

# TECHNICAL SUPPORT DOCUMENT

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN  
APPLICATION FOR A PART 70 OPERATING PERMIT

SUBMITTED BY

TRINITY CONSULTANTS

For

LAS VEGAS PAVING – APEX PLANT  
(Operated within Lhoist North America (LNA), Source: 3)

**Part 70 Source: 17333**  
**(Initial Part 70 ATC)**  
**Initial Permit Issued: April 6, 2016**  
**Initial Permit Expiration: April 5, 2021**

SIC Code - 1442: Construction Sand and Gravel



Clark County Department of Air Quality  
Permitting Division

**April, 2016**

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## I. EXECUTIVE SUMMARY

Las Vegas Paving (LVP) is a multifaceted paving company comprised of asphalt-manufacturing hot plants, concrete manufacturing, excavation and grading, and aggregate-crushing divisions. The company entered into an agreement with Lhoist North America (LNA), Air Quality Source #3, to crush, screen, and remove the overburden reject material produced from the limestone mining process.

By itself, LVP emits only PM emissions, which do not exceed major source thresholds. However, LVP will operate within the property boundaries of LNA, a major source of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, and HAP (HCl) pollutants. As a result, both plants are being considered as one source for purposes of establishing source status. In addition the PTE for this permitting action includes the combined emissions from LNA and LVP operations.

Although the two plants are classified as one source, there are no corporate or organizational relationships between LNA and LVP. Due to the fact that common control of the two entities has not been established, a separate Title V Operating Permit is being issued to LVP for compliance purposes.

Both plants are located approximately twenty miles north of the City of Las Vegas, Nevada, in hydrographic basin 216 (Garnet Valley), a section of the Apex Valley Airshed. Garnet Valley is designated as attainment area for all criteria pollutants. The legal description is: portions of T18S, R63E, Sections 23 and 26 County of Clark, State of Nevada. Las Vegas Paving fall under SIC Code 1442: Construction Sand and Gravel and NAICS Code 212321: Construction Sand and Gravel.

The following table summarizes the source potential to emit for each regulated air pollutant from all emission units, owned and operated by LVP, for which the operating permit has been issued:

**Table I-1: PTE from Las Vegas Paving Operations (tons per year)**

PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAP
6.62	1.52	0	0	0	0	0

The following table summarizes the source PTE for each regulated air pollutant for the combined emission units for both LVP and LNA when considering a single major stationary source. Air Quality decided to issue separate Part 70 Operating Permits for LVP and LNA:

**Table I-2: Source PTE for LNA and LVP Operations (tons per year)**

PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAP
334.61	196.68	1,899.90	972.03	1,647.59	8.46	22.95

Note: The values in this table represent the PTE for an LNA permitting action pending issuance as of August 31, 2015.

Clark County Department of Air Quality has been delegated to implement the requirement of the Part 70 operating permit program. Based on information submitted by the applicant and a technical review performed by staff, Air Quality proposes the issuance of a Part 70 Operating Permit to Las Vegas Paving.

## II. ACRONYMS

**Table II-1: List of Acronyms**

<b>Acronym</b>	<b>Term</b>
Air Quality	Clark County Department of Air Quality
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
BCC	Clark County Board of County Commissioners
CE	Control Efficiency
CF	Control Factor
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CPI	Urban Consumer Price Index
DEM	Digital Elevation Model
EF	Emission Factor
EI	Emission Increase
EPA	United States Environmental Protection Agency
EU	Emission Unit
HAP	Hazardous Air Pollutant
LNA	Lhoist of North America of Arizona
LON	Letter of Noncompliance
LVP	Las Vegas Paving
NO <sub>x</sub>	Nitrogen Oxides
NOV	Notice of Violation
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
PM <sub>2.5</sub>	Particulate Matter less than 2.5 microns
PM <sub>10</sub>	Particulate Matter less than 10 microns
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
SCC	Source Classification Codes
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
TSD	Technical Support Document
USGS	United States Geological Survey
VOC	Volatile Organic Compound

### III. SOURCE INFORMATION

#### A. General

<b>Company Name:</b>	Las Vegas Paving Corp.
<b>Source Name:</b>	Las Vegas Paving – Lhoist
<b>Source Address:</b>	12101 North Las Vegas Blvd., North Las Vegas, Nevada 89165
<b>Legal Description:</b>	Apex Valley (AV) Airshed
	Hydrographic Area 216 (Garnet Valley), T18S, R63E, Sections 23 and 26
<b>Address (Mailing/Billing):</b>	4420 South Decatur Boulevard Las Vegas, NV 89103
<b>Telephone Number:</b>	(702) 251-5800
<b>FAX Number:</b>	(702) 257-9436
<b>Source SIC:</b>	1442: Construction Sand and Gravel
<b>Source NAICS:</b>	212321: Construction Sand and Gravel Mining

#### B. Process Description

##### Non-Metallic Mineral Processing

The feed source for LVP is stockpiles consisting of overburden materials produced by LNA from the limestone mining process.

The LVP aggregate plant will operate three crushers and three screens in association with various conveyor systems to produce various sizes rock products that will be transferred off site via paved and unpaved haul roads. LVP is limited to processing 946,000 tons of overburden material per year on a 1.55 acre parcel of land located within the property boundaries of LNA.

Fugitive dust is controlled with water spray systems.

#### C. Permitting History

The LNA Apex Plant was first permitted as a stationary source (source #3) in 1967, by the Clark County Health District. The most recent Title V Operating Permit was issued to the source on December 16, 2011. A revised OP was issued on February 27, 2015.

The initial ATC for LVP operations at this location was issued on April 16, 2014. On August 21, 2015, the Permittee submitted an application requesting to convert the ATC to an Operating Permit.

#### IV. EMISSIONS INFORMATION

##### A. Emission Units, Emission Limitations, and PTE

Table IV-A-1 represents the PTE based on the controlled emission factors obtained from AP-42 Chapter 11.19.2.

**Table IV-A-1: Emission Units List and PTE**

EU	Description	Throughput		SCC	EF (lbs/ton)		PTE (tons/yr)	
		(tons/hr)	(tons/yr)		PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
A01	Loader to Feeder	1,000	946,000	30502031	4.71E-06	1.6E-05	0.01	0.01
A02	Feeder to Grizzly	600	567,600	30502006	4.71E-06	1.6E-05	0.01	0.01
	Grizzly			30502031				
	Grizzly to Conveyor #1			30502006				
A03	Feeder to Primary Crusher	400	378,400	30502006	1.0E-04	5.4E-04	0.02	0.10
	Primary Crusher			30502001				
	Primary Crusher to Conveyor #1			30502006				
A04	Conveyor #1 to Conveyor #2	1,000	946,000	30502006	1.3E-05	4.6E-05	0.01	0.04
	Conveyor #2 to Stacker I	1,000	946,000	30502006	1.3E-05	4.6E-05		
A05	Stacker I to Stockpile I	1,000	946,000	30502006	5.2E-05	1.84E-04	0.02	0.09
A06	Tunnel Feeder #1 to Conveyor #3	800	756,800	30502006	1.3E-05	4.6E-05	0.01	0.01
A07	Conveyor #3 to Primary Screen	800	756,800	30502006	5.0E-05	7.4E-04	0.02	0.28
	Primary Screen			30502006				
	Primary Screen to Conveyor #4			30502006				
	Primary Screen to Conveyor #5			30502006				
	Primary Screen to Conveyor #6			30502006				
	Primary Screen to Conveyor #7			30502006				
A08	Conveyor #4 to Stacker G	250	236,500	30502006	1.3E-05	4.6E-05	0.01	0.01
A09	Stacker G to Stockpile G	250	236,500	30502006	5.2E-05	1.84E-04	0.01	0.02
A10	Conveyor #6 to Conveyor #11	75	70,950	30502006	1.3E-05	4.6E-05	0.01	0.01
A11	Conveyor #6 to Conveyor #12	75	70,950	30502006	1.3E-05	4.6E-05	0.01	0.01
	Conveyor #12 to Conveyor #13	75	70,950	30502006	1.3E-05	4.6E-05		
	Conveyor #13 to Conveyor #20	75	70,950	30502006	1.3E-05	4.6E-05		
A12	Conveyor #7 to Conveyor #8	250	236,500	30502006	1.3E-05	4.6E-05	0.01	0.02
	Conveyor #8 to Conveyor #9	250	236,500	30502006	1.3E-05	4.6E-05		
	Conveyor #9 to Stacker A	275	260,150	30502006	1.3E-05	4.6E-05		
A13	Stacker A to Stockpile A	275	260,150	30502006	5.2E-05	1.84E-04	0.01	0.02
A14	Conveyor #5 to Conveyor #10	150	141,900	30502006	1.3E-05	4.6E-05	0.01	0.01
A15	Conveyor #10 to Secondary Crusher	400	189,200	30502006	1.0E-04	5.4E-04	0.01	0.05
	Conveyor #17 to Secondary Crusher			30502006				
	Secondary Crusher			30502002				
	Secondary Crusher to Conveyor #14			30502006				
A16	Conveyor #14 to Conveyor #15	200	189,200	30502006	1.3E-05	4.6E-05	0.01	0.01
	Conveyor #15 to Conveyor #16	200	189,200	30502006	1.3E-05	4.6E-05		
A17	Conveyor #16 to Secondary Screen	800	354,750	30502006	7.76E-04	2.2E-03	0.14	0.39
	Secondary Screen			30502021				
	Secondary Screen to Conveyor			30502006				

EU	Description	Throughput		SCC	EF (lbs/ton)		PTE (tons/yr)	
		(tons/hr)	(tons/yr)		PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
	#17							
	Secondary Screen to Conveyor #18			30502006				
A18	Conveyor #18 to Conveyor #19	325	307,450	30502006	1.3E-05	4.6E-05	0.01	0.01
	Conveyor #19 to Conveyor #20	325	307,450	30502006	1.3E-05	4.6E-05		
A19	Conveyor #20 to Finish Screen	600	378,400	30502006	7.76E-04	2.2E-03	0.15	0.42
	Finish Screen			30502021				
	Finish Screen to Conveyor #21			30502006				
	Finish Screen to Conveyor #22			30502006				
	Finish Screen to Conveyor #23			30502006				
	Finish Screen to Conveyor #24	30502006						
A20	Conveyor #21 to Stacker B	50	47,300	30502006	1.3E-05	4.6E-05	0.01	0.01
A21	Stacker B to Stockpile B	50	47,300	30502006	5.2E-05	1.84E-04	0.01	0.01
A22	Conveyor #22 to Stacker C	50	47,300	30502006	1.3E-05	4.6E-05	0.01	0.01
A23	Stacker C to Stockpile C	50	47,300	30502006	5.2E-05	1.84E-04	0.01	0.01
A24	Conveyor #23 to Stacker D	50	47,300	30502006	1.3E-05	4.6E-05	0.01	0.01
A25	Stacker D to Stockpile D	50	47,300	30502006	5.2E-05	1.84E-04	0.01	0.01
A26	Conveyor #21 to Washer	50	47,300	30502006	1.3E-05	4.6E-05	0.01	0.01
	Washer	50	47,300		Wet Process			
	Washer to Conveyor #33	50	47,300	30502006	1.3E-05	4.6E-05		
	Conveyor #33 to Stacker E	50	47,300	30502006	1.3E-05	4.6E-05		
A27	Stacker E to Stockpile E	50	47,300	30502006	5.2E-05	1.84E-04	0.01	0.01
A28	Conveyor #22 to Conveyor #30	50	47,300	30502006	1.3E-05	4.6E-05	0.01	0.01
A29	Conveyor #23 to Conveyor #31	50	47,300	30502006	1.3E-05	4.6E-05	0.01	0.01
	Conveyor #31 to Conveyor #32	50	47,300	30502006	1.3E-05	4.6E-05		
A30	Conveyor #24 to Conveyor #25	100	94,600	30502006	1.3E-05	4.6E-05	0.01	0.01
	Conveyor #25 to Conveyor #26	100	94,600	30502006	1.3E-05	4.6E-05		
	Conveyor #26 to Conveyor #27	100	94,600	30502006	1.3E-05	4.6E-05		
A31	Conveyor #27 to Air Separator	100	94,600	30502006	1.3E-05	4.6E-05	0.02	0.05
	Air Separator	200	94,600	30500626	Enclosed Unit			
	Air Separator to Conveyor #28	90	85,140	30502006	3.1E-04	1.1E-03		
	Air Separator to Conveyor #29	10	9,460	30502006	3.1E-04	1.1E-03		
A32	Conveyor #28 to Conveyor #38	90	42,570	30502006	3.1E-04	1.1E-03	0.01	0.05
	Conveyor #38 to Stacker F	90	42,570	30502006	3.1E-04	1.1E-03		
A33	Stacker F to Stockpile F	90	42,570	30502006	5.2E-05	1.84E-04	0.01	0.01
A34	Conveyor #28 to Conveyor #39	90	42,570	30502006	3.1E-04	1.1E-03	0.02	0.07
	Conveyor #39 to Classifier	90	42,570	30502006	3.1E-04	1.1E-03		
	Classifier	90	42,570	30503812	Wet Process			
	Classifier to Conveyor #40	90	42,570	30502006	3.1E-04	1.1E-03		
A35	Conveyor #40 to Stacker H	90	42,570	30502006	3.1E-04	1.1E-03	0.01	0.01
A36	Stacker H to Stockpile H	90	42,570	30502006	5.2E-05	1.84E-04	0.01	0.01
A37	Conveyor #29 to Conveyor #36	10	9,460	30502006	3.1E-04	1.1E-03	0.01	0.02
	Conveyor #36 to Conveyor #37	10	9,460	30502006	3.1E-04	1.1E-03		
	Conveyor #37 to Conveyor #9	25	23,650	30502006	3.1E-04	1.1E-03		
A38	Loader to Feeder #2	15	14,190	30502031	4.71E-06	1.6E-05	0.01	0.01
	Feeder #2 to Conveyor #37	15	14,190	30502006	3.1E-04	1.1E-03		
A39	Conveyor #11 to Tertiary Crusher	300	165,550	30502006	1.0E-04	5.4E-04	0.01	0.04
	Conveyor #30 to Tertiary Crusher			30502006				

EU	Description	Throughput		SCC	EF (lbs/ton)		PTE (tons/yr)	
		(tons/hr)	(tons/yr)		PM <sub>2.5</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>
	Conveyor #32 to Tertiary Crusher			30502006				
	Tertiary Crusher			30502003				
	Tertiary Crusher to Conveyor #34			30502006				
A40	Conveyor #34 to Conveyor #35	175	165,550	30502006	1.3E-05	4.6E-05	0.01	0.01
	Conveyor #35 to Conveyor #16	175	165,550	30502006	1.3E-05	4.6E-05		
A41	Stockpiles	1.55 Acres		30502507	1.66 lbs/acre-day			0.47
A42	Haul Road; Paved; R.T. = 0.6 miles	20,380 VMT/year		30502504	0.06 lbs/VMT	0.23 lbs/VMT	0.57	2.34
	Haul Roads; Unpaved; R.T. = 0.25 Miles	35,552 VMT/year		30502504	See Table XII-2		0.23	1.90
<b>Total</b>							<b>1.52</b>	<b>6.62</b>

## B. Operational Limits

1. The Permittee shall limit the throughput of aggregate materials to 946,000 tons per any consecutive twelve month period.
2. The Permittee shall not exceed 1.55 acres of total stockpile area at any given time (EU: A41).
3. The Permittee shall not exceed 20,380 VMT per any consecutive twelve month period on paved roads (EU: A42).
4. The Permittee shall not exceed 35,552 VMT per any consecutive twelve month period on unpaved roads (EU: A42).

The proposed throughput is based on a contractual agreement between LNA and LVP. This agreement is the equivalent to the Permittee taking a VAEL. Control measures to enforce the proposed emission limits are discussed below.

## V. Control Technology

### Material Processing

The source shall employ water sprays, wherever necessary, to maintain sufficient moisture content to the crushers, screens, conveyors and feed systems to comply with the opacity limits established in Condition III.B.1.(a, b, and c) of the ATC and the proposed Operating Permit.

The washer and classifier units (EUs: A26 and A34) are wet processes. To be classified as a wet process, the Permittee shall maintain the minimum moisture content of 10 percent. This level of control is assumed to be 100 percent for controlling particulate emissions from these units.

### Storage Piles

The Permittee shall regulate the moisture content of the stockpiles so as to comply with the permitted opacity limits.

### Haul Roads

Portions of the roads to be used by LVP for hauling aggregate material are roads that have been previously permitted for use by LNA. Two new roads, one paved and one unpaved, are being added by LVP. Those have been left unpaved cannot be effectively maintained as paved surfaces. These include areas of variable stockpile footprints, heavy equipment load-out, digging, scraping, etc.

The paving of haul roads achieves the highest form of control efficiency. Additional control of emissions shall be achieved by sweeping, as necessary, with a certified PM sweeper to maintain opacity within permitted limits.

The Permittee shall maintain unpaved roads with water or dust palliatives to maintain opacity within permitted limits.

## **VI. Monitoring**

### Visible Emissions

The Permittee shall conduct a daily visual emissions check for visible emissions from the facility while it is in operation.

### Mineral Processing Equipment

The Permittee shall visually inspect the water spray system at all emission units controlled through water suppression daily, and monitor its effectiveness. Inspections shall include, but not be limited to, flow rates, leaks and nozzle conditions, as applicable.

The Permittee shall monitor the material throughput of each process that has a production limit identified in Table IV-A-1 of this TSD. The throughput shall be monitored and recorded at least monthly.

### Haul Roads

The Permittee shall monitor the number of vehicle miles traveled onsite by haul trucks entering and leaving.

### Storage Piles

The Permittee shall monitor the total area for storage piles to ensure that it does not exceed 1.55 acres.

## **VII. Performance Testing**

Performance testing is subject to 40 CFR 60 (as amended), and Air Quality Guideline for Source Testing. The Permittee shall demonstrate initial compliance with the opacity standards for mineral processing in Section III-B-1 of this permit in accordance with 40 CFR 60 Subpart OOO, and 40 CFR 60 Reference Method 9 (Standards for Opacity). Subsequent testing may be performed if requested by the Control Officer.

## VIII. Mitigation

The source has no federal offset requirements.

## IX. Modeling

Las Vegas Paving - Apex Plant is a Title V source in the Hydrographic Area 216 (Garnet Valley). Permitted emission units include mineral processing. Since minor source baseline dates for PM<sub>10</sub> (December 31, 1980), NO<sub>2</sub> (January 24, 1991) and SO<sub>2</sub> (December 31, 1980) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

Air Quality modeled the source along with Lhoist North America (Source #3) using AERMOD to track the increment consumption. The average of 2013 and 2014 actual emissions were used in the model. Stack data submitted by the applicant were used in the model. Five years (1999 to 2003) of meteorological data from the McCarran station and Desert Rock station were used in the model. United States Geological Survey (USGS) National Elevation Dataset (NED) terrain data was used to calculate elevations. Table IX-1 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

**Table IX-1: PSD Increment Consumption**

Pollutant	Averaging Period	PSD Increment Consumption by the Source ( $\mu\text{g}/\text{m}^3$ )	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO <sub>2</sub>	3-hour	25.79 <sup>1</sup>	688024	4025572
SO <sub>2</sub>	24-hour	5.08 <sup>1</sup>	688024	4025572
SO <sub>2</sub>	Annual	0.29	688024	4025572
PM <sub>10</sub>	24-hour	10.22 <sup>1</sup>	687092	4024661
PM <sub>10</sub>	Annual	3.20	687092	4024661
NO <sub>x</sub>	Annual	4.84	688152	4026131

<sup>1</sup> Second High Concentration

## X. Regulatory Analysis

The proposed PM<sub>10</sub> PTE for the source, using the controlled emission factors from AP-42 Chapter 11.19.2, is below the minor NSR significance. The project is subject to 40 CFR 60 Subpart OOO and therefore, it meets the preconstruction review applicability criteria defined in AQR Section 12.4 at the time of the issuance of the ATC. Additionally, the Permittee is requesting a separate Title V operating permit for this operation.

The Nevada Revised Statutes (NRS) and the Clean Air Act Amendments (CAAA) are public laws that establish the general authority for the applicable requirements and regulations mentioned in this section.

Local regulations contain sections that are federally enforceable and sections that are locally enforceable only. Requirements and conditions that appear in the Part 70 OP which are related only to non-SIP rules notated as locally enforceable only.

**A. Local Regulatory Requirements**

Air Quality has determined that the following public law, statues, and associated regulations are applicable:

1. Clean Air Act, as amended (CAAA), Authority: 42 U.S.C. § 7401, et seq.;
2. Title 40 of the Code of Federal Regulations (CFR);
3. Nevada Revised Statutes (NRS), Chapter 445B;
4. Portions of the AQR that are included in the State Implementation Plan (SIP) for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from Authority to Construct permits issued by Air Quality are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and
5. Portions of the AQR that are not included in the SIP. These locally applicable requirements are locally enforceable only.

**Table X-1: Applicable Air Quality Regulations-DAQ**

Applicable Section – Title	Applicable Subsection - Title	SIP	Affected Emission Unit
0: Definitions	applicable definitions	yes	entire source
2: Air Pollution Control Board	all subsections	yes	entire source
4: Control Officer	all subsections	yes	entire source
5: Interference with Control Officer	all subsections	yes	entire source
6: Injunctive Relief	all subsections	yes	entire source
7: Hearing Board and Hearing Officer	Applicable subsections	yes	entire source
8: Persons Liable for Penalties - Punishment: Defense	all subsections	yes	entire source
9: Civil Penalties	all subsections	yes	entire source
10: Compliance Schedule	when applicable; applicable subsections	yes	entire source
12.4: ATC Application and Permit Requirements for Part 70 Sources	All Subsections	yes	entire source
12.5: Part 70 Operating Permit Requirements	applicable subsections	yes	entire source
12.6: Confidentiality	all subsections	no	entire source
12.9: Annual Emissions Inventory	all subsections	yes	entire source
12.13: Posting of Permit	all subsections	no	entire source
14: New Source Performance Standards	14.1(b)(74): Subpart OOO, Nonmetallic Mineral Processing	yes	entire source
18: Permit and Technical Service Fees	18.1 Operating Permit Fees	yes	entire source
	18.2 Annual Emission Unit Fees		
	18.4 New Source Review Application Review Fee		
	18.5 Part 70 Application Review Fee		
	18.6 Annual Part 70 Emission Fee		

Applicable Section – Title	Applicable Subsection - Title	SIP	Affected Emission Unit
	18.14 Billing Procedures		
25.1: Upset/Breakdown, Malfunctions	§ 25.1 Requirements for the excess emissions caused by upset/breakdown and malfunctions	yes	entire source
25.2: Upset/Breakdown, Malfunctions	§ 25.2 Reporting and Consultation	yes	entire source
26: Emission of Visible Air Contaminates	26.1 Limit on opacity ( $\leq$ 20 percent for 3 minutes in a 60-minute period)	yes	entire source
40: Prohibitions of Nuisance Conditions	40.1 Prohibitions	yes	entire source
41: Fugitive Dust	41.1 Prohibitions	yes	entire source
50: Storage of Petroleum Products	all subsections	no	entire source
70: Emergency Procedures	all subsections	yes	entire source
80: Circumvention	all subsections	yes	entire source
81: Provisions of Regulations Severable	all subsections	yes	entire source

## B. Applicable Federal Regulations

1. Clean Air Act, as amended (CAAA), Authority: 42 U.S.C. § 7401, et seq
2. 40 CFR 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

### Subpart A – General Provisions

#### 40 CFR 60.1 – Applicability

**Discussion:** This regulation requires all sources which commence construction after November 17, 1975, to obtain a stationary source permit and to adhere to all standards of performance applicable to the facility.

#### 40 CFR 60.7 – Notification and record keeping

**Discussion:** This regulation requires the source to notify Air Quality of modifications, opacity testing, records of malfunctions of process equipment and performance test data. These requirements are found in the Part 70 OP. Air Quality requires records to be maintained for five years, which is more stringent than the two years required by 40 CFR 60.7.

#### 40 CFR 60.8 – Performance tests

**Discussion:** These requirements are found in the Part 70 OP. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. Air Quality requirements for initial performance testing are identical to AQR Section 60.8.

#### 40 CFR 60.11 – Compliance with standards and maintenance requirements

**Discussion:** Compliance with various applicable standards will be demonstrated by performance tests unless otherwise specified in the standard. The source is subject to 40 CFR 60 Subpart OOO. Compliance requirements are discussed in corresponding sections.

#### 40 CFR 60.12 – Circumvention

**Discussion:** This regulation forbids the Permittee from building, erecting, or installing any article, machine, equipment or process for the purpose of concealing an emission which would

otherwise constitute a violation of an applicable standard. This prohibition is also addressed in AQR 80.1.

**40 CFR 60.13 – Monitoring requirements**

**Discussion:** These requirements are found in the Part 70 OP.

**Subpart 000 – Standards of Performance for Nonmetallic Mineral Processing Plants:**

**40 CFR 60.670 – Applicability and designation of affected facility**

**Discussion:** The source is subject to the standards of Subpart 000 since it commenced construction after August 31, 1983.

**40 CFR 60.672 – Standard for Particulate Matter**

**Discussion:** Opacity requirements are addressed in the Part 70 OP.

**40 CFR 60.675 – Test Methods and Procedures**

**Discussion:** The Permittee is subject to the requirements of particulate matter standards and emissions limits, including PM limit and opacity limits, as described in Tables 2 and 3 of the Subpart. These requirements are found in the Part 70 OP.

**40 CFR 60.676 – Reporting and Recordkeeping**

**Discussion:** The Permittee shall submit to the Administrator and to the Control Officer information required by this subsection. Specific recordkeeping and reporting requirements are identified in the Part 70 OP.

**XI. Public Notice**

The source is subject to public notice in accordance with AQR 12.5.2.17.

**XII. Permitting History**

1. The initial ATC was issued to the source on April 16, 2014.
2. The Permittee submitted an application for an Operating Permit on August 21, 2015.
3. The application was assigned to the Permit Writer on August 24, 2015
4. The application was deemed complete on August 26, 2015.
5. Draft copies of the OP and TSD were sent for internal review on August 26, 2015.

**XIII. Attachments**

Haul road PTE calculations.

**Table XII-1: Haul Road Description (Paved)**

Description	Vehicle Weight (W)	Annual VMT	k (PM <sub>10</sub> ) <sup>1</sup>	k (PM <sub>2.5</sub> ) <sup>1</sup>	P	sL
Material Transfer	36.25 tons	20,380	0.0022	0.00054	28	3.0

<sup>1</sup>Value obtained from AP-42, Table 13.2.1-1

**Equation 1:**  $E = [k(sL)^{0.91} * (W)^{1.02}] * (1-P/4N)$ ; where

- E = particulate emission factor (lbs/VMT)
- k = particle size multiplier (lbs/VMT)
- W = average weight of vehicles traveling the road
- sL = road surface silt loading (g/m<sup>2</sup>)

P = number of days with at least 0.01 inch of precipitation during the averaging period.  
 N = number of days in averaging period (365)

$$E(\text{PM}_{10}) = [(0.0022)(3.0)^{0.91} * (36.25)^{1.02}] * (1-28/365) = 0.23 \text{ lbs/VMT}$$

$$\rightarrow (20,380 \text{ VMT/year} * 0.23 \text{ lbs/VMT}) \div 2,000 \text{ lbs/ton} = 2.34 \text{ tons/year}$$

$$E(\text{PM}_{2.5}) = [(0.00054)(3.0)^{0.91} * (36.25)^{1.02}] * (1-28/365) = 0.06 \text{ lbs/VMT}$$

$$\rightarrow (20,380 \text{ VMT/year} * 0.06 \text{ lbs/VMT}) \div 2,000 \text{ lbs/ton} = 0.61 \text{ tons/year}$$

**Table XII-2: Haul Road Description (Unpaved)**

Description	Vehicle Weight (W)	Annual VMT	k (PM <sub>10</sub> ) <sup>1</sup>	k (PM <sub>2.5</sub> ) <sup>1</sup>	P	s	PTE (tons/yr)		
							PM <sub>2.5</sub>	PM <sub>10</sub>	
Material Transfer	36.25 tons	11,758	1.5	0.15	28	3.0	0.07	0.72	
Feed Loader	59.71 tons	2,588	1.5	0.15	28	3.0	0.02	0.20	
Loadout Loader	41.58 tons	3,583	1.5	0.15	28	3.0	0.02	0.23	
Feed Operation	74.72 tons	766	1.5	0.15	28	3.0	0.01	0.06	
Plant Cleanup	3.14 tons	3,831	1.5	0.15	28	3.0	0.01	0.08	
Plant Repairs	11 tons	1,916	1.5	0.15	28	3.0	0.01	0.06	
Service Trucks	7.25 tons	766	1.5	0.15	28	3.0	0.01	0.02	
Lube Trucks	12 tons	383	1.5	0.15	28	3.0	0.01	0.01	
Aggregate Trucks	41.75 tons	383	1.5	0.15	28	3.0	0.01	0.02	
Supervisor Trucks	4.3 tons	1,915	1.5	0.15	28	3.0	0.01	0.04	
Foreman Trucks	5.13 tons	1,915	1.5	0.15	28	3.0	0.01	0.05	
Water Trucks	51.6 tons	5,746	1.5	0.15	28	3.0	0.04	0.41	
<b>Total</b>								<b>0.23</b>	<b>1.90</b>

<sup>1</sup>Values obtained from AP-42, Table 13.2.2-2

**Equation 2:**  $E = [k(s/12)^{0.9} * (W/3)^{0.45}] * [(365-P)/365]$ ; where

E = particulate emission factor (lbs/VMT)

k = particle size multiplier (lbs/VMT)

W = average weight of vehicles traveling the road

s = surface material silt content (%)

P = number of days with at least 0.01 inch of precipitation during the averaging period.

N = number of days in averaging period (365)