FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTY
APPLICATION FOR NEW CONSTRUCTION
&
APPLICATION FOR SYNTHETIC MINOR LIMIT

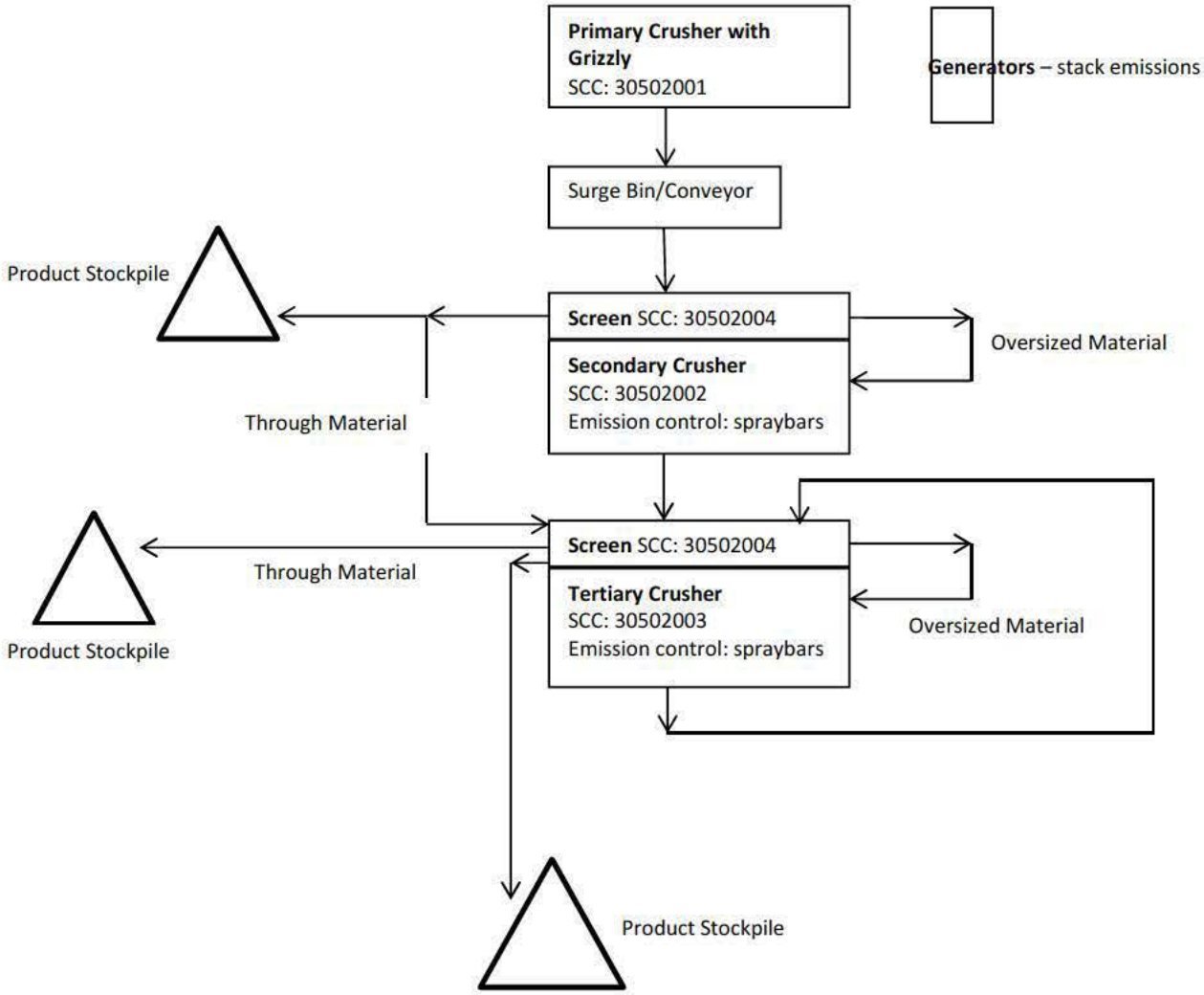
FOR A NONMETALLIC MINERAL PROCESSING PLANT
TO BE LOCATED AT ANY APPROVED SITE,
IN ANY APPROVED INDIAN COUNTRY,
IN THE STATE OF WISCONSIN

PROPOSAL SUMMARY

The proposal is the construction and operation of a portable nonmetallic mineral processing plant (crusher) in Indian Country. The plant will be powered with distillate fuel fired generators or use electrical power to run the crusher. The crushing operation consists of a primary (initial) crusher, secondary and tertiary crushers, screens or screening plant, and several conveyors. The facility is currently permitted and operates as a portable Synthetic Minor, Non-Part 70 source, with the State of Wisconsin, Department of Natural Resources, and holds a General Operation Permit (attached). To remain a synthetic minor non-Part 70 source, the source restricts its production rate and fuel usage.

Sources of emissions at the facility will include the combustion of fuel in the generators, and fugitive dust emissions from primary, secondary, and tertiary crushing, screening, conveying, and loading, unloading and handling of aggregate material.

PROCESS FLOW CHART – PORTABLE NON-METALLIC AGGREGATE CRUSHER



NARRATIVE DESCRIPTION

Feed loader loads plant with earthen/aggregate material directly from gravel pit, earthen bank, or stockpile. Material falls through grizzly into primary crusher. Grizzly removes large boulders, if any. Material continues to surge bin which is used to consistently convey material to secondary stage. At secondary stage material first passes through screen deck. Some of the through material from the screen deck can be pulled out of the stream at this point if necessary, otherwise through material continues to tertiary stage. Oversize material from screen deck enters secondary crusher and then

continues to tertiary stage. At tertiary stage material first passes through screen deck. Through material from the screen deck can be pulled out of the stream at this point or conveyed to final product conveyor. Oversize material from screen deck enters tertiary crusher. Material from tertiary crusher is recirculated back through tertiary stage until all material bypasses to final product conveyor. Material is moved via conveyors (represented by arrows in above process flow chart) between stages and to final stockpiles. All emissions through this process are fugitive emissions.

Mobile fugitive emissions are associated with hauling materials out from the site with trucks, and with loaders that feed the plant, load trucks, and aid in stockpiling materials.

The process does not include heating, drying, or the application of chemicals. The process does utilize a water spraybar system to control fugitive dust emissions, as necessary. Moisture content typically present in Wisconsin earthen materials also significantly aids in keeping fugitive emissions controlled.

PROPOSED EMISSION UNITS AND ACTIVITIES

The following equipment comprises our typical portable crushing plant:

Primary Crusher – initial jaw crusher, may include mounted grizzly, fugitive emissions
Secondary Crusher – second stage cone crusher, fugitive emissions
Tertiary Crusher – third stage cone crusher, fugitive emissions
Screens – used to size and separate materials, may be mounted on crushers or operated separately, fugitive emissions
Conveyors (including surge bin) – used to transfer materials between stages and to final product stockpiles, fugitive emissions
Stockpiles – fugitive emissions
Generator(s) – supply power to plant, housed in portable trailer, stacks exhaust emissions

Mobile equipment: trucks, loader(s). It is our understanding that emission calculations for mobile sources are not required to be included.

FUELS

Equipment Type: Generators
Fuel Type: #2 diesel fuel (ULSD, 15ppm Sulfur)
Quantity: 70 gal/hr (>600 hp), 30 gal/hr (≤600 hp), 1667 gal/day, 20,000 gal/yr

RAW MATERIALS AND FINAL PRODUCTS

Raw Materials:
Typical raw materials may include but are not limited to: sand, gravel, rock, stone, top dirt, pit run, recyclable materials (asphalt, concrete)

Final Products:
Typical products produced may include but are not limited to: screened sand, road gravel, shoulder gravel, hot mix asphalt aggregates, concrete aggregates, breaker run stone, other gravels, aggregates,

and stones of varying sizes and specifications, top dirt, and recyclable products such as recycled asphaltic pavement (RAP) and recycled concrete.

800 tons/hr maximum production
12,800 tons/day maximum production
100,000 tons/yr maximum production

PROPOSED OPERATING SCHEDULE

16 hrs/day, 6 days/week, 60 production days/yr

DESCRIPTION OF EQUIPMENT

S10, P10: **Processing Equipment**

Primary (initial) Crusher:	800 ton/hour maximum capacity. 100,000 ton/year maximum capacity.
Pool Equipment:	Secondary and tertiary crushers, conveyors, transfer points or storage bins, screens and screening operations.

Operation Type:	Crush, grind, screen, transfer
Control Technology Status:	Fugitive Dust Control Plan (attached)
Control Efficiency:	75% according to Appendix G Tier Control Requirements, WDNR, Nonmetallic Mining Air Emissions Guidance for the Development of the 1998 Air Emissions Inventory, Publication#: PUBL-AM-268-98, January, 1999 (attached). See also Reference #2 in REFERENCES section.

All the PM and PM_{10} emissions from P10 are fugitive emissions. No other pollutants are emitted. All equipment affected by NSPS for Nonmetallic Mineral Processing, used to transfer, store, or process material including crushers, screening operations, conveyors, transfer points or storage bins, is represented by P10.

S11, P11: Load In and Load Out

Loading and delivering raw material to/from the plant

Operation Type:	Loading, hauling
Control Technology Status:	Fugitive Dust Control Plan
Control Efficiency:	75% according to Appendix G Tier Control Requirements, WDNR, Nonmetallic Mining Air Emissions Guidance for the Development of the 1998 Air Emissions Inventory, Publication#: PUBL-AM-268-98, January, 1999.

All the PM and PM_{10} emissions from P11 are mobile fugitive emissions. No other pollutants are emitted.

S12, P12 - Diesel Fired Internal Combustion (IC) Engine(s)

>600 horsepower:	70 gallons/hour maximum fuel usage
≤600 horsepower:	30 gallons/hour maximum fuel usage
	20,000 gallons/year maximum fuel usage

Operation Type: Power generation, fuel combustion
Control Technology Status: None

Emissions from P12 are stack emissions.

EMISSION CALCULATIONS

	Potential	Allowable*
Diesel Generator Max. Fuel Use	70 gals/hr	20,000 gallons/yr 1667 gal/mth
Throughput Max.	800 tons/hr	100,000 tons/yr 8333 tons/mth

*Allowable restrictions are based on a 12-consecutive month rolling average.

EMISSION FACTORS

Emission factors from AP42 were used where data is available. Where no data is available from AP42, emissions factors utilized by the State of Wisconsin, Department of Natural Resources were used. See Reference section below.

Primary Crushing

Reference #2
PM: 0.0007 lb/ton, Uncontrolled
PM: 0.000175 lb/ton, Controlled
PM10: 0.0007 lb/ton, Uncontrolled
PM10: 0.000175 lb/ton, Controlled
PM2.5: No Data, References #1 and #2

Secondary Crushing

Reference #2
PM: 0.00504 lb/ton, Uncontrolled
PM: 0.00126 lb/ton, Controlled
PM10: 0.0024 lb/ton, Uncontrolled
PM10: 0.0006 lb/ton, Controlled
PM2.5: No Data, References #1 and #2

Tertiary Crushing

Reference #2
PM: 0.00504 lb/ton, Uncontrolled
PM: 0.00126 lb/ton, Controlled
PM10: 0.0024 lb/ton, Uncontrolled
PM10: 0.0006 lb/ton, Controlled

PM2.5: No Data, References #1 and #2

Screening
Reference #1
PM: 0.025 lb/ton, Uncontrolled
PM:0.0022 lb/ton, Controlled
PM10: 0.0087 lb/ton, Uncontrolled
PM10:0.00074 lb/ton, Controlled
PM2.5: No Data, Uncontrolled
PM2.5: 0.000050 lb/ton, Controlled

Conveying
Reference #1
PM: 0.0030 lb/ton, Uncontrolled
PM: 0.00014 lb/ton, Controlled
PM10: 0.00110 lb/ton, Uncontrolled
PM10: 0.000046 lb/ton, Controlled
PM2.5: No Data, Uncontrolled
PM2.5: 0.000013 lb/ton, Controlled

Generators
>600 hp
Reference #3
Assumed: Heating value of diesel fuel of 19,300 BTU/lb at density of 7.1 lb/gal,
PM emissions are considered to be PM10 emissions,
Maximum sulfur content in fuel oil of 15 ppm.
Example emission factor calculation: PM = (0.1 lb/MMBTU)(19,300 BTU/lb)(7.1 lb/gal) = 13.7 lb/1000 gal

PM: 0.1 lb/MMBTU = 13.7 lb/1000 gal
PM10: 0.1 lb/MMBTU = 13.7 lb/1000 gal
NOx: 3.2 lb/MMBTU = 438 lb/1000 gal
CO: 0.85 lb/MMBTU = 116 lb/1000 gal
VOC: 0.09 lb/MMBTU = 12.3 lb/1000 gal
SO2: $1.01S_1$ lb/MMBTU
SO_2 emission factor: $1.01S_1$ lb/MMBTU does not apply to 15 ppm sulfur fuels so the calculations are based on the fuel density and sulfur content.
SO2 = (7.1 lb/gal)(0.000015 S)(64:32 ratio of SO_2:S) = 0.2 lb SO2/1000 gal

≤600 hp
Reference #4
Assumed: Heating value of diesel fuel of 19,300 BTU/lb at density of 7.1 lb/gal,
PM emissions are considered to be PM10 emissions,
Maximum sulfur content in fuel oil of 15 ppm.
Example emission factor calc.: PM = (0.31 lb/MMBTU)(19,300 BTU/lb)(7.1 lb/gal) = 42.5 lb/1000 gal

PM: 0.31 lb/MMBTU = 42.5 lb/1000 gal
PM10: 0.31 lb/MMBTU = 42.5 lb/1000 gal
NOx: 4.41 lb/MMBTU = 604 lb/1000 gal

CO: 0.95 lb/MMBTU = 130 lb/1000 gal
VOC: 0.36 lb/MMBTU = 49.3 lb/1000 gal
SO2: $1.01S_1$ lb/MMBTU
SO_2 emission factor: $1.01S_1$ lb/MMBTU does not apply to 15 ppm sulfur fuels so the calculations are based on the fuel density and sulfur content.
SO2 = (7.1 lb/gal)(0.000015 S)(64:32 ratio of SO_2:S) =0.2 lb SO2/1000 gal

REFERENCES
#1: USEPA, AP-42, Section 11.19.2 Crushed Stone Processing, Table 11.19.2-2, August, 2004.

#2: WDNR, Nonmetallic Mining Air Emissions Guidance for the Development of the 1998 Air Emissions Inventory, Publication#: PUBL-AM-268-98, January, 1999. Emission factors were developed from AP42. Uncontrolled emission factors are back calculated from the controlled emissions factors. Controlled emission factors used are 75% of the uncontrolled emission factors. Appendix G of this document outlines Tier Control Requirements for determining control efficiency.

#3: USEPA, AP-42, Section 3.4 Large Stationary Diesel and All Stationary Dual-fuel Engines, Table 3.4-1, October, 1996.

#4: USEPA, AP-42, Section 3.3 Gasoline and Diesel Industrial Engines, Table 3.3-1, October, 1996.

1. CURRENT ACTUAL EMISSIONS

Zero production within Indian country in 2013 = zero current actual emissions.

2. POTENTIAL EMISSIONS

Uncontrolled emissions factors, where available, were used to calculate potential emissions. Potential emissions are based on source operating 8760 hrs/yr = (24 hrs/day)(365 days/yr). Emission factor derivation and references in EMISSION FACTORS section above.

- **S10, P10 - PROCESSING EQUIPMENT**

  <u>PM Emissions</u>
  Primary Crushing: (0.0007 lb/ton)(800 ton/hr) = 0.56 lb/hr
  (0.560 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **2.5 TPY**

  Secondary Crushing: (0.00504 lb/ton)(800 ton/hr) = 4.0 lb/hr
  (4.0 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **17.5 TPY**

  Tertiary Crushing: (0.00504 lb/ton)(800 ton/hr) = 4.0 lb/hr
  (4.0 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **17.5 TPY**

  Screening: (0.025 lb/ton)(800 ton/hr) = 20.0 lb/hr
  (20.0 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **87.6 TPY**

  Conveying: (0.0030 lb/ton)(800 ton/hr) = 2.4 lb/hr
  (2.4 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **10.5 TPY**

PM10 Emissions
Primary Crushing: (0.0007 lb/ton)(800 ton/hr) = 0.56 lb/hr
(0.560 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **2.5 TPY**

Secondary Crushing: (0.0024 lb/ton)(800 ton/hr) = 1.9 lb/hr
(1.9 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **8.3 TPY**

Tertiary Crushing: (0.0024 lb/ton)(800 ton/hr) = 1.9 lb/hr
(1.9 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **8.3 TPY**

Screening: (0.0087 lb/ton)(800 ton/hr) = 7.0 lb/hr
(7.0 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **30.7 TPY**

Conveying: (0.00110 lb/ton)(800 ton/hr) = 0.88 lb/hr
(0.88 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **3.9 TPY**

- **S12, P12 - Diesel Fired Internal Combustion (IC) Engine(s)**

>600 hp

PM Emissions
(13.7 lb/1000 gal)(70 gal/hr) = 0.96 lb/hr
(0.96 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **4.2 TPY**

PM10 Emissions
(13.7 lb/1000 gal)(70 gal/hr) = 0.96 lb/hr
(0.96 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **4.2 TPY**

NOx Emissions
(438 lb/1000 gal)(70 gal/hr) = 30.7 lb/hr
(30.7 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **134.5 TPY**

SO2 Emissions
(0.2 lb/1000 gal)(70 gal/hr) = 0.01 lb/hr
(0.01 lb/hr)(8760 hrs/hr)(ton/2000 lb) = **0.04 TPY**

CO Emissions
(116 lb/1000 gal)(70 gal/hr) = 8.1 lb/hr
(8.1 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **35.5 TPY**

VOC Emissions
(12.3 lb/1000 gal)(70 gal/hr) = 0.86 lb/hr
(0.86 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **3.8 TPY**

≤600 hp

PM Emissions
(42.5 lb/1000 gal)(30 gal/hr) = 1.3 lb/hr

(1.3 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **5.7 TPY**

PM10 Emissions
(42.5 lb/1000 gal)(30 gal/hr) = 1.3 lb/hr
(1.3 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **5.7 TPY**

NOx Emissions
(604 lb/1000 gal)(30 gal/hr) = 18.1 lb/hr
(18.1 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **79.3 TPY**

SO2 Emissions
(0.2 lb/1000 gal)(30 gal/hr) = 0.01 lb/hr
(0.01 lb/hr)(8760 hrs/hr)(ton/2000 lb) = **0.04 TPY**

CO Emissions
(130 lb/1000 gal)(30 gal/hr) = 3.9 lb/hr
(3.9 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **17.1 TPY**

VOC Emissions
(49.3 lb/1000 gal)(30 gal/hr) = 1.5 lb/hr
(1.5 lb/hr)(8760 hrs/yr)(ton/2000 lb) = **6.6 TPY**

- **TOTAL POTENTIAL EMISSIONS**

(With Gen. >600 hp)
PM = 2.5+17.5+17.5+87.6+10.5+4.2 = **139.8 TPY**
PM10 = 2.5+8.3+8.3+30.7+3.9+4.2 = **57.9 TPY**
NOX = **134.5 TPY**
SO2 = **0.04 TPY**
CO = **35.5 TPY**
VOC = **3.8 TPY**

(With Gen. ≤600 hp)
PM = 2.5+17.5+17.5+87.6+10.5+5.7 = **141.3 TPY**
PM10 = 2.5+8.3+8.3+30.7+3.9+5.7 = **59.4 TPY**
NOX = **79.3 TPY**
SO2 = **0.04 TPY**
CO = **17.1 TPY**
VOC = **6.6 TPY**

3. PROPOSED ALLOWABLE EMISSIONS

Controlled emission factors, where available, were used to calculate proposed allowable emissions. Controlled PM and PM10 emission factors are established at 75% of uncontrolled emission factors according to Reference #2, Appendix G (attached). Source currently follows 75% tier control requirements in the State of Wisconsin. Proposed allowable emissions are based on source restrictions of 100,000 tons/yr, and 20,000 gals/yr.

- **S10, P10 - PROCESSING EQUIPMENT**

PM Emissions
Primary Crushing: (0.000175 lb/ton)(800 ton/hr) = 0.14 lb/hr
(0.000175 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.01 TPY**

Secondary Crushing: (0.00126 lb/ton)(800 ton/hr) = 1.0 lb/hr
(0.00126 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.06 TPY**

Tertiary Crushing: (0.00126)(800 tons/hr) = 1.0 lb/hr
(0.00126 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.06 TPY**

Screening: (0.0022 lb/ton)(800 tons/hr) = 1.8 lb/hr
(0.0022 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.11 TPY**

Conveying: (0.00014 lb/ton)(800 tons/hr) = 0.11 lb/hr
(0.00014 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.01 TPY**

PM10 Emissions
Primary Crushing: (0.000175 lb/ton)(800 ton/hr) = 0.14 lb/hr
(0.000175 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.01 TPY**

Secondary Crushing: (0.0006 lb/ton)(800 ton/hr) = 0.48 lb/hr
(0.0006 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.03 TPY**

Tertiary Crushing: (0.0006)(800 ton/hr) = 0.48 lb/hr
(0.0006 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.03 TPY**

Screening: (0.00074 lb/ton)(800 ton/hr) = 0.59 lb/hr
(0.00074 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.04 TPY**

Conveying: (0.000046 lb/ton)(800 ton/yr) = 0.04 lb/hr
(0.000046 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.002 TPY**

PM2.5 Emissions
Screening: (0.000050 lb/ton)(800 ton/hr) = 0.04 lb/hr
(0.000050 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.003 TPY**

Conveying: (0.000013 lb/ton)(800 ton/yr) = 0.01 lb/hr
(0.000013 lb/ton)(100,000 tons/yr)(ton/2000 lb) = **0.0007 TPY**

- **S12, P12 - Diesel Fired Internal Combustion (IC) Engine(s)**

  >600 hp

  PM Emissions
  (13.7 lb/1000 gal)(70 gal/hr) = 0.96 lb/hr
  (13.7 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.1 TPY**

PM10 Emissions
(13.7 lb/1000 gal)(70 gal/hr) = 0.96 lb/hr
(13.7 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.1 TPY**

NOx Emissions
(438 lb/1000 gal)(70 gal/hr) = 30.7 lb/hr
(438 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **4.4 TPY**

SO2 Emissions
(0.2 lb/1000 gal)(70 gal/hr) = 0.01 lb/hr
(0.2 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.002 TPY**

CO Emissions
(116 lb/1000 gal)(70 gal/hr) = 8.1 lb/hr
(116 lb/1000gal)(20,000 gal/yr)(ton/2000 lb) = **1.2 TPY**

VOC Emissions
(12.3 lb/1000 gal)(70 gal/hr) = 0.86 lb/hr
(12.3 lb1000gal)(20,000 gal/yr)(ton/2000 lb) = **0.1 TPY**

≤600 hp

PM Emissions
(42.5 lb/1000 gal)(30 gal/hr) = 1.3 lb/hr
(42.5 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.4 TPY**

PM10 Emissions
(42.5 lb/1000 gal)(30 gal/hr) = 1.3 lb/hr
(42.5 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.4 TPY**

NOx Emissions
(604 lb/1000 gal)(30 gal/hr) = 18.1 lb/hr
(604 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **6.0 TPY**

SO2 Emissions
(0.2 lb/1000 gal)(30 gal/hr) = 0.01 lb/hr
(0.2 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.002 TPY**

CO Emissions
(130 lb/1000 gal)(30 gal/hr) = 3.9 lb/hr
(130 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **1.3 TPY**

VOC Emissions
(49.3 lb/1000 gal)(30 gal/hr) = 1.5 lb/hr
(49.3 lb/1000 gal)(20,000 gal/yr)(ton/2000 lb) = **0.5 TPY**

- **TOTAL PROPOSED ALLOWABLE EMISSIONS**

(With Gen. >600 hp)

PM = 0.01+0.06+0.06+0.11+0.01+0.1 = **0.4 TPY**
PM10 = 0.01+0.03+0.03+0.04+0.002+0.1 = **0.2 TPY**
NOX = **4.4 TPY**
SO2 = **0.002 TPY**
CO = **1.2 TPY**
VOC = **0.1 TPY**

(With Gen. ≤600 hp)

PM = 0.01+0.06+0.06+0.11+0.01+0.4 = **0.7 TPY**
PM10 = 0.01+0.03+0.03+0.04+0.002+0.4 = **0.5 TPY**
NOX = **6.0 TPY**
SO2 = **0.002 TPY**
CO = **1.3 TPY**
VOC = **0.5 TPY**

EMISSIONS SUMMARY

S10, P10; S11, P11 (fugitive emissions from crushers &related processes)

POLLUTANT	POTENTIAL		PROPOSED ALLOWABLE*	
	lbs/hr	TPY	lbs/hr	TPY
PM	31.0	135.6	4.1	0.3
PM10	12.2	53.7	1.7	0.1

*Based on proposed annual throughput restrictions.

S12, P12 (stack emissions from diesel generators)

POLLUTANT	POTENTIAL				PROPOSED ALLOWABLE*			
	lbs/hr		TPY		lbs/hr		TPY	
	≤600 hp	>600 hp	≤600 hp	>600 hp	≤600 hp	>600 hp	≤600 hp	>600 hp
PM	1.3	0.96	5.7	4.2	1.3	0.96	0.4	0.1
PM10	1.3	0.96	5.7	4.2	1.3	0.96	0.4	0.1
NOX	18.1	30.7	79.3	134.5	18.1	30.7	6.0	4.4
SO2	0.01	0.01	0.04	0.04	0.01	0.01	0.002	0.002
CO	3.9	8.1	17.1	35.5	3.9	8.1	1.3	1.2
VOC	1.5	0.86	6.6	3.8	1.5	0.86	0.5	0.1

*Based on proposed annual throughput restrictions.

TOTAL FACILITY EMISSIONS

POLLUTANT	POTENTIAL		PROPOSED ALLOWABLE*	
	TPY ≤600 hp	TPY >600 hp	TPY ≤600 hp	TPY >600 hp
PM	141.3	139.8	0.7	0.4
PM10	59.4	57.9	0.5	0.2
NOX	79.3	134.5	6.0	4.4
SO2	0.04	0.04	0.002	0.002
CO	17.1	35.5	1.3	1.2
VOC	6.6	3.8	0.5	0.1

*Based on proposed annual throughput restrictions.

GHG EMISSIONS

Of the six GHGs, the only emission factor available in AP42, Section 3.3, Table 3.3-1 is for CO2.

CO2 emission factor = 164 lb/MMBTU
(164 lb/MMBTU)(19,300 BTU/gal)(7.1 gal/lb) = 22.5 lb/gal

Potential CO2 emissions (taking into account enforceable limits) =
(22.5 lb/gal)(20,000 gal/yr)(ton/2000 lb) = 225 TPY CO2

GWP of CO2 = 1
CO2e = (1)(225 TPY CO2) = 225 TPY CO2e

According to Appendix B. GHG Applicability Flow Chart – New Sources (On or after July 1, 2011) of the USEPA's PSD and Title V Permitting Guidance for Greenhouse Gases, GHG emissions from this facility are not subject to PSD. Additionally, it is my understanding that GHG reporting requirements and related monitoring and recordkeeping requirements do not apply to this facility according to 40 CFR Part 98, Subpart A.

PROPOSED LIMITATIONS, TESTING, MONITORING, RECORDKEEPING, REPORTING

To remain a synthetic minor non-part 70 source, we are proposing the following limitations:

Limitation: 100,000 tons/yr max. throughput (8333 tons/mth based on rolling ave.)

Testing, Monitoring, Recordkeeping, Reporting:
Daily, monthly, and annual production records shall be kept detailing production. A 12-mth rolling average shall be calculated at the end of each month.

Limitation: 20,000 gals/yr max. throughput (1667 gals/mth based on rolling ave.)

Testing, Monitoring, Recordkeeping, Reporting:
Daily, monthly, and annual records shall be kept detailing type and amount of fuel usage. A 12-mth rolling average shall be calculated at the end of each month.

The effect of these proposed limitations is shown in the EMISSIONS SUMMARY section above. Compliance with the above production and fuel usage limitations will significantly decrease emissions as shown in the TOTAL FACILITY EMISSIONS table, as you compare the potential emissions to the allowable emissions.

OTHER TESTING, MONITORING, RECORDKEEPING, REPORTING
Our State of Wisconsin, General Operation Permit is attached which details our current compliance, monitoring and recordkeeping requirements by the WDNR, as well as a Fugitive Dust Control Plan. We propose similar requirements for consistency in operations, however, recognize that USEPA may require different and/or additional requirements.

Particulate Matter: Implementation of Fugitive Dust Control Plan including the use of spraybars when necessary. Records of fugitive dust control measures taken shall be kept, and weather records maintained when control measures are not necessary.

Visible Emissions: Proper operation and maintenance of process equipment and generators will assure compliance with NSPS requirements. Opacity testing shall be performed on NSPS subject equipment as recommended by USEPA.

Relocation requirements as recommended by USEPA.

ENDANGERED SPECIES ACT

Canada Lynx is listed as threatened in Vilas County, Wisconsin, but no resident populations are known from Wisconsin. Kirtland's Warbler is listed as endangered in Vilas County, Wisconsin, but no known warbler's are known to be present . (www.fws.gov/midwest)

NATIONAL HISTORIC PRESERVATION ACT

The National Register of Historic Places for Vilas County, Wisconsin, includes three places within the Township of Lac Du Flambeau – Hultin House, Strawberry Island, and Government Boarding School. Upon viewing the description of the three places, all three are located approximately 3-4 miles from the sources currently listed for this permit. Operations proposed in this permit application would not adversely affect these historic places. (www.nationalregisterofhistoricplaces.com)

LIST OF ATTACHMENTS

Attachment #1 – Proposed Source Locations.

Attachment #2 – Pitlik & Wick, Inc., Air Pollution Control General Operation Permit, Permit No.: 998380240-G20, State of Wisconsin, Department of Natural Resources.

Attachment #3 – Sections of WDNR, Nonmetallic Mining Air Emissions Guidance for the Development of the 1998 Air Emissions Inventory, Publication#: PUBL-AM-268-98, January, 1999.

Attachment #4 – Fugitive Dust Control Plan.

ATTACHMENT #1 – PROPOSED SOURCE LOCATIONS

Location #1:	**Hwy. D Aggregate Source**
Physical:	2975 County Road D
	Lac Du Flambeau, WI 54548
Reservation:	Lac Du Flambeau Indian Reservation
County:	Vilas
Latitude:	45°59'24"
Longitude:	89°51'30"
Qrtr/Qrtr:	NE ¼ of SW ¼, and SE ¼ of NW ¼
Section:	34
Township:	T41N
Range:	R5E

Location #2:	**Clear Lake Aggregate Source**
Physical:	Hwy. 70 West, 3 miles west of Hwy. D
	Lac Du Flambeau, WI
Reservation:	Lac Du Flambeau Indian Reservation
County:	Vilas
Latitude:	45°54'44"
Longitude:	89°57'31"
Qrtr/Qrtr:	W ½ of NW ¼,
Section:	35
Qrtr/Qrtr:	W ½ of SW ¼
Section:	26
Township:	T40N
Range:	R4E

Additional locations in the future.