113

Sent To: SAN MIGUEL HOSPITAL CORPORTION
Street a: A NM CORP
PROPERTY VALUATION SERVICES
City, St: 14400 METCALF
OVERLAND PARK, KS 66223-2989

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



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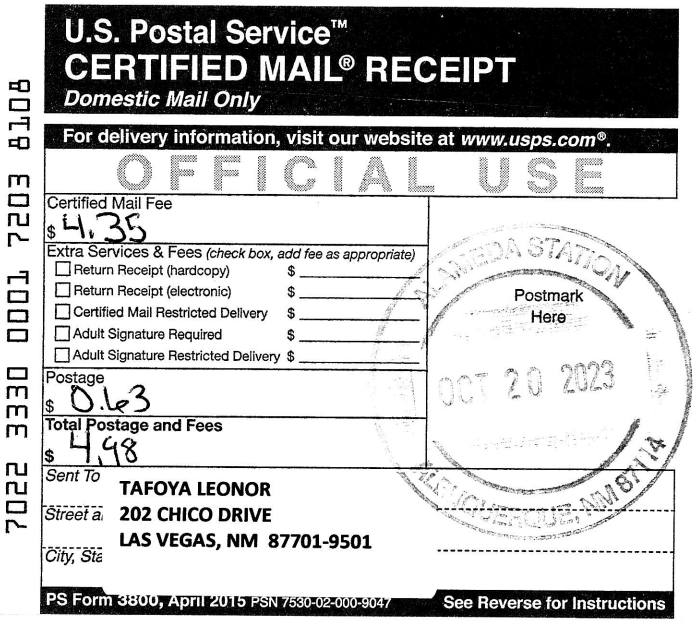
☐ Return Receipt (electronic) $
☐ Certified Mail Restricted Delivery $
☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $
Postage $ 0.63
Total Postage and Fees $ 4.98
Sent To RUDOLPH GENE L SR, JERRY & BERNICE
Street 29 RUDOLPH DRIVE #9
City, LAS VEGAS, NM 87701-9420
Postmark Here
OCT 20 2023
ALAMEDA STATION ALBUQUERQUE, NM 87114
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7022 3330 0001 7203 8078



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OFFICIAL USE
Certified Mail Fee $ 4.35
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) $
☐ Return Receipt (electronic) $
☐ Certified Mail Restricted Delivery $
☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $
Postage $ 0.63
Total Postage and Fees $ 4.98
Sent To TAFOYA LEONOR
Street a 202 CHICO DRIVE
City, Sta LAS VEGAS, NM 87701-9501
Postmark Here
OCT 20 2023
ALAMEDA STATION ALBUQUERQUE, NM 87114
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7022 3330 0001 7203 8108

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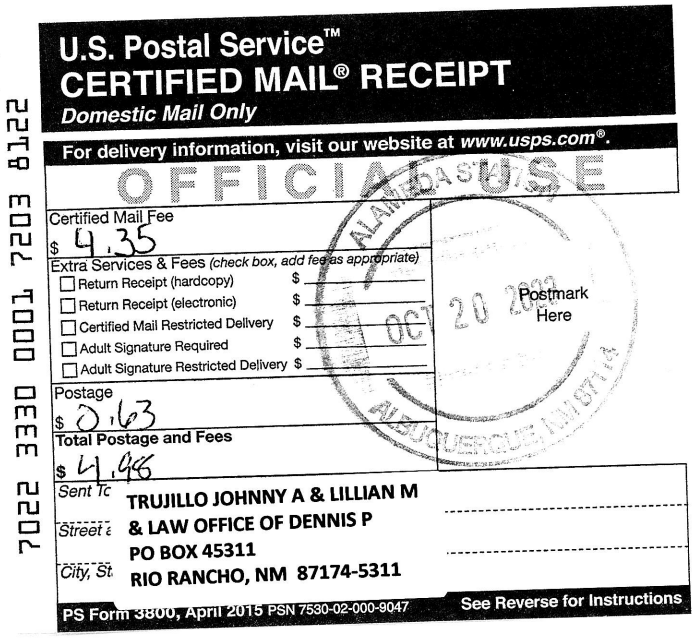
☐ Return Receipt (hardcopy) $
☐ Return Receipt (electronic) $
☐ Certified Mail Restricted Delivery $
☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $
Postage $ 0.63
Total Postage and Fees $ 4.98
Sent To STALLSMITH JUNE & ROY
Street ar PO Box 1147
City, Sta LAS VEGAS, NM 87701-1147
Postmark Here
OCT 20 2023
ALBUQUERQUE, NM
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7022 3330 0001 7203 8092



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Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) $
☐ Return Receipt (electronic) $
☐ Certified Mail Restricted Delivery $
☐ Adult Signature Required $
☐ Adult Signature Restricted Delivery $
Postage $ 0.63
Total Postage and Fees $ 4.98
Sent To TRUJILLO JOHNNY A & LILLIAN M
Street a & LAW OFFICE OF DENNIS P
City, St PO BOX 45311
RIO RANCHO, NM 87174-5311
Postmark Here
OCT 20 2023
ALBUQUERQUE, NM 87114
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions
7022 3330 0001 7203 8122

Gmail san miguel

Mail

Chat

Spaces

Meet

Garcia-Lujan, Dorene
to me

Good morning Paul,

Attached please find the information you requested. Please feel free to contact me if you have any questions or concerns.

Thank you,

Dorene J. García-Lujan
San Miguel County
Chief Deputy Assessor
dgarcialujan@co.sanmiguel.nm.us
505-454-1430

One attachment • Scanned by Gmail

Request for Publi..

Paul Wade <pwade@montrose-env.com>
to Dorene

Dorene
I am in need of one more item. As part of the requirement from the state I need a map that shows the area of landowners that corresponds to the list of landowners. T

NOTICE OF AIR QUALITY PERMIT APPLICATION

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.

The proposed Las Vegas HMA & Crusher facility includes a 120 ton per hour and 200,000 tons per year hot mix asphalt plant (HMA) producing asphalt for road paving. The proposed construction includes aggregate storage piles, two 3-bin cold aggregate feeders, scalping screen, drum dryer/mixer with baghouse, incline conveyor, asphalt silo, asphalt heater, four (4) transfer conveyors, Evotherm storage tank, and two (2) asphalt cement storage tanks. The HMA plant will be powered with a 504 kW (676 horsepower (hp)) generator.

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}	4.70 pph	4.18 tpy
$PM_{2.5}$	3.39 pph	3.18 tpy
Sulfur Dioxide (SO_2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NO_x)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
Volatile Organic Compounds (VOC)	8.03 pph	7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1.29 pph	1.11 tpy
Toxic Air Pollutant (TAP)	1.50 pph	1.25 tpy
Green House Gas Emissions as Total CO_2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:

Short Line, LLC
PO Box 1499
Peralta, NM 87042

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.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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.

AFFIDAVIT OF PUBLICATION

COUNTIES OF SAN MIGUEL and MORA, STATE OF NEW MEXICO } ss.

Phil Scherer, Editor, being first duly sworn, on oath states that he is a Manager of the Las Vegas Optic, a semi-weekly newspaper of general paid and general circulation in San Miguel and Mora Counties, New Mexico, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of the provisions of Chapter 167, session Laws of 1937, and that payment therefor has been made and assessed as court costs. That the notice of which a copy as published is hereto attached and hereby made a part hereof was published in said newspaper once each week for 1 consecutive insertion(s). That the first publication being on the 13th day of October, 2023 and the subsequent consecutive publications on the __n/a__ day(s) of _____, 20_____.

Price: $ 172.17.

Account Number: 40484.

Phillip Scherer

Editor

Subscribed and sworn to before me this 13th day of October, 2023.

Maria Sanchez

Notary Public

STATE OF NEW MEXICO
NOTARY PUBLIC
MARIA S. SANCHEZ
COMMISSION NUMBER 1117811
EXPIRATION DATE 08-09-2025

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Pollutant / MaximumPounds per hour / Maximum Tons per year

PM 10 / 4.70 pph / 4.18tpy

PM 2.5 / 3.39 pph / 3.18tpy

Sulfur Dioxide (SO2) /7.27 pph / 6.62 tpy

Nitrogen Oxides (NOx)/ 13.54 pph / 21.12 tpy

Carbon Monoxide (CO)/ 20.15 pph / 22.23 tpy

Volatile Organic Compounds (VOC) / 8.03pph / 7.29 tpy

Total sum of all Hazardous Air Pollutants(HAPs) / 1.29 pph / 1.11tpy

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The maximum and standard operating schedule of the facility is daylighthours, 7 days per week,and 52 weeks per year. The owner and/or operator of the Facility is:

Short Line, LLC
PO Box 1499
Peralta, NM 87042

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that youhave been discriminated against with respectto a NMED programor activity, you maycontact: Non-Discrimination Coordinator,NMED, 1190 St. Francis Dr., Suite N4050,P.O. Box 5469, SantaFe, NM 87502, (505)827-2855, nd.coordinator@env.nm.gov. Youmay also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learnhow and where to filea complaint of discrimination.

PUB: Las Vegas Optic,October 13, 2023
#218510

To submit your classified ad, go to: **www.lasvegasoptic.com** *(Under Classifieds/Submit an Ad/Go to form)*

CLASSIFIEDS

To place a legal or display ad, email
lvolegals@orourkemediagroup.com
Questions? Call: 505-425-6796

To view statewide legals online, go to: www.newmexicopublicnotices.com

To view local classifieds/legals online, go to: www.lasvegasoptic.com

EMPLOYMENT

EMPLOYMENT

We are looking for full time drivers, Laborers, Yard men, and experienced carpenters. Please call (505) 429-2961.

LAS VEGAS OPTIC SPORTS EDITOR
The successful applicant will be a multi-talented writer who is dedicated to excelling at local sports coverage, identifying and producing sports news and features. Must have strong writing, editing, photography and pagination skills with a knowledge of Adobe Creative Suite - Photoshop and InDesign. Will be part of the editorial team developing stories and producing accurate, timely news articles. Must work well under pressure and meet deadlines. Send your resume to Jim O'Rourke, jorourke@orourkemediagroup.com or to Phil Scherer, pscherer@orourkemediagroup.com

GARAGE SALES

YARD SALE

HUMONGOUS Yard Sale Saturday 10/14. At 482 Christine Dr, Las Vegas. 9 am to 1 pm, unless sold out earlier. Christmas gift items as well as some tools, bedding, replace items lost in the fire and gifts.

MERCHANDISE

FOR SALE

I have two coin operated pool tables with accessories, a jukebox for sale, great for a game room. Please contact me at (505) 429-2961

RENTALS

HOMES FOR RENT

For Rent - 2 bedroom, 1 bathroom home for rent plus all utilities. Has large yard. References required, a lease is required, and non-smoking. For more information, call Aileen @ 505.426.5301.

For Rent - 3 bedrooms. $600 per month. No pets. Please call 505-398-0031 or 505-451-9389 for more information

MOBILE HOMES FOR RENT

2 bedroom in Buena Vista NM, Hwy 518 MM 21. No Kids, No Pets. Call or text 505-259-7373 or 575-770-4169.

FOR RENT
I have a Mobile home Set up for sale. Please call me for questions (505) 429-2961.

COMMERCIAL

FOR LEASE

Available salon space/ office space for rent at 618 8th street if you have any questions please contact (505) 429-2961. For further information.

WATER RIGHTS

Looking to purchase water rights in the Upper Pecos Basin (Las Vegas NM broader area.) Call 505-702-7192.

LEGALS

**STATE OF NEW MEXICO
COUNTY OF MORA
FOURTH JUDICIAL DISTRICT COURT
JOSEPH ROMERO,
Plaintiff,
v.
MICHELLE RENAE ROMERO, THE ESTATE OF RAYMOND CHRISTIAN ROMERO, and ALL UNKNOWN PERSONS WHO MAY CLAIM A LIEN, INTEREST OR TITLE TO THE PROPERTY,
Defendants.
D-430-CV-2023-41
NOTICE OF SUIT**

STATE OF NEW MEXICO to the defendants Michelle Renae Romero, the Estate of Raymond Christian Romero, and All Unknown Persons Who May Claim a Lien, Interest or Title to the Property, GREETINGS:
You are hereby notified that the above-named Plaintiff has filed a civil action against you in the above-entitled court and cause, the general object thereof being enforcing specific performance of a contract to convey the following described real estate:
All of that certain Tract of Land herein designated Tract "B-A" being part of Tract B on P. David Archuleta & Associates, Inc., drawing No. 112225-262, Date 2-23-95, Mora County, New Mexico. Said Tract B-A being bounded as follows: On the north & west by property belonging now or formerly to Eureka Ranch, on the east by property belonging now or formerly to Theresa M. Manzanares, and on the south by Tract B-B and being more particularly described as follows: Commencing at 1/4 corner USGLO brass cap section 25 & 24, T.19N., R.22E.; thence S00o 12'53" west, a distance of 1333.021 feet to a 1/2" l/P. with cap number 10261; thence N89o 53'51" west, a distance of 893.39 feet to angle point number 1 and true point of beginning; thence N89o 53'51" west, a distance of 1761.60 set to angle point number 2; thence S00o 17'00" east, a distance of 680.518 feet to angle point number 3; thence S89o 55'59" east, a distance of 1761.60 feet to angle point number 4; thence N00o 17'02" west, a distance of 679.428 feet to angle point number 1 and true point of beginning; containing 26.500 acres more or less
That unless you enter your appearance in said cause on or before 30 days after the last day of publication, judgment by default may be entered against you.
Scott Aaron, Attorney for Plaintiff
POB 3834, Las Vegas, NM 87701
505-434-1515
WITNESS the Honorable Flora Gallegos, District Judge of the Fourth Judicial District Court of the State of New Mexico, and the Seal of the District Court of Mora County, this 25th day of September, 2023.
(SEAL)
CLERK OF THE DISTRICT COURT
/s/ Helen Tafoya
Deputy
PUB: Las Vegas Optic, September 29, October 6, 13, 2023
#217111

**IN THE DISTRICT COURT
COUNTY OF SAN MIGUEL
STATE OF NEW MEXICO
D-412-PB-2023-00045
IN THE MATTER OF THE JOINT AND SUCCEEDING ESTATE OF CARLY GALLEGOS, DECEASED, AND THE ESTATE OF JORDAN MARAE GALLEGOS, DECEASED
NOTICE TO CREDITORS**

NOTICE IS HEREBY GIVEN that the undersigned has been appointed personal representative of the estates of Carly Gallegos and Jordan Marae Gallegos. All persons having claims against these estates are required to present their claims within four months after the date of the first publication of this Notice or the claims will be forever barred. Claims must be presented either to the undersigned personal representative c/o Danelle J. Smith, Attorney for Personal Representative, P.O. Box 1811, Las Vegas, New Mexico 87701 or filed with the District Court, San Miguel County Courthouse, Las Vegas, New Mexico.
DATED: September 27, 2023
Marie G. Sena,
Personal Representative of the Joint and Succeeding Estates of Carly Gallegos, Deceased, and Jordan Marae Gallegos, Deceased
c/o Danelle J. Smith, Attorney
P.O. Box 1811
Las Vegas, NM 87701
PUB: Las Vegas Optic, October 6, 13, 20, 2023
#217315

AUCTION
NOTICE OF PUBLIC AUCTION THURSDAY, DECEMBER 21, 2023, 10 A.M. HWY 518 MM 26, MORA, NM. The following vehicle will be sold to satisfy storage debt to DANIEL GARCIA, per NM State law: 1957 CHEVY BELAIR WAGON, VIN#: VC57T183921, $1976.70 **NO PRIOR VIEWING OF VEHICLE**
PUB: Las Vegas Optic, October 6, 13, 2023
#218057

**STATE OF NEW MEXICO
IN THE PROBATE COURT
SAN MIGUEL COUNTY
IN THE MATTER OF THE ESTATE OF DONELIA MABEL FLORES, a/k/a MABEL B. FLORES,
Deceased
No. 2023-0070
NOTICE TO CREDITORS**

NOTICE IS HEREBY GIVEN that the undersigned has been appointed personal representative of the decedent. All persons having claims against this estate of the decedent are required to present their claims within four (4) months after the date of the first publication of any published notice to creditors or sixty (60) days after the date of mailing or other delivery of this notice, whichever is later, or the claims will be forever barred. Claims must be presented either to the undersigned personal representative at the address listed below, or filed with the Probate Court of San Miguel County, New Mexico, located at the following address: 500 West National Ave., Las Vegas, N.M. 87701.
Dated: 10/02/2023
/s/ Julia D. Lucero, personal representative
HC 73, Box 70
San Jose, NM 87565
PUB: Las Vegas Optic, October 6, 13, 20, 2023
#218123

**STATE OF NEW MEXICO
COUNTY OF SAN MIGUEL
FOURTH JUDICIAL DISTRICT COURT
D-412-CV-2023-340
THERESITA TAFOYA,
Plaintiff,
v.
THE ESTATE OF JOSE ANDRES TAFOYA, ALL UNKNOWN PERSONS WHO MAY CLAIM A LIEN, INTEREST OR TITLE ADVERSE TO PLAINTIFF,
Defendants.
NOTICE OF SUIT**

STATE OF NEW MEXICO to the defendants The Estate of Jose Andres Tafoya and All Unknown Persons Who May Claim a Lien, Interest or Title Adverse to Plaintiff, GREETINGS:
You are hereby notified that the above-named Plaintiff has filed a civil action against you in the above-entitled court and cause, the general object thereof being ejectment, quiet title in and to the following described real estate:
The property located at 110 Bridge Street, Las Vegas, San Miguel County, New Mexico, Parcel number 1-094-093-426-012, R0659724, as judicially awarded to Marian Elvira Tafoya in that certain Final Decree in the Fourth Judicial District Court of Las Vegas, New Mexico, dated September 1, 1970, case number 18,715, recorded on March 28, 1994, in book 234, page 5196 in the Office of the San Miguel County Clerk (the "Property").
That unless you enter your appearance in said cause on or before 30 days after the last day of publication, judgment by default may be entered against you.
Attorney(s)
Scott Aaron
Attorney for Plaintiff
POB 3834
Las Vegas, NM 87701
505-434-1515
WITNESS the Honorable Abigail Aragon, District Judge of the Fourth Judicial District Court of the State of New Mexico, and the Seal of the District Court of San Miguel County, this 3rd day of October, 2023.
(SEAL)
Vidal Martinez
CLERK OF THE DISTRICT COURT
By: /s/ Helen Tafoya
Deputy
PUB: Las Vegas Optic, October 6, 13, 20, 2023
#218185

**STATE OF NEW MEXICO
COUNTY OF SAN MIGUEL
FOURTH JUDICIAL DISTRICT COURT
VIRGINIA GONZALES and DEBORAH VALENCIA,
Plaintiffs,
v.
THE HEIRS OF AURORA TRUJILLO, ALL UNKNOWN PERSONS WHO MAY CLAIM A LIEN, INTEREST OR TITLE ADVERSE TO PLAINTIFFS,
Defendants.
D-412-CV-2023-343
NOTICE OF SUIT**

STATE OF NEW MEXICO to the defendants The Heirs of Aurora Trujillo and All Unknown Persons Who May Claim a Lien, Interest or Title Adverse to Plaintiffs, GREETINGS:
You are hereby notified that the above-named Plaintiffs have filed a civil action against you in the above-entitled court and cause, the general object thereof being quiet title in and to the following real estate:
Right of way, beginning at the SE corner, being the SW corner of the 0.96 acre tract currently or formerly owned by Teofilo Duran (as found in warranty deed recorded on January 19, 1971 in book 224, page 5487, in the office of the San Miguel County Clerk, New Mexico), on E. Lone of the highway between Rociada and Manuelitas; Thence, N 41° 40 minutes W 22 feet to SW corner; Thence N 33° 20 minutes E 250 feet to the NW corner; Thence, S 51° 00 minute E 22 feet to SE corner; Thence, S 33° 20 minutes W 2055 feet to the place of the beginning, containing 1.03 acres, more or less.
That unless you enter your appearance in said cause on or before 30 days after the last day of publication, judgment by default may be entered against you.
Attorney(s) Scott Aaron
Attorney for Plaintiff
POB 3834
Las Vegas, NM 87701
505-434-1515
WITNESS the Honorable Michael A. Aragon, District Judge of the Fourth Judicial District Court of the State of New Mexico, and the Seal of the District Court of San Miguel County, this 5th day of October, 2023.
(SEAL)
VIDAL MARTINEZ
CLERK OF THE DISTRICT COURT
By: /s/ Lenor Encinas
Deputy
PUB: Las Vegas Optic, October 13, 20, 27, 2023
#218465

NOTICE OF AIR QUALITY PERMIT APPLICATION
Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for an aggregate crushing and screening plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.
The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,040 meters, UTM Northing 3,942,880 meters The approximate location of this facility is 2.3 miles north-northeast of Las Vegas in San Miguel county.
The proposed Las Vegas HMA & Crusher facility includes a 200 ton per hour aggregate crushing and screening plant. The proposed construction includes raw and finish aggregate storage piles, aggregate feeder, primary crusher, secondary crusher, screen, nine (9) transfer conveyors, and three (3) stacker conveyors. The aggregate crushing and screening plant will be powered with a 261 kW (350 horsepower (hp)) generator and a 242 kW (325 horsepower (hp)) generator.
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 / 4.51 pph / 9.39 tpy
PM 2.5 / 0.81 pph / 1.72 tpy
Sulfur Dioxide (SO2) / 0.24 pph / 0.53 tpy
Nitrogen Oxides (NOx) / 6.75 pph / 14.78 tpy
Carbon Monoxide (CO) / 3.88 pph / 8.51 tpy
Volatile Organic Compounds (VOC) / 0.36 pph / 0.78 tpy
Total sum of all Hazardous Air Pollutants (HAPs) / 0.03 pph / 0.06 tpy
Toxic Air Pollutant (TAP) / 0.0002 pph / 0.0004 tpy
Green House Gas Emissions as Total CO2e / n/a / 1,700 tpy
The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.
The owner and/or operator of the Facility is:
Short Line, LLC
PO Box 1499
Peralta, NM 87042
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.
Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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.
PUB: Las Vegas Optic, October 13, 2023
#218509

NOTICE OF AIR QUALITY PERMIT APPLICATION
Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.
The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.
The proposed Las Vegas HMA & Crusher facility includes a 120 ton per hour and 200,000 tons per year hot mix asphalt plant (HMA) producing asphalt for road paving. The proposed construction includes aggregate storage piles, two 3-bin cold aggregate feeders, scalping screen, drum dryer/mixer with baghouse, incline conveyor, asphalt silo, asphalt heater, four (4) transfer conveyors, Evotherm storage tank, and two (2) asphalt cement storage tanks. The HMA plant will be powered with a 504 kW (676 horsepower (hp)) generator.
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 De-

Continue on next page

LEGALS (cont.)

partment's review:
Pollutant / Maximum Pounds per hour / Maximum Tons per year
PM 10 / 4.70 pph / 4.18 tpy
PM 2.5 / 3.39 pph / 3.18 tpy
Sulfur Dioxide (SO2) / 7.27 pph / 6.62 tpy
Nitrogen Oxides (NOx) / 13.54 pph / 21.12 tpy
Carbon Monoxide (CO) / 20.15 pph / 22.23 tpy
Volatile Organic Compounds (VOC) / 8.03 pph / 7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs) / 1.29 pph / 1.11 tpy
Toxic Air Pollutant (TAP) / 1.50 pph / 1.25 tpy
Green House Gas Emissions as Total CO2e / n/a / 5,860 tpy
The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.
The owner and/or operator of the Facility is:
Short Line, LLC
PO Box 1499
Peralta, NM 87042
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.
Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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.
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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.
PUB: Las Vegas Optic, October 13, 2023
#218510

New Mexico Environment Department – Ground Water Quality Bureau
The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) hereby provides notice that the following Groundwater Discharge Permits have been proposed for approval. NMED will allow 30 days after the date of publication of this notice for submittal of written comments and/or a request for a public hearing for a permitting action. You can add the comment period to your calendar through our Events Calendar located at https://www.env.nm.gov/events-calendar/. You can now submit your comments online using the Public Comment Portal located at https://nmed.commentinput.com/. Requests for public hearing shall be in writing and shall set forth the reasons why a hearing should be held. A hearing will be held if NMED determines that there is substantial public interest. After the administrative record for a permitting action is complete and all required information is available, NMED will approve, approve with conditions, or disapprove the Permit based on the administrative record. NMED maintains a Public Involvement Plan (PIP) for each permitting action to plan for providing public participation opportunities and information that may be needed for the community to participate in a permitting process. PIPs may be viewed online at https://www.env.nm.gov/public-notices/, at the NMED field office nearest to the proposed permitted activity, or by contacting the NMED Permit Contact identified below. NMED also maintains facility-specific mailing lists for persons wishing to receive associated notices for a permitting action. To learn more about a Discharge Permit and the permitting process, to be placed on a facility-specific mailing list, or to obtain a copy of a draft permit or PIP, please contact the NMED Permit Contact at the telephone number or address provided below. Draft permits may be viewed on-line at https://www.env.nm.gov/public-notices/ under the tab for the facility's county. Comments or a request for hearing regarding a draft permit should be addressed to the GWQB, PO Box 5469, Santa Fe, NM 87502-5469, or emailed to the NMED Permit Contact. If you are a non-English speaker, do not speak English well, or if you have a disability, you may contact the NMED Permit Contact to request assistance, an interpreter, or an auxiliary aid in order to learn more about a Discharge Permit or the permitting process, or to participate in activities associated with the permitting process. To the extent possible, NMED will arrange for requested interpretation services and accommodations or services for persons with disabilities. Telephone conversation assistance is available through Relay New Mexico at no charge for people who are deaf, hard of hearing, or have difficulty speaking on the phone, by calling 1-800-659-1779; Spanish: 1-800-327-1857; TTY users: 1-800-659-8331. Telephone interpretation assistance for persons that are a non-English speaker or do not speak English well is available at no charge when calling NMED. 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. Parts 5 and 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, you may contact: Kate Cardenas, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at https://www.env.nm.gov/general/environmental-justice-in-new-mexico/ to learn how and where to file a complaint of discrimination. DP-1075, Village of Wagon Mound Wastewater Treatment Facility proposes to renew the Discharge Permit for the discharge of up to 30,000 gallons per day of domestic wastewater to a treatment and disposal system. Potential contaminants from this type of discharge include nitrogen compounds. The facility is located at one mile southeast of the Village of Wagon Mound off Highway 271, in Section 4, Township 20 North, Range 21 East, Mora County. Groundwater most likely to be affected is at a depth of approximately 24 feet and had a pre-discharge total dissolved solids concentration of 745 milligrams per liter. Applicant: Village of Wagon Mound, Gary E. Sanchez, Utilities Superintendent, P.O. Box 87, Wagon Mound, NM 87752. NMED Permit Contact: Kambray Townsend, Water Resource Professional, kambray.townsend@env.nm.gov or pps.general@env.nm.gov, Telephone: 505-538-0497 or 505-827-2900. The Public Involvement Plan may be viewed online at https://www.env.nm.gov/public-notices/ or at the NMED office in Las Vegas: 2538 Ridgerunner Road, Las Vegas, NM 87701.
Departamento del Medio Ambiente de Nuevo México - La Oficina de Calidad de Aguas Subterráneas
La Oficina de Calidad de Aguas Subterráneas (GWQB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés) notifica por este medio que se han propuesto los siguientes Permisos de Descarga de Agua Subterránea para su aprobación. NMED permitirá 30 días después de la fecha de publicación de este aviso para la presentación de comentarios por escrito y/o una solicitud de audiencia pública para una acción de permiso. Puede añadir el periodo de comentarios a su calendario a través de nuestro Calendario de Eventos situado en https://www.env.nm.gov/events-calendar/. Ahora puede enviar sus comentarios en línea utilizando el Portal de comentarios públicos ubicado en https://nmed.commentinput.com/. Las solicitudes de audiencia pública deberán presentarse por escrito y expondrán los motivos por los cuales debe celebrarse una audiencia. Se llevará a cabo una audiencia si NMED determina que existe un interés público considerable. Después de que el registro administrativo para la acción de permiso esté completo y toda la información requerida esté disponible, NMED aprobará, aprobará con condiciones o denegará el Permiso basado en el registro administrativo. NMED mantiene un Plan de Participación Pública (PIP, por sus siglas en inglés) para cada acción de permiso para planificar la facilitación de oportunidades de participación del público e información que pueda ser necesaria para que la comunidad participe en el proceso de permisos. Los PIP se pueden ver en línea en https://www.env.nm.gov/public-notices/, en la oficina local de NMED más cercana a la actividad de permiso propuesta, o comunicándose con el contacto de permisos de NMED identificado a continuación. NMED también mantiene listas de correo específicas de las instalaciones para las personas que desean recibir avisos asociados para una acción de permiso. Para obtener más información sobre un Permiso de Descarga y el proceso de permisos, para ser incluido en la lista de correo específica de una instalación, o para obtener una copia de un borrador de permiso o PIP, comuníquese con la persona que sirve como Contacto de Permisos de NMED en el número o la dirección facilitados. Los borradores de permisos se pueden ver en línea en https://www.env.nm.gov/public-notices/ bajo la pestaña correspondiente al condado de la instalación. Los comentarios o las solicitudes de audiencia sobre un borrador de permiso deben dirigirse a GWQB, PO Box 5469, Santa Fe, NM 87502-5469, o enviarse por correo electrónico al contacto de permisos de NMED. Si usted no habla inglés, no habla bien inglés, o si tiene una discapacidad, puede comunicarse con el contacto de permisos de NMED para solicitar asistencia, un intérprete o un dispositivo auxiliar con el fin de aprender más sobre un Permiso de Descarga o el proceso de permisos, o para participar en actividades asociadas con el proceso de permisos. En la medida de lo posible, el NMED organizará los servicios de interpretación y las adaptaciones o servicios para personas con discapacidades que hayan sido solicitados. Hay disponible asistencia para conversaciones telefónicas a través de Relay New Mexico de forma gratuita para las personas sordas, con problemas de audición o con dificultades para hablar por teléfono llamando al 1-800-659-1779; español: 1-800-327-1857; los usuarios de TTY: 1-800-659-8331. Asistencia telefónica de interpretación para personas que no hablan inglés o no hablan bien el inglés está disponible de forma gratuita llamando a NMED. NMED no discrimina por motivos de raza, color, origen nacional, discapacidad, edad o sexo en la administración de sus programas o actividades, según lo exigido por las leyes y los reglamentos correspondientes. NMED es responsable de la coordinación de los esfuerzos de cumplimiento y la recepción de consultas relativas a los requisitos de no discriminación implementados por 40 C.F.R. Partes 5 y 7, incluido el Título VI de la Ley de Derechos Civiles de 1964, según enmendada; Sección 504 de la Ley de Rehabilitación de 1973; la Ley de Discriminación por Edad de 1975, Título IX de las Enmiendas de Educación de 1972 y la Sección 13 de las Enmiendas a la Ley Federal de Control de Contaminación del Agua de 1972. Si usted tiene preguntas sobre este aviso o sobre cualquier programa, política o procedimiento de no discriminación de NMED, usted puede comunicarse con la Coordinadora de No Discriminación: Kate Cardenas, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. Si usted piensa que ha sido discriminado/a con respecto a un programa o actividad de NMED, usted puede comunicarse con la Coordinadora de No Discriminación antes indicada o visitar nuestro sitio web en https://www.env.nm.gov/general/environmental-justice-in-new-mexico/ para aprender cómo y dónde presentar una queja de discriminación. DP-1075, La Instalación de Tratamiento de Aguas Residuales de la localidad de Wagon Mound propone renovar el Permiso de Descarga para la descarga de hasta 30,000 galones por día de aguas residuales domésticas a un sistema de tratamiento y eliminación. Los posibles contaminantes de este tipo de descarga incluyen compuestos de nitrógeno. La instalación está ubicada a una milla al sureste de la localidad de Wagon Mound, en la salida de la carretera 271, en la Sección 4, Municipio 20 Norte, Rango 21 Este, condado de Mora. Las aguas subterráneas con mayor probabilidad de ser afectadas se encuentran a una profundidad de aproximadamente 24 pies y tenían una concentración total de sólidos disueltos antes de la descarga de 745 miligramos por litro. Solicitante: Village of Wagon Mound, Gary E. Sanchez, Superintendente de Servicios Públicos, P.O. Box 87, Wagon Mound, NM 87752. Contacto para el permiso del NMED: Kambray Townsend, Profesional de Recursos Hídricos, kambray.townsend@env.nm.gov o pps.general@env.nm.gov, Teléfono: 505-538-0497 o 505-827-2900. El Plan de Participación Pública puede verse en línea en https://www.env.nm.gov/public-notices/ o en la oficina de NMED en Las Vegas: 2538 Ridgerunner Road, Las Vegas, NM 87701.
PUB: Las Vegas Optic, October 13, 2023
#218546

**STATE OF NEW MEXICO
IN THE PROBATE COURT
SAN MIGUEL COUNTY
IN THE MATTER OF THE ESTATE OF GEORGE W DIMSEY, Deceased
No. 2023-0064
NOTICE TO CREDITORS**
NOTICE IS HEREBY GIVEN that the undersigned has been appointed personal representative of the decedent. All persons having claims against this estate of the decedent are required to present their claims within four (4) months after the date of the first publication of any published notice to creditors or sixty (60) days after the date of mailing or other delivery of this notice, whichever is later, or the claims will be forever barred. Claims must be presented either to the undersigned personal representative at the address listed below, or filed with the Probate Court of San Miguel County, New Mexico, located at the following address: 500 West National Ave., Las Vegas, N.M. 87701.
Dated: Sept. 25, 2023
/s/ Randall Clark, personal representative
400 Socorro Street
Las Vegas, NM 87701
PUB: Las Vegas Optic, October 13, 20, 27, 2023
#218636

REQUEST FOR BIDS
Total Contracting Services, Inc. An EEO Employer, requests employment and quotes from DBE / MBE / WBE / Subcontractors and Suppliers for, Pecos Water System Improvements Phase 1, Pecos, NM bidding on October 13, 2023 at 11:00 am. Please send your requests to Butch Blackberg at bblackberg@tcsi.us Quotes will be received no later than October 12, 2023 by 5:00 PM. Plans, Specifications and other Contracting Documents, May be obtained at www.wilsonco.com/plan-room, Or by contacting Butch Blackberg at 505-800-7156.
PUB: Las Vegas Optic, October 13, 2023
#218826

NOTICE OF THE CITY OF LAS VEGAS HEARING LODGER'S TAX ADVISORY BOARD SPECIAL HEARING
Notice is hereby given that the Lodger's Tax Advisory Board of the City of Las Vegas, NM will hold a special public hearing on Tuesday, October 17th, 2023 starting at 2:00 PM. Meeting will be in person at the city council chambers located at 1700 North Grand Ave, Las Vegas NM, 87701.
Items to be discussed: Lodger's Tax Projects, Application Dates and Procedures
Agenda: the agenda for the meeting is available on City website: www.lasvegasnm.gov, under meetings and minutes.
Public input: The Lodgers Tax Advisory Board will take general public input (3 minutes). A sign up sheet for public input will be available fifteen minutes (15) prior to the meeting.
CITY OF LAS VEGAS
/s/ Casandra Fresquez
City Clerk
PUB: Las Vegas Optic, October 13, 2023
#218869

AFFIDAVIT OF PUBLICATION

COUNTIES OF SAN MIGUEL and MORA,
STATE OF NEW MEXICO } ss.

Phil Scherer, Editor, being first duly sworn, on oath states that he is a Manager of the Las Vegas Optic, a semi-weekly newspaper of general paid and general circulation in San Miguel and Mora Counties, New Mexico, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of the provisions of Chapter 167, session Laws of 1937, and that payment therefor has been made and assessed as court costs. That the notice of which a copy as published is hereto attached and hereby made a part hereof was published in said newspaper once each week for 1 consecutive insertion(s). That the first publication being on the 13th day of October, 2023 and the subsequent consecutive publications on the __n/a__ day(s) of _____, 20_____.

Price: $ 421.77.

Account Number: 40484.

Phillip Scherer

Editor

Subscribed and sworn to before me this 13th day of October, 2023.

Maria Sanchez

Notary Public

STATE OF NEW MEXICO
NOTARY PUBLIC
MARIA S. SANCHEZ
COMMISSION NUMBER 1117811
EXPIRATION DATE 08-09-2025

NOTICE OF AIR QUALITY PERMIT APPLICATION

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.
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PM 10	4.70 pph	4.18 tpy
PM 2.5	3.39 pph	3.18 tpy
Sulfur Dioxide (SO2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NOx)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
Volatile Organic Compounds (VOC)	8.03 pph	7.29 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1.29 pph	1.11 tpy
Toxic Air Pollutant (TAP)	1.50 pph	1.25 tpy
Green House Gas Emissions as Total CO2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Short Line, LLC
PO Box 1499
Peralta, NM 87042
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.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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.

Atención
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.

News

Rough Riders Rail Rehab aims to get historic train back in motion

By Vanessa Maciel
Community Reporter

It's been stationary for almost 70 years, but if train conductor Brooks Potts has a say, the locomotive on the corner of Grand and Mills avenues will soon be in motion again.

Potts' goal is to have A.T.&S.F. No. 1129 back in operation and, potentially, start charter historical routes between Las Vegas and Santa Fe with it. To this end, he created a nonprofit, the Rough Riders Rail Rehab, and plans to approach the Las Vegas City Council during its regular meeting on Wednesday to ask for the city's support.

Potts said he hopes to restore the 1129 so that it can do what it was designed to do – work. His proposal to the City Council states that, through the Rough Riders Rail Rehab, he hopes to "secure charitable donations, grants, or capital outlay funding to return (the 1129) to operation, and provide the town revenue for the other infrastructure that desperately needs it."

"I built my nonprofit on the premise of bringing my dream to life, that is, to restore a piece of railroad history for the betterment of the community," Potts goes on to state in his proposal.

Potts, who moved to Las Vegas from Denver in August, has gotten to know the ins and outs of the 1129 locomotive since he first discovered it back in July.

"When I came out here and saw the locomotive, I was surprised it was sitting where it was," Potts said. He soon became fascinated with the history of the locomotive that has been sitting at the same unassuming spot since 1956.

"I went down the rabbit hole of research," said Potts, who is a train conductor by trade and who describes railroad history and rehabilitation as his passion. This passion is perhaps most evident in the proposal he prepared for the City Council, which outlines the history of the 1129 going back more than a century.

Potts' research into the 1129 goes back to 1902, when Baldwin Locomotive first created the steel frame for the 2-6-2 prairie locomotive known as the 1050 class.

A total of 103 of these locomotives would be

See TRAIN, Page A9

Vanessa Maciel/Optic photo
Brooks Potts stands near locomotive 1129 where it currently sits on the corner of Grand and Mills avenues on Oct. 6.

NOTICE OF AIR QUALITY PERMIT APPLICATION

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM. The exact location of the Las Vegas HMA & Crusher is at Zone 13, UTM Easting 482,180 meters, UTM Northing 3,943,060 meters The approximate location of this facility is 2.5 miles northeast of Las Vegas in San Miguel county.
The proposed Las Vegas HMA & Crusher facility includes a 120 ton per hour and 200,000 tons per year hot mix asphalt plant (HMA) producing asphalt for road paving. The proposed construction includes aggregate storage piles, two 3-bin cold aggregate feeders, scalping screen, drum dryer/mixer with baghouse, incline conveyor, asphalt silo, asphalt heater, four (4) transfer conveyors, Evotherm storage tank, and two (2) asphalt cement storage tanks. The HMA plant will be powered with a 504 kW (676 horsepower (hp)) generator.
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	4.70 pph	4.18 tpy
PM 2.5	3.39 pph	3.18 tpy
Sulfur Dioxide (SO2)	7.27 pph	6.62 tpy
Nitrogen Oxides (NOx)	13.54 pph	21.12 tpy
Carbon Monoxide (CO)	20.15 pph	22.23 tpy
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Green House Gas Emissions as Total CO2e	n/a	5,860 tpy

The maximum and standard operating schedule of the facility is daylight hours, 7 days per week, and 52 weeks per year.

The owner and/or operator of the Facility is:
Short Line, LLC
PO Box 1499
Peralta, NM 87042
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.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a 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
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PUBLIC SERVICE ANNOUNCEMENT

Short Line, LLC announces its application submittal to the New Mexico Environment Department for a new air quality permit for a hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is October 20, 2023.

The address for the new facility known as, Las Vegas HMA & Crusher, is at 1109 Airport Road, Las Vegas, NM.

The proposed Las Vegas HMA & Crusher facility includes a 120 ton per hour and 200,000 tons per year hot mix asphalt plant (HMA) producing asphalt for road paving.

Public notices have been posted in the following locations for review by the public:

1. At Kocina De Raphael, 610 Legion Dr., Las Vegas, NM 87701;
2. At USPS West Las Vegas, 1900 Hot Springs Blvd, Las Vegas, NM 87701;
3. At USPS Las Vegas, 1001 Douglas Ave, Las Vegas, NM 87701; and
4. At the main entrance to Las Vegas HMA & Crusher at 1109 Airport Road, Las Vegas, NM

The owner and/or operator of the Facility is:

Short Line, LLC
PO Box 1499
Peralta, NM 87042

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

October 23, 2023

KBQL Radio
304 South Grand Ave.
Las Vegas, NM 88030

CERTIFIED MAIL

Dear KBQL Radio:

SUBJECT: PSA Request - Proposed Air Quality Construction Permit Application for Short Line LLC's Hot Mix Asphalt (HMA) Plant at 1109 Airport Road, Las Vegas, NM.

Attached is a copy of a public service announcement regarding a proposed air quality construction permit application for Short Line LLC's HMA Plant. This announcement is being submitted by Montrose Environmental Solutions, Inc., Albuquerque, NM on behalf of Short Line LLC.

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. You may also contact Ms. Beverly Zastrow, Short Line LLC at (505) 892-5400.

Thank you.

Sincerely,

Paul Wade

Paul Wade
Principal/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

Submittal of Public Service Announcement – Certification

I, Paul Wade, the undersigned, certify that on 10/23/2023, submitted a public service announcement to KBQL Radio that serves the City of Las Vegas, San Miguel County, New Mexico, in which the source is or is proposed to be located and that KOTS Radio DID NOT RESPOND THAT IT WOULD AIR THE ANNOUNCEMENT.

Signed this 23 day of Oct, 2023,

Paul Wade
Signature

10/23/2023
Date

Paul Wade
Printed Name

Air Quality Consultant – Montrose Environmental Solutions, Inc.
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

7022 3330 0001 7203 8184

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- ☐ Adult Signature Restricted Delivery $ ____

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Total Postage and Fees
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ALBUQUERQUE, NM 87114
Postmark Here
OCT 23 2023

Sent To **KBQL Radio**

Street a **304 South Grand Ave.**

City, St **Las Vegas, NM 88030**

PS Form 3800, April 2015 PSN 7530-02-000-9047 **See Reverse for Instructions**

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 MSCI HMA #3 produces hot mix asphalt concrete. The operation is typical to a continuous drum mix HMA operation. Aggregate in loaded into the Cold Aggregate Feed Bins (Unit 1), where it is metered onto the Aggregate Feed Bin Collection Conveyor (Unit 2). From the Aggregate Feed Bin Collection Conveyor the aggregate is sent to the Scalping Screen (Unit 3) and Pug Mill (Unit 5). The Mineral Filler Silo and Augur (Unit 13) meters mineral filler into the Pug Mill. The Pug Mill mixes the aggregate and mineral filler together and empties onto the Pug Mill Conveyor (Unit 6). The Pug Mill Conveyor transfers the material onto the Slinger Conveyor (Unit 7) and sends the aggregate/mineral filler to the Drum Dryer (Unit 14). RAP is loaded into the RAP Feed Bin (Unit 8), where it is metered onto the RAP Feed Bin Conveyor (Unit 9) and then transferred to the RAP Screen (Unit 10). The RAP Transfer Conveyor (Unit 11) transports RAP to the RAP Scale Transfer Conveyor (Unit 12). The RAP Scale Conveyor transports RAP to the Drum Dryer/Mixer. There the material is dried and asphalt cement is added to make asphalt concrete. From the Drum Dryer/Mixer the asphalt concrete is sent by the Incline Conveyor (Unit 15) to the Asphalt Silo (Unit 16).

Control Units include a Drum Dryer/Mixer Dust Collector (C5) that captures particulates generated at the Drum Dryer/Mixer and Mineral Filler Silo Dust Collector (C4) that captures particulates generated during loading of the Mineral Filler Silo. Controlled particulates exhaust the Drum Dryer/Mixer Dust Collector Stack (Stack 2) and Mineral Filler Silo Dust Collector Stack (Stack 1).

Fugitive dust is controlled when material exits the Cold Aggregate or RAP Feed Bins to the Cold Aggregate or RAP Feed Bin Collection Conveyors with enclosures to reduce the chance that wind will blow any generated fugitive dust away and/or water sprays, as needed, at the exit of the feed bins.

Fugitive dust is controlled when material enters and exits the Scalping Screen (Unit 3), Pug Mill (Unit 4), and RAP Scalping Screen (Unit 10) with the addition of water, as needed, on the material at the Scalping Screen, Pug Mill, and RAP Scalping Screen.

All baghouse fines that are captured in the Drum Dryer/Mixer Dust Collector (Unit 14) are recycled back to the Drum Dryer using an enclosed loop with no visible emissions. The system is a closed loop. All baghouse fines are emptied before maintenance or relocation.

Baghouse fines that are captured in the Mineral Filler Silo Dust Collector (Unit 8) are recycled back to the Mineral Filler Silo.

There are no pollution controls for the Aggregate/RAP Storage Piles (Unit AGGPILE), Aggregate or RAP Feed Bins (Units 1, 8), Incline Belt (Unit 15), Asphalt Silo (Units 16), Main Plant Generator (Unit 17), Standby Plant Generator (Unit 18), Asphalt Heaters (Unit 19), or Hot Oil Asphalt Storage Tanks (2 total) (Unit 20).

All truck traffic travels to the HMA Plant on the Main Entrance road. The road is controlled with asphalt millings, surfactants, and watering to the HMA Plant. All truck traffic leaves the same way. Aggregate materials come from the aggregate plant onsite or on-site stockpiles.

Annual emissions are controlled by permit limits on annual production for processing equipment and hours of operation for generators and asphalt heaters.

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)**:** Hot Mix Asphalt Plant - produce asphalt concrete, co-located aggregate crushing and screening 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.

☐ **Yes** **X 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: 21.1 TPY**
b. **CO: 22.2 TPY**
c. **VOC: 7.3 TPY**
d. **SOx: 6.6 TPY**
e. **PM: 7.2 TPY**
f. **PM10: 4.1 TPY**
g. **PM2.5: 3.2 TPY**
h. **Fluorides: 0.0 TPY**
i. **Lead: 0.0016 TPY**
j. **Sulfur compounds (listed in Table 2): 0.0055 TPY**
k. **GHG: 5860 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 REGU-LATIONS 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 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 20.2.7 NMAC.
20.2.11 NMAC	Asphalt Process Equipment	Yes	7 (C4)	These sources are subject to 20.2.11.108 NMAC and 20.2.11.109 NMAC.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	10, 12	Engines and heaters are Stationary Combustion Equipment. Specify units subject to this regulation. The facility stationary combustion equipment are subject to a 20 percent opacity limit.
20.2.70 NMAC	Operating Permits	No	Facility	This facility is not a Title V Operating Permit source. The facility consists of aggregate processing plants and HMA plants. Aggregate processing falls under 2-digit SIC Code Group 14 and HMA plants falls under 2-digit SIC Code Group 29. While aggregate material from aggregate processing plants is used in the HMA plant, since they are operating under different SIC Codes they are separate facilities for major source determination.
20.2.71 NMAC	Operating Permit Fees	No	Facility	This facility is not a Title V Operating Permit source.
20.2.72 NMAC	Construction Permits	Yes	Facility	Potential emission rate (PER) for the facility is greater than 10 pph or greater than 25 tpy for any pollutant subject to a state or federal ambient air quality standard.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	**NOI:** 20.2.73.200 NMAC applies (requiring a NOI application) **Emissions Inventory Reporting:** 20.2.73.300 NMAC applies.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	Facility	This facility is not a PSD major source.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This facility is subject to 20.2.72 NMAC and is in turn subject to 20.2.75 NMAC.
20.2.77 NMAC	New Source Performance	Yes	Units subject to 40 CFR 60	This is a stationary source, which is subject to the requirements of 40 CFR Part 60.
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This facility doesn't emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61.
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	This facility is located in an Attainment Area.

STATE REGU-LATIONS 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.)
20.2.80 NMAC	Stack Heights	Yes	7 (C4), 12	The objective of this Part is to establish requirements for the evaluation of stack heights and other dispersion techniques in permitting decisions. The Department shall give no credit for reductions in emissions due to the length of a source's stack height that exceeds good engineering practice or due to any other dispersion technique. The facility will meet all requirements of good engineering practices.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	12	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

Table for Applicable FEDERAL REGULATIONS:

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	This is a 20.2.72 NMAC permit application.
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	Units subject to 40 CFR 60	Subparts OOO, IIII, and I in 40 CFR 60 applies.
NSPS 40 CFR60.40, Subpart I	Subpart I, Performance Standards for **Hot Mix Asphalt Facilities**	Yes	7 (C4)	The affected facility, that commences construction or modification after June 11, 1973, to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for **Volatile Organic Liquid Storage Vessels** (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced **After** July 23, 1984	No		This facility does not have storage vessels with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.
NSPS 40 CFR Part 60 Subpart OOO	Standards of Performance for **Nonmetallic Mineral Processing Plants**	No		NSPS standards for non-metallic minerals apply to applicable crushers, screens, and conveyors.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	Yes	12	The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE). Units 17, 18, 36, and 45 are applicable to 60.4202(a) and Subpart IIII Table 1 emission standards for its year and size category if they are located at the same location for a period of 12 months.
NSPS 40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No		See 40 CFR 60.4230 and EPA Region 1's Reciprocating Internal Combustion Guidance website.

FEDERAL REGU-LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
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	Units Subject to 40 CFR 63	Applies if any other Subpart in 40 CFR 63 applies.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	12	Facilities are subject to this subpart if they own or operate a stationary RICE, except if the stationary RICE is being tested at a stationary RICE test cell/stand. Applicable if the units are located at the same location for a period of 12 months.

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.

Operational Plan to Mitigate Emissions and **Plan of Work Practices**

Startup

Prior to the production of asphalt, the drum mixer dust collector will be operational and functioning correctly per 20.2.11.108.A, 20.2.11.109, and applicable permit conditions.

Prior to the production of asphalt, feeder bin exit enclosures or other control measures will be functioning correctly to control fugitive emissions to an opacity limit of 20 percent per EPA Reference Method 9.

Prior to the production of asphalt, water sprays, or other control measures, for the scalping screen will be functioning correctly and used as needed, to control fugitive emissions to an opacity limit of 20 percent per EPA Reference Method 9.

Upon visual inspection, all unpaved haul roads will be controlled with base course and watering or other equivalent control methods, to minimize fugitive dust as required under applicable permit conditions.

Shutdown

All required control equipment will operate until all asphalt production ceases.

Maintenance

The feeder bin exit enclosures, asphalt drum mixer, drum mixer dust collector, and equipment water sprays will be maintained to prevent excess emissions during startup or shutdown. This facility will not have excess emissions during any maintenance procedures.

Malfunction

Upon malfunction where excess particulate emissions are observed from the feeder bin exit enclosures, asphalt drum mixer, drum mixer dust collector, scalping screen water sprays, and baghouse loadout enclosure and watering, all asphalt production will cease until repairs to control equipment are made.

Upon malfunction where excess particulate emissions are observed from the feeder bin exit enclosures, and equipment water sprays, all aggregate processing will cease until repairs to control equipment are made.

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.

No alternative operating scenarios are proposed for this facility.

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:	Las Vegas HMA & Crusher
2	Name of company:	Short Line, LLC
3	Current Permit number:	New Permit
4	Name of applicant's modeler:	Paul Wade
5	Phone number of modeler:	505-830-9680 x6
6	E-mail of modeler:	pwade@montrose-env.com

16-B: Brief

1	Was a modeling protocol submitted and approved?	Yes☐	No☒
2	Why is the modeling being done?	New Facility	
3	Describe the permit changes relevant to the modeling.		
	New facility consisting of a new HMA plant and crushing and screening plant each operating under a different 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	154	
8	List the PSD baseline dates for this region (minor or major, as appropriate).		
	NO2	NA	
	SO2	NA	
	PM10	NA	
	PM2.5	NA	
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).		
	Pecos Wilderness Area, 20.7 km		
10	Is the facility located in a non-attainment area? If so describe below	Yes☐	No☒
11	Describe any special modeling requirements, such as streamline permit requirements.		

16-C: Modeling History of Facility

1 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	NA		New Permit
NO_2	NA		New Permit
SO_2	NA		New Permit
H_2S	NA		New Permit
PM2.5	NA		New Permit
PM10	NA		New Permit
Lead	N/A		
Ozone (PSD only)	N/A		
NM Toxic Air Pollutants (20.2.72.402 NMAC)	NA		New Permit

16-D: Modeling performed for this application

1 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
Asphalt Fumes	1.5	0.333	6.5	5	0.3

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes☒	No☐

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	6/1/2023

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.

AQB Source ID	Description of Corrections

16-H: Building and structure downwash

1	How many buildings are present at the facility?	6 – HMA Plant		
2	How many above ground storage tanks are present at the facility?	1 – HMA Plant		
3	Was building downwash modeled for all buildings and tanks? If not explain why below.		Yes☒	No☐
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.						
	Fencing and Gates restrict access						
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	Fence Following	50	0	500		
	Very Fine	Fence Following	100	500	1000		
	Fine	Fence Following	250	1000	3000		
	Fine	Fence Following	500	3000	5000		
	Course	Fence Following	1000	5000	50000		
5	Describe receptor spacing along the fence line.						
	25 meters						

6	Describe the PSD Class I area receptors.
	NA

16-J: Sensitive areas

1	Are there schools or hospitals or other sensitive areas near the facility? If so describe below. This information is optional (and purposely undefined) but may help determine issues related to public notice.	Yes☐	No☒
3	The modeling review process may need to be accelerated if there is a public hearing. Are there likely to be public comments opposing the permit application?	Yes☐	No☒

16-K: Modeling Scenarios

1	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).		
	None		
2	Which scenario produces the highest concentrations? Why?		
	NA		
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: Daylight Hours all sources except Asphalt Heater (Unit 10) and Asphalt Cement Storage Tank (Unit 11). For Units 10 and 11, sources will be permitted to operate 24 hours per day.		

5

HMA/Aggregate Crushing and Screening Plant Production 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	0	0
6:00 AM	0	0.5	1	1	1	1	1	1	1	1	0.5	0
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	0.5	1	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	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**	**12**	**10.5**	**10**

If hourly, variable emission rates were used that were not described above, describe them below.

None

6 Were different emission rates used for short-term and annual modeling? If so describe below. Yes☐ No☒

16-L: 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.	
	Both ROI and Cumulative analysis were run using ARM2	
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: 98th percentile as calculated by AERMOD Annual: Highest Annual Average of Three Years	

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.	
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.			
	NO_X (ton/yr)	SO_2 (ton/yr)	$[PM2.5]_{annual}$	$[PM2.5]_{24\text{-}hour}$

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.
	NA

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.

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 #	Model ID	Description
	HMA Plant	
7	HMASTK	HMA Baghouse Stack
10	HMAHEAT	HMA Asphalt Cement Heater
8	DRUMUNL	HMA Asphalt Silo Loading
9	HMASILO	HMA Asphalt Silo Unloading
12	HMAGEN	HMA Generator
AGGPILE	HMAPILE1	HMA Storage Pile Handling 1
AGGPILE	HMAPILE2	HMA Storage Pile Handling 2
AGGPILE	HMAPILE3	HMA Storage Pile Handling 3
AGGPILE	HMAPILE4	HMA Storage Pile Handling 4
AGGPILE	HMAPILE5	HMA Storage Pile Handling 5
1	HMABIN1	HMA 1 Bin Loading (3 Bins)
1	HMABIN2	HMA 1 Bin Loading (3 Bins)
2	HMATP1	HMA Bin 1 Unloading
2	HMATP2	HMA Bin 2 Unloading
4	HMASCR	HMA Scalping Screen
5	HMATP3	HMA Scalping Screen Unloading
6	HMATP4	HMA Conveyor Transfer to Drum Conveyor
11	ASPHTANK	Asphalt Cement Storage Tank
13	HR_0001-0049	HMA Haul Road Volume 1-49
YARD	HR_0027-0049	HMA Yard
	Crushing and Screening Plant	
12	GEN1	Crusher Generator 1
13	GEN2	Crusher Generator 2
RAW	RAW	Raw Material Piles
1	FEED	Feeder
2	TP1	Waste Conveyor
3	PCRSH	Primary Crusher
4	TP2	Primary Crusher Conveyor
5	SCRSH	Secondary Crusher
6	TP3	Secondary Crusher Conveyor
7	SCR	Screen

	8	TP4	Screen Conveyor	
	9	TP5	Screen Conveyor	
	10	TP6	Screen Conveyor	
	11	STK1	Stacker Conveyor Drop to Pile	
	11	STK2	Stacker Conveyor Drop to Pile	
	11	STK3	Stacker Conveyor Drop to Pile	
	FPILE	FP	Finish Piles	
	14	CR_0001-0023	Crusher Haul Road Volume 1-23	

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☐
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
NA				

5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).	NA

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)
	NA			

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 model inputs were based on the size of the pile (100 feet)/4.3 (sigma-Y) and a release height of 8 feet or a sigma-Z of 8ft*2/2.15. All others 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.

Unit #	Model ID	Description
	HMA Plant	
AGGPILE	HMAPILE1	HMA Storage Pile Handling 1
AGGPILE	HMAPILE2	HMA Storage Pile Handling 2
AGGPILE	HMAPILE3	HMA Storage Pile Handling 3
AGGPILE	HMAPILE4	HMA Storage Pile Handling 4
AGGPILE	HMAPILE5	HMA Storage Pile Handling 5
1	HMABIN1	HMA 1 Bin Loading (3 Bins)
1	HMABIN2	HMA 1 Bin Loading (3 Bins)
2	HMATP1	HMA Bin 1 Unloading
2	HMATP2	HMA Bin 2 Unloading
4	HMASCR	HMA Scalping Screen
5	HMATP3	HMA Scalping Screen Unloading
6	HMATP4	HMA Conveyor Transfer to Drum Conveyor
11	ASPHTANK	Asphalt Cement Storage Tank
13	HR_0001-0049	HMA Haul Road Volume 1-49
YARD	HR_0027-0049	HMA Yard
	Crushing and Screening Plant	
RAW	RAW	Raw Material Piles
1	FEED	Feeder
2	TP1	Waste Conveyor
3	PCRSH	Primary Crusher
4	TP2	Primary Crusher Conveyor
5	SCRSH	Secondary Crusher
6	TP3	Secondary Crusher Conveyor
7	SCR	Screen
8	TP4	Screen Conveyor
9	TP5	Screen Conveyor
10	TP6	Screen Conveyor
11	STK1	Stacker Conveyor Drop to Pile
11	STK2	Stacker Conveyor Drop to Pile
11	STK3	Stacker Conveyor Drop to Pile
FPILE	FP	Finish Piles
14	CR_0001-0023	Crusher Haul Road Volume 1

Describe any open pits.

4	None
5	Describe emission units included in each open pit.
	NA

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: N/A		
	PM2.5: Santa Fe (350490020)		
	PM10: Santa Fe (350490020)		
	SO_2: N/A		
	Other:		
	Comments: For NO2 1-Hour and Annual, and SO2 1-Hour averaging periods modeling only neighboring sources were included as discussed in Table 20. Facility location is outside the city of Las Vegas		
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. Santa Fe 2017 - 2021	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.		

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes☒	No☐
	Yes, for point sources only. For volume sources, model was run in source selected flat terrain mode.		
2	What was the source of the terrain data?		
	USGS National Elevation Data (NED)		

16-U: Modeling Files

1	Describe the modeling files:		
	File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
	Shortline Combustion ROI	NOx, CO, SO2	ROI
	Shortline PM ROI	PM10, PM2.5	ROI
	Shortline NO2 1Hour	NO2	cumulative
	Shortline NO2 Annual	NO2	cumulative
	Shortline PM10	PM10	cumulative
	Shortline PM25 24Hr	PM2.5	cumulative
	Shortline PM25 Yr	PM2.5	cumulative
	Shortline SO2 1Hour	SO2	cumulative
	Shortline H2S	H2S	ROI
	Shortline PM10 Setback	PM10	setback
	Shortline PM25 24 Hr Setback	PM25	setback
	Shortline PM25 Annual Setback	PM25	setback
	Shortline NO2 Annual Setback	NO2	setback
	Shortline NO2 1 Hour Setback	NO2	setback
	Shortline SO2 Setback	SO2	setback

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.		
	Not a PSD Source		
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
	Not a PSD Source		
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes☐	No☒
	Not a PSD Source		

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☒
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)
NO2 1 hr	182.8	182.8	NA	NA	182.8	188.0	97.2	482220.6	3943006.9	1982.99
NO2 ann	14.0	1.0	NA	NA	15.0	94.0	16.0	482164.9	3942934.2	1982.40
CO 1 hr	607.0	NA	NA	NA	607.0	SIL - 2000	30.4	482133.9	3943095.8	1982.43
CO 8 hr	219.8	NA	NA	NA	219.8	SIL - 500	44.0	482206.6	3942988.7	1983.00
SO2 1 hr	77.5	77.5	NA	NA	77.5	196.4	39.5	482100.0	3943100.0	1985.32
PM2.5 24 hr	7.5	7.7	NA	9.2	16.9	35.0	48.3	482154.0	3943110.0	1982.16
PM2.5 ann	3.6	3.9	NA	3.7	7.6	12.0	63.3	482234.5	3943025.1	1983.29
PM10 24 hr	64.3	68.3	NA	19.0	87.3	150.0	58.2	482113.9	3942854.9	1981.59
H2S 1 hr	0.24	NA	NA	NA	0.24	SIL - 1.0	24.0	482176.8	3943113.0	1985.74

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 Las Vegas HMA & Crusher permit applications. All facility pollutants with ambient air quality 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.

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
7, 8	New Permitted Facility	TBD
12	New Permitted Facility	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: Short Line, LLC

I, Beverly Zastrow 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 23 day of October, 2023, upon my oath or affirmation, before a notary of the State of New Mexico.

*Signature

10/23/23
Date

Beverly Zastrow
Printed Name

Managing Member
Title

Scribed and sworn before me on this 23 day of October, 2023.

My authorization as a notary of the State of New Mexico expires on the 1st day of June, 2024.

LINDA R. HERRERA
Notary Public - State of New Mexico
Commission # 1114817
My Comm. Expires June 1, 2024

Linda R. Herrera
Notary's Signature

06/01/2024
Date

Linda R. Herrera
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.

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**
Short Line, LLC		October 20, 2023
Permittee/Company Contact	**Phone**	**Email**
Beverly Zastrow	505-892-5400	shortlinellc@yahoo.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.	

October 23, 2023

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 Short Line, LLC's Las Vegas HMA and Crusher Facility

NSR Permit Manager:

Attached please find two (2) hardcopies and three (3) electronic (CD) copies of the 20.2.72 NMAC Permit Application for Short Line, LLC's Las Vegas HMA and Crusher Facility. 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.

Short Line, LLC (Short Line) is applying for a new 20.2.72 NMAC air quality permit for a 120 ton per hour (TPH) hot mix asphalt plant to be operated within county of San Miguel, state of New Mexico. Regulation governing this permit application is 20.2.72.200.A(1) NMAC.

Please let me know if you have any questions or need additional information.

Sincerely,

Paul Wade
Sr. Associate Engineer
Montrose Environmental Solutions, Inc.

Cc: Beverly Zastrow, Short Line, LLC

Montrose Environmental Solutions, Inc.
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