GOLDEN VERTEX CORP

Golden Vertex Corp
P.O. Box 23277
Bullhead City, AZ 86439

August 13, 2021

FedEx Priority Shipping No. 7745 3380 2262

Jennifer Paskash
Acting Air Quality Permit Manager
Arizona Department of Environmental Quality
1110 W. Washington
Phoenix, AZ 85007

Re: Moss Mine Class I Air Quality Permit (#64302) Renewal Application

Dear Ms. Paskash:

Golden Vertex Corp. is hereby submitting the enclosed Class I renewal application package for the Moss Mine Air Quality Permit (# 64302). The application package includes the equipment list, emission calculations, and the completed administrative checklist. Modifications included as part of the renewal are updates to the mining production rates and the generators on the equipment list. Multiple generators have been removed, one generator has been added, and the status of the existing emergency generators have been changed to non-emergency. All support documentation is included in the enclosed.

Please contact me at 928-763-6252 extension 114 or 928-234-3753 should you have any questions.

Regards,

John Stefka
Environmental Manager

Enclosure:

- Moss Mine Air Quality Permit Renewal Application

EC: Joel Murphy – GVC

SECTION 2.1

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Quality Division

1110 West Washington • Phoenix, AZ 85007 • Phone: (602) 771-2338

STANDARD CLASS I PERMIT APPLICATION FORM

(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to (Business license name of organization that is to receive permit):
Golden Vertex Corp. (subsidiary of Northern Vertex Mining Corporation)

2. Mailing Address: 1882 Lakeside Dr #23277
City: Bullhead City State: Arizona ZIP: 86439

3. Name (or names) of Owners/ Principals: Golden Vertex Corp.
Phone: 928-763-6252 Fax: 928-763-6259 Email:

4. Name of Owner's Agent: N/A
Phone: Fax: Email:

5. Plant/Site Manager/ Contact Person and Title: John Stefka/Environmental Manager
Phone: 928-763-6252 Fax: Email: john.stefka@goldenvertexcorp.com

6. Plant Site Name: Moss Mine

7. Plant Site Location Address: 10 Miles East of Bullhead City, Arizona
City: Bullhead City County: Mohave Zip Code: N/A
Indian Reservation (if applicable, which one): N/A
Latitude/ Longitude, Elevation: 35.093821/-114.444658/ 2020 ft.
Section/ Township/ Range: Section 19/20/29/30, Township 20N, Range 20W

8. General Nature of Business: Gold Mining & Processing

9. Type of Organization:
☒Corporation ☐Individual Owner ☐Partnership ☐Government Entity (Government Facility Code: ----------)
☐Other

8. Permit Application Basis: ☐New Source ☐Revision ☒Renewal of Existing Permit
(Check all that apply.)
For renewal or modification, include existing permit number (and exp. date): Permit #64302, Exp. 02/14/2022
Date of Commencement of Construction or Modification: Upon Approval
Primary Standard Industrial Classification Code: 212221

9. I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by ADEQ as public record. I also attest that I am in compliance with the applicable requirements of the Permit and will continue to comply with such requirements and any future requirements that become effective during the life of the Permit. I will present a certification of compliance to ADEQ no less than annually and more frequently if specified by ADEQ. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Signature of Responsible Official:
Official Title of Signer: General Manager
Typed or Printed Name of Signer: Joel Murphy
Date: August 9, 2021 Telephone Number: 928-763-6252

SECTION 2.2 - EMISSION SOURCES

PAGE _____ OF _____
DATE _____

Estimated "Potential to Emit" per A.A.C. R18-2-101.
Review of applications and issuance of permits will be expedited by supplying all necessary information on this Table.

REGULATED AIR POLLUTANT DATA					EMISSION POINT DISCHARGE PARAMETERS										
EMISSION POINT [1]		CHEMICAL COMPOSITION OF TOTAL STREAM	AIR POLLUTANT EMISSION RATE		UTM COORDINATES OF EMISSION POINT [5]			STACK SOURCES [6]					NONPOINT	
NUMBER	NAME	REGULATED AIR POLLUTANT NAME [2]	#/ HR. [3]	TONS/ YEAR [4]	ZONE	EAST (Mtrs)	NORTH (Mtrs)	HEIGHT ABOVE GROUND (feet)	HEIGHT ABOVE STRUC. (feet)	EXIT DATA			SOURCES [7]		
										DIA (ft.)	VEL. (fps)	TEMP. (°F)	LENGTH (ft.)	WIDTH (ft.)	

GROUND ELEVATION OF FACILITY ABOVE MEAN SEA LEVEL _____ feet
ADEQ STANDARD CONDITIONS ARE 293K AND 101.3 KILOPASCALS (A.A.C. R18-2-101)

General Instructions:

1. Identify each emission point with a unique number for this plant site, consistent with emission point identification used on plot plan, previous permits, and Emissions Inventory Questionnaire. Include fugitive emissions. Limit emission point number to eight (8) character spaces. For each emission point use as many lines as necessary to list regulated air pollutant data. Typical emission point names are: heater, vent, boiler, tank, reactor, separator, baghouse, fugitive, etc. Abbreviations are O.K.

2. Components to be listed include regulated air pollutants as defined in A.A.C. R18-2-101. Examples of typical component names are: Carbon Monoxide (CO), Nitrogen Oxides (NO_X), Sulfur Dioxide (SO_2), Volatile Organic Compounds (VOC), particulate matter (PM), particulate less than 10 microns (PM_{10}), etc. Abbreviations are O.K.
3. Pounds per hour (#/HR) is maximum potential emission rate expected by applicant.

4. Tons per year is annual maximum potential emission expected by applicant, which takes into account process operating schedule.

5. As a minimum applicant shall furnish a facility plot plan as described in the filing instructions. UTM coordinates are required only if the source is a major source or is required to perform refined modeling for the purposes of demonstrating compliance with ambient air quality guidelines.

6. Supply additional information as follows if appropriate:
   (a) Stack exit configuration other than a round vertical stack. Show length and width for a rectangular stack. Indicate if horizontal discharge with a note.
   (b) Stack's height above supporting or adjacent structures if structure is within 3 "stack height above the ground" of stack.

7. Dimensions of nonpoint sources as defined in A.A.C. R18-2-101.

	A	B	C	D	E	F	G	H	I	J
1										
2	**Table 4 Production Rates**									
3	**Unit ID**	**Unit Description**	**Unit Code**	**Nameplate Production Rates**		**Operational Periods**		**Operating Availability**	**Operational Production Rate[a]**	
4				**Metric Tons/Hour**	**Tons/Hour**	**Hours/Day**	**Days/Year**		**Metric Tons Per Year**	**Tons Per Year**
5	**Primary Crushing**									
6	PC01	Unloading to Run of Mine Stockpile	Run of Mine Stockpile	424.6	468.0	24	365	100%	3,719,462	4,100,000
7	PC02	Loading to Grizzly Feeder	Loading to 100-FE-001	424.6	468.0	24	365	100%	3,719,462	4,100,000
8	PC03	Vibrating Grizzly Feeder	100-FE-001	424.6	468.0	24	365	100%	3,719,462	4,100,000
9	PC04	Vibrating Grizzly Feeder to Primary Crusher Discharge Conveyor	100-FE-001 to 100-CV-001	225.1	248.1	24	365	100%	1,971,547	2,173,256
10	PC05	Vibrating Grizzley Feeder to Primary Crusher	100-FE-001 to 100-CR-001	199.5	219.9	24	365	100%	1,747,915	1,926,744
11	PC06	Primary Crusher	100-CR-001	199.5	219.9	24	365	100%	1,747,915	1,926,744
12	PC07	Primary Crusher to Primary Crusher Discharge Conveyor	100-CR-001 to 100-CV-001	199.5	219.9	24	365	100%	1,747,915	1,926,744
13	PC08	Primary Crusher Discharge Conveyor to Secondary Bin Feed Conveyor	100-CV-001 to 200-CV-002	424.6	468.0	24	365	100%	3,719,462	4,100,000
14	PC09	Secondary Bin Feed Conveyor to Secondary Crushing Feed Bin	200-CV-002 to 200-BN-001	424.6	468.0	24	365	100%	3,719,462	4,100,000
15	PC10	Secondary Crushing Feed Bin to Secondary Screen Feeder	200-BN-001 to 200-FE-001	424.6	468.0	24	365	100%	3,719,462	4,100,000
16	PC11	Secondary Screen Feeder to Secondary Screen Feed Conveyor	200-FE-001 to 200-CV-003	424.6	468.0	24	365	100%	3,719,462	4,100,000
17	**Fine Crushing**									
18	FC01	Secondary Screen Feed Conveyor to Secondary Screen	200-CV-003 to 200-SR-001	424.6	468.0	24	365	100%	3,719,462	4,100,000
19	FC02	Secondary Screen	200-SR-001	424.6	468.0	24	365	100%	3,719,462	4,100,000
20	FC03	Secondary Screen Undersize to Fine Crushing Product Conveyor	200-SR-001 to 200-CV-011	148.6	163.8	24	365	100%	1,301,706	1,434,884
21	FC04	Secondary Screen Oversize to Secondary Crusher	200-SR-001 to 200-CR-001	276.0	304.2	24	365	100%	2,417,756	2,665,116
22	FC05	Secondary Crusher	200-CR-001	276.0	304.2	24	365	100%	2,417,756	2,665,116
23	FC06	Secondary Crusher to Crusher Discharge Conveyor No. 1	200-CR-001 to 200-CV-004	276.0	304.2	24	365	100%	2,417,756	2,665,116
24	FC07	Crusher Discharge Conveyor No. 1 to Tertiary Bin Feed Conveyor	200-CV-004 to 200-CV-007	276.0	304.2	24	365	100%	2,417,756	2,665,116
25	FC08	Tertiary Bin Feeder Conveyor to Tertiary Crushing Feed Bin	200-CV-007 to 200-BN-002	276.0	304.2	24	365	100%	2,417,756	2,665,116
26	FC09	Tertiary Crushing Feed Bin to Tertiary Screen Feeder	200-BN-002 to 200-FE-002	138.0	152.1	24	365	100%	1,208,878	1,332,558
27	FC10	Tertiary Crushing Feed Bin to Tertiary Screen Feeder	200-BN-002 to 200-FE-003	138.0	152.1	24	365	100%	1,208,878	1,332,558
28	FC11	Tertiary Screen Feeder to Tertiary Screen Feed Conveyor	200-FE-002 to 200-CV-008	138.0	152.1	24	365	100%	1,208,878	1,332,558
29	FC12	Tertiary Screen Feeder to Tertiary Screen Feed Conveyor	200-FE-003 to 200-CV-009	138.0	152.1	24	365	100%	1,208,878	1,332,558
30	FC13	Tertiary Screen Feed Conveyor to Tertiary Screen	200-CV-008 to 200-SR-002	138.0	152.1	24	365	100%	1,208,878	1,332,558
31	FC14	Tertiary Screen Feed Conveyor to Tertiary Screen	200-CV-009 to 200-SR-003	138.0	152.1	24	365	100%	1,208,878	1,332,558
32	FC15	Tertiary Screen	200-SR-002	138.0	152.1	24	365	100%	1,208,878	1,332,558
33	FC16	Tertiary Screen	200-SR-003	138.0	152.1	24	365	100%	1,208,878	1,332,558
34	FC17	Tertiary Screen to Tertiary Crusher	200-SR-002 to 200-CR-002	84.5	93.10	24	365	100%	739,833	815,526
35	FC18	Tertiary Screen to Tertiary Crusher	200-SR-003 to 200-CR-003	84.5	93.10	24	365	100%	739,833	815,526
36	FC19	Tertiary Crusher	200-CR-002	84.5	93.10	24	365	100%	739,833	815,526
37	FC20	Tertiary Crusher	200-CR-003	84.5	93.10	24	365	100%	739,833	815,526
38	FC23	Tertiary Crusher to Crusher Discharge Conveyor No. 1	200-CR-002 to 200-CV-004	84.5	93.10	24	365	100%	739,833	815,526
39	FC24	Tertiary Crusher to Crusher Discharge Conveyor No. 1	200-CR-003 to 200-CV-004	84.5	93.10	24	365	100%	739,833	815,526
40	FC25	Tertiary Screen to Screen Undersize Conveyor	200-SR-002 to 200-SR-002-CV1	53.5	59.0	24	365	100%	469,045	517,033
41	FC26	Tertiary Screen to Screen Undersize Conveyor	200-SR-003 to 200-SR-003-CV1	53.5	59.0	24	365	100%	469,045	517,033
42	FC27	Screen Undersize Conveyor to Fine Crushing Product Conveyor	200-SR-002-CV1 to 200-CV-011	53.5	59.0	24	365	100%	469,045	517,033
43	FC28	Screen Undersize Conveyor to Fine Crushing Product Conveyor	200-SR-003-CV1 to 200-CV-011	53.5	59.0	24	365	100%	469,045	517,033
44	**CRUSHED ORE AGGLOMERATION**									
45	CH01	Fine Crushing Product Conveyor to Agglomeration Conveyor	200-CV-011 to 250-CV-012	424.6	468.0	24	365	100%	3,719,462	4,100,000
46	CH02	Cement Storage Silo	250-BN-001	0.51	0.56	24	365	100%	4,430	4,883
47	CH03	Cement Storage Silo to Cement Feeder	250-BN-001 to 250-FE-001	0.51	0.56	24	365	100%	4,430	4,883
48	CH04	Cement Feeder to Agglomeration Conveyer	250-FE-001 to 250-CV-012	0.51	0.56	24	365	100%	4,430	4,883
49	CH05	Agglomeration Conveyor to Paddle Wheel	250-CV-012 To 250-PW-001	425.1	468.59	24	365	100%	3,723,892	4,104,883
50	CH06	Paddle Wheel	250-PW-001	425.1	468.59	24	365	100%	3,723,860	4,104,848
51	CH07	Paddle Wheel to Agglomerated Product Conveyor	250-PW-001 to 250-CV-013	425.1	468.59	24	365	100%	3,723,860	4,104,848
52	CH08	Agglomerated Product Conveyor to Stockpile Feed Conveyor	250-CV-013 to 250-CV-014	425.1	468.59	24	365	100%	3,723,860	4,104,848
53	CH09	Stockpile Feed Conveyor to Stockpile Feed Conveyor	250-CV-014 to 250-CV-015	425.1	468.59	24	365	100%	3,723,860	4,104,848
54	CH10	Agglomerated Product Conveyor to Transfer Conveyor	250-CV-015 to 300-CV-021	425.1	468.59	24	365	100%	3,723,860	4,104,848
55	CH11	Transfer Conveyor to Transfer Conveyor	300-CV-021 to 300-CV-022	425.1	468.59	24	365	100%	3,723,860	4,104,848
56	CH12	Transfer Conveyor to Transfer Conveyor	300-CV-022 to 300-CV-023	425.1	468.59	24	365	100%	3,723,860	4,104,848
57	CH13	Transfer Conveyor to Transfer Conveyor	300-CV-023 to 300-CV-024	425.1	468.59	24	365	100%	3,723,860	4,104,848
58	CH14	Transfer Conveyor to Transfer Conveyor	300-CV-024 to 300-CV-025	425.1	468.59	24	365	100%	3,723,860	4,104,848
59	CH15	Transfer Conveyor to Transfer Conveyor	300-CV-025 to 300-CV-026	425.1	468.59	24	365	100%	3,723,860	4,104,848
60	CH16	Transfer Conveyor to Transfer Conveyor	300-CV-026 to 300-CV-027	425.1	468.59	24	365	100%	3,723,860	4,104,848
61	CH17	Transfer Conveyor to Transfer Conveyor	300-CV-027 to 300-CV-028	425.1	468.59	24	365	100%	3,723,860	4,104,848
62	CH18	Transfer Conveyor to Transfer Conveyor	300-CV-028 to 300-CV-029	425.1	468.59	24	365	100%	3,723,860	4,104,848
63	CH19	Transfer Conveyor to Transfer Conveyor	300-CV-029 to 300-CV-030	425.1	468.59	24	365	100%	3,723,860	4,104,848

	A	B	C	D	E	F	G	H	I	J
2	**Table 4 Production Rates**									
3	**Unit ID**	**Unit Description**	**Unit Code**	**Nameplate Production Rates**		**Operational Periods**		**Operating Availability**	**Operational Production Rate[a]**	
4				**Metric Tons/Hour**	**Tons/Hour**	**Hours/Day**	**Days/Year**		**Metric Tons Per Year**	**Tons Per Year**
64	CH20	Transfer Conveyor to Transfer Conveyor	300-CV-030 to 300-CV-031	425.1	468.59	24	365	100%	3,723,860	4,104,848
65	CH21	Transfer Conveyor to Transfer Conveyor	300-CV-031 to 300-CV-032	425.1	468.59	24	365	100%	3,723,860	4,104,848
66	CH22	Transfer Conveyor to Transfer Conveyor	300-CV-032 to 300-CV-033	425.1	468.59	24	365	100%	3,723,860	4,104,848
67	CH23	Transfer Conveyor to Transfer Conveyor	300-CV-033 to 300-CV-034	425.1	468.59	24	365	100%	3,723,860	4,104,848
68	CH24	Transfer Conveyor to Transfer Conveyor	300-CV-034 to 300-CV-035	425.1	468.59	24	365	100%	3,723,860	4,104,848
69	CH25	Transfer Conveyor to Transfer Conveyor	300-CV-035 to 300-CV-036	425.1	468.59	24	365	100%	3,723,860	4,104,848
70	CH26	Transfer Conveyor to Transfer Conveyor	300-CV-036 to 300-CV-037	425.1	468.59	24	365	100%	3,723,860	4,104,848
71	CH27	Transfer Conveyor to Heap Leach Stacker Conveyor	300-CV-037 to 300-CV-051	425.1	468.59	24	365	100%	3,723,860	4,104,848
72	CH28	Heap Leach Stacker Conveyor to Heap Leach Pad	300-CV-051 to Heap Leach Pad	425.1	468.59	24	365	100%	3,723,860	4,104,848
73	**Merrill Crowe**									
74	MC01	Diatomaceous Earth to Body Feed Tank	Diatomaceous Earth to 400-TK-004	0.0132	0.015	24	365	100%	116.0	127.9
75	MC02	Diatomaceous Earth to Pre-Coat Tank	Diatomaceous Earth to 400-TK-005	0.0132	0.015	24	365	100%	116.0	127.9
76	MC03	Zinc Dust to Zinc Feeder	Zinc Dust to 400-FE-001	0.0036	0.004	24	365	100%	31.6	34.9
77	MC04	Zinc Feeder to Zinc Mix Cone	400-FE-001 to 400-MX-002	0.0036	0.004	24	365	100%	31.6	34.9
78	**REFINERY**									
79	RF01	Flux to Flux Pan	Flux to Flux Pan	0.0251	0.028	24	365	100%	219.8	242.3
80	RF02	Flux Pan to Flux Mixer	Flux Pan to 500-DC-002	0.0251	0.028	24	365	100%	219.8	242.3
81	RF03	Refinery Drying Oven Precip. To Flux Mixer	500-DR-001 to 500-DC-002	0.0248	0.027	24	365	100%	217.5	239.7
82	RF04	Flux Mixer to Furnace Charge Blender & Feeder	500-DC-002 to 500-MS-001	0.0248	0.027	24	365	100%	217.5	239.7
83	RF05	Furnace Charge Blender and Feeder to Melting Furnace	500-MS-001 to 500-FU-001	0.0499	0.055	24	365	100%	437.3	482.0
84	RF06	Melting Furnace	500-FU-001	0.0499	0.055	24	365	100%	437.3	482.0
85	RF07	Melting Furnace to Slag Pots	500-FU-001 to 500-MS-002	0.0329	0.036	24	365	100%	288.4	317.9
86	RF08	Melting Furnace to Dore	500-FU-001 to DORE	0.0170	0.019	24	365	100%	148.9	164.1
87	RF09	Slag Pots to Forklift	500-MS-002 to FL	0.0329	0.036	24	365	100%	288.4	317.9
88	Tons per year for operational production rates are calculated values based on tons per hour conversions.									

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	**Table 5 Annual Particulate Emissions**																					
3	**Unit ID**	**Unit Description**	**Unit Codes**	**Process Code**	**SCC**	**Non-Fug. (NF) Fug. (F)**	**Production Rate (annual)**	**Rate Units**	**Emission Factors**			**EF Units**	**Control Code**	**Capture and Control Eff. (%)**			**PM/TSP Emissions (tpy)**		**PM10 Emissions (tpy)**		**PM2.5 Emissions (tpy)**	
4									**PM/TSP**	**PM10**	**PM2.5**			**PM**	**PM10**	**PM2.5**	**Uncontrolled**	**Controlled**	**Uncontrolled**	**Controlled**	**Uncontrolled**	**Controlled**
5	**Mining**																					
6	MN01	Drilling	Not Applicable	Drilling	3-05-020-10	F	51,314	Holes	1.30	0.08	0.01	lb/hole	None	0%	0%	0%	33.35	33.35	2.00	2.00	0.33	0.33
7	MN02	Blasting	Not Applicable	Blast	3-05-020-09	F	234	Blasts	328.7371716	170.94	9.86	lb/blast	None	0%	0%	0%	38.46	38.46	20.00	20.00	1.15	1.15
8	MN03	Dozing	Not Applicable	Dozer	3-05-010-99	F	13,903	Hours	15.97	3.18	1.68	lbs/hr	HaulRdWTCS	90%	90%	90%	111.01	11.10	22.09	2.21	11.66	1.17
9	MN04	Loading Ore	Not Applicable	Loading	3-03-024-08	F	4,100,000	Tons	4.36E-03	2.06E-03	3.12E-04	lbs/ton	None	0%	0%	0%	8.94	8.94	4.23	4.23	0.64	0.64
10	MN05	Loading Waste Rock	Not Applicable	Loading	3-03-024-08	F	4,629,707	Tons	4.36E-03	2.06E-03	3.12E-04	lbs/ton	None	0%	0%	0%	10.10	10.10	4.78	4.78	0.72	0.72
11	MN06	Hauling Ore to Run of Mine Stockpile	Not Applicable	Hauling	3-05-020-11	F	18,560	VMT	12.02	3.09	0.31	lbs/VMT	HaulRdWTCS	90%	90%	90%	111.54	11.15	28.66	2.87	2.87	0.29
12	MN07	Hauling Waste Rock to Waste Rock Storage Area	Not Applicable	Hauling	3-05-020-11	F	78,260	VMT	12.02	3.09	0.31	lbs/VMT	HaulRdWTCS	90%	90%	90%	470.30	47.03	120.85	12.08	12.08	1.21
13	MN08	Unloading Ore to Run of Mine Stockpile	Not Applicable	Loading	3-03-024-08	F	0	Tons	4.36E-03	2.06E-03	3.12E-04	lbs/ton	WSpry	0%	0%	0%	0.00	0.00	0.00	0.00	0.00E+00	0.00
14	MN09	Unloading Waste Rock to Waste Rock Storage Area	Not Applicable	Loading	3-03-024-08	F	4,629,707	Tons	4.36E-03	2.06E-03	3.12E-04	lbs/ton	WSpry	0%	0%	0%	10.10	10.10	4.78	4.78	0.72	0.72
15	MN10	Water Truck Use	Not Applicable	WtrTrks	3-05-010-99	F	1,987	VMT	15.98	4.11	0.41	lbs/VMT	HaulRdWTCS	90%	90%	90%	15.88	1.59	4.08	0.41	0.41	0.04
16	MN11	Grader Use	Not Applicable	Grader	3-05-010-99	F	939	VMT	2.24	0.77	0.07	lbs/VMT	HaulRdWTCS	90%	90%	90%	1.05	0.10	0.36	0.04	0.03	0.003
17	MN12	Support Vehicle Use	Not Applicable	SupVeh	3-05-010-99	F	32,760	VMT	5.48	1.41	0.14	lbs/VMT	HaulRdWTCS	90%	90%	90%	89.72	8.97	23.05	2.31	2.31	0.23
18							T-put reset to zero, because this unit operation (MN08) is accounted for at PC01.							**Sub-Total**			**900.46**	**180.91**	**234.87**	**55.69**	**32.93**	**6.51**
19	**Primary Crushing**																					
20	Wind	Wind Erosion - Run of Mine Stockpile	None	WindROM	3-03-888-01	F	0.1	Acres	1.04	0.53	0.16	lb/day-acre	WSpry	90%	72%	40%	1.91E-02	1.91E-03	9.72E-03	2.73E-03	2.86E-03	1.72E-03
21	PC01	Unloading to Run of Mine Stockpile	Run of Mine Stockpile	TrStnPrt	3-03-024-08	F	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.84	0.08	0.40	1.12E-01	0.06	3.62E-02
22	PC02	Loading to Grizzly Feeder	Loading to 100-FE-001	TrStnPrt		NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.84	0.08	0.40	1.12E-01	0.06	3.62E-02
23	PC03	Vibrating Grizzly Feeder	100-FE-001	TrStnPrt	3-03-024-08	NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.84	0.08	0.40	1.12E-01	0.06	3.62E-02
24	PC04	Vibrating Grizzly Feeder to Primary Crusher Discharge Conveyor	100-FE-001 to 100-CV-001	TrStnPrt	3-03-024-08	NF	2,173,256	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.45	0.04	0.21	5.94E-02	0.03	1.92E-02
25	PC05	Vibrating Grizzley Feeder to Primary Crusher	100-FE-001 to 100-CR-001	TrStnPrt	3-03-024-08	NF	1,926,744	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.40	3.96E-02	0.19	5.26E-02	0.03	1.70E-02
26	PC06	Primary Crusher	100-CR-001	CrushP	3-03-024-05	NF	1,926,744	Tons Per Year	0.5	5.00E-02	9.25E-03	lbs/ton	WSpry	90%	72%	40%	481.69	4.82E+01	48.17	1.35E+01	8.91	5.35E+00
27	PC07	Primary Crusher to Primary Crusher Discharge Conveyor	100-CR-001 to 100-CV-001	TrStnPrt	3-03-024-08	NF	1,926,744	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.40	0.04	0.19	5.26E-02	0.03	1.70E-02
28	PC08	Primary Crusher Discharge Conveyor to Secondary Bin Feed Conveyor	100-CV-001 to 200-CV-002	TrStnUnP	3-03-02408	NF	4,100,000	Tons Per Year	4.36E-03	2.06E-03	3.12E-04	lbs/ton	WSpry	90.0%	72%	40%	8.94	8.94E-01	4.23	1.19E+00	0.64	3.84E-01
29	PC09	Secondary Bin Feed Conveyor to Secondary Crushing Feed Bin	200-CV-002 to 200-BN-001	TrStnPrt	3-03-024-08	NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-001	95%	95%	94%	0.84	4.61E-02	0.40	2.18E-02	0.06	3.59E-03
30	PC10	Secondary Crushing Feed Bin to Secondary Screen Feeder	200-BN-001 to 200-FE-001	TrStnPrt	3-03-024-08	NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	Enclosed	100%	100%	100%	0.84	0.00E+00	0.40	0.00E+00	0.06	0.00E+00
31	PC11	Secondary Screen Feeder to Secondary Screen Feed Conveyor	200-FE-001 to 200-CV-003	TrStnPrt	3-03-024-08	NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-002	95%	95%	94%	0.84	4.61E-02	0.40	2.18E-02	6.03E-02	3.59E-03
32														**Sub-Total**			**496.94**	**49.53**	**55.39**	**15.27**	**10.01**	**5.90**
33	**Fine Crushing**																					
34	FC01	Secondary Screen Feed Conveyor to Secondary Screen	200-CV-003 to 200-SR-001	TrStnPrt	3-03-024-08	NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.84	4.61E-02	0.40	2.18E-02	0.06	3.59E-03
35	FC02	Secondary Screen	200-SR-001	ScreenS	3-05-020-02,03	NF	4,100,000	Tons Per Year	2.50E-02	8.70E-03	5.92E-04	lbs/ton	200-DC-008	95%	95%	94%	51.25	2.81E+00	17.83	9.76E-01	1.21	7.22E-02
36	FC03	Secondary Screen Undersize to Fine Crushing Product Conveyor	200-SR-001 to 200-CV-011	TrStnPrt	3-03-024-08	NF	1,434,884	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.29	2.95E-02	0.14	3.92E-02	0.02	1.27E-02
37	FC04	Secondary Screen Oversize to Secondary Crusher	200-SR-001 to 200-CR-001	TrStnPrt	3-03-024-08	NF	2,665,116	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-002	95%	95%	94%	0.55	3.00E-02	0.26	1.42E-02	0.04	2.33E-03
38	FC05	Secondary Crusher	200-CR-001	CrushS	3-03-024-06	NF	2,665,116	Tons Per Year	1.20E+00	1.60E-01	2.96E-02	lbs/ton	200-DC-002	95%	95%	94%	1599.07	8.75E+01	213.21	1.17E+01	39.44	2.35E+00
39	FC06	Secondary Crusher to Crusher Discharge Conveyor No. 1	200-CR-001 to 200-CV-004	TrStnPrt	3-03-024-08	NF	2,665,116	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.55	3.00E-02	0.26	1.42E-02	0.04	2.33E-03
40	FC07	Crusher Discharge Conveyor No. 1 to Tertiary Bin Feed Conveyor	200-CV-004 to 200-CV-007	TrStnPrt	3-03-024-08	NF	2,665,116	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.55	3.00E-02	0.26	1.42E-02	0.04	2.33E-03
41	FC08	Tertiary Bin Feeder Conveyor to Tertiary Crushing Feed Bin	200-CV-007 to 200-BN-002	TrStnPrt	3-03-024-08	NF	2,665,116	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.55	3.00E-02	0.26	1.42E-02	0.04	2.33E-03
42	FC09	Tertiary Crushing Feed Bin to Tertiary Screen Feeder	200-BN-002 to 200-FE-002	TrStnPrt	3-03-024-08	NF	1,332,558	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-005	95%	95%	94%	0.27	1.50E-02	0.13	7.09E-03	0.02	1.17E-03
43	FC10	Tertiary Crushing Feed Bin to Tertiary Screen Feeder	200-BN-002 to 200-FE-003	TrStnPrt	3-03-024-08	NF	1,332,558	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-005	95%	95%	94%	0.27	1.50E-02	0.13	7.09E-03	1.96E-02	1.17E-03
44	FC11	Tertiary Screen Feeder to Tertiary Screen Feed Conveyor	200-FE-003 to 200-CV-008	TrStnPrt	3-03-024-08	NF	1,332,558	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-005	95%	95%	94%	0.27	1.50E-02	0.13	7.09E-03	1.96E-02	1.17E-03
45	FC12	Tertiary Screen Feeder to Tertiary Screen Feed Conveyor	200-FE-003 to 200-CV-009	TrStnPrt	3-03-024-08	NF	1,332,558	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-006	95%	95%	94%	0.27	1.50E-02	0.13	7.09E-03	1.96E-02	1.17E-03
46	FC13	Tertiary Screen Feed Conveyor to Tertiary Screen	200-CV-008 to 200-SR-002	TrStnPrt	3-03-024-08	NF	1,332,558	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.27	1.50E-02	0.13	7.09E-03	1.96E-02	1.17E-03
47	FC14	Tertiary Screen Feed Conveyor to Tertiary Screen	200-CV-009 to 200-SR-003	TrStnPrt	3-03-024-08	NF	1,332,558	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.27	1.50E-02	0.13	7.09E-03	0.02	1.17E-03
48	FC15	Tertiary Screen	200-SR-002	ScreenT	3-05-020-21	NF	1,332,558	Tons Per Year	3.00E-01	7.20E-02	4.90E-03	lbs/ton	200-DC-008	95%	95%	94%	199.88	1.09E+01	47.97	2.63E+00	3.26	1.94E-01
49	FC16	Tertiary Screen	200-SR-003	ScreenT	3-05-020-21	NF	1,332,558	Tons Per Year	3.00E-01	7.20E-02	4.90E-03	lbs/ton	200-DC-008	95%	95%	94%	199.88	1.09E+01	47.97	2.63E+00	3.26E+00	1.94E-01
50	FC17	Tertiary Screen to Tertiary Crusher	200-SR-002 to 200-CR-002	TrStnPrt	3-03-024-08	NF	815,526	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.17	9.18E-03	0.08	4.34E-03	1.20E-02	7.14E-04
51	FC18	Tertiary Screen to Tertiary Crusher	200-SR-003 to 200-CR-003	TrStnPrt	3-03-024-08	NF	815,526	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.17	9.18E-03	0.08	4.34E-03	1.20E-02	7.14E-04
52	FC19	Tertiary Crusher	200-CR-002	CrushT	3-03-024-07	NF	815,526	Tons Per Year	2.70E+00	1.60E-01	2.96E-02	lbs/ton	200-DC-008	95%	95%	94%	1100.96	6.03E+01	65.24	3.57E+00	1.21E+01	7.18E-01
53	FC20	Tertiary Crusher	200-CR-003	CrushT	3-03-024-07	NF	815,526	Tons Per Year	2.70E+00	1.60E-01	2.96E-02	lbs/ton	200-DC-008	95%	95%	94%	1100.96	6.03E+01	65.24	3.57E+00	1.21E+01	7.18E-01
54	FC23	Tertiary Crusher to Crusher Discharge Conveyor No. 1	200-CR-002 to 200-CV-004	TrStnPrt	3-03-024-08	NF	815,526	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.17	9.18E-03	0.08	4.34E-03	1.20E-02	7.14E-04
55	FC24	Tertiary Crusher to Crusher Discharge Conveyor No. 1	200-CR-003 to 200-CV-004	TrStnPrt	3-03-024-08	NF	815,526	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	200-DC-008	95%	95%	94%	0.17	9.18E-03	0.08	4.34E-03	0.01	7.14E-04
56	FC25	Tertiary Screen to Screen Undersize Conveyor	200-SR-002 to 200-SR-002-CV1	TrStnPrt	3-03-024-08	NF	517,033	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.11	1.06E-02	0.05	1.41E-02	0.01	4.57E-03
57	FC26	Tertiary Screen to Screen Undersize Conveyor	200-SR-003 to 200-SR-003-CV1	TrStnPrt	3-03-024-08	NF	517,033	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.11	1.06E-02	0.05	1.41E-02	7.61E-03	4.57E-03
58	FC27	Screen Undersize Conveyor to Fine Crushing Product Conveyor	200-SR-002-CV1 to 200-CV-011	TrStnPrt	3-03-024-08	NF	517,033	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.11	1.06E-02	0.05	1.41E-02	7.61E-03	4.57E-03
59	FC28	Screen Undersize Conveyor to Fine Crushing Product Conveyor	200-SR-003-CV1 to 200-CV-011	TrStnPrt	3-03-024-08	NF	517,033	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.11	1.06E-02	0.05	1.41E-02	7.61E-03	4.57E-03
60														**Sub-Total**			**4258.07**	**233.16**	**460.34**	**25.28**	**71.75**	**4.30E+00**
61	**Crushed Ore Handling**																					
62	CH01	Fine Crushing Product Conveyor to Agglomeration Conveyor	200-CV-011 to 250-CV-012	TrStnPrt	3-03-024-08	NF	4,100,000	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.84	8.43E-02	0.40	1.12E-01	0.06	3.62E-02
63	CH02	Cement Storage Silo	250-BN-001	TrStnPrt	3-03-024-08	NF	4,883	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	250-DC-001	95%	95%	94%	0.0010	5.49E-05	0.00	2.60E-05	0.00007	4.28E-06
64	CH03	Cement Storage Silo to Cement Feeder	250-BN-001 to 250-FE-001	TrStnPrt	3-03-024-08	NF	4,883	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	Enclosed	100%	100%	100%	0.00	0.00	0.00	0.00E+00	0.00	0.00E+00
65	CH04	Cement Feeder to Agglomeration Conveyer	250-FE-001 to 250-CV-012	TrStnPrt	3-03-024-08	NF	4,883	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	None	0%	0%	0%	0.0010	1.00E-03	0.00	4.75E-04	0.00	7.19E-05
66	CH05	Agglomeration Conveyor to Paddle Wheel	250-CV-012 To 250-PW-001	TrStnPrt	3-03-024-08	NF	4,104,883	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	WSpry	90%	72%	40%	0.84	8.44E-02	0.40	1.12E-01	0.06	3.63E-02
67	CH06	Paddle Wheel	250-PW-001	TrStnPrt	3-03-024-08	NF	4,104,883	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	Enclosed	100%	100%	100%	0.84	0.00E+00	0.40	0.00E+00	0.06	0.00E+00
68	CH07	Paddle Wheel to Agglomerated Product Conveyor	250-PW-001 to 250-CV-013	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	1.30E-03	6.00E-04	9.00E-05	lbs/ton	WSpry	90%	72%	40%	2.67E+00	2.67E-01	1.23E+00	3.46E-01	1.85E-01	1.11E-01
69	CH08	Agglomerated Product Conveyor to Stockpile Feed Conveyor	250-CV-013 to 250-CV-014	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	1.30E-03	6.00E-04	9.00E-05	lbs/ton	WSpry	90%	72%	40%	2.67E+00	2.67E-01	1.23E+00	3.46E-01	1.85E-01	1.11E-01
70	CH09	Stockpile Feed Conveyor to Stockpile Feed Conveyor	250-CV-014 to 250-CV-015	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	1.30E-03	6.00E-04	9.00E-05	lbs/ton	WSpry	90%	72%	40%	2.67E+00	2.67E-01	1.23E+00	3.46E-01	1.85E-01	1.11E-01
71	CH10	Agglomerated Product Conveyor to Transfer Conveyor	250-CV-015 to 300-CV-021	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
72	CH11	Transfer Conveyor to Transfer Conveyor	300-CV-021 to 300-CV-022	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
73	CH12	Transfer Conveyor to Transfer Conveyor	300-CV-022 to 300-CV-023	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
74	CH13	Transfer Conveyor to Transfer Conveyor	300-CV-023 to 300-CV-024	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
75	CH14	Transfer Conveyor to Transfer Conveyor	300-CV-024 to 300-CV-025	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
76	CH15	Transfer Conveyor to Transfer Conveyor	300-CV-025 to 300-CV-026	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
77	CH16	Transfer Conveyor to Transfer Conveyor	300-CV-026 to 300-CV-027	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
78	CH17	Transfer Conveyor to Transfer Conveyor	300-CV-027 to 300-CV-028	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
79	CH18	Transfer Conveyor to Transfer Conveyor	300-CV-028 to 300-CV-029	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
80	CH19	Transfer Conveyor to Transfer Conveyor	300-CV-029 to 300-CV-030	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
81	CH20	Transfer Conveyor to Transfer Conveyor	300-CV-030 to 300-CV-031	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
82	CH21	Transfer Conveyor to Transfer Conveyor	300-CV-031 to 300-CV-032	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
83	CH22	Transfer Conveyor to Transfer Conveyor	300-CV-032 to 300-CV-033	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
84	CH23	Transfer Conveyor to Transfer Conveyor	300-CV-033 to 300-CV-034	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
85	CH24	Transfer Conveyor to Transfer Conveyor	300-CV-034 to 300-CV-035	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
86	CH25	Transfer Conveyor to Transfer Conveyor	300-CV-035 to 300-CV-036	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
87	CH26	Transfer Conveyor to Transfer Conveyor	300-CV-036 to 300-CV-037	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
88	CH27	Transfer Conveyor to Heap Leach Stacker Conveyor	300-CV-037 to 300-CV-051	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
89	CH28	Heap Leach Stacker Conveyor to Heap Leach Pad	300-CV-051 to Heap Leach Pad	TrStnUnP4.8	3-03-024-08	NF	4,104,883	Tons Per Year	0.0013	0.0006	0.0001	lbs/ton	WSpry	90%	72%	40%	2.67	0.27	1.23	3.46E-01	0.18	1.11E-01
90														**Sub-Total**			**10.54**	**0.97**	**4.89**	**1.26**	**0.74**	**0.41**
91	**Merrill Crowe**																					
92	MC01	Diatomaceous Earth to Body Feed Tank	Diatomaceous Earth to 400-TK-004	TrStnPrt	3-03-024-08	NF	127.91	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	400-DC-004	94.5%	94.5%	94.1%	2.63E-05	1.44E-06	1.24E-05	6.81E-07	1.88E-06	1.12E-07

Table 5 Annual Particulate Emissions

Unit ID	Unit Description	Unit Codes	Process Code	SCC	Non-Fug. (NF) Fug. (F)	Production Rate (annual)	Rate Units	Emission Factors			EF Units	Control Code	Capture and Control Eff. (%)			PM/TSP Emissions (tpy)		PM10 Emissions (tpy)		PM2.5 Emissions (tpy)	
								PM/TSP	PM10	PM2.5			PM	PM10	PM2.5	Uncontrolled	Controlled	Uncontrolled	Controlled	Uncontrolled	Controlled
MC02	Diatomaceous Earth to Pre-Coat Tank	Diatomaceous Earth to 400-TK-005	TrStnPrt	3-03-024-08	NF	127.91	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	400-DC-005	94.5%	94.5%	94.1%	2.63E-05	1.44E-06	1.24E-05	6.81E-07	1.88E-06	1.12E-07
MC03	Zinc Dust to Zinc Feeder	Zinc Dust to 400-FE-001	TrStnUnP	3-03-024-08	NF	34.88	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	Wet	100%	100%	100%	7.17E-06	0.00E+00	3.39E-06	0.00E+00	5.13E-07	0.00E+00
MC04	Zinc Feeder to Zinc Mix Cone	400-FE-001 to 400-MX-002	TrStnUnP	3-03-024-08	NF	34.88	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	Wet	100%	100%	100%	7.17E-06	0.00E+00	3.39E-06	0.00E+00	5.13E-07	0.00E+00
													Sub-Total			**6.69E-05**	**2.88E-06**	**3.16E-05**	**1.36E-06**	**4.79E-06**	**2.24E-07**
Refinery	**Emission factors for emission points within red border, include 500-DC-001 baghouse control.**																				
RF01	Flux to Flux Pan	Flux to Flux Pan	TrStnUnP	3-03-024-08	NF	242.29	Tons Per Year	4.36E-03	2.06E-03	3.12E-04	lbs/ton	None	0%	0%	0%	5.29E-04	5.29E-04	2.50E-04	2.50E-04	3.79E-05	3.79E-05
RF02	Flux Pan to Flux Mixer	Flux Pan to 500-DC-002	FLXM	3-05-002-05	NF	242.29	Tons Per Year	32.00	4.50	0.27	lbs/ton	500-DC-010	94%	94%	93%	3.88	2.49E-01	0.55	3.50E-02	0.03	2.22E-03
RF03	Refinery Drying Oven Precip. To Flux Mixer	500-DR-001 to 500-DC-002	TrStnPrt	3-03-024-08	NF	239.73	Tons Per Year	4.11E-04	1.94E-04	2.94E-05	lbs/ton	500-DC-010	94%	94%	93%	4.93E-05	3.16E-06	2.33E-05	1.50E-06	3.53E-06	2.43E-07
RF04	Flux Mixer to Furnace Charge Blender & Feeder	500-DC-002 to 500-MS-001	ChargeRF	03-04-003-04	NF	239.73	Tons Per Year	0.06	0.02	0.03	lbs/ton	Enclosed	100%	100%	100%	7.07E-03	0.00E+00	2.40E-03	0.00E+00	3.48E-03	0.00E+00
RF05	Furnace Charge Blender and Feeder to Melting Furnace	500-MS-001 to 500-FU-001	ChargeRF	03-04-003-04	NF	482.02	Tons Per Year	0.06	0.02	0.03	lbs/ton	500-DC-010	93.6%	93.6%	93.1%	1.42E-02	9.13E-04	4.82E-03	3.09E-04	6.99E-03	4.82E-04
RF06	Melting Furnace	500-FU-001	MeltRF	03-04-003-04	NF	482.02	Tons Per Year	0.06	0.02	0.03	lbs/ton	500-DC-010	93.6%	93.6%	93.1%	1.42E-02	9.13E-04	4.82E-03	3.09E-04	6.99E-03	4.82E-04
RF07	Melting Furnace to Slag Pots	500-FU-001 to 500-MS-002	MeltRF	03-04-003-04	NF	317.93	Tons Per Year	0.06	0.02	0.03	lbs/ton	500-DC-010	93.6%	93.6%	93.1%	9.38E-03	6.02E-04	3.18E-03	2.04E-04	4.61E-03	3.18E-04
RF08	Melting Furnace to Dore	500-FU-001 to DORE	TrStnHM	03-04-003-04	NF	164.09	Tons Per Year	0.06	0.02	0.03	lbs/ton	500-DC-010	93.6%	93.6%	93.1%	4.84E-03	3.11E-04	1.64E-03	1.05E-04	2.38E-03	1.64E-04
RF09	Slag Pots to Forklift	500-MS-002 to Forklift	TrStnPrt		F	317.93	Tons Per Year	0.0044	0.0021	0.0003	lbs/ton	Enclosed	100.0%	100.0%	100.0%	6.93E-04	0.00E+00	3.28E-04	0.00E+00	4.97E-05	0.00E+00
RF10	Forklift	Not Applicable	FL	2-73-003-20	F	200.00	VMT	3.19	0.82	0.08	lbs/VMT	HaulRdWTCS	90%	90%	90%	0.32	0.03	0.08	8.19E-03	0.01	8.19E-04
													Sub-Total			**4.25**	**0.28**	**0.64**	**0.04**	**0.06**	**0.00**
Fuel Burning Equipment																					
ICED(455)	Internal Combustion Engine Diesel, 455KW (8 unit)	N/A	N/A	UPDATED	NF	31886400	kW-Hours	0.03	0.03	0.03	g/kW-hr	Non-Emergency	0%	0%	0%	1.05	1.05	1.05	1.05E+00	1.05	1.05E+00
ICED(200)	Internal Combustion Engine Diesel, 200KW (2 unit)	N/A	N/A	REMOVED	NF		kW-Hours	0.03	0.03	0.03	g/kW-hr	None	0%	0%	0%	0.00	0.00	0.00	0.00E+00	0.00	0.00E+00
ICED(100)	Internal Combustion Engine Diesel, 100KW (2 unit)	N/A	N/A		NF	1,752,000	kW-Hours	0.03	0.03	0.03	g/kW-hr	None	0%	0%	0%	0.06	0.06	0.06	5.79E-02	0.06	5.79E-02
ICED(56)	Internal Combustion Engine Diesel, 56KW (1 units)	N/A	N/A	REMOVED	NF		kW-Hours	0.03	0.03	0.03	g/kW-hr	None	0%	0%	0%	0.00	0.00	0.00	0.00E+00	0.00	0.00E+00
ICED(70)	Internal Combustion Engine Diesel, 70KW (1 units)	N/A	N/A	UPDATED	NF	613,200	kW-Hours	0.03	0.03	0.03	g/kW-hr	None	0%	0%	0%	0.02	0.02	0.02	2.03E-02	0.02	2.03E-02
DFB	Distillate Oil Fired Melt Furnace	N/A	N/A	1-02-005-03	NF	43800	gallons	2.00	1.00	0.24	lbs/1000 gal	None	0%	0%	0%	0.04	0.04	0.02	2.19E-02	0.01	5.26E-03
Note: Red =Remove and Yellow = Update. Mine Inputs updated to 2020 actual production and Gensets no longer on site were removed. Updated all eight 455kW generators to non-emergency hours. Updated 70kW generator.													**Sub -Total**			**0.12**	**0.12**	**0.10**	**0.10**	**0.08**	**0.08**
TOTAL NON-FUGITIVE EMISSIONS															**Non-fugitive**	**4820.49**	**290.08**	**545.33**	**49.47**	**87.14**	**13.81**
TOTAL FUGITIVE EMISSIONS															**Fugitve**	**901.64**	**181.03**	**235.36**	**55.82**	**33.00**	**6.55**

ADEQ NOTE 1:
[10/19/16 addenda to ADEQ Note 1 - Capture and control efficiencies in red border do not all follow "Note 1" protocol. See file "Refinery Emission & Control Detail 101816" for additonal tech review, comment and explanation]

For emissions serially controlled by 500-DC-001 (baghouse) followed by 500-DC-010 (scubber) ***and not*** based on AP42 Section 12.5.1 which include baghouse control, capture and control efficiency is calculated as follows:

PM	500 DC-001 = (95% capture × 99.5% control), 500-DC-010 = (100% capture × 99.0% control), therefore combined capture and control = (95% ×99.5% ×100% × 99.0%) = ***93.6%***
PM10	500 DC-001 = (95% capture × 99.5% control), 500-DC-010 = (100% capture × 99.0% control), therefore combined capture and control = (95% ×99.5% ×100% × 99.0%) = ***93.6%***
PM2.5	500 DC-001 = (95% capture × 99.0% control), 500-DC-010 = (100% capture × 99.0% control), therefore combined capture and control = (95% ×99.0% ×100% × 99.0%) = ***93.1%***

For emissions serially controlled by 500-DC-001 (baghouse) followed by 500-DC-010 (scubber) ***that are*** based on AP42 Section 12.5.1 which include baghouse control, capture and control efficiency is calculated as follows:

PM	
PM10	500-DC-001 is accounted for in EF, therefore capture and control is based on 500-DC-010 only. 100% capture × 99% control = ***99.0 %***
PM2.5	

													ADEQ Sum Check	**Non-fugitive**		**4820.49**	**290.08**	**545.33**	**49.47**	**87.14**	**13.81**
														Fugitive		**901.64**	**181.03**	**235.36**	**55.82**	**33.00**	**6.55**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	**Table 6 Annual Gas Emissions**																		
3	**Unit ID**	**Unit Description**	**Unit Codes**	**Process Code**	**SCC**	**Non-Fug. (NF) Fug. (F)**	**Production Rate (annual)**	**Rate Units**	**Control Code**	**Pick-Up or Control Eff. (%)**	**Emission Factors**				**Units**	**Emission (Tons/Year)**			
4											**CO**	**NO_x**	**SO_2**	**VOC**		**CO**	**NO_x**	**SO_2**	**VOC**
5	**Mining**																		
6	MN02	Blasting	N/A	Blast	3-05-020-09	F	1,542	tons ANFO	None	0%	67	17	2	0	(lbs/tons ANFO)	51.66	13.11	1.54	0.00
7	**Fuel Burning Equipment**																		
8	ICED(455)	Internal Combustion Engine Diesel, 455KW (8 unit)	N/A	N/A		NF	31,886,400.00	kW-Hours	None	0%	3.5	0.40	0.0066	0.19	g/kW-hr	123.04	14.06	0.23	6.68
9	ICED(200)	Internal Combustion Engine, Diesel, 200KW (2 unit)	N/A	N/A		NF		kW-Hours	None	0%	3.50	0.40	0.0066	0.19	g/kW-hr	0.00	0.00	0.00	0.00
10	ICED(100)	Internal Combustion Engine Diesel, 100 KW (2 Unit)	N/A	N/A		NF	1,752,000	kW-Hours	None	0%	5.00	0.40	0.0066	0.19	g/kW-hr	9.66	0.77	0.01	0.37
11	ICED(56)	Internal Combustion Engine Diesel, 56KW (1 units)	N/A	N/A		NF		kW-Hours	None	0%	5.00	0.40	0.0066	0.19	g/kW-hr	0.00	0.00	0.00	0.00
12	ICED(70)	Internal Combustion Engine Diesel, 70 KW (1 units)	N/A	N/A		NF	613,200	kW-Hours	None	0%	5.00	0.40	0.0066	0.19	g/kW-hr	3.38	0.27	0.00	0.13
13	**Refinery**																		
14	DFB	Distillate Oil Fired Melt Furnace	N/A	N/A	1-02-005-03	NF	43800	gallons	500-DC-010	0%	5.00	20.00	12.78	0.34	lb/1000 gallons	0.11	0.44	0.28	0.007
15	**Crushing**																		
16	EFPE	Emergency Fire Pump Engine 50hp, 2016 DOM	N/A	N/A	N/A	NF	N/A	N/A	Electric	100%	0.00	0.00	0.00	0.00	N/A	0.00	0.00	0.00	0.000
17	**TOTAL NON-FUGITIVE EMISSIONS**															**136.19**	**15.54**	**0.53**	**7.18**
18	**TOTAL FUGITIVE EMISSIONS**															**51.66**	**13.11**	**1.54**	**0.00**
19	Gaseous emissions from the distillate oil fired melt furnace will be controlled by a baghouse followed by a wet scrubber. A gas control efficiency for these combined controlled devices could not be documented. Therefore, a conservative 0% control efficiency was applied.																		

Production Rate assumes continous use for 4 previous emergency generators combined with the four non emergency generators

5 gal/hour based on continuous use

SECTION 2.3 - EQUIPMENT LIST

The following table should include all equipment utilized at the facility, and should be completed with all the requested information. Be sure to notate the units (tons/hour, horsepower, etc.) when recording the Maximum Rated Capacity information, the Serial Number and/or the Equipment ID Number. The date of manufacture must be included in order to determine if portions of the facility are NSPS applicable. Make additional copies of this form if necessary.

Type of Equipment	Maximum Rated Capacity	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number

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See Below for Section 2.3

	B	C	D	E	F	G	H	I	J
3	**Section 2.3 Moss Mine Equipment List**								
4	**Type of Equipment**	**Maximum Rated Capacity**	**Make**	**Model**	**Equipment ID #/ Serial No.**	**Emission Status**	**Control Device**	**Date of Manufacture**	**Applicable Regulatory Requirements**
5	**Primary Crushing**								
6	Primary Crusher Feed Hopper	70 tons	Goodfellow	70 Ton	100-HP-001	Non-Fugitive	Water Sprays	2017	40 CFR 60, Subpart LL
7	Vibrating Grizzly Feeder	353 tph*	KPI	42x20	100-FE-001	Non-Fugitive	Water Sprays	2017	40 CFR 60, Subpart LL
8	Primary Crusher	166 tph*	KPI	3144V Jaw Crusher	100-CR-001	Non-Fugitive	Water Sprays	2017	40 CFR 60, Subpart LL
9	Primary Crusher Discharge Conveyor	353 tph*	KPI	42x20	100-CV-001	Non-Fugitive	Water Sprays	2017	40 CFR 60, Subpart LL
10	**Fine Crushing**								
11	Bin Vent Dust Collector	1,500 acfm	Donaldson	CPV-4	200-DC-001	Non-Fugitive	N/A	2017	40 CFR, Subpart LL
12	Single Point Dust Collector	1,500 acfm	Donaldson	CPV-4	200-DC-002	Non-Fugitive	N/A	2017	40 CFR, Subpart LL
13	Tertiary Feed Bin Vent	1500 cfm	Donaldson	CPV-4	200-DC-005	Non-Fugitive	N/A	2017	40 CFR 60,Subpart LL
14	Single Point Dust Collector	1500 cfm	Donaldson	CPV-4	200-DC-006	Non-Fugitive	N/A	2017	40 CFR 60,Subpart LL
15	Single Point Dust Collector	1500 cfm	Donaldson	CPV-4	200-DC-007	Non-Fugitive	N/A	2017	40 CFR 60,Subpart LL
16	Secondary and Tertiary Baghouse	35,0000 cfm	Torit -484RFW12	CPV-4	200-DC-008	Non-Fugitive	N/A	2005	40 CFR 60,Subpart LL
17	Secondary Bin Feed Conveyor	353 tph*	KPI	36x160	200-CV-002	Non-Fugitive	200-DC-002	2017	40 CFR 60, Subpart LL
18	Secondary Crushing Feed Bin	70 ton	Goodfellow	70 ton	200-BN-001	Non-Fugitive	200-DC-002	2017	40 CFR 60, Subpart LL
19	Secondary Screen Feeder	353 tph*	Goodfellow	42x22	200-FE-001	Non-Fugitive	200-DC-002	2017	40 CFR 60, Subpart LL
20	Secondary Screen Feed Conveyor	353 tph*	KPI	36x125	200-CV-003	Non-Fugitive	200-DC-002	2017	40 CFR 60, Subpart LL
21	Secondary Screen	353 tph*	JCI	6203DI	200-SR-001	Non-Fugitive	200-DC-002	2017	40 CFR 60,Subpart LL
22	Screen Undersize Conveyor	353 tph	JCI	60x22	200-SR-002-CV1	Non-Fugitive	200-DC-002	2017	40 CFR 60,Subpart LL
23	Secondary Crusher	229 tph*	KPI-JCI	K400+	200-CR-001	Non-Fugitive	200-DC-002	2017	Not Applicable
24	Screen Undersize Conveyor	200tph	JCI	36x20	200-SR-003-CV1	Non-Fugitive	200-DC-002	2017	Not Applicable
25	Crusher Discharge Conveyor No. 1	353 tph	KPI-JCI	42"x115'x8.5'	200-CV-004	Non-Fugitive	200-DC-002	2017	Not Applicable
26	Tertiary Bin Feed Conveyor	909 tph*	KPI-JCI	TBD	200-CV-007	Non-Fugitive	200-DC-005	2017	40 CFR 60,Subpart LL
27	Tertiary Crushing Feed Bin	140 ton	KPI-JCI	TBD	200-BN-002	Non-Fugitive	200-DC-005	2017	40 CFR 60,Subpart LL
28	Tertiary Screen Feeder	454 tph	KPI-JCI	TBD	200-FE-002	Non-Fugitive	200-DC-006	2017	40 CFR 60,Subpart LL
29	Tertiary Screen Feeder	454 tph	KPI-JCI	TBD	200-FE-003	Non-Fugitive	200-DC-007	2017	40 CFR 60,Subpart LL
30	Tertiary Screen Feed Conveyor	454 tph	KPI-JCI	36"x125'	200-CV-008	Non-Fugitive	200-DC-006	2017	40 CFR 60,Subpart LL
31	Tertiary Screen Feed Conveyor	454 tph	KPI-JCI	36"x125'	200-CV-009	Non-Fugitive	200-DC-007	2017	40 CFR 60,Subpart LL
32	Tertiary Screen	454 tph*	KPI-JCI	8203SI	200-SR-002	Non-Fugitive	200-DC-002	2017	40 CFR 60,Subpart LL
33	Tertiary Screen	454 tph*	KPI-JCI	8203SI	200-SR-003	Non-Fugitive	200-DC-002	2017	40 CFR 60,Subpart LL
34	Screen Undersize Conveyor	176 tph*	KPI-JCI	60x16	200-SR-002-CV1	Non-Fugitive	Water Sprays	2017	40 CFR 60,Subpart LL
35	Tertiary Crusher	278 tph*	KPI-JCI	KK500+	200-CR-002	Non-Fugitive	200-DC-002	2017	40 CFR 60,Subpart LL
36	Tertiary Crusher	278 tph*	KPI-JCI	KK500+	200-CR-003	Non-Fugitive	200-DC-002	2017	40 CFR 60,Subpart LL
37	Fine Crushing Product Conveyor	353 tph	KPI-JCI	36 inch Belt; 100 ft L; 0 ft Lift	200-CV-011	Non-Fugitive	200-DC-002	TBD	40 CFR 60,Subpart LL
38	**Crushed Ore Handling**								
39	Cement Storage Silo (w/Dust Collector)	100 ton	Westpro	SI100	250-BN-001	Non-Fugitive	250-DC-001	2017	A.A.C. R18-2-730
40	Cement Feeder	0.42 tph*	Westpro	6x21	250-FE-001	Enclosed	Enclosed	2017	A.A.C. R18-2-730
41	Agglomeration Conveyor	353 tph	Westpro	TBD	250-CV-012	Non-Fugitive	Water Sprays	2017	A.A.C. R18-2-730
42	Paddle Wheel	650 tph	Custom	Custom	250-PW-001	Non-Fugitive	Enclosed	2017	A.A.C. R18-2-730
43	Agglomerated Product Conveyor	353 tph*	KPI	3x60	250-CV-013	Non-Fugitive	Water Sprays	2017	A.A.C. R18-2-730
44	Stockpile Feed Conveyor	353 tph*	KPI	3x100	250-CV-014	Non-Fugitive	Water Sprays	2017	A.A.C. R18-2-730
45	Agglomerated Product Conveyor	353 tph*	KPI	3x60	250-CV-015thru 250-CV-017	Non-Fugitive	Water Sprays	2017	A.A.C. R18-2-730
46	Cement Silo Dust Collector	1,500 CFM	Donaldson	CPV-4	250-DC-001	Non-Fugitive	N/A	2017	A.A.C. R18-2-730
47	Transfer Conveyors	353 tph	Superior	36x100	300-CV-021 thru 300-CV-037	Non-Fugitive	Water Spray	2017	A.A.C. R18-2-730
48	Spare Transfer Conveyors	353 tph	Superior	36x100	300-CV-041 thru 300-CV-043	Non-Fugitive	Water Spray	2017	A.A.C. R18-2-730
49	Heap Leach Stacker Conveyor	353 tph	Superior	36x100	300-CV-051	Non-Fugitive	Water Spray	2017	A.A.C. R18-2-730
50	**Merrill Crowe**								
51	Pre-Coat Tank w/ Dust Collector (Bag Breaker)	5,710 gallons	MMI Tank	TBD	400-TK-005	No Emission (Wet Process)	400-DC-005	2017	A.A.C. R18-2-730
52	Body Feed Tank w/ Dust Collector (Bag Breaker)	5,710 gallons	MMI Tank	TBD	400-TK-004	No Emission (Wet Process)	400-DC-004	2017	A.A.C. R18-2-730
53	Bag Breaker Dust Collector	500 acfm	Donaldson	CPV-1	400-DC-004	Non-Fugitive	N/A	2017	A.A.C. R18-2-730
54	Bag Breaker Dust Collector	500 acfm	Donaldson	CPV-1	400-DC-005	Non-Fugitive	N/A	2017	A.A.C. R18-2-730
55	Zinc Feeder	15lb/Hr	CGS	1057-M-01	400-FE-001	TBD	None	2017	A.A.C. R18-2-730
56	Precipitate Filter (2)	4x4	Micronics	TR150DA08-FS-AO	400-FL-011 and 400-FL-012	No Emission (Wet Process)	None	2017	40 CFR 63, Subpart EEEEEEE
57	**Refinery**								
58	Refinery Drying Oven	1000 lbs	Wisconsin Oven	SWN-44-6E	500-DR-001	Non-Fugitive	None	2017	40 CFR 63, Subpart EEEEEEE
59	Melt Furnace (Crucible)	943 lbs (brass)	Baker Furnace	#400-T-D	500-FU-001	Non-Fugitive	500-DC-01 and 500-DC-010	2017	40 CFR 63, Subpart EEEEEEE
60	Melt Furnace (Fuel Oil Burner)	1M BTU/hr	Baker Furnace	#400-T-D	500-FU-001	Non-Fugitive	500-DC-01 and 500-DC-010	2017	40 CFR 63, Subpart EEEEEEE
61	Slag Pots (8)	0.93 cu ft	Legend	183791	500-MS-002	Non-Fugitive	500-DC-01 and 500-DC-011	2017	40 CFR 63, Subpart EEEEEEE
62	Refinery Baghouse	40,000 acfm	Ducon	156/2449	500-DC-001	Non-Fugitive	N/A	2017	40 CFR 60, Subpart LL and 40 CFR 63, Subpart EEEEEEE
63	Refinery Wet Scrubber	40,000 acfm	Ducon	60	500-DC-010	Non-Fugitive	Non-Fugitive	2017	40 CFR 60, Subpart LL and 40 CFR 63, Subpart EEEEEEE
64	**Generators**								
65	Tier 4 Non-Emergency CI-RICE (4 units)	455kW	CAT	C18 Tier 4 Final	700-GE-001 thru 700-GE-004	Non-Fugitive	N/A	2017	40 CFR 60, Subpart IIII
66	Tier 4 Non-emergency CI-RICE (4 units)	455kW	CAT	C18 Tier 4 Final	700-GE-005 thru 700-GE-008	Non-Fugitive	N/A	2017	40 CFR 60, Subpart IIII
67	Tier 4 Generator	47.5kW	CAT	XQ60	IN ROUTE	Non-Fugitive	N/A	2017	40 CFR 60, Subpart IIII
68	Interim Tier 4 Generator	200 kW	CAT	XQ200-2	C71CMRP00783	Non-Fugitive	N/A	2018	40 CFR 60, Subpart IIII
69	Interim Tier 4 Generator	200 KW	CAT	XQ200-2	C71LMRP00562	Non-Fugitive	N/A	2018	40 CFR 60, Subpart IIII
70	Tier 3 Generator	100 KW	CAT	XQ100-6	XQ-100/D4D02186	Non-Fugitive	N/A	2012	40 CFR 60, Subpart IIII
71	Tier 3 Generator	100 KW	CAT	XQ100-6	XQ - 100/D4D02896	Non-Fugitive	N/A	2012	40 CFR 60, Subpart IIII
72	Tier 3 Generator	70 KW	ISUZU	BJ-4JJ1X	BSZXL03.0JXB/SZX-NRCI-11-17	Non-Fugitive	N/A	2011	40 CFR 60, Subpart IIII
73	**Fuel Tanks (Insignificant Activities)**								
74	Diesel Fuel Storage Tanks for Mobile Equipment (3)	10,000 gallons	Tyco Enterprises	Double Wall	McCoy	Non-Fugitive	Non-Fugitive	2017	Insignificant Activities
75	Diesel Fuel Storage Tanks for Gensets (2)	10,000 gallons	Tyco Enterprises	Double Wall	700-TK-001, 700-TK-002	Non-Fugitive	Non-Fugitive	2017	Insignificant Activities
76	Furnace Fuel Oil Day Tank	1,000 gallons	Rebel Oil	Double Wall	500-TK-001	Non-Fugitive	Non-Fugitive	2017	Insignificant Activities
77	Unleaded Gasoline Fuel Storage Tank for Mobile Equipment	1000 gallons	Rebel Oil	Double Wall	McCoy	Non-Fugitive	Non-Fugitive	2015	Insignificant Activities
78	Unleaded Gasoline Fuel Storage Tank for Mobile Equipment (2)	500 gallons	Rebel Oil	Double Wall	McCoy	Non-Fugitive	Non-Fugitive	2016	Insignificant Activities

SECTION 4.0 - APPLICATION ADMINISTRATIVE COMPLETENESS CHECKLIST

	REQUIREMENT	MEETS REQUIREMENTS			COMMENT
		YES	NO	N/A	
1	Has the standard application form been completed?	X			
2	Has the responsible official signed the standard application form?	X			
3	Has a process description been provided?	X			See Permit
4	Are the facility's emissions documented with all appropriate supporting information?	X			
5	Is the facility subject to Minor NSR requirements? If the answer is "YES", answer 6a, 6b and 6c as applicable. If the answer is "NO", skip to 7.		X		
6.a	If the facility chooses to implement RACT, is the RACT determination included for the affected pollutants for all affected emission units?			X	
6.b	If the facility chooses to demonstrate compliance with NAAQS by screen modeling, is the modeling analysis included?			X	
6.c	If refined modeling has been conducted, is a comprehensive modeling report along with all modeling files included?			X	
7	Does the application include an equipment list with the type, name, make, model, serial number, maximum rated capacity, and date of manufacture?	X			
8	Does the application include an identification and description of Pollution Controls? (if applicable)			X	
9	For any application component claimed as confidential, are the requirements of AR.S. 49-432 and A.A.C. R18-2-305 addressed?			X	
10	For any current non-compliance issue, is a compliance schedule attached?			X	
11	For minor permit revision that will make a modification upon submittal of application, has a suggested draft permit been attached?			X	Permit Renewal
12	For major sources, have all applicable requirements been identified?			X	
13	For major sources, has a CAM applicability analysis been provided? For CAM applicable units, have CAM plans been provided?			X	
14	For major sources subject to requirements under Article 4 of the A.A.C., have all necessary New Source Review analyses identified in the application been presented?			X	

EXHAUST EMISSION DATA SHEET

MQ POWER GENERATOR SET

Model: DCA70SSI

The engine used in this generator set is certified to comply with United States EPA Tier 3 and CARB Mobile Off-Highway emission regulations.

ENGINE DATA

Manufacturer:	ISUZU	Bore:	3.76 in.	(95.4 mm)
Model:	BJ-4JJ1X	Stroke:	4.13 in.	(105 mm)
Type:	4-Cycle, In-Line, 4-Cylinder, Diesel	Displacement:	183 cid	(3.0 liters)
Aspiration:	Turbocharged, Charge Air Cooler, ECM, Exhaust Gas Recirculation	Compression Ratio:		17.5:1

PERFORMANCE DATA

SAE Gross HP @ 1800 RPM (60 Hz)	98
Rated Load Fuel Consumption (gal/Hr)	4.1
Rated Load Exhaust Gas Flow (cfm)	332
Rated Load Exhaust Gas Temperature (°F)	932

United States EPA - Mobile Off-Highway Tier 3 Limits - ≥75 BHP ~ <100 BHP

Criteria Pollutant	Emission Requirements	Certified Engine Emissions
NOx (Oxides of Nitrogen as NO2)	3.50 gr/bhp-hr	2.16 gr/bhp-hr
HC (Total Unburned Hydrocarbons)	(NOx + HC)* Combined	(NOx + HC)* Combined
CO (Carbon Monoxide)	3.73 gr/bhp-hr	0.89 gr/bhp-hr
PM (Particulate Matter)	0.30 gr/bhp-hr	0.13 gr/bhp-hr

EPA Engine Family:	BSZXL03.0JXB
EPA Certificate of Conformance:	SZX-NRCI-11-17
ARB Executive Order:	U-R-006-0348
Effective Date:	Model Year 2011

Note: Engine operation with excessive air intake or exhaust restriction beyond factory published maximum limits, or with improper service maintenance, may result in higher emission levels.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF TRANSPORTATION AND AIR QUALITY
WASHINGTON, DC 20460

CERTIFICATE OF CONFORMITY
2011 MODEL YEAR

Manufacturer:	**ISUZU MOTORS LIMITED**
Engine Family:	**BSZXL03.0JXB**
Certificate Number:	**SZX-NRCI-11-17**
Intended Service Class:	**NR 4 (37-75)**
Fuel Type:	**DIESEL**
FELs:	NMHC + NOx: **N/A** NOx: **N/A** PM: **N/A**
Effective Date:	**9/23/2010**
Date Issued:	**9/23/2010**

Karl J. Simon, Director
Compliance and Innovative Strategies Division
Office of Transportation and Air Quality

Pursuant to Section 213 of the Clean Air Act (42 U.S.C. section 7547) and 40 CFR Part 89, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following nonroad engines, by engine family, more fully described in the documentation required by 40 CFR 89 and produced in the stated model year.

This certificate of conformity covers only those nonroad compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 89 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 89.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 89.129-96 and 89.506-96 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to a revocation or suspension of this certificate for reasons specified in 40 CFR Part 89. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void ab initio for other reasons specified in 40 CFR Part 89.

This certificate does not cover nonroad engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

California Environmental Protection Agency AIR RESOURCES BOARD	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0348 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2011	BSZXL03.0JXB	3.0	Diesel	8,000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Electronic Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Exhaust Gas Recirculation	Generator Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
56 ≤ kW < 75	Tier 3	STD	N/A	N/A	4.7	5.0	0.40	N/A	N/A	N/A
		CERT	--	--	2.9	1.2	0.17	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 19 day of October 2010.

Annette Hebert, Chief
Mobile Source Operations Division