

**20.2.72 NMAC
AIR QUALITY PERMIT
REVISION APPLICATION**

For

HARBORLITE CORPORATION

**No Agua Perlite Mine and Mill
Permit Revision #0071-M2
Revised 12/14/07**

Tres Piedras, NM

PREPARED BY
CLASS ONE TECHNICAL SERVICES
ALBUQUERQUE, NM
DECEMBER 2007

The contents of this application packet include:

20.2.72 NMAC Permit Application Forms

Attachment A: Application Summary

Attachment B: Process Flow Diagrams

Attachment C: Facility Site Plot Plan Drawn to Scale

Attachment D: Emission Calculations

Attachment E: Information Used To Determine Emissions

Attachment F: Figure E-1: 7.5 Minute USGS Topographic Map with 5 Kilometer Radius

Figure E-2: 7.5 Minute USGS Topographic Map showing Equipment Location

Attachment G: Public Notice Documentation

Attachment H: Written Description of the Routine Operations of the Facility

Attachment I: PSD Applicability Determination for All Sources

Attachment J: Discussion Demonstrating Compliance With Each Applicable State & Federal Regulation

Attachment K: Preliminary Operational Plan

Attachment L: Air Dispersion Modeling

Attachment M: Special Requirements for PSD Application

Attachment N: Other Relevant Information

Electronic Files

Mail Application To: New Mexico Environment Department Air Quality Bureau New Source Review Unit 2048 Galisteo Santa Fe, NM 87505 Phone (505) 827-1494 www.nmenv.state.nm.us/aqb		AIRS No.:
--	---	-----------

Universal Air Quality Permit Application & Notice of Intent Application to Construct or Modify Sources of Air Emissions

- Acknowledgements:**
- I acknowledge that a pre-application meeting is available to me upon request
 - \$500 Permit Filing Fee enclosed, Check No.:
 - This facility meets the applicable requirements to register as a Small Business

Part I – General Information

I-A: Company Information

1	Company name: Harborlite Corporation	Date application notarized: Revised 12/13/07
2	Facility name: No Agua Perlite Mine and Mill	SIC code (4 digits): 1499
3	Company mailing address: P.O. Box 338, Antonito, CO 81120	
4	Company contact person: Mr. Dean Hellickson	Title: Plant Manager
5	Phone No: (719) 376-5484 Ext. 111	Fax No: (719) 376-5842
	E-mail: Dean.Hellickson@worldminerals.com	
6	Preparer/Consultant (if applicable) name: Paul Wade Address: 3500 Comanche Rd. NE Suite G, Albuquerque, NM 87107	
7	Preparer/Consultant phone: (505) 830-9680	E-mail: pwade@classonetech.com

I-B: Current Facility Status

1	This application is for: <input type="checkbox"/> NOI <input type="checkbox"/> New Facility NSR Permit <input checked="" type="checkbox"/> Modification to an existing facility <input type="checkbox"/> Technical Revision	
2	Has this facility already been constructed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it currently operating in New Mexico? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	Is the plant currently shut down? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, give month and year of shut down (MM/YY):
4	Was this facility constructed before 1972 and continuously operated since 1972? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5	Does this facility have a Title V operating permit (20.2.70 NMAC)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the permit No. is: P-
6	Has this facility been issued a No Permit Required (NPR)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7	Has this facility been issued a Notice of Intent (NOI)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8	Does this facility have a construction permit (20.2.72 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9	Is this facility registered under a General permit (GCP-1, GCP-2,...)? <input type="checkbox"/> Yes	

	<input checked="" type="checkbox"/> No	
10	Is this a PSD major source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure.	Is this a Title V major source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure
a	Is this a major modification under the PSD rules (20.2.74 NMAC)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure	
11	If <i>Yes</i> or <i>Unsure</i> to any of the questions in question No. 10, contact the AQB to see if a pre-application meeting is required.	

Table I-B: Current Facility Status (continued)

12	What is the facility's maximum input capacity, specify units (reference here and list capacities in Attachment N if more room is required)			
a	Current	Hourly: 73 tons per hour	Daily: 1,752 tons per day	Annually: 401,500 tons per year
b	Proposed	Hourly: 73 tons per hour	Daily: 1,752 tons per day	Annually: 458,440 tons per year
13	What is the facility's maximum production rate, specify units (reference here and list capacities in Attachment N, if more room is required)			
a	Current	Hourly: 53 tons per hour	Daily: 1,272 tons per day	Annually: 291,500 tons per day
b	Proposed	Hourly: 53 tons per hour	Daily: 1,272 tons per day	Annually: 332,840 tons per day

Table I-C: Facility Location Information

1	Section: 11-14, 23	Range: 9E	Township: 29N	County: Taos	Elevation (ft): 8415
2	UTM Zone: <input type="checkbox"/> 12 or <input checked="" type="checkbox"/> 13			Datum: <input checked="" type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 <input type="checkbox"/> WGS 84	
	UTM E (to nearest 10 meters): 414,580			UTM N (to nearest 10 meters): 4,068,750	
a	AND Latitude (deg., min., sec.): 36 45 44.98			Longitude (deg., min., sec.): 105 57 25.30	
3	Name and zip code of nearest New Mexico town: Tres Piedras, 87577				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Tres Piedras go north on Highway 285 for 7.5 miles. Turn east on the unnamed access road for 1 mile to site.				
5	The facility is 7.5 miles north of Tres Piedras, NM.				
6	Status of land at facility (check one): <input checked="" type="checkbox"/> Private <input type="checkbox"/> Indian/Pueblo <input type="checkbox"/> Government				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2) of the property on which the facility is proposed to be constructed or operated: Taos				
8	Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) from other states, Bernalillo County, or a Class I area (see www.nmenv.state.nm.us/aqb/modeling/class1areas.html)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (20.2.72.206.A.7) If yes, list all: Colorado, Wheeler Peak Wilderness				
9	Name nearest Class I area: Wheeler Peak Wilderness				
10	Shortest distance from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 48780 meters				

Table I-D: Proposed Operating Schedule (Note: the operating schedule (D1, D2) shall become a condition of the permit)

1	Facility maximum operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 6280
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start:		<input type="checkbox"/> AM <input type="checkbox"/> PM	End: <input type="checkbox"/> AM <input type="checkbox"/> PM
3	Month and year of anticipated start of construction: Once permit is issued			
4	Month and year of anticipated construction completion: Modification is expected to take 3 to 6 months			
5	Month and year of anticipated startup of new or modified facility: 3 to 6 months after permit is issued			
6	Will this facility operate at this site for more than one year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Table I-E: Other

1	Is this application in response to a Notice of Violation (NOV)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
a	If yes, NOV date: June 15, 2005	NOV Tracking No: HAR-1553-0401
2	Is air quality dispersion modeling being submitted with this application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3	Does this facility require an “Air Toxics” permit under 20.2.72 NMAC, Part IV, Tables A and/or B in Part V? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
4	Will this facility be a source of federal Hazardous Air Pollutants? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
a	If yes, list applicable subparts in 40 CFR 61 & 63:	

Part II – Submittal Requirements

The 20.2.73 NMAC NOI application or the 20.2.72 NMAC permit application package shall consist of the following:

- 1) One hard copy **original signed and notarized application package** printed double sided
- 2) If the application is for a NSR permit or permit modification, include one working hard copy for Department use
- 3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically on compact disk(s) (CD). The base number of CD copies required is two, with additional copies as specified below.
- 4) If air dispersion modeling is required, include one additional electronic copy of the air dispersion modeling including the input and output files. The dispersion modeling *summary report only* should be submitted as hard copy(ies) unless otherwise indicated by the Bureau. The complete dispersion modeling study, including all input/output files, should be submitted electronically as part of the electronic submittal.
- 5) If subject to PSD review under 20.2.74 NMAC (PSD) include,
 - a. one additional hard copy and one additional CD copy for US EPA,
 - b. one additional hard copy and one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
 - c. one additional hard copy and one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

Electronic Submittal Format:

- 1) All required electronic documents shall be submitted in duplicate. One copy should be in a Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text 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 with the number of additional hard copies corresponding to the number of CD copies required.
- 2) Submit the application form and all MSWord formatted attachments as a single electronic file on the CD(s).
- 3) All documents shall have the electronic file names also displayed in the lower left hand of each page. The page numbers shall appear on the lower right hand of each page. The 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 format of electronic Attachments document that are not in MS Word format shall be in the format: “A-3423-G-Description”, where “G” stands for Attachment G (public notice).

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
1 a,b,c	NA	NA	NA	Mining Operations	2000 tpd 460,000 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30602010 30502033				
2	NA	NA	NA	Raw Material Storage Pile	2000 tpd 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30502031				
3	Pre-1983	Uneco	Wobbler	Feeder/Grizzly	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		424x121	30502031				
4	Pre-1983	Roger	49"	Primary Jaw Crusher	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30502001				
5	Pre-1983	Shopmade	TBD	Rod Deck Feed Conveyor	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
6	Pre-1983	Symons	TBD	Rod Deck Screen	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
7	Pre-1983	Symons/ Nordberg	TBD	Cone Crusher	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
8	Pre-1983	Shopmade	TBD	Cone Crusher Discharge Conv.	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
9	Pre-1983	TBD	TBD	South Ore Elevator	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
10	Pre-1983	Shopmade	TBD	Ore Bin Conveyor	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
11	Pre-1983	TBD	TBD	Ore Bin	150 tph 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
12a,b	Pre-1983	Shopmade	TBD	N & S Dryer Feeders	1752 tpd 458,440 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
13	Pre-1983	Bartlett Snow	TBD	North Furnace/Dryer	876 tpd 229,220 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501801				
14	Pre-1983	Shopmade	TBD	South Furnace/Dryer	876 tpd 229,220 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501801				
15	Pre-1983	Shopmade	TBD	Dryer Discharge Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
16	Pre-1983	TBD	TBD	Cooling Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
17	Pre-1983	TBD	TBD	Hot Rock Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
18 a,b,c	Pre-1983	Shopmade	TBD	Dryer Cyclone Discharge Screws (3)	340.8 tpd 89,176 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
19 a,b	Pre-1983	TBD	TBD	Dryer Cyclone (2)	340.8 tpd 89,176 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
21	Pre-1983	Shopmade	TBD	Screen Feed Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
22 a,b,c	Pre-1983	Mogensen	TBD	Screen Feeders (3)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
23 a,b,c	Pre-1983	Mogensen	TBD	Scalping Screens (3)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
24	Pre-1983	Mogensen	TBD	Screen Discharge Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
25	Pre-1983	Shopmade	TBD	Impactor Surge Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
26	Pre-1983	Shopmade	TBD	#1 Impactor Crusher	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
27	Pre-1983	Cemco	TBD	#1-A Impactor Crusher	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
28	Pre-1983	Shopmade	TBD	Duel Impactor Discharge Screw	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
29	Pre-1983	Shopmade	TBD	Oversize Return Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
30	Pre-1983	TBD	TBD	Dual Impactor Return Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
32	Pre-1983	TBD	TBD	Dual Impactor Discharge Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
33	Pre-1983	Shopmade	TBD	North Screen Feed Belt	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
34	Pre-1983	Shopmade	TBD	South Screen Feed Belt	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
35	Pre-1983	Shopmade	TBD	#2 Screen Feed Screw	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
36 a-g	Pre-1983	Hummer	TBD	8/12 Screens (7)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
37	Pre-1983	TBD	TBD	Oversize Collection Belt	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
38	Pre-1983	TBD	TBD	8/12 Collection Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
39	Pre-1983	Rhewum	M54	Screen	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		7307018	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
40	Pre-1983	TBD	TBD	8/12 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
41	Pre-1983	TBD	TBD	8/12 Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
42 a-g	Pre-1983	Hummer	TBD	16/30 Screens (7)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
43	Pre-1983	TBD	TBD	12/16 Collection Belt	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
44	Pre-1983	TBD	TBD	12/16 Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
45	Pre-1983	TBD	TBD	12/16 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
46	Pre-1983	TBD	TBD	12/16 Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
47	Pre-1983	TBD	TBD	16/30 Collection Belt	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
48	Pre-1983	TBD	TBD	16/30 Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
49	Pre-1983	TBD	TBD	16/30 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
50 a,b	Pre-1983	TBD	TBD	16/30 Bins (2)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
51	Pre-1983	TBD	TBD	Recycle Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
52	Pre-1983	Shopmade	TBD	-30 Collection Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
53	Pre-1983	Shopmade	TBD	#2 -30 Collection Screw	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
55	Pre-1983	TBD	TBD	Sizer Discharge Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
56	Pre-1983	TBD	TBD	Fines Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
57	Pre-1983	Cemco	TBD	#2 Impactor Crusher	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
58	Pre-1983	TBD	TBD	#2 Impactor Discharge Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
59	Pre-1983	Shopmade	TBD	N 14' Separator Feed Screw	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
60	Pre-1983	Raymond	TBD	N 14' Separator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
61	Pre-1983	Raymond	TBD	S 14' Separator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
62	Pre-1983	Raymond	TBD	N 8' Separator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
63	Pre-1983	Sturtevant	TBD	S 8' Separator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
64	Pre-1983	TBD	TBD	N 8' separator Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
65	Pre-1983	Shopmade	TBD	PA-116 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
66	Pre-1983	TBD	TBD	70/40 Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
67	Pre-1983	Shoopmade	TBD	East PA-116 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
68 a,b	Pre-1983	TBD	TBD	PA-116 Bins (2)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
69 a,b	Pre-1983	TBD	TBD	N&S Ultrafines Screws (2)	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input checked="" type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
			TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
70	Pre-1983	TBD	TBD	Ultrafines Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
71	Pre-1983	TBD	TBD	PA 1000 Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
73	Pre-1983	TBD	TBD	Smalls Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
74	Pre-1983	TBD	TBD	Fine Screen Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
75	Pre-1983	TBD	TBD	Screen Feed Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
76 a-e	Pre-1983	Hummer	TBD	30/50 – 50/100 Screens (5)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
77	Pre-1983	TBD	TBD	30/50 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
78 a,b	Pre-1983	TBD	TBD	30/50 Bins (2)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
79	Pre-1983	TBD	TBD	50/100 Bin Belt Conveyor	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
80	Pre-1983	TBD	TBD	50/100 Bin	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
82 a-i	Pre-1983	TBD	TBD	Mill Dust Collector Screws	2.5 tph 15,700 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
83 a-h	Pre-1983	TBD	TBD	Dryer Dust Collector Screws	1.0 tph 6,200 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
84	Pre-1983	TBD	TBD	N Dust Riser Screw	2.5 tph 15,700 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
85	Pre-1983	TBD	TBD	Dust Collector Elevator	2.5 tph 15,700 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
86 a-d	1996	Buffalo	TBD	Mill Dust Collector Fans (4)	90,000 ACFM	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899				
87 a-d	1996	Buffalo	TBD	Dryer Dust Collector Fans (4)	56,500 ACFM	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899				
88 a,b	1996	Hauck	TBD	Dryer Combustion Air Fans (2)	56,500 ACFM	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
89	1996	National Filter Media	UP380	Mill Dust Collector	90,000 ACFM	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899				
90	1996	National Filter Media	TBD	Dryer Dust Collector	56,500 ACFM	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899				
91	Pre-1983	TBD	TBD	Cyclone Discharge Elevator	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input checked="" type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
92	Pre-1983	TBD	TBD	S 8' Separator Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
95 a-e	1990 or earlier	NA	TBD	Fuel Storage Tanks	See Table III-B	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,72,73	
	1990 or earlier		TBD	30501899				
96 a-k	Pre-1983	TBD	TBD	Product Silos (11)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
97 a,b	Pre-1983	TBD	TBD	Waste Silos (2)	340.8 tpd 89,176 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899				
98a	NA	NA	NA	Waste Area - Truck Unload	340.8 tpd 89,176 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899				
98b	NA	NA	NA	Waste Area – Active Area Wind Erosion	NA	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One		Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)		<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input checked="" type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced		
89	1996	National Filter Media	UP380	Mill Dust Collector	90,000 ACFM	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input checked="" type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899					
90	1996	National Filter Media	TBD	Dryer Dust Collector	56,500 ACFM	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced		
	1996		TBD	30501899					
91	Pre-1983	TBD	TBD	Cyclone Discharge Elevator	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input checked="" type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899					
92	Pre-1983	TBD	TBD	S 8' Separator Elevator	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899					
95 a-e	1990 or earlier	NA	TBD	Fuel Storage Tanks	See Table III-B	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,72,73	
	1990 or earlier		TBD	30501899					
96 a-k	Pre-1983	TBD	TBD	Product Silos (11)	1272 tpd 332,840 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899					
97 a,b	Pre-1983	TBD	TBD	Waste Silos (2)	340.8 tpd 89,176 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	Pre-1983		TBD	30501899					
98a	NA	NA	NA	Waste Area - Truck Unload	340.8 tpd 89,176 tpy	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899					
98b	NA	NA	NA	Waste Area – Active Area Wind Erosion	NA	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified	<input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899					

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
98c	NA	NA	NA	Waste Area – Inactive Area Wind Erosion	NA	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899				
98d	NA	NA	NA	Waste Area – Overburden Truck Unloading	1022.4 tpd 267,528 tpy	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899				
98e	NA	NA	NA	Waste Area – Bulldozer	3 hr/day 1095 hr/yr	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30501899				
99a	NA	NA	NA	Haul Roads – Haul Truck Traffic	50 truck/day Mine, 51 truck/day Product, 26 truck/day Waste, 26 truck/day Overburden	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30602011				
99b	NA	NA	NA	Haul Roads - Road Grader Maintenance	750 hour/yr	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73	
	NA		NA	30602011				
100a,b	TBD	TBD	TBD	N 8' Separator Ultrafines Discharge Screw (2)	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	3,5,7,15,72,73, 77	
	TBD		TBD	30501899				

¹ Date format is MM/DD/YY

Part III – Production and Control Equipment

Table III-A: Regulated Equipment (Unit and stack numbering must correspond throughout the application package.)

Note: If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72, 202 do not apply, and all equipment should be listed here.

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Source Description	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Applicable State Regulation(s) 20.2.X, ...	Replacing Unit No.
	Date ¹ of Installation/ Construction		Serial No.	Source Classification Code (SCC)				
101	TBD	TBD	TBD	S 8' Separator Ultrafines Discharge Screw	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73, 77	
	TBD		TBD	30501899				
102	TBD	TBD	TBD	S 8' Separator Inlet Elevator	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73, 77	
	TBD		TBD	30501899				
103a,b	TBD	TBD	TBD	S 8' Separator Elevator Discharge Conveyors (2)	1272 tpd 332,840 tpy	<input type="checkbox"/> Existing (unchanged) <input checked="" type="checkbox"/> New/Additional <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Removed <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Replaced	3,5,7,15,72,73, 77	
	TBD		TBD	30501899				

¹ Date format is MM/DD/YY

Table III-B: 20.2.72.202.B NMAC Exempted Equipment (If exempt under 20 NMAC 2.72.202.B.5, list emission rates in Table IV-A.)

Unit & stack numbering must be consistent throughout the application package. This table is applicable only if applying for a 20.2.72 NMAC permit. 20.2.72.202 NMAC Exemptions do not apply to NOI facilities under 20.2.73 NMAC, per Exemptions Policy 02-012.00 (see http://www.nmenv.state.nm.us/aqb/permit/aqb_pol.html) for more details:

Unit No.	Date ¹ of Manufacture /Reconstruction.	Manufacturer	Model No.	Type (Source Description)	Capacity (Specify Units)	For Each Piece of Equipment, Check One	Site Specific 20.2.72.202 NMAC Exemption (e.g. 2.72.202.B.5)	Other Required Information
	Date ¹ of Installation/ Construction		Serial No.					
95a	1990 or earlier	Unknown	Unknown	Spec. Used Oil Storage Tank	20,000 gallons	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	20.2.72.202.B.2	
	1990 or earlier		Unknown					
95b	1990 or earlier	Unknown	Unknown	Diesel Fuel Storage Tank	20,000 gallons	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	20.2.72.202.B.2	
	1990 or earlier		Unknown					
95c	1990 or earlier	Unknown	Unknown	Diesel Fuel Storage Tank	15,000 gallons	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	20.2.72.202.B.2	
	1990 or earlier		Unknown					
95d	1990 or earlier	Unknown	Unknown	Diesel Fuel Storage Tank	20,000 gallons	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced	20.2.72.202.B.2	
	1990 or earlier		Unknown					
						<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
						<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
						<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
						<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		
						<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To be Modified <input type="checkbox"/> To be Replaced		

¹ Date format is MM/DD/YY

Part IV - Emissions

Table IV-A: Maximum Uncontrolled¹ Emissions Under Normal Operating Conditions. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table IV-F. Unit & stack numbering must be consistent throughout the application package. Include tank-flashing emissions estimates (20.2.72.203.A.3 NMAC) This Table was intentionally left blank because it would be identical to Table IV-B.

Unit No.	NO _x		CO		VOC		SO _x		TSP ²		PM10 ²		PM2.5 ²		<input type="checkbox"/> H ₂ S or <input checked="" type="checkbox"/> 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
1a									6.05	6.96	1.29	1.48	0.64	0.73		
1b									0.012	0.014	0.006	0.007	0.0004	0.0004		
1c									0.36	0.42	0.17	0.20	0.03	0.03		
2									0.23	0.26	0.11	0.12	0.034	0.04		
3									0.17	0.26	0.08	0.12	0.026	0.04		
4									0.81	1.24	0.36	0.55	0.055	0.08		
13,14	4.02	12.6	9.49	29.8	2.34	7.3	4.97	15.6	2044.00	6418.2	474.50	1489.9	114.25	348.7	0.035	0.11
5-12, 15-17,21-80									5000	15700	5000	15700	5000	15700		
96 a-k									0.92	2.90	0.44	1.37	0.07	0.21		
97 a,b									0.25	0.78	0.12	0.37	0.02	0.06		
98a									0.25	0.78	0.12	0.37	0.02	0.06		
98b									5.78	25.31	2.89	12.66	0.43	1.90		
98c									2.34	10.26	1.17	5.13	0.18	0.77		
98d									0.05	0.15	0.02	0.07	0.003	0.01		
98e									7.20	3.94	1.56	0.85	0.76	0.41		
99a									263.12	290.42	67.06	74.02	6.70	7.40		
99b									7.73	2.90	2.79	1.05	0.24	0.09		
95e					0.28	1.2										
Totals →	4.02	12.6	9.49	29.8	2.62	8.5	4.97	15.6	7339.2 7	22464. 8	5552.6 9	17288. 3	5123.4 6	16060. 5	0.035	0.11

¹ **Maximum Uncontrolled Emissions** are the uncontrolled emissions at maximum capacity, prior to (in the absence of) pollution control equipment. 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.

² **Condensables:** Include condensable particulate matter emissions in particulate matter calculations.

Table IV – B: Requested Allowable Emissions

Unit and stack numbering must be consistent throughout the application package. Include tank-flashing emissions estimates.

Unit No.	NO _x		CO		VOC		SO _x		TSP ¹		PM10 ¹		PM2.5 ¹		<input type="checkbox"/> H ₂ S or <input checked="" type="checkbox"/> 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
1a									6.05	6.96	1.29	1.48	0.64	0.73		
1b									0.012	0.014	0.006	0.007	0.0004	0.0004		
1c									0.36	0.42	0.17	0.20	0.03	0.03		
2									0.23	0.26	0.11	0.12	0.034	0.04		
3									0.17	0.26	0.08	0.12	0.026	0.04		
4									0.18	0.28	0.08	0.12	0.015	0.02		
13,14	4.02	12.6	9.49	29.8	2.34	7.3	4.97	15.6	11.31	35.5	11.31	35.5	8.49	26.7	0.035	0.11
5-12, 15-17,21-80									12.26	38.50	12.26	38.50	4.90	15.39		
96 a-k									0.92	2.90	0.44	1.37	0.07	0.21		
97 a,b									0.25	0.78	0.12	0.37	0.02	0.06		
98a									0.25	0.78	0.12	0.37	0.02	0.06		
98b									5.78	25.31	2.89	12.66	0.43	1.90		
98c									2.34	10.26	1.17	5.13	0.18	0.77		
									0.05	0.15	0.02	0.07	0.003	0.01		
									7.20	3.94	1.56	0.85	0.76	0.41		
99a									105.25	116.16	26.82	29.62	2.69	2.96		
99b									7.73	2.90	2.79	1.05	0.24	0.09		
95e					0.28	1.2										
Totals ➔	4.02	12.6	9.49	29.8	2.62	8.5	4.97	15.6	160.34	245.4	61.24	127.5	18.55	49.4	0.035	0.11

¹ **Condensables:** Include condensable particulate matter emissions in particulate matter calculations.

Table IV-D: Stack Exit and Fugitive¹ Emission Rates (Requested Allowables) List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table IV-F (Unit and stack numbering must correspond throughout the application package). Include tank-flashing emissions estimates.

I have elected to leave this table blank because this facility does not have any stacks/vents that are split or combine with any of its sources and the emission rates match Requested allowable emission rates already stated in the above tables.

		TSP		PM10		PM2.5		NOx		CO		VOC		SOx		<input type="checkbox"/> H ₂ S or <input checked="" type="checkbox"/> Lead	
Stack No.	Unit No.(s) from Table III-A	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
F	1a	6.05	6.96	1.29	1.48	0.64	0.73										
F	1b	0.012	0.014	0.006	0.007	0.0004	0.0004										
F	1c	0.36	0.42	0.17	0.20	0.03	0.03										
F	2	0.23	0.26	0.11	0.12	0.034	0.04										
F	3	0.17	0.26	0.08	0.12	0.026	0.04										
F	4	0.18	0.28	0.08	0.12	0.015	0.02										
1,2	13,14	11.31	35.5	11.31	35.5	8.49	26.7	4.02	12.6	9.49	29.8	2.34	7.3	4.97	15.6	0.035	0.11
3,4,5,6	5-12, 15-17,21-80	12.26	38.50	12.26	38.50	4.90	15.39										
F	96 a-k	0.92	2.90	0.44	1.37	0.07	0.21										
F	97 a,b	0.25	0.78	0.12	0.37	0.02	0.06										
F	98a	0.25	0.78	0.12	0.37	0.02	0.06										
F	98b	5.78	25.31	2.89	12.66	0.43	1.90										
F	98c	2.34	10.26	1.17	5.13	0.18	0.77										
F	98d	0.05	0.15	0.02	0.07	0.003	0.01										
F	98e	7.20	3.94	1.56	0.85	0.76	0.41										
F	99a	105.25	116.16	26.82	29.62	2.69	2.96										
F	99b	7.73	2.90	2.79	1.05	0.24	0.09										
F	95e											0.28	1.2				
Totals →		160.34	245.4	61.24	127.5	18.55	49.4	4.02	12.6	9.49	29.8	2.62	8.5	4.97	15.6	0.035	0.11

¹ List all fugitives that are associated with the normal, routine, or non-emergency operation of the facility.

Table IV-F: Stack Exit Emission Rates for HAPs and TAPs (Describe Stack Exit Conditions in Table IV-E)
 (Unit and stack numbering must correspond throughout the application package.) Include tank-flashing emissions estimates

Stack No.	Unit No.(s)	Specify the name of the TAP as listed in 20.2.72.502 NMAC and HAP as it appears in Section 112 (b) of the 1990 CAAA. 20.2.72.402.C NMAC lists sources that are exempt from the permitting requirements of 20.2.72.400-499															
		Total HAPs		HAP <input type="checkbox"/> TAP <input type="checkbox"/>		HAP <input type="checkbox"/> TAP <input type="checkbox"/>		HAP <input type="checkbox"/> TAP <input type="checkbox"/>		HAP <input type="checkbox"/> TAP <input type="checkbox"/>		HAP <input type="checkbox"/> TAP <input type="checkbox"/>		HAP <input type="checkbox"/> TAP <input type="checkbox"/>		HAP <input type="checkbox"/> TAP <input type="checkbox"/>	
		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
1,2	13,14	0.059	0.16	A complete list of all HAPs for the rotary dryers is found in Attachment D													
TOTAL →		0.059	0.16														

Only list TAPs that have a maximum uncontrolled emissions rate greater than the threshold emission rate listed in 20.2.72.502, Tables A and B

Table IV-F: Stack Exit Emission Rates for HAPs and TAPs (Describe Stack Exit Conditions in Table IV-E)
 (Unit and stack numbering must correspond throughout the application package.) Include tank-flashing emissions estimates

Stack No.	Unit No.(s)	Specify the name of the TAP as listed in 20.2.72.502 NMAC and HAP as it appears in Section 112 (b) of the 1990 CAAA. 20.2.72.402.C NMAC lists sources that are exempt from the permitting requirements of 20.2.72.400-499															
		Antimony HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Barium HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Cadmium HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Chromium HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Cobalt HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Manganese HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Nickel HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>		Silver HAP <input type="checkbox"/> TAP <input checked="" type="checkbox"/>	
		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
1,2	13,14	0.00064	0.0017	0.01335	0.0367	0.00118	0.0032	0.00235	0.0065	0.00080	0.0022	0.00959	0.0264	0.02256	0.0620	0.00048	0.00131
TOTAL	→	0.00064	0.0017	0.01335	0.0367	0.00118	0.0032	0.00235	0.0065	0.00080	0.0022	0.00959	0.0264	0.02256	0.0620	0.00048	0.00131

Only list TAPs that have a maximum uncontrolled emissions rate greater than the threshold emission rate listed in 20.2.72.502, Tables A and B

Part VI – Material Storage and Handling

Table VI-A: Liquid Storage Data¹ Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories

Tank No.	(SCC)	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)
95a	39090 001,2	Specification Used Oil	Reclaimed Petroleum Distillate	6.3	130.0	65.9	0.0078	78.4	0.0117
95b	39090 003,4	Diesel #2	Petroleum Distillate	7.05	105.0	65.9	0.0078	78.4	0.0117
95c	39090 003,4	Diesel #2	Petroleum Distillate	7.05	105.0	65.9	0.0078	78.4	0.0117
95d	39090 003,4	Diesel #2	Petroleum Distillate	7.05	130.0	65.9	0.0078	78.4	0.0117
95e	39090 003,4	Gasoline	Petroleum Distillate	6.4	67.0	65.9	0.0078	78.4	0.0117

¹If tank is to be used for storage of different materials, list all the materials, 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.

Table VI-B: Liquid Storage Tank Data (Use additional sheets if necessary.) (Unit and stack numbering must correspond throughout the application package.)

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories.

Tank No.	Date Installed/ Modified (MM/YY)	Materials Stored	Roof Type (Table VI-C)	Seal Type (Table VI-C)	Capacity ¹		Diameter (M)	Vapor Space (M)	Color (Table VI-C)		Paint Condition (Table VI-C)	Annual Through-put (gal/yr)	Turn-overs per year
					(bbl)	(M ³)			Roof	Shell			
95a	1990 or earlier	Specification Used Oil	FX	NA	476	75.7	3.64	N/A	OT	OT	Good	850,000	42.5
95b	1990 or earlier	Diesel #2	FX	NA	476	75.7	3.64	N/A	OT	OT	Good	45,000	2.3
95c	1990 or earlier	Diesel #2	FX	NA	357	56.8	3.36	N/A	AD	AD	Good	90,000	6.3
95d	1990 or earlier	Diesel #2	FX	NA	476	75.7	3.64	N/A	AD	AD	Good	130,000	6.8
95e	1990 or earlier	Gasoline	FX	NA	119	18.9	2.45	N/A	OT	OT	Good	8,000	1.6

Table VI-C: Liquid Storage Tank Data Codes						
Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Cond.
FX, Fixed Roof	1, Mechanical Shoe Seal	2, Liquid-mounted resilient seal	3, Vapor-mounted resilient seal	4, 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	

¹0.159 M³ = 42.0 gal = 1.00 bbl

Table VI-D: Materials Processed and Produced (Use additional sheets if necessary.)							
Material Processed				Material Produced			
Description	Chemical Composition	Phase¹	Quantity (specify units)	Description	Chemical Composition	Phase¹	Quantity (specify units)
Raw Material	Perlite Ore	S	Maximum 1752 tpd	Product	Perlite Ore	S	Maximum 1272 tpd
				Waste	Perlite Ore	S	Maximum 340.8 tpd

¹G = Gas, L = Liquid, or S = Solid

Rev 6/13/2007

A-0071M2-NoAguaMine

Part VII – Emissions Measurement

Table VII-A: Continuous Emissions Measurement (CEM) Equipment (Use additional sheets if necessary.) (Unit and stack numbering must correspond throughout the application package.)									
Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
NA									

Note: 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 Attachment D.

ATTACHMENT A

Application Summary

- Attachment A The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (20.2.72.200.A.X, or 20.2.73 NMAC) for 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 effect the facility's operations and emissions, debottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).
-

Harborlite Corporation is submitting this application to the New Mexico Environment Department, Air Quality Bureau, for a revision to Air Quality Permit #0071-M1 for its No Agua Perlite Mine and Mill. Harborlite mines perlite ore in an open pit mine, mills the ore to various sizes, and trucks the milled ore to Antonito, Colorado, for shipment to customers via railroad cars or over-the-road trucks. The permit revision includes (1) adding processing equipment (bucket elevators, screw conveyors, and belt conveyors) inside the mill building, (2) changing existing permit conditions concerning the waste area fugitive dust control and the dryer baghouse bypass; (3) increasing allowable annual hours of operation; and (4) imposing particulate emission requirements on the mill ventilation dust control system that will reduce facility-wide allowable emissions by 20 percent. The permit revision, in part, is a condition of Settlement Agreement and Stipulation Compliance Order No. AQCA 07-30 Section II, Paragraph 13.

The additional equipment will be installed in the mill house to recover material that presently goes to the waste dump. Fugitive dust generated by operating the new equipment will be vented to the present Mill Dust Collector (Unit 89). This additional equipment will be subject to NSPS Subpart OOO. Harborlite proposes to impose enforceable limitations subjecting the Mill Dust Collector to the particulate matter standards of 40 CFR 60.672(a)(1) and (2), even though the unit is not subject to NSPS Subpart OOO.. This will reduce the allowable Mill Baghouse (Unit 89) PM emission rate from 0.04 grains per dry standard cubic feet to 0.022 grains per dry standard cubic feet, lowering the PM emissions from the Mill Baghouse by 45%.

Dryer (Unit 13) bypass, discussed in Settlement Agreement and Stipulation Compliance Order No. AQCA 07-30 Section I, Paragraph 3.b and f, has been addressed. Harborlite has installed baghouse filter media that is resistant to excessive heat. The bypass system has been removed so that no bypass of dryer exhaust can occur.

The permit condition in Permit #0071-M1 that is addressed in Settlement Agreement and Stipulation Compliance Order No. AQCA 07-30 Section II, Paragraph 13, involves material handling in the waste disposal area. The language of this condition will be clarified to address the present or proposed operating procedures to be used at the waste disposal area. Waste is hauled in covered trucks and disposed of into the waste disposal area. A maximum of 340.8 tons of waste can be created per day. This is not an increase over what was allowed in the application for Permit #0071-M1. The waste area consists of 27 acres with only a 0.5 acre active area for disposal at any one time. The method of disposal and the method to minimize fugitive emissions is described in a separate document titled "Waste Area Operating Procedures and Fugitive Dust Management Plan".

Harborlite is requesting an increase in annual hours from 5500 hours per year to 6280 hours per year. This is consistent with the normal hours of operation presently followed by Harborlite of 24 hours per day, 5 days per week, and 52 weeks per year.

All other operations or procedures at the No Agua Mine and Mill will not change with this permit revision application.

If you have any questions regarding this permit revision application please call Paul Wade of Classone Technical Services at (505) 830-9680.

ATTACHMENT B

Process Flow Sheet

- Attachment B 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.
-

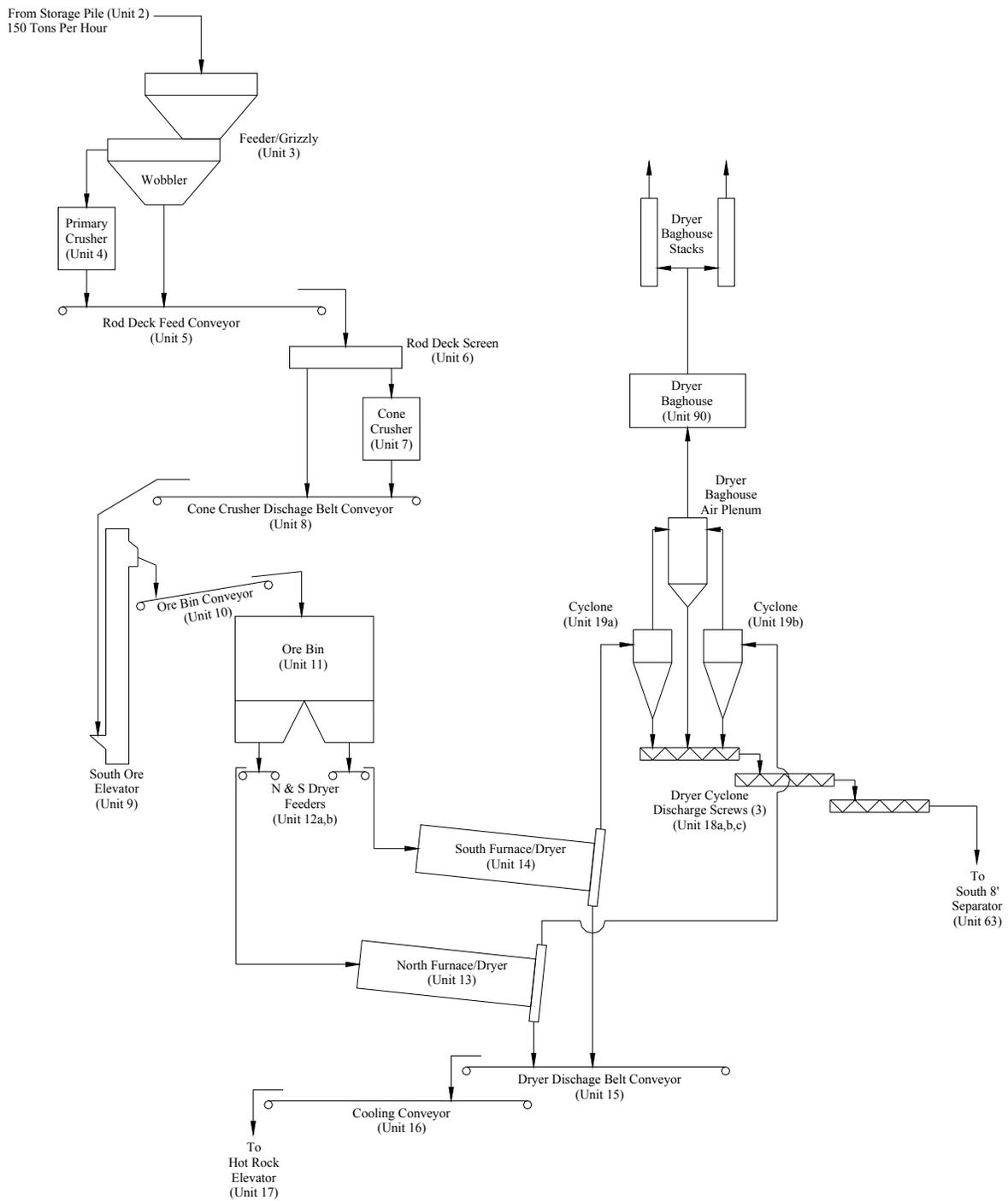


Figure B-1: Harborlite Process Flow Diagram #1

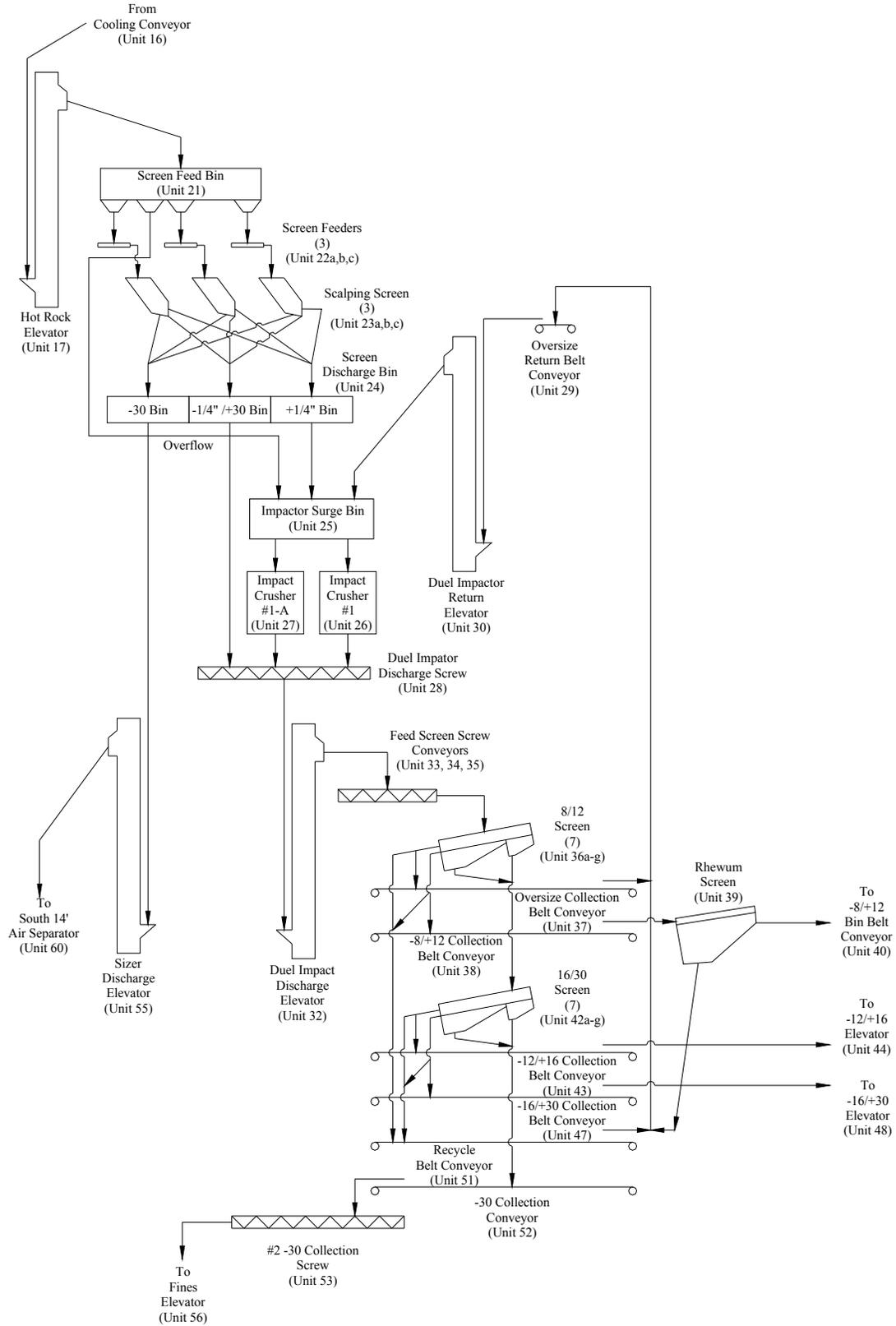


Figure B-2: Harborlite Process Flow Diagram #2

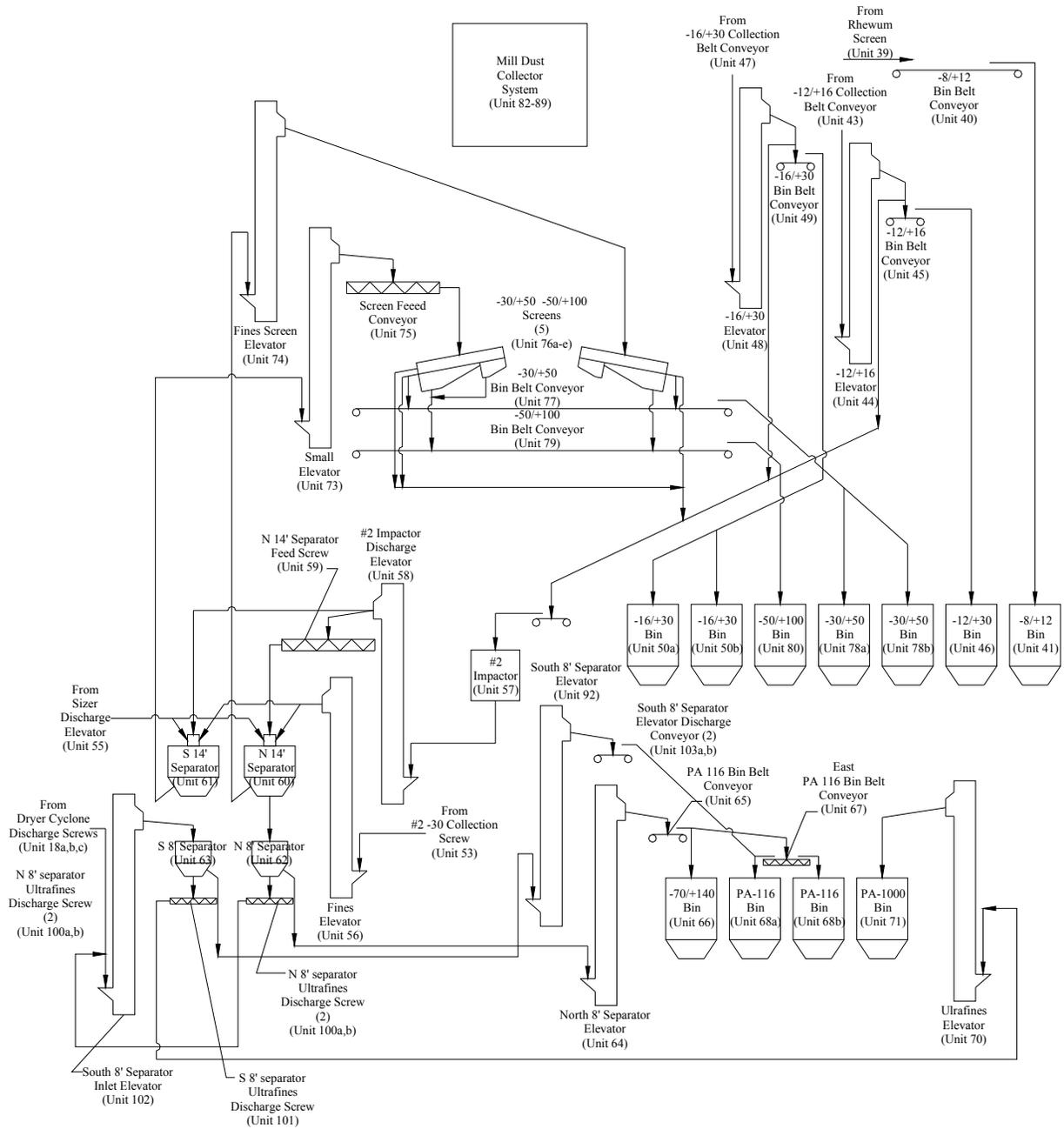


Figure B-3: Harborlite Process Flow Diagram #3

ATTACHMENT C

Plot Plan Drawn To Scale

- Attachment C A **plot plan drawn to scale** showing emissions points, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. The unit numbering system should be consistent throughout this application.
-

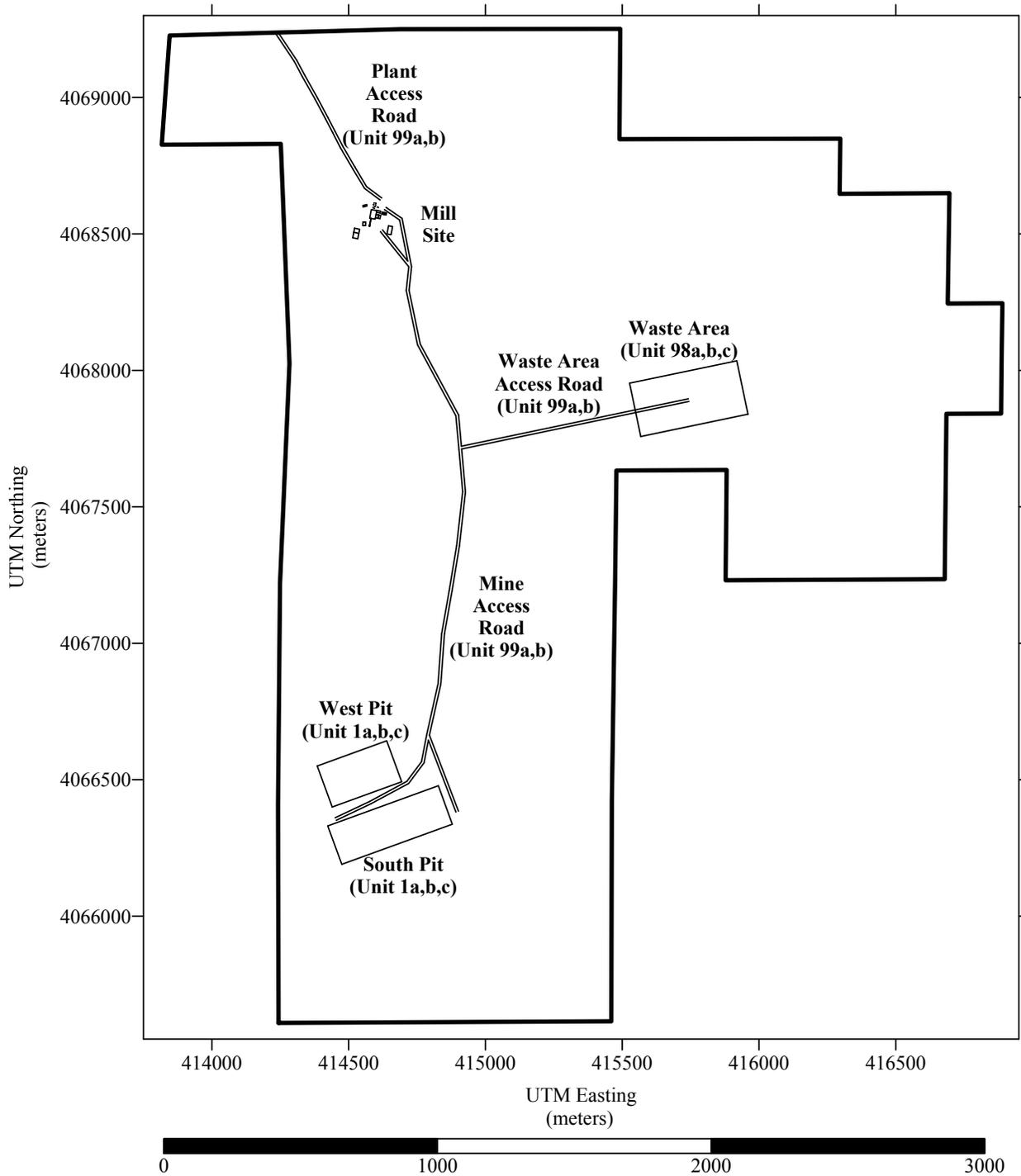


Figure B-1: Harborlite's No Agua Mine and Mill Site Plot Plan

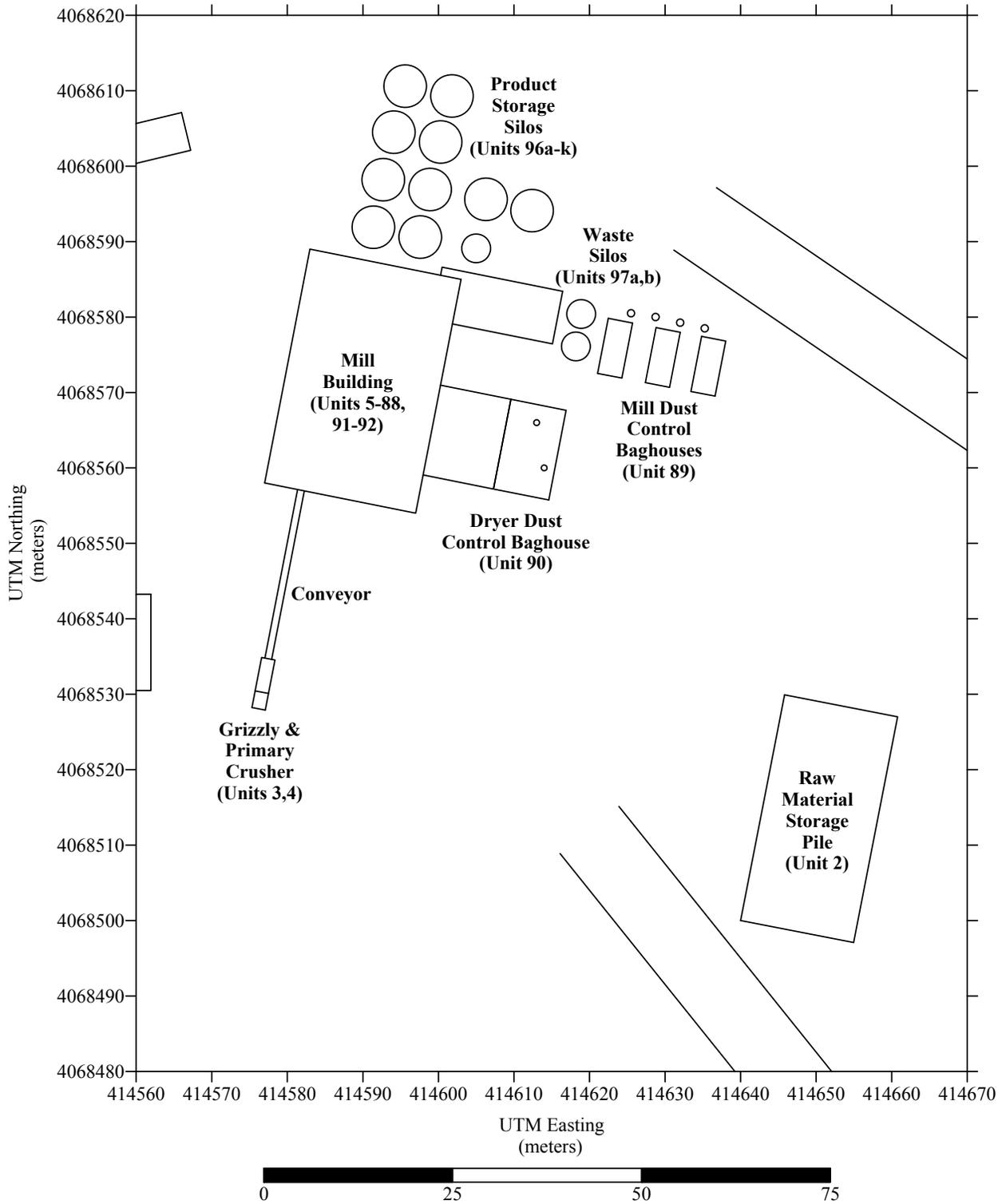


Figure B-2: Harborlite's No Agua Mill Site Plot Plan

ATTACHMENT D

All Calculations

- Attachment D **All calculations** used to determine both the hourly and annual controlled and uncontrolled emission rates. Document the source of each emission factor used. 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.
-

1.0 Maximum Uncontrolled Emission Rates

Mining Particulate Emissions

Perlite ore is obtained from open pit mining. Emissions include particulate matter during mining, front-end loading of mined material into haul trucks, and blasting. Perlite ore is mined using bulldozer scraping and blasting. Maximum hours of operation for bulldozers are 10 hours per day and 2300 hours per year, and material silt content (s) of 10% (run of mine average 5 to 10%) and material moisture content of 8% (run of mine average 8 to 10%). The maximum number of blasts per year is 2 with a blast area (A) of 10,000 square feet. The hourly blasting emission rates will be based on the tons per hour emission rate and annual hours of mining. The maximum amount of mill material loaded into haul trucks is 200 tons per hour and 460,000 tons per year. The maximum amount of overburden for the waste area loaded into haul trucks is 116.3 tons per hour and 267,528 tons per year.

To estimate maximum uncontrolled particulate emissions rates for mining operations (bulldozing, blasting), emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.9, Table 11.9-1 for blasting and bulldozer operations.

To estimate maximum uncontrolled particulate emission rates for aggregate handling operations (haul truck loading), 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 (11/06), where the k (TSP = 0.74, PM₁₀ = 0.35, PM_{2.5} = 0.053), wind speed is the NMED's recommended values of 11 mph, and a mine average moisture content of 8 percent.

Bulldozer Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (s)^{1.2} / (M)^{1.3}$$

$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (s)^{1.5} / (M)^{1.4}$$

$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (s)^{1.2} / (M)^{1.3}$$

$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (10)^{1.2} / (8)^{1.3} = 6.05143 \text{ lbs/hr}$$

$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (10)^{1.5} / (8)^{1.4} = 1.29043 \text{ lbs/hr}$$

$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (10)^{1.2} / (8)^{1.3} = 0.63540 \text{ lbs/hr}$$

Blasting Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/blast)} = 0.000014 \times (A)^{1.5}$$

$$E_{PM_{10}} \text{ (lbs/blast)} = 0.52 \times 0.000014 \times (A)^{1.5}$$

$$E_{PM_{2.5}} \text{ (lbs/blast)} = 0.03 \times 0.000014 \times (A)^{1.5}$$

$$E_{TSP} \text{ (lbs/blast)} = 0.000014 \times (10000)^{1.5} = 14.00000 \text{ lbs/blast}$$

$$E_{PM_{10}} \text{ (lbs/blast)} = 0.52 \times 0.000014 \times (10000)^{1.5} = 7.28000 \text{ lbs/blast}$$

$$E_{PM_{2.5}} \text{ (lbs/blast)} = 0.03 \times 0.000014 \times (10000)^{1.5} = 0.42000 \text{ lbs/blast}$$

Aggregate Handling Emission Equation:

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

$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{PM_{10}} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{PM_{2.5}} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{TSP} \text{ (lbs/ton)} = 0.00114 \text{ lbs/ton};$$

$$E_{PM_{10}} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$

$$E_{PM_{2.5}} \text{ (lbs/ton)} = 0.00017 \text{ lbs/ton}$$

Table D-1 Maximum Uncontrolled Mining Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
1a	Bulldozing	2300 hr/yr	6.05	6.96	1.29	1.48	0.64	0.73
1b	Blasting	2 blast/yr	0.012	0.014	0.006	0.007	0.0004	0.0004
1c	Truck Loading	243 tph; 727,528 tpy	0.36	0.42	0.17	0.20	0.03	0.03

Raw Ore Processing Particulate Emissions

From the mine, perlite ore is hauled to the mill site and stored in a storage pile. From the storage pile a front-end loader dumps the perlite ore in to a grizzly feeder and primary crusher. The perlite ore is then conveyed into the mill building for processing. Emissions include particulate matter during unloading of mine haul trucks into the storage pile and front-end loading of perlite ore into the feeder/primary crusher. The maximum amount of material unloaded from mine haul trucks is 200 tons per hour and 458,440 tons per year. The maximum amount of material loaded into the feeder/primary crusher is 150 tons per hour and 458,440 tons per year.

To estimate maximum uncontrolled particulate emission rates for raw ore processing operations (storage pile loading and feeder loading), 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 (11/06), where the k (TSP = 0.74, PM₁₀ = 0.35, PM_{2.5} = 0.053), wind speed is the NMED's recommended values of 11 mph, and a mine average moisture content of 7 percent.

To estimate maximum uncontrolled particulate emissions rates for raw ore processing operations (primary crusher), emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, November 2006, Section 11.19.2, Table 11.19.2-2 "Tertiary Crusher". To determine missing PM_{2.5} emission factors the ratio of 0.35/0.053 from PM₁₀/PM_{2.5} *k* factors found in AP-42 Section 13.2.4 (11/2006) were used.

Storage Pile and Feeder Loading Particulate Emission Equation:

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

$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{TSP} \text{ (lbs/ton)} = 0.00114 \text{ lbs/ton;}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.00017 \text{ lbs/ton}$$

Primary Crushing Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/ton)} = 0.0054 \text{ lbs/ton}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.0024 \text{ lbs/ton}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.0054 \times 0.053 / 0.35 = 0.00036 \text{ lbs/ton}$$

Table D-2 Maximum Uncontrolled Raw Ore Processing Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
2	Storage Pile Loading	200 tph; 458,440 tpy	0.23	0.26	0.11	0.12	0.034	0.04
3	Feeder Loading	150 tph; 458,440 tpy	0.17	0.26	0.08	0.12	0.026	0.04
4	Primary Crusher	150 tph; 458,440 tpy	0.81	1.24	0.36	0.55	0.054	0.08

Rotary Dryers Emissions

Raw material that has been crushed in the primary crusher is sent to a surge bin until sent to one of two rotary dryers. The maximum input to the dryers is 73 tons per hour and 458,440 tons per year with surface moisture content of 7 to 10%. Perlite ore product exiting the dryers is 53 tons per hour and 332,840 tons per year with surface moisture content of 1%. Waste ore from raw material entering the mill is generated at 14.2 tons per hour and 89,176 tons per year with surface moisture content of 1% is sent to the waste silos. Maximum hours of operation of the mill are 24 hours per day and 6280 hours per year.

Uncontrolled particulate, nitrogen dioxide, carbon monoxide, sulfur dioxide, and volatile organic carbon emissions from the rotary dryers were estimated using AP-42, Section 11.1 "Hot Mix Asphalt Plants" (ver. 03/04), Tables

11.1-3, -7, and -8 emission equations. To determine missing PM_{2.5} emission factors, the sum of uncontrolled filterable from Table 11.1-4 plus uncontrolled organic and inorganic condensable in Table 11.1-3 was used. Percent sulfur content of the burner fuel will not exceed 0.5 percent.

AP-42 Uncontrolled Emission Factors:

Process Unit	Pollutant	Emission Factor (lbs/ton)
Rotary Dryer	NO _x	0.055
	CO	0.13
	SO ₂	0.058
	VOC	0.032
	TOC	0.044
	TSP	28.0
	PM ₁₀	6.5
	PM _{2.5}	1.565

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

$$\text{Emission Rate (lbs/hour)} = \text{Process Rate (tons/hour)} * \text{Emission Factor (lbs/ton)}$$

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 D-3: Maximum Uncontrolled Rotary Drum Dryer Emission Rates

Process Unit Number	Process Unit Description	Pollutant	Average Hourly Process Rate (tons/hour)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
13,14	Rotary Drum Dryer	NO _x	73	4.02	12.6
		CO	73	9.49	29.8
		SO ₂	73	4.23	13.3
		VOC	73	2.34	7.3
		TSP	73	2044.00	6418.2
		PM ₁₀	73	474.50	1489.9
		PM _{2.5}	73	114.25	348.7

Emissions of lead from burning specification used oil is estimated based on the “Average Physical Properties of Mesa Oil, Inc’s Specification Used Oil Fuel” of 30 PPM or 30 mg/liter found in Attachment E. The amount of fuel burned is equal to 141 gallons per hour or 533 liters per hour.

Lead (lb/hr) = 30 mg/liter * 533 liter/hr / 453600 mg/lb = 0.035 lbs/hr

Lead (ton/yr) = 0.035 lbs/hr * 6280 hr/yr = 0.11 tons/yr

Mill Ventilation Control System Particulate Emissions

After drying, the perlite ore is sized into final product. Particulate emissions generated during sizing are controlled by a cyclone and ventilation filter system. The maximum uncontrolled emission rate is based on the know amount of material that is collected by the mill ventilation control system of 2.5 tons per hour.

Table D-4 Maximum Uncontrolled Mill Ventilation Control System Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
5-12,15-17,21-80	Mill Processing	73 tph, 458,440 tpy	5000	15700	5000	15700	5000	15700

Perlite Ore Product and Waste Ore Loading into Haul Truck Particulate Emissions

After processing the perlite ore product and waste ore are unloaded into haul trucks at the mill for transport of product to Antonio, Colorado or waste ore to the Waste Area area. Perlite ore product exiting the dryer is 53 tons per hour and 332,840 tons per year with surface moisture content of 1%. Waste ore from raw material entering the mill is generated at 14.2 tons per hour and 89,176 tons per year with surface moisture content of 1% is sent to the waste silos.

To estimate maximum uncontrolled particulate emission rates for haul truck loading operations (perlite ore product and waste ore), 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 (11/06), where the k (TSP = 0.74, PM₁₀ = 0.35, PM_{2.5} = 0.053), wind speed is the NMED’s recommended values of 11 mph, and a mine average moisture content of 1 percent.

Haul Truck Loading at Mill Particulate Emission Equation:

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

$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{TSP} \text{ (lbs/ton)} = 0.01742 \text{ lbs/ton};$$

$$E_{PM10} \text{ (lbs/ton)} = 0.00824 \text{ lbs/ton}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.00125 \text{ lbs/ton}$$

Table D-5 Maximum Uncontrolled Product and Waste Haul Truck Loading Particulate Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
96a-k	Product Haul Truck Loading	53 tph; 332,840 tpy	0.92	2.90	0.44	1.37	0.07	0.21
97a,b	Waste Haul Truck Loading	14.2 tph; 89,176 tpy	0.25	0.78	0.12	0.37	0.02	0.06

Waste Area Particulate Emissions

Waste ore is removed from the mill and transported to a designated waste area. The waste area is 27 acres in size with ½ acre used for active waste disposal. After the active ½ acre is filled, the ½ acre of waste ore is topped with overburden generated from mining activities. Waste ore is delivered to the dumpsite at 14.2 tons per hour and 89,176 tons per year with surface moisture content of 1%. Particulate emissions are generated at the dumpsite during unloading of the waste ore from haul trucks, wind erosion from the active ½ acre, and wind erosion from the 27 acre inactive area.

To estimate maximum uncontrolled particulate emission rates for haul truck unloading operations (waste ore), 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 (11/06), where the k (TSP = 0.74, PM₁₀ = 0.35, PM_{2.5} = 0.053), wind speed is the NMED's recommended values of 11 mph, and a mine average moisture content of 1 percent for waste and 7 percent for overburden.

To estimate maximum uncontrolled particulate emission rates for wind erosion in the active dumpsite area, an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.5 (11/06), where the particle size multiplier are (TSP = 1.0, PM₁₀ = 0.5, PM_{2.5} = 0.075). Inputs to the particulate emissions equation for active area wind erosion includes the surface roughness, threshold friction velocity, frequency of disturbance, and fastest mile data. The surface roughness and threshold friction velocity are taken from Table 13.2.5-2 for ground coal surrounding coal piles. The fastest mile was taken from 1993 fastest mile data from Albuquerque Airport data. The frequency of disturbance is set for daily based on normal operating procedures at No Agua Mine. Calculations for determining the active area wind erosion particulate emissions can be found in a MS Excel spreadsheet - [A-0071M2-D-WindErosion.xls](#). Hourly particulate emission rates are determined by dividing the annual tons per year by 8760 hours per year.

To estimate maximum uncontrolled particulate emission rates for wind erosion in the non-open area, an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Aug. 2004, Section 11.9, Table 11.9-4 for wind erosion of exposed area. Inputs to the particulate emissions equation for non-open area wind erosion include the amount of exposed area in acres. The amount of non-open area exposed is 26.5 acres. Particle size multipliers were taken from Section 13.2.5 (11/06), where the particle size multiplier are (TSP = 1.0, PM₁₀ = 0.5, PM_{2.5} = 0.075). Hourly particulate emission rates are determined by dividing the annual tons per year by 8760 hours per year.

Haul Truck Unloading Waste at Waste Area Particulate Emission Equation:

$$E \text{ (lbs/ton)} = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.01742 \text{ lbs/ton;}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.00824 \text{ lbs/ton}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.00125 \text{ lbs/ton}$$

Haul Truck Unloading Overburden at Waste Area Particulate Emission Equation:

$$E \text{ (lbs/ton)} = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.00114 \text{ lbs/ton;}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.00017 \text{ lbs/ton}$$

Bulldozer Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (s)^{1.2} / (M)^{1.3}$$
$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (s)^{1.5} / (M)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (s)^{1.2} / (M)^{1.3}$$
$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (10)^{1.2} / (8)^{1.3} = 6.05143 \text{ lbs/hr}$$
$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (10)^{1.5} / (8)^{1.4} = 1.29043 \text{ lbs/hr}$$
$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (10)^{1.2} / (8)^{1.3} = 0.63540 \text{ lbs/hr}$$

Wind Erosion from Inactive Area of Waste Area Particulate Emission Equation:

$$E \text{ (ton/yr)} = 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{TSP} \text{ (ton/yr)} = 1.0 \times 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{PM10} \text{ (ton/yr)} = 0.5 \times 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{PM2.5} \text{ (ton/yr)} = 0.075 \times 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{TSP} \text{ (ton/yr)} = 0.38 \text{ tons/acre/yr;}$$
$$E_{PM10} \text{ (ton/yr)} = 0.19 \text{ tons/acre/yr}$$
$$E_{PM2.5} \text{ (ton/yr)} = 0.0285 \text{ tons/acre/yr}$$

Table D-6 Maximum Uncontrolled Waste Area Particulate Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
98a	Waste Haul Truck Unloading	14.2 tph; 89,176 tpy	0.25	0.78	0.12	0.37	0.02	0.06
98d	Overburden Haul Truck Unloading	116.3 tph; 267,528 tpy	0.05	0.15	0.02	0.07	0.003	0.01
98e	Bulldozing	1095 hr/yr	7.20	3.94	1.56	0.85	0.76	0.41
98b	Wind Erosion Active Area	½ acre	5.78	25.31	2.89	12.66	0.43	1.90
98c	Wind Erosion Inactive Area	27 acres	2.34	10.26	1.17	5.13	0.18	0.77

Haul Truck Travel Fugitive Particulate Emissions

Haul truck travel emissions were estimated using AP-42, Section 13.2.2 (ver.11/06) “Unpaved Roads” emission equation. Haul trucks travel is based on three operations at the site, raw material transport by mine haul truck from the mine to the mill, perlite ore product transport by haul truck to Antonito, Colorado, and waste transport by haul truck from the mill to the waste dump. Particulate emission equation inputs include the percent silt content of the road, the average loaded and unloaded weight of the haul truck, the number of days when the rainfall exceeded 0.01 inches, and the number of vehicle miles per hour.

Vehicle miles traveled (VMT) are based on the one-way distance the each haul truck for each operation will travel and the number of trips per hour/year.

Haul Truck Traffic Vehicle Miles Traveled

Operation	Material Transported (ton)	Load Capacity (ton)	# Trucks	Distance One-Way (miles)	Distance Round Trip (miles)	VMT
South Pit Haul Trucks	100 tph	40	2.5 per hour	1.3907	2.7814	6.95 per hour
	23000 tpy	40	575 per year			1599.3 per year
West Pit Haul Trucks	100 tph	40	2.5 per hour	1.5079	3.0158	7.54 per hour
	23000 tpy	40	575 per year			1734.1 per year
Product Haul Trucks	53 tph	25	2.12 per hour	0.4444	0.8887	1.88 per hour
	332840 tpy	25	13313.6 per year			11831.8 per year
Waste Haul Trucks	14.2 tph	13	1.09 per hour	1.1212	2.2423	2.44 per hour
	89176 tpy	13	6859.7 per year			15381.5 per year
Overburden Haul Trucks	42.6 tph	40	2.91 per hour	1.4953	2.9906	8.70 per hour
	89176 tpy	40	6688.2 per year			20002.0 per year

Below are the inputs for each haul truck operation.

Haul Truck Traffic Particulate Equation Input

Operation	% Silt Content (s)	Vehicle Weight (tons)			# Day Precip. > 0.01"	Vehicle Miles Traveled	
		Unloaded	Load	Ave		(VMT/hr)	(VMT/yr)
South Pit Haul Trucks	4.8	42.5	40	62.5	70	6.954	15993.2
West Pit Haul Trucks	4.8	42.5	40	62.5	70	7.539	17340.6
Product Haul Trucks	4.8	15	25	27.5	70	1.884	11832.4
Waste Haul Trucks	4.8	15	13	21.5	70	2.449	15381.8
Overburden Haul Trucks	4.8	42.5	40	62.5	70	8.697	20002.0

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

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

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

South Pit Haul Trucks

Hourly Emission Rate Factor

TSP = 10.1176 lbs/VMT
 PM10 = 2.5786 lbs/VMT
 PM2.5 = 0.2579 lbs/VMT

Annual Emission Rate Factor

TSP = 8.1772 lbs/annual VMT
 PM10 = 2.0841 lbs/annual VMT
 PM2.5 = 0.2084 lbs/annual VMT

West Pit Haul Trucks

Hourly Emission Rate Factor

TSP = 10.1176 lbs/VMT
PM10 = 2.5786 lbs/VMT
PM2.5 = 0.2579 lbs/VMT

Annual Emission Rate Factor

TSP = 8.1772 lbs/annual VMT
PM10 = 2.0841 lbs/annual VMT
PM2.5 = 0.2084 lbs/annual VMT

Product Haul Trucks

Hourly Emission Rate Factor

TSP = 6.9925 lbs/VMT
PM10 = 1.7821 lbs/VMT
PM2.5 = 0.1782 lbs/VMT

Annual Emission Rate Factor

TSP = 5.6515 lbs/annual VMT
PM10 = 1.4403 lbs/annual VMT
PM2.5 = 0.1440 lbs/annual VMT

Waste Haul Trucks

Hourly Emission Rate Factor

TSP = 6.2594 lbs/VMT
PM10 = 1.5953 lbs/VMT
PM2.5 = 0.1595 lbs/VMT

Annual Emission Rate Factor

TSP = 5.0589 lbs/annual VMT
PM10 = 1.2893 lbs/annual VMT
PM2.5 = 0.1289 lbs/annual VMT

Overburden Haul Trucks

Hourly Emission Rate Factor

TSP = 10.1176 lbs/VMT
PM10 = 2.5786 lbs/VMT
PM2.5 = 0.2579 lbs/VMT

Annual Emission Rate Factor

TSP = 8.1772 lbs/annual VMT
PM10 = 2.0841 lbs/annual VMT
PM2.5 = 0.2084 lbs/annual VMT

Table D-7: Maximum Uncontrolled Haul Road Fugitive Dust Emission Rates

Unit #	Process Unit Description	TSP Emission Rate (lbs/hr)	TSP 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)
99a	South Pit Haul Trucks	70.35	65.39	17.93	16.67	1.79	1.67
99a	West Pit Haul Trucks	76.28	70.90	19.44	18.07	1.94	1.81
99a	Product Haul Trucks	13.17	33.44	3.36	8.52	0.34	0.85
99a	Waste Haul Trucks	15.33	38.91	3.91	9.92	0.39	0.99
99a	Overburden Haul Trucks	87.99	81.78	22.42	20.84	2.24	2.08
	Total	263.12	290.42	67.06	74.02	6.70	7.40

Road grader particulate emissions occur during maintenance of haul roads. Maximum hours of operation for road grading are 750 hours per year at a speed (S) of 4.5 miles per hour.

To estimate maximum uncontrolled particulate emissions rates for haul road maintenance (road grading), emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.9, Table 11.9-1 for grading operations.

Road Grading Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/hr)} = 0.040 \times (S)^{2.5}$$

$$E_{PM_{10}} \text{ (lbs/hr)} = 0.60 \times 0.051 \times (S)^{2.0}$$

$$E_{PM_{2.5}} \text{ (lbs/hr)} = 0.031 \times 0.040 \times (S)^{2.5}$$

$$E_{TSP} \text{ (lbs/hr)} = 0.040 \times (4.5)^{2.5} = 1.7183 \text{ lbs/VMT}$$

$$E_{PM_{10}} \text{ (lbs/hr)} = 0.60 \times 0.051 \times (4.5)^{2.0} = 0.6170 \text{ lbs/VMT}$$

$$E_{PM_{2.5}} \text{ (lbs/hr)} = 0.031 \times 0.040 \times (4.5)^{2.5} = 0.0533 \text{ lbs/VMT}$$

Table D-8 Maximum Uncontrolled Mining Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
99b	Road Grading	4.5 mile/hr 3375 mile/yr	7.73	2.90	2.79	1.05	0.24	0.09

2.0 Requested Allowable Emission Rates

Mining Particulate Emissions

No particulate controls are proposed for mining operations. Maximum uncontrolled particulate emission rates in Table IV-A will equal requested allowable particulate emission rates in Table IV-B. Maximum hours of operation for bulldozers are 10 hours per day and 2300 hours per year, and material silt content (s) of 10% (run of mine average 5 to 10%) and material moisture content of 8% (run of mine average 8 to 10%). The maximum number of blasts per year is 2 with a blast area (A) of 10,000 square feet. The hourly blasting emission rates will be based on the tons per hour emission rate and annual hours of mining. The maximum amount of material loaded into haul trucks is 200 tons per hour and 460,000 tons per year. The maximum amount of overburden for the waste area loaded into haul trucks is 116.3 tons per hour and 267,528 tons per year.

Bulldozer Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (s)^{1.2} / (M)^{1.3}$$
$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (s)^{1.5} / (M)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (s)^{1.2} / (M)^{1.3}$$
$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (10)^{1.2} / (8)^{1.3} = 6.05143 \text{ lbs/hr}$$
$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (10)^{1.5} / (8)^{1.4} = 1.29043 \text{ lbs/hr}$$
$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (10)^{1.2} / (8)^{1.3} = 0.63540 \text{ lbs/hr}$$

Blasting Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/blast)} = 0.000014 \times (A)^{1.5}$$
$$E_{PM10} \text{ (lbs/blast)} = 0.52 \times 0.000014 \times (A)^{1.5}$$
$$E_{PM2.5} \text{ (lbs/blast)} = 0.03 \times 0.000014 \times (A)^{1.5}$$
$$E_{TSP} \text{ (lbs/blast)} = 0.000014 \times (10000)^{1.5} = 14.00000 \text{ lbs/blast}$$
$$E_{PM10} \text{ (lbs/blast)} = 0.52 \times 0.000014 \times (10000)^{1.5} = 7.28000 \text{ lbs/blast}$$
$$E_{PM2.5} \text{ (lbs/blast)} = 0.03 \times 0.000014 \times (10000)^{1.5} = 0.42000 \text{ lbs/blast}$$

Aggregate Handling Emission Equation:

$$E \text{ (lbs/ton)} = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.00114 \text{ lbs/ton;}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.00017 \text{ lbs/ton}$$

Table D-9 Requested Allowable Mining Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
1a	Bulldozing	2300 hr/yr	6.05	6.96	1.29	1.48	0.64	0.73
1b	Blasting	2 blast/yr	0.012	0.014	0.006	0.007	0.0004	0.0004
1c	Truck Loading	243 tph; 727,528 tpy	0.36	0.42	0.17	0.20	0.03	0.03

Raw Ore Processing Particulate Emissions

No particulate controls are proposed for storage pile and feeder loading. Maximum uncontrolled particulate emission rates in Table IV-A will equal requested allowable particulate emission rates in Table IV-B. Particulate emission controls for the primary crusher include high moisture content of the material crushed and enclosure of the primary crusher. The maximum amount of material unloaded from mine haul trucks is 200 tons per hour and 458,440 tons per year. The maximum amount of material loaded into the feeder/primary crusher is 150 tons per hour and 458,440 tons per year.

To estimate requested allowable particulate emissions rates for raw ore processing operations (primary crusher), emission factors were obtained from EPA’s Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, November 2006, Section 11.19.2, Table 11.19.2-2 “Controlled Tertiary Crusher”.

Storage Pile and Feeder Loading Particulate Emission Equation:

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

$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$

$$E_{TSP} \text{ (lbs/ton)} = 0.00114 \text{ lbs/ton;}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.00017 \text{ lbs/ton}$$

Primary Crushing Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/ton)} = 0.0012 \text{ lbs/ton}$$

$$E_{PM10} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$

$$E_{PM2.5} \text{ (lbs/ton)} = 0.0001 \text{ lbs/ton}$$

Table D-10 Requested Allowable Raw Ore Processing Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
2	Storage Pile Loading	200 tph; 458,440 tpy	0.23	0.26	0.11	0.12	0.034	0.04
3	Feeder Loading	150 tph; 458,440 tpy	0.17	0.26	0.08	0.12	0.026	0.04
4	Primary Crusher	150 tph; 458,440 tpy	0.18	0.28	0.08	0.12	0.015	0.02

Rotary Dryers Emissions

No combustion emission controls are proposed for the rotary dryers. Maximum uncontrolled NO_x, CO, SO₂, VOC, Lead emission rates in Table IV-A will equal requested allowable emission rates in Table IV-B. Particulate emissions from the rotary dryers are controlled by a dust collector system. The requested allowable TSP and PM₁₀ emission rate is based on a limit of 0.04 grains per dry standard cubic foot (DSCF) and 10% opacity as found in NSPS Subpart UUU. The requested allowable PM_{2.5} emission rate is based on a ratio of PM_{2.5} /TSP determined during recent stack testing that determined a ratio of 0.75. The PM_{2.5} stack test results included both front and back half totals and followed EPA Conditional Test Method 040. The TSP stack test followed EPA Test Method 5. The measured flowrate during the stack test was 33,000 dscfm. The maximum input to the dryer is 73 tons per hour and 458,440 tons per year with surface moisture content of 7 to 10%. Perlite ore product exiting the dryer is 53 tons per hour and 332,840 tons per year with surface moisture content of 1%. Waste ore from raw material entering the mill is generated at 14.2 tons per hour and 89,176 tons per year with surface moisture content of 1% is sent to the waste silos. Maximum hours of operation of the mill are 24 hours per day and 6280 hours per year.

Table D-11: Requested Allowable Rotary Drum Dryer Emission Rates

Process Unit Number	Process Unit Description	Pollutant	Average Hourly Process Rate (tons/hour)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
13,14,90	Rotary Drum Dryer	NO _x	73	4.02	12.6
		CO	73	9.49	29.8
		SO ₂	73	4.23	13.3
		VOC	73	2.34	7.3
		TSP	73	11.31	35.5
		PM ₁₀	73	11.31	35.5
		PM _{2.5}	73	8.49	26.7

Emissions of lead from burning specification used oil is estimated based on the “Average Physical Properties of Mesa Oil, Inc’s Specification Used Oil Fuel” of 30 PPM or 30 mg/liter found in Attachment E. The amount of fuel burned is equal to 141 gallons per hour or 533 liters per hour.

$$\text{Lead (lb/hr)} = 30 \text{ mg/liter} * 533 \text{ liter/hr} / 453600 \text{ mg/lb} = 0.035 \text{ lbs/hr}$$

$$\text{Lead (ton/yr)} = 0.035 \text{ lbs/hr} * 6280 \text{ hr/yr} = 0.11 \text{ tons/yr}$$

Mill Ventilation Control System Particulate Emissions

After drying, the perlite ore is sized into final product. Particulate emissions generated during sizing are controlled by a cyclone and ventilation filter system. The exhaust from the filters will meet the grain loading requirements of NSPS Subpart OOO of 0.022 grains per dry standard cubic feet (DSCF) for PM measured by EPA Test Method 5. The filter system design flowrate is 65,000 dry standard cubic feet per minute (DSCFM). The ratio of PM to PM_{2.5} is based on recent stack testing. EPA Testing Method 5 determined an average PM emission rate from the mill ventilation system of 2.022 lbs/hr. EPA Conditional Testing Method 040 determined an average PM_{2.5} emission rate from the mill ventilation system of 0.793 lbs/hr. The ratio of PM_{2.5}/PM is then 0.793/2.022 or 0.40. Maximum hours of operation of the mill are 24 hours per day and 6280 hours per year.

Mill Ventilation System Particulate Emission Equation:

$$E_{\text{TSP}} \text{ (lbs/hr)} = 65000 \text{ dscfm} * 60 \text{ min/hr} * 0.022 \text{ grain/dscf} / 7000 \text{ grain/lb} = 12.26 \text{ lbs/hr}$$

$$E_{\text{PM}_{10}} \text{ (lbs/ton)} = 65000 \text{ dscfm} * 60 \text{ min/hr} * 0.022 \text{ grain/dscf} / 7000 \text{ grain/lb} = 12.26 \text{ lbs/hr}$$

$$E_{\text{PM}_{2.5}} \text{ (lbs/ton)} = 65000 \text{ dscfm} * 60 \text{ min/hr} * 0.022 \text{ grain/dscf} / 7000 \text{ grain/lb} * 0.40 = 4.90 \text{ lbs/hr}$$

Table D-12 Requested Allowable Mill Ventilation Control System Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
5-12,15-17,21-80,89	Mill Baghouse	65000 dscfm	12.26	38.50	12.26	38.50	4.90	15.39

Perlite Ore Product and Waste Ore Loading into Haul Truck Particulate Emissions

No particulate controls are proposed for perlite ore product and waste ore loading into haul trucks. Maximum uncontrolled particulate emission rates in Table IV-A will equal requested allowable particulate emission rates in Table IV-B. Perlite ore product exiting the dryer is 53 tons per hour and 332,840 tons per year with surface moisture content of 1%. Waste ore from raw material entering the mill is generated at 14.2 tons per hour and 89,176 tons per year with surface moisture content of 1% is sent to the waste silos.

Haul Truck Loading at Mill Particulate Emission Equation:

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

$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{PM_{10}} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{PM_{2.5}} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{TSP} \text{ (lbs/ton)} = 0.01742 \text{ lbs/ton};$$

$$E_{PM_{10}} \text{ (lbs/ton)} = 0.00824 \text{ lbs/ton}$$

$$E_{PM_{2.5}} \text{ (lbs/ton)} = 0.00125 \text{ lbs/ton}$$

Table D-13 Requested Allowable Product and Waste Haul Truck Loading Particulate Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
96a-k	Product Haul Truck Loading	53 tph; 332,840 tpy	0.92	2.90	0.44	1.37	0.07	0.21
97a,b	Waste Haul Truck Loading	14.2 tph; 89,176 tpy	0.25	0.78	0.12	0.37	0.02	0.06

Waste Area Particulate Emissions

No particulate controls are proposed for operations at the waste area, but Harborlite will self impose several measures to control excess fugitive particulate emissions. These controls are discussed in a separate “Fugitive Dust Management Plan”. Maximum uncontrolled particulate emission rates in Table IV-A will equal requested allowable particulate emission rates in Table IV-B. Waste ore is delivered to the waste area at 14.2 tons per hour and 89,176 tons per year with surface moisture content of 1%. Overburden used to cap the waste is delivered to the waste area from the active mining area at 116.3 tons per hour during mining hours and 267,528 tons per year with surface moisture content of 7%. To cap the waste with overburden a front-end loader or bulldozer is used at a rate of 3 hours per day. Particulate emissions are generated at the waste area during unloading of the waste ore from haul trucks, unloading of the overburden from haul trucks, front-end loader or bulldozer operations, wind erosion from the active ½ acre, and wind erosion from the 27 acre inactive area.

Haul Truck Waste Unloading at Waste Area Particulate Emission Equation:

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

$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{PM_{10}} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (1/2)^{1.4}$$

$$E_{PM_{2.5}} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (15/5)^{1.3} / (1/2)^{1.4}$$

$$E_{TSP} \text{ (lbs/ton)} = 0.01742 \text{ lbs/ton};$$

$$E_{PM_{10}} \text{ (lbs/ton)} = 0.00824 \text{ lbs/ton}$$

$$E_{PM_{2.5}} \text{ (lbs/ton)} = 0.00125 \text{ lbs/ton}$$

Haul Truck Unloading Overburden at Waste Area Particulate Emission Equation:

$$E \text{ (lbs/ton)} = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.74 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{PM10} \text{ (lbs/ton)} = 0.35 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.053 \times 0.0032 \times (11/5)^{1.3} / (7/2)^{1.4}$$
$$E_{TSP} \text{ (lbs/ton)} = 0.00114 \text{ lbs/ton};$$
$$E_{PM10} \text{ (lbs/ton)} = 0.00054 \text{ lbs/ton}$$
$$E_{PM2.5} \text{ (lbs/ton)} = 0.00017 \text{ lbs/ton}$$

Bulldozer Particulate Emission Equation:

$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (s)^{1.2} / (M)^{1.3}$$
$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (s)^{1.5} / (M)^{1.4}$$
$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (s)^{1.2} / (M)^{1.3}$$
$$E_{TSP} \text{ (lbs/hr)} = 5.7 \times (10)^{1.2} / (8)^{1.3} = 6.05143 \text{ lbs/hr}$$
$$E_{PM10} \text{ (lbs/hr)} = 0.75 \times 1.0 \times (10)^{1.5} / (8)^{1.4} = 1.29043 \text{ lbs/hr}$$
$$E_{PM2.5} \text{ (lbs/hr)} = 0.105 \times 5.7 \times (10)^{1.2} / (8)^{1.3} = 0.63540 \text{ lbs/hr}$$

Wind Erosion from Inactive Area of Waste Area Particulate Emission Equation:

Calculations for determining the active area wind erosion particulate emissions can be found in a MS Excel spreadsheet - [A-0071M2-D-WindErosion.xls](#). Hourly particulate emission rates are determined by dividing the annual tons per year by 8760 hours per year.

Wind Erosion from Inactive Area of Waste Area Particulate Emission Equation:

$$E \text{ (ton/yr)} = 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{TSP} \text{ (ton/yr)} = 1.0 \times 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{PM10} \text{ (ton/yr)} = 0.5 \times 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{PM2.5} \text{ (ton/yr)} = 0.075 \times 0.38 \text{ tons/acre/yr} \times \text{acres}$$
$$E_{TSP} \text{ (ton/yr)} = 0.38 \text{ tons/acre/yr};$$
$$E_{PM10} \text{ (ton/yr)} = 0.19 \text{ tons/acre/yr}$$
$$E_{PM2.5} \text{ (ton/yr)} = 0.0285 \text{ tons/acre/yr}$$

Table D-14 Requested Allowable Waste Area Particulate Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP 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)
98a	Waste Haul Truck Unloading	14.2 tph; 89,176 tpy	0.25	0.78	0.12	0.37	0.02	0.06
98d	Overburden Haul Truck Unloading	116.3 tph; 267,528 tpy	0.05	0.15	0.02	0.07	0.003	0.01
98e	Bulldozing	1095 hr/yr	7.20	3.94	1.56	0.85	0.76	0.41
98b	Wind Erosion Active Area	½ acre	5.78	25.31	2.89	12.66	0.43	1.90
98c	Wind Erosion Inactive Area	27 acres	2.34	10.26	1.17	5.13	0.18	0.77

Haul Truck Travel Fugitive Particulate Emissions

Road watering will control particulate fugitive emissions generated during haul truck travel. The department allows 60% control efficiency for road watering.

Table D-15: Requested Allowable Haul Road Fugitive Dust Emission Rates

Unit #	Process Unit Description	TSP Emission Rate (lbs/hr)	TSP 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)
99a	South Pit Haul Trucks	28.14	26.16	7.17	6.67	0.72	0.67
99a	West Pit Haul Trucks	30.51	28.36	7.78	7.23	0.78	0.72
99a	Product Haul Trucks	5.27	13.37	1.34	3.41	0.13	0.34
99a	Waste Haul Trucks	6.13	15.56	1.56	3.97	0.16	0.40
99a	Overburden Haul Trucks	35.20	32.71	8.97	8.34	0.90	0.83
	Total	105.25	116.16	26.82	29.62	2.69	2.96

No particulate controls are proposed for road grading. Maximum uncontrolled particulate emission rates in Table IV-A will equal requested allowable particulate emission rates in Table IV-B. Maximum hours of operation for road grading are 750 hours per year at a speed (S) of 4.5 miles per hour.

Road Grading Particulate Emission Equation:

$$E_{TSP} (\text{lbs/hr}) = 0.040 \times (S)^{2.5}$$

$$E_{PM_{10}} (\text{lbs/hr}) = 0.60 \times 0.051 \times (S)^{2.0}$$

$$E_{PM_{2.5}} (\text{lbs/hr}) = 0.031 \times 0.040 \times (S)^{2.5}$$

$$E_{TSP} (\text{lbs/hr}) = 0.040 \times (4.5)^{2.5} = 1.7183 \text{ lbs/VMT}$$

$$E_{PM_{10}} (\text{lbs/hr}) = 0.60 \times 0.051 \times (4.5)^{2.0} = 0.6170 \text{ lbs/VMT}$$

$$E_{PM_{2.5}} (\text{lbs/hr}) = 0.031 \times 0.040 \times (4.5)^{2.5} = 0.0533 \text{ lbs/VMT}$$

Table D-16 Requested Allowable Mining Emission Rates

Unit #	Process Unit Description	Process Rate	TSP Emission Rate (lbs/hr)	TSP Emission Rate (tons/yr)	PM₁₀ Emission Rate (lbs/hr)	PM₁₀ Emission Rate (tons/yr)	PM_{2.5} Emission Rate (lbs/hr)	PM_{2.5} Emission Rate (tons/yr)
99b	Road Grading	4.5 mile/hr 3375 mile/yr	7.73	2.90	2.79	1.05	0.24	0.09

Table D-17: Estimated Maximum Uncontrolled Emissions

Uncontrolled Emission Totals															
	NOx		CO		SO2		VOC		TSP		PM10		PM2.5		
	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	
Mine Quarry															
Bulldozing									6.05	6.96	1.29	1.48	0.64	0.73	
Truck Loading									0.36	0.42	0.17	0.20	0.03	0.03	
Blasting									0.012	0.014	0.006	0.007	0.0004	0.0004	
Raw Ore Processing															
Storage Pile Loading									0.23	0.26	0.11	0.12	0.02	0.02	
Feeder Loading									0.17	0.26	0.08	0.12	0.01	0.02	
Primary Crusher									0.81	1.24	0.36	0.55	0.05	0.08	
Mill															
Dryer Emissions	4.02	12.61	9.49	29.80	4.97	15.61	2.34	7.34	2044.00	6418.16	474.50	1489.93	114.25	358.73	
Mill Ventilation Baghouse									5000	15700	5000	15700	5000	15700	
Product Loading									0.92	2.90	0.44	1.37	0.07	0.21	
Waste Loading									0.25	0.78	0.12	0.37	0.02	0.06	
Waste Area															
Truck Unloading									0.25	0.78	0.12	0.37	0.02	0.06	
Truck Overburden Unloading									0.05	0.15	0.02	0.07	0.003	0.01	
Bulldozing Waste Area									7.20	3.94	1.56	0.85	0.76	0.41	
Wind Erosion Active									5.78	25.31	2.89	12.66	0.43	1.90	
Wind Erosion Inactive									2.34	10.26	1.17	5.13	0.18	0.77	
Haul Roads															
North Road Truck									13.17	33.44	3.36	8.52	0.34	0.85	
Waste Truck									15.33	38.91	3.91	9.92	0.39	0.99	
West Pit Ore Haul Truck									76.28	70.90	19.44	18.07	1.94	1.81	
South Pit Ore Haul Truck									70.35	65.39	17.93	16.67	1.79	1.67	
Road Grader									7.73	2.90	2.79	1.05	0.24	0.09	
Totals	4.02	12.61	9.49	29.80	4.97	15.61	2.34	7.34	7339.28	22464.74	5552.68	17288.30	5123.38	16070.49	

Table D-18: Requested Allowable Emissions

Requested Allowable Emission Totals															
	NOx		CO		SO2		VOC		TSP		PM10		PM2.5		
	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	
Mine Quarry															
Bulldozing									6.05	6.96	1.29	1.48	0.64	0.73	
Truck Loading									0.36	0.42	0.17	0.20	0.03	0.03	
Blasting									0.012	0.014	0.006	0.007	0.0004	0.0004	
Raw Ore Processing															
Storage Pile Loading									0.23	0.26	0.11	0.12	0.02	0.02	
Feeder Loading									0.17	0.26	0.08	0.12	0.01	0.02	
Primary Crusher									0.18	0.28	0.08	0.12	0.02	0.02	
Mill															
Dryer Emissions	4.02	12.61	9.49	29.80	4.97	15.61	2.34	7.34	11.31	35.53	11.31	35.53	8.49	26.65	
Mill Ventilation Baghouse									12.26	38.49	12.26	38.49	4.90	15.39	
Product Loading									0.92	2.90	0.44	1.37	0.07	0.21	
Waste Loading									0.25	0.78	0.12	0.37	0.02	0.06	
Waste Area															
Truck Unloading									0.25	0.78	0.12	0.37	0.02	0.06	
Truck Overburden Unloading									0.05	0.15	0.02	0.07	0.003	0.01	
Bulldozing Waste Area									7.20	3.94	1.56	0.85	0.76	0.41	
Wind Erosion Active									5.78	25.31	2.89	12.66	0.43	1.90	
Wind Erosion Inactive									2.34	10.26	1.17	5.13	0.18	0.77	
Haul Roads															
North Road Truck									5.27	13.37	1.34	3.41	0.13	0.34	
Waste Truck									6.13	15.56	1.56	3.97	0.16	0.40	
West Pit Ore Haul Truck									30.51	28.36	7.78	7.23	0.78	0.72	
South Pit Ore Haul Truck									28.14	26.16	7.17	6.67	0.72	0.67	
Road Grader									7.73	2.90	2.79	1.05	0.24	0.09	
Totals	4.02	12.61	9.49	29.80	4.97	15.61	2.34	7.34	160.35	245.38	61.23	127.55	18.49	49.33	

3.0 Fugitive Emissions from Onsite Fuel Storage Tanks

The facility maintains liquid fuel storage tanks for diesel fuel, gasoline, and used oil fuel. Of these tanks only the gasoline storage tanks does not meet the definition for exemption found in 20.2.72.202.B.2.a. VOC emissions generated during loading and storing gasoline is calculated using TANKS 4.0. These emissions are unchanged as estimated in Permit Application 0071-M1. VOC emissions from the gasoline storage tank can be found in the attached TANKS 4.0 printout.

File Attachment: [A-0071M2-D-TANKS4.pdf](#)

4.0 Estimates for HAPs and State Toxic Air Pollutants

HAPS and state toxic air pollutants from Harborlite's No Agua Mine and Mill occur during the burning of specification used oil in the rotary dryers. It was determined during review of Permit Application 0071-M1 that Harborlite did not trigger Federal (Part 70) or State (20.2.72.400 NMAC) permitting thresholds. The facility is not listed in any source categories which would subject it to a National /Emission Standard for Hazardous Air Pollutant (NESHAP). An estimate of emissions of some pollutants of concern is attached in the following tables. None of the rule emissions thresholds are exceeded.

Table D-19: EPA HAPS Emissions Rotary Dryers

Type of Fuel:	Specification Used Fuel Oil							
Emission Factors	AP-42 Section 1.11 Tables 1.11-1, 1.11-3, 1.11-4, 1.11-5 (ver. 10/96); Precision Petroleum Labs Analysis of Mesa Oil (Attachment E)							
Maximum Hourly Fuel Usage:					141	gallons per hour		
Maximum Hourly Fuel Usage:					533	liters per hour		
Maximum Hours of Operation:					5500	hours per year		
Yearly Fuel Usage:					775500	gallons per year		
Maximum Hourly Fuel Usage:					0.141	1000 gallons per hour		
HAPS	CAS#	Maximum (PPM)	Analysis (PPM)	Emission Factor (mg/liter)	Emission Factor (lbs/1000 Gallon)	Emission Rate	Emission Rate (ton/yr)	
Benz(a)anthracene/chrysene	218-01-9				4.0E-03	0.000564	0.001551	AP-42 Table 1.11-5
Benzo(b)pyrene	192-97-2				4.0E-03	0.000564	0.001551	AP-42 Table 1.11-5
Bis(2-ethylhexyl)phthalate	117-81-7				2.2E-03	0.000310	0.000853	AP-42 Table 1.11-5
Butylbenzylphthalate	85-68-7				5.1E-04	0.000072	0.000198	AP-42 Table 1.11-5
Dibutylphthalate	84-74-2				3.4E-05	0.000005	0.000013	AP-42 Table 1.11-5
Dichlorobenzene	106-46-7				8.0E-07	0.000000	0.000000	AP-42 Table 1.11-5
Naphthalene	91-20-3				1.3E-02	0.001833	0.005041	AP-42 Table 1.11-5
Phenanthrene/anthracene	85-01-8				1.1E-02	0.001551	0.004265	AP-42 Table 1.11-5
Phenol	108-95-2				6.5E-04	0.002400	0.006600	AP-42 Table 1.11-5
Pyrene	129-00-0				3.0E-06	0.007100	0.019525	AP-42 Table 1.11-5
Antimony	7440-36-0				4.5E-03	0.000635	0.001745	AP-42 Table 1.11-4
Arsenic	7440-38-2	2.0	BDL	2.0		0.002350	0.006463	Analysis
Beryllium	7440-41-7				BDL	0.000000	0.000000	AP-42 Table 1.11-4
Cadmium	7440-43-9	1.0		1.0		0.001175	0.003231	Analysis
Chromium	7440-47-3	2.0		2.0		0.002350	0.006463	Analysis
Cobalt	7440-48-4				2.1E-04	0.000030	0.000081	AP-42 Table 1.11-4
Hydrogen Chlorides	7647-01-0				66CL	0.000931	0.002559	AP-42 Table 1.11-3 (CL = Chlorides = 100 PPM)
Manganese	7439-96-5				6.8E-02	0.009588	0.026367	AP-42 Table 1.11-4
Mercury	7439-97-6		BDL			0.000000	0.000000	Analysis
Nickel	7440-02-0				1.6E-01	0.022560	0.062040	AP-42 Table 1.11-4
Phosphorus	7723-14-0				3.6E-02	0.005076	0.013959	AP-42 Table 1.11-4
Selenium	7782-49-2		BDL		BDL	0.000000	0.000000	Analysis; AP-42 1.11-4
				Total HAPS		0.05909	0.16251	

* BDL = Below Detection Levels

Table D-20: State 20.2.72.502 NMAC TAPS Emissions Rotary Dryers

TAPS	CAS#	Maximum (PPM)	Analysis (PPM)	Emission Factor (mg/liter)	Emission Factor (lbs/1000 Gallon)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)	20.2.72.502 Table A (lbs/hr)	% of Limit	
Antimony	7440-36-0				4.5E-03	0.000635	0.001745	0.033300	1.9%	AP-42 Table 1.11-4
Barium			11.36	11.36		0.013349	0.036708	0.033300	40.1%	Analysis
Cadmium	7440-43-9	1.0		1.0		0.001175	0.003231	0.003330	35.3%	Analysis
Chromium	7440-47-3	2.0		2.0		0.002350	0.006463	0.033300	7.1%	Analysis
Cobalt	7440-48-4				5.7E-03	0.000804	0.002210	0.006670	12.0%	AP-42 Table 1.11-4
Manganese	7439-96-5				6.8E-02	0.009588	0.026367	0.066700	14.4%	AP-42 Table 1.11-4
Nickel	7440-02-0				1.6E-01	0.022560	0.062040	0.066700	33.8%	AP-42 Table 1.11-4
Selenium	7782-49-2		BDL	BDL	BDL	0.000000	0.000000	0.013330	0.0%	Analysis; AP-42 1.11-4
Silver			0.405	0.405		0.000476	0.001309	0.000667	71.3%	Analysis
				Total TAPS		0.01398	0.03845			

* BDL = Below Detection Levels

ATTACHMENT E

Information Used To Determine Emissions

Attachment E **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.

MS Excel Emission Estimation Spreadsheet - File Attachment: [A-0071M2-E-SpreadV2.xls](#)

AP-42 Emission Factors - File Attachment: [A-0071M2-E-AP42.pdf](#)

Gasoline Fuel Storage Tank Emission Estimation - File Attachment: [A-0071M2-D-TANKS4.pdf](#)

Mesa Oil Specification Used Oil Data - File Attachment: [A-0071M2-E-MesaOil.pdf](#)

Gasoline MSDS Fuel Specification - File Attachment: [A-0071M2-E-MSDSGas.pdf](#)

Recent Stack Testing Preliminary Results - File Attachment: [A-0071M2-E-StackTest.pdf](#)

ATTACHMENT F

Map

- Attachment F **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 5km (3.1 miles)	The nearest occupied structure(s)
Topographic features of the area	Access and haul roads
The name of the map	Facility property boundaries
A scale	The area which will be restricted to public access

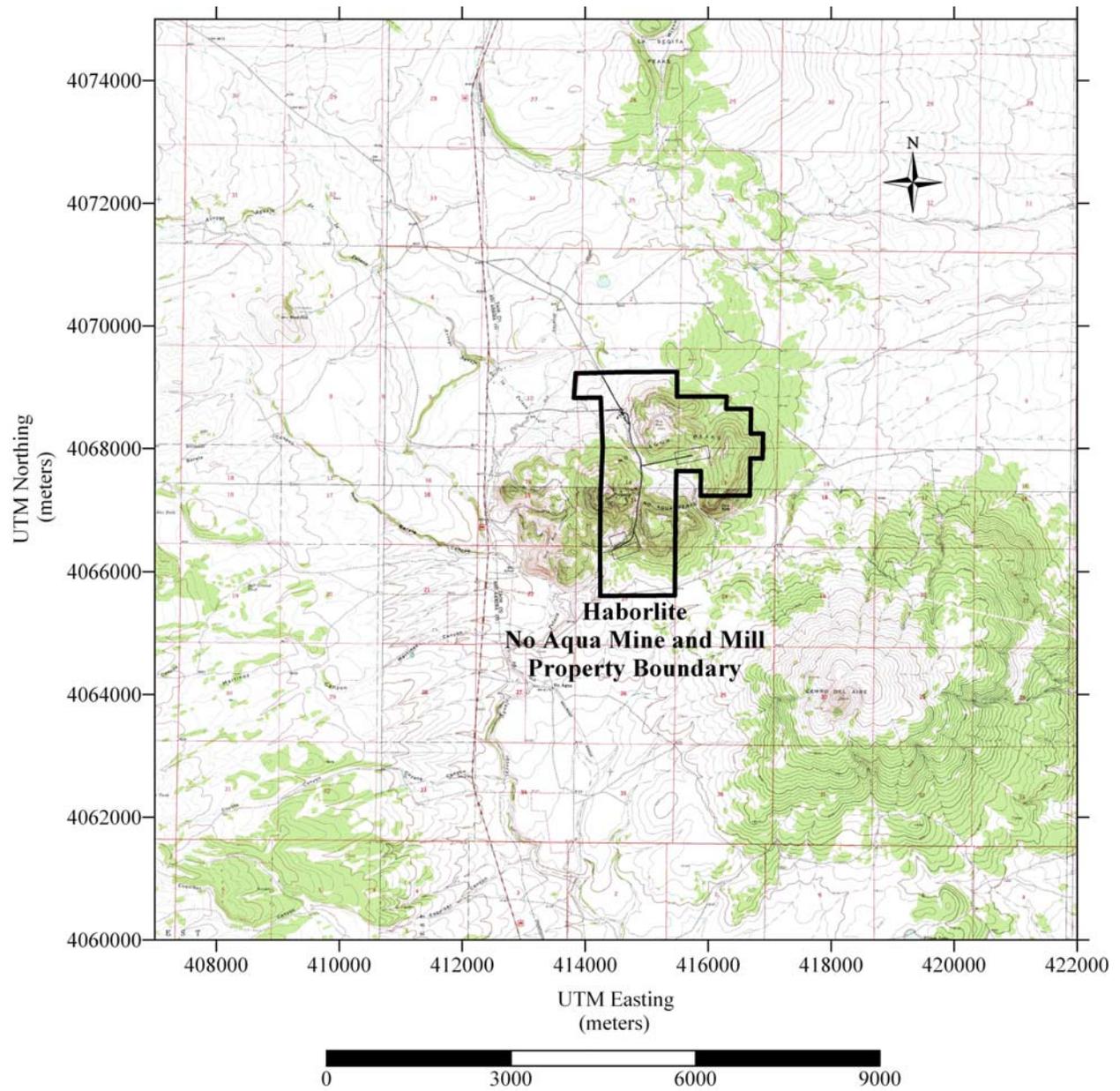


Figure F-1: 7 ½' Topo Map Showing 5 Kilometer Radius around Site Boundaries
 Topo Quadrangle: San Antonio Mountain, La Segita Peak, Mule Canyon, Tres Piedras, Cerro de la Olla,
 Tres Piedras NE 7 ½ Minute Quadrants
 NAD 27

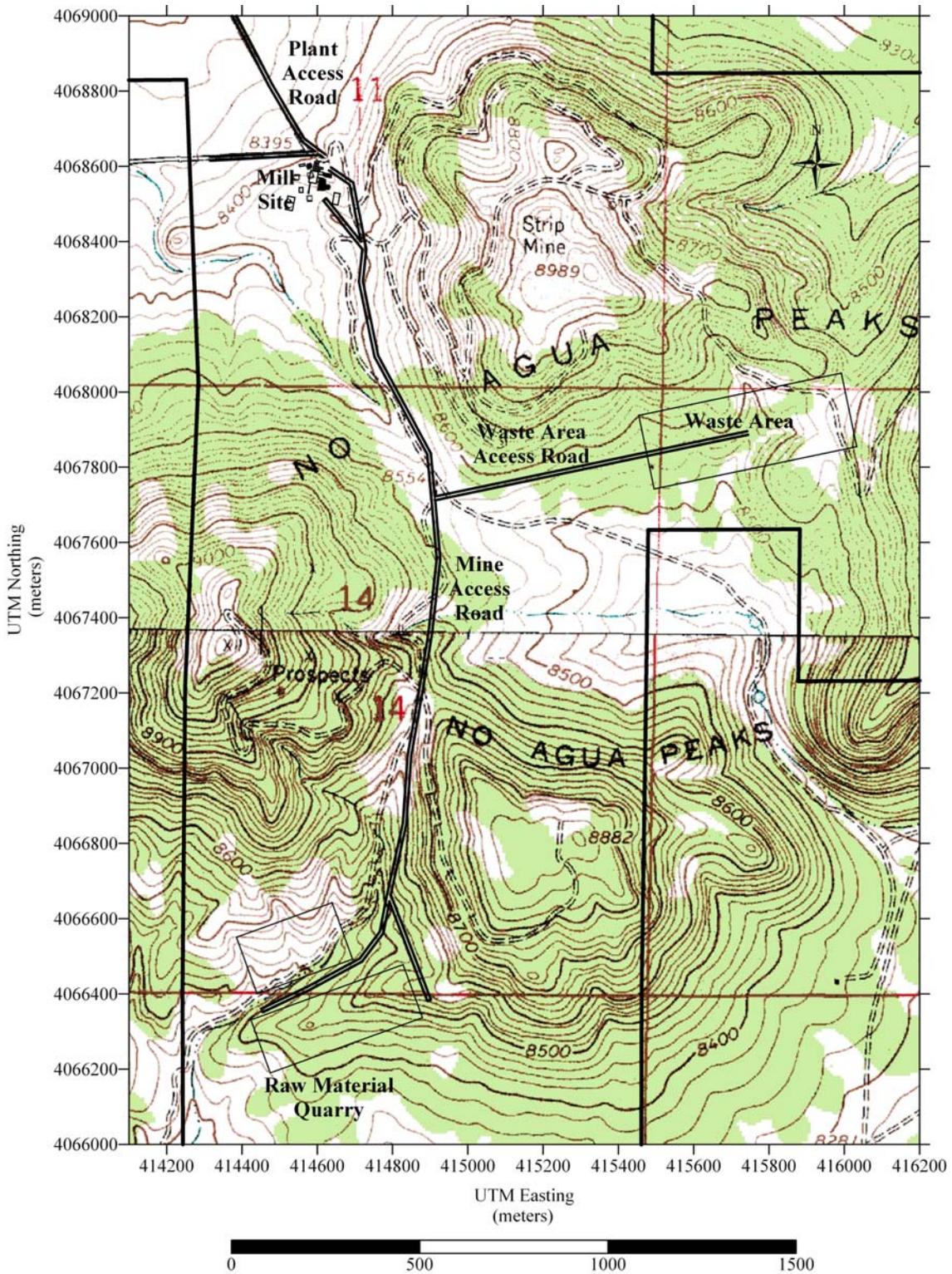


Figure F-2: 7 1/2" Topo Map showing Equipment Location to Model Boundaries
 Topo Quadrangle: La Segita Peak, Tres Piedras 7 1/2 Minute Quadrant
 NAD 27

ATTACHMENT G

Proof of Public Notice

I have read the AQB “Guidelines for Public Notification for Air Quality Permit Applications”

Documentary Proof of applicant’s public notice

(20.2.72.203.A.14 NMAC)

Per the Guidelines for Public Notification document mentioned above, include.

<input type="checkbox"/> A copy of the certified letter receipts with post marks and property tax record (20.2.72.203.B NMAC).	<input type="checkbox"/> 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.)
<input type="checkbox"/> A sample of the letters sent to the owners of record.	
<input type="checkbox"/> A sample of the letters sent to counties, municipalities, and Indian tribes.	<input type="checkbox"/> A sample and verification of the local postings.
<input type="checkbox"/> A table of the different groups’ notices and to whom the notices were sent in each group.	<input type="checkbox"/> A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
<input type="checkbox"/> A copy of the classified or legal ad and its affidavit of publication. When appropriate, this shall be printed in both English and Spanish.	<input type="checkbox"/> A copy of the display ad and its affidavit of publication. When appropriate, this shall be printed in both English and Spanish.

Landowners within ½ mile of restricted area boundary includes:

Eliu Romero
P.O. Box 255
Taos, NM 87571

Dicaperl
P.O. Box 308
Antonito, CO 81120

Randy Schofield
P.O. Box 82
Tres Piedras, NM 87577

George Smith
General Delivery
Tres Piedras, NM 87577

US Department of the Interior
Bureau of Land Management
226 Cruz Alta Road
Taos, NM 87571

Rev 6/13/07

A-0071M2-NoAguaMine

Public Notice sent to all Counties, Municipalities, and Indian tribes includes:

Taos County
County Manager
105 Albright
Taos, NM 87571

Rio Arriba County
County Manager
1122 Industrial Road
Española, NM 87532

Attached are copies of the public notice, certifications of public notice postings, “Dear Neighbor” letter, “Dear Neighbor” letter certified mail receipts, Newspaper Ad, Radio Announcement, and certification of Radio Announcement.

File Attachment: [A-0071M2-G-PublicNotice.pdf](#)

ATTACHMENT H

Written Description of the Routine Operations of the Facility

- Attachment H **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 Harborlite mines perlite ore in an open pit mine, mills the ore to various sizes, and then has it trucked to Antonito, Colorado, for shipment to customers via railroad cars or over-the-road trucks. Mining starts with the removal of overburden in the various open pits to expose the perlite ore. Overburden material is dumped and stockpiled next to the pits. The perlite ore, depending on the ore characteristics, is either drilled and shot or ripped with a bulldozer and pushed into stockpiles. This mine ore is then transported to a stockpile next to the mill in end dump trucks, which are loaded with a front-end loader. Maximum raw material removed is 2000 tons per day. Normal operating time for mining and raw material hauling is 10 hours per day, six days a week. If needed, a maximum of two blasts occur per year.

At the mill, perlite ore, a maximum of 1752 tons per day @ run of mine 7% surface moisture, is loaded by front-end loader into a feeder/grizzly then to a primary crusher. The feeder/grizzly and primary jaw crusher are located outside the mill building, but are enclosed. An enclosed conveyor transfers the ore into the mill building for second stage crushing with a cone crusher. The crushed ore is then stored in a surge bin prior to drying of surface moisture.

Material from the surge bin is fed into two “specification” used oil-fired rotary dryers to remove surface moisture from 7% to 1%. After drying, the ore (53 tons per hour) is sent to scalping screens where the oversize material is sent directly to vertical shaft impact crushers for further reduction. A middle cut of the screened material is sent to the first set of screen decks, and the fines are moved to the first stage air separation in a 14’ air separator.

Impact crusher discharge material is also sent to the first set of screen decks, where oversize product is sent back to the impactors. From the first set of screen decks, a product is sent to a storage bin and a smaller discharge stream is passed to a second set of screens.

The second set of screens produces two finished products that are conveyed to storage bins and a fine product that also goes to first stage air separation. The two 14’ air separators produce a course and a fine product. The course product is conveyed to another set of screens that produce two finished products that are conveyed to storage bins. The fine product from the two 14’ air separators goes to an 8’ air separator, which also produces two products, a course and a fine.

The two products from the 8’ air separators are transferred to storage bins. The finest product is either sold or wasted.

Two baghouses are used to control dust during perlite ore processing. The dryer cyclone/baghouse collects the hot, dirty air from the two ore dryers, cleans the air, and captures the particulate. The captured particulate in the cyclone will be sent to one of the 8’ separators for further processing then transferred to storage bins as product or waste. The captured particulate in the dryer baghouse is sent to a storage bin as waste. The other baghouse captures dust during crushing, screening, and conveying operations of dried ore. Captured particulate is also sent to a storage bin as waste.

Product is loaded from the storage silos into product haul trucks at a maximum rate of 51 trucks per day. Fugitive dust created on all haul roads, for either raw material or final product, are controlled to 60% by watering.

The waste area consists of 27 acres with only a 0.5 acre active area for disposal at any one time. The method of disposal and the method to minimize fugitive emissions is described in a separate document titled "Waste Area Operating Procedures and Fugitive Dust Management Plan".

ATTACHMENT I

PSD Applicability Determination for All Sources

- Attachment I **A PSD applicability determination for all sources.** For PSD major sources applying for a significant permit revision, use 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. If netting was done, please provide a copy of it with this attachment.
-

Harborlite Corporation's No Agua Perlite Mine and Mill will not be subject to major New Source Review permitting requirements. The facility is not one of the 28 major source categories identified in Table 1 of 20.2.74 NMAC. For the facility to be a major source under PSD requirements, it would have to emit or have the potential to emit regulated pollutants into the air equal to or greater than the major NSR threshold of 250 tons per year. Harborlite Corporation's No Agua Perlite Mine and Mill will not emit or have the potential to emit into the air 250 tons or greater per year of any regulated pollutant within the meaning of 20.2.74 NMAC.

ATTACHMENT J

Discussion Demonstrating Compliance With Each Applicable State & Federal Regulation

- Attachment J **A discussion demonstrating compliance with each applicable state & federal regulation.** If there is a state or federal regulation for your facility's source category that does not apply to your facility, explain why. Examples of regulatory requirements that may nor may not apply to your facility include 40 CFR 60 Subpart OOO (crushers), 40 CFR 63 Subpart HHH (HAPs),,or 20.2.74 NMAC (PSD major sources).
-

New Mexico State Regulations

The following are New Mexico State Air Quality Regulations that may or may not be applicable.

20.2.3 NMAC– Ambient Air Quality Standards: Applicable to Harborlite's No Agua Mine and Mill

Requirement: Compliance with state ambient air quality standards.

Compliance: Harborlite's No Agua Mine and Mill's will demonstrate compliance by performing and submitting dispersion modeling analysis for applicable pollutants per the NMED's modeling guidelines.

20.2.5 NMAC– Source Surveillance: Applicable to Harborlite's No Agua Mine and Mill

Requirement: General requirement on record keeping and data submission.

Compliance: It is expected that specific record keeping and data submission requirements will be specified in the 20.2.72 NMAC permit issued to Harborlite's No Agua Mine and Mill. Compliance with these permit conditions will insure compliance with 20.2.5 NMAC.

20.2.7 NMAC– Excess Emissions during Malfunction, Startup, Shutdown, or Scheduled Maintenance:

Applicable to Harborlite's No Agua Mine and Mill

Requirement: Notification to the NMED regarding periods of excess emissions along with cause of the excess and actions taken to minimize duration and recurrence.

Compliance: Harborlite's No Agua Mine and Mill will report any periods of excess emissions as required by specific 20.2.7 provisions. It is expected the 20.2.72 NMAC permit issued to Harborlite's No Agua Mine and Mill will contain specific methods for determining compliance with each specific emission limitation.

20.2.15 NMAC– Pumice, Mica and Perlite Processing: Applicable to Harborlite’s No Agua Mine and Mill

Requirement: Allowable particulate matter emissions rates shall be less than those defined in 20.2.15.108.A NMAC for those processes that can be technically limited to stack outlets. All other perlite process equipment will be reasonable controlled to prevent particulate matter from becoming airborne.

Compliance: Harborlite’s No Agua Mine and Mill will not exceed particulate matter emissions specified in 20.2.15.108.A NMAC. All perlite process equipment particulate matter emissions will be controlled by water sprays, enclosures, and good housekeeping practices.

20.2.34 NMAC– Oil Burning Equipment- Nitrogen Oxides: Not applicable to Harborlite’s No Agua Mine and Mill

Requirement: Sets a nitrogen oxide limit of 0.3 pounds per million Btu for oil burning equipment with a annual heat input of 1,000,000 million Btu.

Compliance: Harborlite’s No Agua Mine and Mill will not exceed 1,000,000 million Btu of heat input into the rotary dryers per year.

20.2.61 NMAC– Smoke and Visible Emissions: Not Applicable to Harborlite’s No Agua Mine and Mill

Requirement: Places limits of 20 percent opacity on stationary combustion equipment.

Compliance: Harborlite’s No Agua Mine and Mill will meet the particulate matter requirements of 20.2.15 NMAC. Therefore, the opacity requirements of 20.2.61 NMAC do not apply.

20.2.70 NMAC– Title V Operating Permit: Not Applicable to Harborlite’s No Agua Mine and Mill

Requirement: Requires an operating permit for “major source” facilities under 20.2.70.200 NMAC.

Compliance: Harborlite’s No Agua Mine and Mill does not emit or have the potential to emit more than 100 tpy of any regulated air pollutant or more than 10 tpy of any HAP or 25 tpy of all HAPs and thus does not meet any of the conditions under 20.2.70.200 NMAC for permit applicability.

20.2.72 NMAC– Construction Permit: Applicable to Harborlite’s No Agua Mine and Mill

Requirement: Requires the facility to obtain a permit prior to start of construction.

Compliance: Harborlite’s No Agua Mine and Mill is applying for a 20.2.72 NMAC permit with this application.

20.2.75 NMAC– Construction Permit Fees: Applicable to Harborlite’s No Agua Mine and Mill

Requirement: A one-time permit fee will be assessed by the NMED.

Compliance: Harborlite’s No Agua Mine and Mill will pay all required construction permit fees applicable to their facility.

20.2.77 NMAC– New Source Performance Standards: Applicable to Harborlite’s No Agua Mine and Mill

Requirement: Adoption of all federal 40 CFR Part 60 new source performance standards.

Compliance: Harborlite’s No Agua Mine and Mill will meet the requirements of all applicable requirements in 40 CFR Part 60 NSPS Subpart OOO.

Federal Regulations

40 CFR 50 – National Ambient Air Quality Standards: Applicable to Harborlite’s No Agua Mine and Mill

Requirement: Compliance with federal ambient air quality standards.

Compliance: Harborlite’s No Agua Mine and Mill will demonstrate compliance by performing and submitting dispersion modeling analysis for applicable pollutants per the NMED’s modeling guidelines.

40 CFR 60 OOO – NSPS Standards of Performance for Aggregate Facilities: Applicable to Harborlite’s No Agua Mine and Mill

Requirement: No facility will discharge or cause to discharge gases containing particulate matter in excess of 0.05 gr/dscm (0.0022 gr/dscfm) from any stack. No facility will discharge or cause to discharge from any transfer point on belt conveyors or screen exhibiting opacities greater than 10 percent. No facility will discharge or cause to discharge from any crusher exhibiting opacities greater than 15 percent.

Compliance: Harborlite’s No Agua Mine and Mill will perform any required stack testing using Method 5 or Method 17. Harborlite’s No Agua Mine and Mill will perform any required opacity observations using Method 9 and/or Method 22 with certified opacity observers.

40 CFR 60 UUU – NSPS Standards of Performance for Calciners and Dryers in Mineral Industries: Not applicable to Harborlite’s No Agua Mine and Mill

Requirement: No affected facility shall emit particulate in excess of 0.04 grains per dry standard cubic foot or exhibit opacities greater than 10 percent from each calciner and dryer.

Compliance: Even though Subpart UUU is not applicable, Harborlite will limit the particulate emissions from the rotary dryers to the limits specified in Subpart UUU. Harborlite’s No Agua Mine and Mill installed the rotary dryers prior to April 23, 1986.

40 CFR 60 Kb – NSPS Standards of Performance for Volatile Liquid Storage Vessels: Not applicable to Harborlite’s No Agua Mine and Mill

Requirement: For any volatile liquid storage vessel with a capacity greater than or equal to 75 cubic meters (m³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) (0.5077 psi) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa (2.1758 psi).

Compliance: At present, Harborlite's No Agua Mine and Mill has no storage tanks greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa. If in the future Harborlite's No Agua Mine and Mill have storage tanks meeting the above requirements, they will meet the requirements of 40 CFR 60 Kb.

ATTACHMENT K

Preliminary Operational Plan

□ Attachment K A **preliminary operational plan** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown.

Schedule

The mill, including both dust collectors, normally starts at midnight Monday morning and shuts down at midnight Friday night. Two maintenance shifts of approximately 8 ½ hours each are scheduled each week. These maintenance shifts are normally either Tuesday and Thursday or Wednesday and Friday. Maintenance shifts start with mill shutdown at about 7:30 AM and end with mill startup at 4:00 PM. Based on ore demand, occasional Saturday and Sunday operating shifts are scheduled, which will change the startup or shutdown times noted above.

Startups and Shutdowns

Normal mill startups and shutdowns do not cause excess emissions. Raw material loading into the primary crusher is controlled by the moisture content of the material processed and the enclosure of the primary crusher. Both methods of controlling excess emissions are passive. Both dryers are operating under normal conditions prior to material production beginning. Neither baghouse system includes bypass modes so all ventilation air is passed through the baghouse filters. Previously, the dryer baghouse did operate on bypass mode to prevent damage to the baghouse filter bags. Harborlite has now installed high temperature filter bags and eliminated the bypass system. At startup, the dryers and dryer baghouse are preheated with out material being fed to the dryers. When the temperature reaches the operating levels, material is fed to the dryers. At shutdown, the material feed is stopped and dryer runout takes approximately 20 minutes. After all material is out of the dryer, the dryer baghouse system will be shutdown. For the mill ventilation system, the baghouse will operated prior to material processing and will not be shutdown until all material is out of the system.

Malfunctions Operational Plan

Inspections of visible emissions from the dryer baghouse (Unit 90) or mill baghouse (Unit 89) will be completed daily. For each baghouse compartment, twice daily monitoring of the baghouse differential pressure will be done and compared with operational ranges. If a compartment is outside of its acceptable differential pressure range, additional opacity monitoring will be completed. If either opacity monitoring shows excess emissions, the system with the excess emissions will be shutdown and repairs made. The unit will not be restarted until the repairs are complete. The Air Quality Bureau will be informed in accordance with 20.2.7 NMAC.

ATTACHMENT L

Air Dispersion Modeling

- Attachment L An air quality **dispersion modeling** demonstration (if applicable) as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines. If air dispersion modeling has been waived for this permit application, attach the AQB Modeling Section modeling waver documentation.
-

Harborlite Corporation is applying for a revision of their 20.2.72 NMAC Construction Permit No. 0071-M1 to operate the No Agua Perlite Mine and Mill plant within the state of New Mexico. The revision to the plant includes additional equipment that will recover product from the existing waste stream. The new particulate emissions generated are located within the mill house and will be vented to the existing mill ventilation control baghouse. Also located at the site are the perlite mining operations. No changes in mining operations proposed in this permit revision application.

The existing facility has been permitted to operate at this site located 7.5 miles north of Tres Piedras, New Mexico for approximately 30 years. Dispersion models will be run to show compliance with all state and federal ambient air quality standards for all operations located within the facility boundaries. This modeling analysis is an update to the modeling analysis done for the 0071-M1 permit application.

Neighboring sources will be included in all refined analysis. The closest neighboring source to Harborlite's No Agua Mine and Mill is Dicaperl's No Agua Facility. Dicaperl boundary is located adjacent to Harborlite and the Dicaperl facility location is to the southwest of Harborlite's No Agua Mill. In the 2003 permit revision 0071-M1 for Harborlite, Dicaperl was input into the Harborlite modeling analysis as a neighboring source based on a recent permitting action by Dicaperl. NMED provided the Dicaperl model analysis for inclusion in Harborlite's 2003 modeling analysis. These same inputs will be used again for this permit revision modeling analysis. All other neighboring sources will be input into the model as obtained from the latest version of the department's MergeMaster as found on the NMED's Website.

Facility hours of operation fall within three categories: mining activities, milling, and product transportation. Mining activities occur during a normal 10-hour day. For operational flexibility purposes, mining activities (material extraction and transportation) in the model were run for 12 hours per day, from 5 AM to 5 PM, at the 10 hour a day maximum hourly emission rates. The mill will be permitted to run 24 hours a day and 6280 hours per year. The mill was modeled at the maximum hourly emission rates for 24 hours a day and 365 days per year. Facility boundaries, process locations, and storage pile locations at the facility can be see in Figures B-1 and B-2.

Complete dispersion modeling input and results can be found in a separate modeling report.

Modeling Protocol - File Attachment: [A-0071M2-L-Protocol.doc](#)

Model Report – File Attachment: [A-0071M2-L-ModelReport.doc](#)

The highest results of the modeling analyses are summarized below in Tables L-1 and L-2.

**Table L-1
Summary of Combustion Model Results**

Parameter	Maximum Modeled Concentration (µg/m³)	Maximum Modeled Concentration With Background (µg/m³)	Lowest Applicable Standard (µg/m³)	% of Standard
CO 1 Hr.	118.9	***	11170	1.1
CO 8 Hr.	48.4	***	7418	<1.0
SO ₂ 3 Hr.	40.1	***	975	4.1
SO ₂ 24 Hr.	9.3	***	195	4.8
SO ₂ Annual	1.1	***	39.0	2.8
NO ₂ 24 Hr.	3.0	***	140.1	2.1
NO ₂ Annual	0.7	***	70.0	1.0

Note: NO_x modeled concentrations were converted to NO₂ using fixed conversion rates of 75% for annual modeled concentrations and 40% for 24 hour modeled concentrations.

**Table L-2
Summary of Particulate Model Results**

Parameter	Maximum Modeled Concentration (µg/m³)	Maximum Modeled Concentration With Background (µg/m³)	Lowest Applicable Standard (µg/m³)	% of Standard
PM _{2.5} 24 Hr. where Harborlite was Significant	Models being rerun, will revise when completed		35	81.4
PM _{2.5} Annual where Harborlite was Significant	Models being rerun, will revise when completed		15	83.3
PM ₁₀ 24 Hr. where Harborlite was Significant	Models being rerun, will revise when completed		150	62.0
TSP 24 Hr. where Harborlite was Significant with Plume Depletion	Models being rerun, will revise when completed		150	55.5
TSP Annual where Harborlite was Significant with Plume Depletion	Models being rerun, will revise when completed		60	68.7

Note: Background concentrations based on “New Mexico Air Pollution Control Bureau, Dispersion Modeling Guidelines”, revised February 2006. For PM_{2.5} the background is 7.3 µg/m³, PM₁₀ the background is 20 µg/m³ and TSP the background is 26.6 µg/m³.

ATTACHMENT M

Special Requirements for PSD Application

Prior to Submitting a PSD application, the permittee shall:

- Submit the BACT analysis for review prior to submittal of the application. No application will be ruled complete until the final determination regarding BACT is made, as this determination can ultimately affect information to be provided in the application. A pre-application meeting is recommended to discuss the requirements of the BACT analysis.
- Submit a modeling protocol prior to submitting the permit application.
- Submit the monitoring exemption analysis protocol prior to submitting the application.

For PSD applications, the permittee shall also include the following in attachment M:

- Documentation containing an analysis on the impact on visibility.
 - Documentation containing an analysis on the impact on soil.
 - Documentation containing an analysis on the impact on vegetation, including state and federal threatened and endangered species.
 - Documentation containing an analysis on the impact on water consumption and quality.
 - Documentation that the federal land manager of a Class I area within 100 km of the site has been notified and provided a copy of the application, including the BACT and modeling results. The name of any Class I Federal area located within one hundred (100) kilometers of the facility.
-

Not Applicable

ATTACHMENT N

Other Relevant Information

Attachment N **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.

Not Applicable

Certification

Company Name: Harborlite's No Agua Mine and Mill

I, Mike Perry, 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 13 day of December 2007, upon my oath or affirmation, before a notary of the State of

_____.

Signature [Handwritten Signature]

Date 12-13-07

Printed Name Mike Perry

Title Ops Mgr

Scribed and sworn before me on this 13th day of December, 2007.

My authorization as a notary of the State of California expires on the

30th day of April, 2010.

Notary's Signature Jodi Gifford

Date 12-13-2007

Notary's Printed Name Jodi Gifford

