SWCAA
Southwest Clean Air Agency

TECHNICAL SUPPORT DOCUMENT

Air Discharge Permit /Nonroad Engine Permit 21-3454
ADP/NEP Application L-717

R G Crushing, Inc.
SWCAA ID - 2694

Issued: February 25, 2021

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Abbreviations

ADP	Air Discharge Permit
AP-42	Compilation of Emission Factors, AP-42, Fifth Edition, Volume 1, Stationary Point and Area Sources – published by the US Environmental Protection Agency
BACT	Best available control technology
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO_2e	Carbon dioxide equivalent as defined in 40 CFR 98
EPA	U.S. Environmental Protection Agency
g/hp-hr	Grams per horsepower hour
HAP	Hazardous air pollutant listed pursuant to Section 112 of the Federal Clean Air Act
lb/hp-hr	Pounds per horsepower hour
lb/hr	Pounds per hour
lb/yr	Pounds per year
MMBtu/hr	Millions of British thermal units per hour
NEP	Nonroad Engine Permit
NO_x	Nitrogen oxides
PM	Total particulate matter (includes both filterable and condensable particulate matter as measured by EPA Methods 5 and 202)
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (includes both filterable and condensable particulate matter as measured by EPA Methods 5 and 202)
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (includes both filterable and condensable particulate matter as measured by EPA Methods 5 and 202)
ppm	Parts per million
ppmv	Parts per million by volume
ppmvd	Parts per million by volume, dry
PSD	Prevention of Significant Deterioration
psig	Pounds per square inch, gauge
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
SDS	Safety data sheet
SQER	Small Quantity Emission Rate listed in WAC 173-460
SO_2	Sulfur dioxide
SWCAA	Southwest Clean Air Agency
TAP	Toxic air pollutant pursuant to Chapter 173-460 WAC
T-BACT	Best Available Control Technology for toxic air pollutants
tpy	Tons per year
VMT	Vehicle mile traveled
VOC	Volatile organic compound
WAC	Washington Administrative Code

1. FACILITY IDENTIFICATION

Applicant Name:	R G Crushing, Inc.
Applicant Address:	PO Box 416, Chehalis, WA 98532
Facility Name:	R G Crushing, Inc.
Facility Address:	Portable – Initially located at Winston Quarry 269 Winston Creek Road, Mossyrock, WA 98564
Contact person:	Rusty Gill, President
SWCAA Identification:	2694
Primary Process:	Crushed and Broken Stone / Other Crushed and Broken Stone Mining and Quarrying
SIC/NAICS Code:	1429 / 212319
Facility Designation:	Natural minor

2. FACILITY DESCRIPTION

R G Crushing, Inc. operates a portable rock crushing/screening plant. The plant consists of rock crushers, an aggregate screen and associated material handling equipment. The rock crushers and aggregate screen are powered by integral diesel engines.

3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit / Nonroad Engine Permit (ADP/NEP) Application L-717 dated December 3, 2020. R G Crushing, Inc. submitted ADP/NEP Application L-717 requesting approval of the following equipment:

- One Kolberg-Pioneer FT2650 jaw crusher with integral Caterpillar diesel engine;
- One McCloskey C44 cone crusher with integral Caterpillar diesel engine; and
- One Astec GT205 aggregate screen with integral Caterpillar diesel engine.

The current permitting action provides approval for the rock crushing operation proposed in ADP/NEP Application L-717.

4. PROCESS DESCRIPTION

4.a Rock Crushing. The proposed rock crushing equipment will be used to crush raw aggregate mined from the site. Crushing equipment will be arranged in sequence for primary (jaw crusher) and secondary (cone crusher) crushing. The screening unit will placed between the crushing stages to size material entering the secondary crusher. Raw aggregate will be fed into the crushing equipment using front-end loaders. Crushed aggregate will be transferred via conveyor belt from the secondary crusher to either a load-out hopper or storage piles. Spray nozzles will be used to control fugitive dust emissions at the entrance of each crusher. Other emission points will be watered as necessary to control fugitive dust emissions. Wet suppression (sprinklers and hose sprays) will be used to control fugitive emissions from associated haul roads and storage piles.

4.b Auxiliary Power Generation. The rock crushing and screening equipment at this facility is powered by integral diesel engines.

5. EQUIPMENT/ACTIVITY IDENTIFICATION

5.a Kolberg-Pioneer Jaw Crusher (*new*). This unit is a track-mounted jaw crusher. Wet suppression is used to control dust emissions at the inlet of the crusher and as necessary at the finished product delivery belt. This unit is powered by an integral diesel engine.

Make / Model:	Kolberg-Pioneer / FT2650 (s/n 415515)
Size:	26" x 50"
Capacity:	400 tph
Year Built:	2016
Federal Regulations:	Subpart OOO

5.b McCloskey Cone Crusher (*new*). This unit is a track-mounted cone crusher. Wet suppression is used to control dust emissions at the inlet of the crusher and as necessary at the finished product delivery belt. This unit is powered by an integral diesel engine.

Make / Model:	McCloskey International / C44 (s/n 80419)
Size:	44"
Capacity:	250 tph
Year Built:	2011
Federal Regulations:	Subpart OOO

5.c Astec Aggregate Screen (*new*). This unit is a track mounted 2-deck aggregate screen. Wet suppression is used as necessary to control dust emissions at associated material handling points. This unit is powered by an integral diesel engine.

Make / Model:	Astec Mobile Screens, Inc. / GT205 (s/n 184614)
Size:	5' x 20'
Capacity:	600 tph
Year Built:	2018
Federal Regulations:	Subpart OOO

5.d Haul Roads and Conveyors (*new*). Vehicle traffic and material handling operations generate fugitive dust emissions. Fugitive emissions from material handling are minimized with the use of low pressure wet suppression.

5.e Nonroad Diesel Engine – Kolberg-Pioneer Jaw Crusher (*new*). This unit provides power to the Kolberg-Pioneer jaw crusher. This unit is mounted directly on the jaw crusher and classified as a nonroad engine.

Make / Model:	Caterpillar C9.3
Power Rating:	350 bhp
Fuel Type:	Diesel
Fuel Consumption:	17.75 gal/hr
Model Year:	2014
EPA Certification:	Tier 4
Federal Regulations:	40 CFR 89 / 1039
Exhaust:	4" diameter, vertical at 11' above ground level

5.f Nonroad Diesel Engine – McCloskey Cone Crusher (*new*). This unit provides power to the McCloskey cone crusher. This unit is mounted directly on the cone crusher and classified as a nonroad engine.

Make / Model:	Caterpillar C13 (s/n LGK18082)
Power Rating:	440 bhp
Fuel Type:	Diesel
Fuel Consumption:	22.4 gal/hr
Model Year:	2005
EPA Certification:	Tier 3
Federal Regulations:	40 CFR 89 / 1039
Exhaust:	5" diameter, horizontal at 10' above ground level

5.g Nonroad Diesel Engine – Astec Aggregate Screen (*new*). This unit provides power to the Kolberg-Pioneer jaw crusher. This unit is mounted directly on the aggregate screen and classified as a nonroad engine.

Make / Model:	Caterpillar C4.4 (s/n JKT04042)
Power Rating:	137 bhp
Fuel Type:	Diesel
Fuel Consumption:	7.37 gal/hr
Model Year:	2017
EPA Certification:	Tier 4
Federal Regulations:	40 CFR 89 / 1039
Exhaust:	3" diameter, horizontal at 6' above ground level

5.h Equipment/Activity Summary.

ID No.	Generating Equipment/Activity	# of Units	Control Measure/Equipment	# of Units
1	Jaw Crusher (Kolberg-Pioneer – FT2650)	1	High pressure wet suppression at crusher entrance	N/A
2	Cone Crusher (McCloskey – C44)	1	High pressure wet suppression at crusher entrance	N/A
3	Aggregate Screen (Astec – GT205)	1	High pressure wet suppression at screen deck	N/A
4	Haul Roads / Conveyors	N/A	Wet Suppression	N/A
5	Nonroad Diesel Engine (Caterpillar C9.3)	1	Ultra-low Sulfur Diesel	N/A
6	Nonroad Diesel Engine (Caterpillar C13)	1	Ultra-low Sulfur Diesel	N/A
7	Nonroad Diesel Engine (Caterpillar C4.4)	1	Ultra-low Sulfur Diesel	N/A

6. EMISSIONS DETERMINATION

Emissions to the ambient atmosphere from rock crushing operations, as proposed in ADP/NEP Application L-717, consist of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter (PM) and sulfur dioxide (SO_2).

6.a Rock Crushing and Screening. Potential emissions from rock crushing and screening operations are calculated based on a maximum material throughput of 60,000 tpy, a control efficiency of 80% (wet suppression), and applicable emission factors. Except for primary crushing, all emission factors for rock crushing are 'controlled' factors from the 8/04 version of EPA AP-42, Table 11.19.2-2. Emission factors for tertiary crushing have been used as an upper limit for secondary crushing as suggested in the 8/04 version of the table.

Emission factors for primary crushing are derived from the 1/95 version of EPA AP-42, Table 11.19.2-2 which only provided an 'uncontrolled' PM factor for primary crushing. An 'uncontrolled' PM_{10} factor was calculated using a PM to PM_{10} ratio of 2.1:1 as specified in the 1/95 table footnotes. An 'uncontrolled' $PM_{2.5}$ factor was calculated using a PM to $PM_{2.5}$ ratio of 12:1 as cited for tertiary crushing in the 8/04 table.

Annual emissions will be calculated based on actual crushing and screening activity.

Total Emissions:	PM	0.16 tpy
	PM_{10}	0.06 tpy
	$PM_{2.5}$	0.01 tpy

Activity	Throughput (tpy)	Pollutant	Emission Factor - Controlled (lb/ton)	Turn Points	Emissions (tpy)
Primary crushing	60,000	PM	0.00014		0.004
		PM_{10}	0.000067		0.002
		$PM_{2.5}$	0.000012		0.000
Secondary crushing	60,000	PM	0.0012		0.036
		PM_{10}	0.00054		0.016
		$PM_{2.5}$	0.0001		0.003
Tertiary crushing	60,000	PM	0.0012		0.036
		PM_{10}	0.00054		0.016
		$PM_{2.5}$	0.0001		0.003
Screening	60,000	PM	0.0022		0.066
		PM_{10}	0.00074		0.022
		$PM_{2.5}$	0.00005		0.002
Loading/conveying	60,000	PM	0.00014	5	0.021
		PM_{10}	0.000046		0.007
		$PM_{2.5}$	0.000013		0.002

6.b Haul Roads. Potential emissions from haul roads were calculated using default emission calculations from EPA AP-42, Section 13.2.2 (12/03), an average load weight of 20 tons, an average silt content of 4.8%, and an average round trip distance of 0.5 miles. This does not include in-pit activities by non-road equipment. The use of wet suppression is expected to provide an overall control efficiency of 80% for haul road emissions.

Annual emissions will be calculated based on actual vehicle weight and miles travelled.

$$E = k\left(\frac{s}{12}\right)^{a}\left(\frac{w}{3}\right)^{b}$$

Where: w = average truck weight in tons;
s = road surface silt content (%); and
k, a, and b are given in the table below:

Constant	$PM_{2.5}$	PM_{10}	PM_{30} (assumed to represent PM)
k (lb/vehicle mile traveled)	0.23	1.5	4.9
a	0.9	0.9	0.7
b	0.45	0.45	0.45

Haul Road Emissions

Average Truck Weight =	27	tons (assumes empty weight of 17 tons)
Average Round Trip Distance =	0.50	miles
Amount of Aggregate per Load =	20.0	tons
Total # of Trips =	3,000	loads
Total Miles Traveled =	1,500	miles
Assumed Silt Content =	4.8%	
Assumed Control (wet suppression) =	80%	

Pollutant	Uncontrolled Emission Factor lb/mile	Controlled Emission Factor lb/mile	Emissions tpy	Emission Factor Source
PM	6.94	1.39	1.04	AP-42 13.2.2 (11/06)
PM_{10}	1.77	0.35	0.27	AP-42 13.2.2 (11/06)
$PM_{2.5}$	0.27	0.054	0.04	AP-42 13.2.2 (11/06)

6.c Nonroad Diesel Engine (Caterpillar C9.3). Potential emissions from engine operation are calculated based on 400 hours of operation, use of ultra-low sulfur diesel (<0.0015% sulfur by weight), an engine rating of 350 hp and applicable emission factors.

Annual emissions will be calculated from actual hours of operation using the emission factors identified below.

Hours of Operation =	400	hours				
Power Output =	350	horsepower				
Fuel Sulfur Content =	0.0015	% by weight				
Fuel Consumption Rate =	17.75	gal/hr				
Fuel Heat Content =	0.138	MMBtu/gal (40 CFR 98)				
	EF	Emissions				
Pollutant	lb/hr	tpy	EF Source			
NO_X	0.029	0.006	EPA Certification Data			
CO	0.006	0.001	EPA Certification Data			
VOC	0.012	0.002	EPA Certification Data			
SO_X as SO_2	0.004	0.001	Mass Balance			
PM/PM_{10}	0.006	0.001	EPA Certification Data			
$PM_{2.5}$	0.006	0.001	EPA Certification Data			
Greenhouse Gases	kg/MMBtu	GWP	CO_2e lb/MMBtu	CO_2e lb/gallon	tpy, CO_2e	
CO_2	73.96	1	163.05	22.501	80	40 CFR 98
CH_4	0.003	25	0.165	0.023	0.1	40 CFR 98
N_2O	0.0006	298	0.394	0.054	0.2	40 CFR 98
Total GHG - CO_2e	73.9636		163.61	22.58	80.2	

6.d Nonroad Diesel Engine (Caterpillar C13). Potential emissions from engine operation are calculated based on 400 hours of operation, use of ultra-low sulfur diesel (<0.0015% sulfur by weight), an engine rating of 440 hp and applicable emission factors.

Annual emissions will be calculated from actual hours of operation using the emission factors identified below.

Hours of Operation =	400	hours
Power Output =	440	horsepower
Fuel Sulfur Content =	0.0015	% by weight
Fuel Consumption Rate =	22.40	gal/hr
Fuel Heat Content =	0.138	MMBtu/gal (40 CFR 98)

Pollutant	EF lb/hr	Emissions tpy	EF Source
NO_X	2.75	0.55	Caterpillar
CO	1.30	0.26	Caterpillar
VOC	0.04	0.01	Caterpillar
SO_X as SO_2	0.005	0.001	Mass Balance
PM/PM_{10}	0.10	0.02	Caterpillar
$PM_{2.5}$	0.10	0.02	Caterpillar

Greenhouse Gases	kg/MMBtu	GWP	CO_2e lb/MMBtu	CO_2e lb/gallon	tpy, CO_2e	
CO_2	73.96	1	163.05	22.501	101	40 CFR 98
CH_4	0.003	25	0.165	0.023	0.1	40 CFR 98
N_2O	0.0006	298	0.394	0.054	0.2	40 CFR 98
Total GHG - CO_2e	73.9636		163.61	22.58	101.2	

6.e Nonroad Diesel Engine (Caterpillar C4.4). Potential emissions from engine operation are calculated based on 400 hours of operation, use of ultra-low sulfur diesel (<0.0015% sulfur by weight), an engine rating of 137 hp and applicable emission factors.

Annual emissions will be calculated from actual hours of operation using the emission factors identified below.

Hours of Operation =	400	hours				
Power Output =	137	horsepower				
Fuel Sulfur Content =	0.0015	% by weight				
Fuel Consumption Rate =	7.37	gal/hr				
Fuel Heat Content =	0.138	MMBtu/gal (40 CFR 98)				
	EF	Emissions				
Pollutant	lb/hr	tpy	EF Source			
NO_X	0.014	0.003	EPA Certification Data			
CO	0.022	0.004	EPA Certification Data			
VOC	0.0022	0.0004	EPA Certification Data			
SO_X as SO_2	0.0016	0.0003	Mass Balance			
PM/PM_{10}	0.0022	0.0004	EPA Certification Data			
$PM_{2.5}$	0.0022	0.0004	EPA Certification Data			
			CO_2e	CO_2e		
Greenhouse Gases	kg/MMBtu	GWP	lb/MMBtu	lb/gallon	tpy, CO_2e	
CO_2	73.96	1	163.05	22.501	33	40 CFR 98
CH_4	0.003	25	0.165	0.023	0.0	40 CFR 98
N_2O	0.0006	298	0.394	0.054	0.1	40 CFR 98
Total GHG - CO_2e	73.9636		163.61	22.58	33.3	

6.f Emissions Summary/Facilitywide Potential to Emit. Facilitywide potential to emit as calculated in the sections above is summarized below.

Pollutant	Potential Emissions (tpy)	Project Increase (tpy)
NO_X	0.56	0.56
CO	0.27	0.27
VOC	0.011	0.011
SO_2	0.002	0.002
Lead	0.0	0.0
PM	1.23	1.23
PM_{10}	0.35	0.35
$PM_{2.5}$	0.07	0.07
TAP	0.0	0.0
HAP	0.0	0.0
CO_2e	214.6	214.6

7. REGULATIONS AND EMISSION STANDARDS

Regulations that have been used to evaluate the acceptability of the proposed facility and establish emission limits and control requirements include, but are not limited to, the regulations, codes, or requirements listed below.

7.a 40 CFR 60.670 et seq. (Subpart OOO) "Standards of Performance for Nonmetallic Mineral Processing Plants" establishes establishes opacity and particulate matter emission limits for stationary (fixed) plants with capacities greater than 25 tons per hour and portable plants greater than 150 tons per hour that were constructed, reconstructed or modified after August 31, 1983. More stringent requirements apply to affected facilities constructed, reconstructed or modified on or after April 22, 2008. The rock crushing equipment proposed in ADP/NEP Application L-717 is subject to this regulation.

7.b 40 CFR 60.4200 et seq. (Subpart IIII) "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to each compression ignition (CI) internal combustion engine (ICE) that commences construction after July 11, 2005 and is manufactured after April 1, 2006, or that is modified or reconstructed after July 11, 2005. The diesel engine power units proposed in ADP/NEP Application L-717 are nonroad engines. Therefore, this regulation is not applicable.

7.c 40 CFR 63.6580 et seq. (Subpart ZZZZ) "National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines" establishes national emission limitations and operating limitations for HAP emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. The diesel engine power units proposed in ADP/NEP Application L-717 are nonroad engines. Therefore, this regulation is not applicable.

7.d 40 CFR 89 establishes standards for new nonroad engines beginning with the 1996 model year for certain categories. The applicable year varies by engine category. The definition of nonroad engines in 40 CFR 89.2 includes any internal combustion engine in (1)(iii) "That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another..." "An internal combustion engine is not a nonroad engine if:... (iii) the engine otherwise included in Paragraph 1(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source...A location is any single site at a building, structure, facility or installation." The diesel engine power units proposed in ADP/NEP Application L-717 are nonroad engines. In accordance with the relevant subpart, the engines must meet the appropriate EPA Tier certification standards based on engine size and year of manufacture.

7.e 40 CFR 1039 establishes standards for new nonroad engines beginning with the 2008 model year for certain categories. The applicable year varies by engine category. The definition of nonroad engine for this subpart is found in 40 CFR 1068.30 and includes any internal combustion engine that (1)(iii) "That, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another..." "An internal combustion engine is not a nonroad engine if:... (iii) the engine otherwise included in Paragraph 1(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source...A location is any single site at a building, structure, facility or installation." The diesel engine power units proposed in ADP/NEP Application L-717 are nonroad engines. In accordance with the relevant subpart, the engines must meet the appropriate EPA Tier certification standards based on engine size and year of manufacture.

7.f Revised Code of Washington (RCW) 70A.15.2040 empowers any activated air pollution control authority to prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution within its jurisdiction. An air pollution control authority may issue such orders as may be necessary to effectuate the purposes of the Washington Clean Air Act and enforce the same by all appropriate administrative and judicial proceedings subject to the rights of appeal as provided in Chapter 62, Laws of 1970 ex. sess.

7.g RCW 70A.15.2210 provides for the inclusion of conditions of operation as are reasonably necessary to assure the maintenance of compliance with the applicable ordinances, resolutions, rules and regulations when issuing an Air Discharge Permit for installation and establishment of an air contaminant source.

7.h WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" requires Best Available Control Technology for toxic air pollutants (T-BACT), identification and quantification of emissions of toxic air pollutants and demonstration of protection of human health and safety. SWCAA implements WAC 173-460 as in effect on August 21, 1998.

7.i WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM_{10}, $PM_{2.5}$, lead, sulfur dioxide, nitrogen dioxide, ozone, and carbon monoxide in the ambient air, which shall not be exceeded.

7.j SWCAA 400-040 "General Standards for Maximum Emissions" requires all new and existing sources and emission units to meet certain performance standards with respect to Reasonably Available Control Technology (RACT), visible emissions, fallout, fugitive emissions, odors, emissions detrimental to persons or property, sulfur dioxide, concealment and masking, and fugitive dust.

7.k SWCAA 400-045 "Permit Applications for Nonroad Engines" requires, with a few exceptions, submittal of a permit application for installation of nonroad engines as defined in 40 CFR 89. This regulation is applicable to the nonroad engines proposed for use by the permittee.

7.l SWCAA 400-046 "Application Review Process for Nonroad Engines" requires that a nonroad engine permit be issued by the agency prior to the installation, replacement or alteration of any nonroad engine subject to the requirements of SWCAA 400-045. Each application must demonstrate that the installation will not cause an exceedance of any national or state ambient air quality standard.

7.m SWCAA 400-050 "Emission Standards for Combustion and Incineration Units" requires that all provisions of SWCAA 400-040 be met and that no person shall cause or permit the emission of particulate matter from any combustion or incineration unit in excess of 0.23 grams per dry cubic meter (0.1 grains per dry standard cubic foot) of exhaust gas at standard conditions.

7.n SWCAA 400-060 "Emission Standards for General Process Units" prohibits particulate matter emissions from all new and existing process units in excess of 0.1 grains per dry standard cubic foot of exhaust gas.

7.o SWCAA 400-109 "Air Discharge Permit Applications" requires that an Air Discharge Permit application be submitted for all new installations, modifications, changes, or alterations to process and emission control equipment consistent with the definition of "new source". Sources wishing to modify existing permit terms may submit an Air Discharge Permit application to request such changes. An Air Discharge Permit must be issued, or written confirmation of exempt status must be received, before beginning any actual construction, or implementing any other modification, change, or alteration of existing equipment, processes, or permits.

7.p SWCAA 400-110 "New Source Review" requires that SWCAA issue an Air Discharge Permit in response to an Air Discharge Permit application prior to establishment of the new source, emission unit, or modification.

7.q SWCAA 400-113 "Requirements for New Sources in Attainment or Nonclassifiable Areas" requires that no approval to construct or alter an air contaminant source shall be granted unless it is evidenced that:

(1) The equipment or technology is designed and will be installed to operate without causing a violation of the applicable emission standards;
(2) Best Available Control Technology will be employed for all air contaminants to be emitted by the proposed equipment;
(3) The proposed equipment will not cause any ambient air quality standard to be exceeded; and

(4) If the proposed equipment or facility will emit any toxic air pollutant regulated under WAC 173-460, the proposed equipment and control measures will meet all the requirements of that Chapter.

8. RACT/BACT/BART/LAER/PSD/CAM DETERMINATIONS

The proposed equipment and control systems incorporate Best Available Control Technology (BACT) for the types and amounts of air contaminants emitted by the processes as described below:

8.a BACT Determination – Rock Crushing and Aggregate Screening. The use of high pressure wet suppression systems, including spray or fog nozzles operating at a minimum pressure of 80 psig, has been determined to meet the requirements of BACT for rock crushing and aggregate screening at this facility. Because there are other wet suppression systems (e.g. sonic fogging systems) that utilize a lower water pressure but provide equivalent or superior levels of emission control, the permit will allow for wet suppression systems reviewed and approved by SWCAA that provide equivalent or superior control of particulate matter emissions.

8.b BACT Determination – Fugitive Dust Emissions. The use of low-pressure wet suppression systems has been determined to meet the requirements of BACT for fugitive dust emissions from storage piles, conveyors and haul roads at this facility.

Other Determinations

8.c Prevention of Significant Deterioration (PSD) Applicability Determination: The potential to emit of this facility is less than applicable PSD applicability thresholds. Likewise, this permitting action will not result in a potential increase in emissions equal to or greater than the PSD thresholds. Therefore, PSD review is not applicable to this action.

8.d Compliance Assurance Monitoring (CAM) Applicability Determination. CAM is not applicable to any emission unit at this facility because it is not a major source and is not required to obtain a Part 70 permit.

9. AMBIENT IMPACT ANALYSIS

9.a Toxic Air Pollutant Review. This facility does not emit quantifiable amounts of TAPs. Toxic air pollutant impacts are presumed to be below regulatory significance.

Conclusions

9.b Operation of rock crushing equipment, as proposed in ADP/NEP Application L-717, will not cause the ambient air quality requirements of Title 40 Code of Federal Regulations (CFR) Part 50 "National Primary and Secondary Ambient Air Quality Standards" to be violated.

9.c Operation of rock crushing equipment, as proposed in ADP/NEP Application L-717, will not cause the requirements of WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" (as in effect 8/21/98) or WAC 173-476 "Ambient Air Quality Standards" to be violated.

9.d Operation of rock crushing equipment, as proposed in ADP/NEP Application L-717, will not cause a violation of emission standards for sources as established under SWCAA General Regulations Sections 400-040 "General Standards for Maximum Emissions," 400-050 "Emission Standards for Combustion and Incineration Units," and 400-060 "Emission Standards for General Process Units."

10. DISCUSSION OF APPROVAL CONDITIONS

SWCAA has made a determination to issue ADP/NEP 21-3454 in response to ADP/NEP Application L-717. ADP/NEP 21-3454 contains approval requirements deemed necessary to assure compliance with applicable regulations and emission standards as discussed below.

10.a General Basis. Permit requirements for equipment affected by this permitting action incorporate the operating schemes proposed by the applicant in ADP/NEP Application L-717. Permit requirements established by this action are intended to implement BACT, minimize emissions, and assure compliance with applicable requirements on a continuous basis. Emission limits for approved equipment are based on potential emission values calculated in Section 6 of this TSD.

10.b Monitoring and Recordkeeping Requirements. ADP/NEP 21-3454 establishes monitoring and recordkeeping requirements sufficient to document compliance with applicable emission limits, ensure proper operation of approved equipment and provide for compliance with generally applicable requirements. Specific monitoring requirements are established for engine operation, material throughput and haul road traffic.

10.c Reporting Requirements. ADP/NEP 21-3454 establishes general reporting requirements for annual air emissions, upset conditions and excess emissions. Specific reporting requirements are established for engine operation, material throughput and haul road traffic. Reports are to be submitted on an annual basis.

10.d Rock Crushing and Screening Equipment. Permit requirements for the proposed rock crushing equipment are consistent with the operating scheme and material data submitted by the applicant. Visible emission limits have been established consistent with proper operation of the proposed equipment and wet suppression systems. High pressure spray systems (≥80 psig) have been determined to be a minimum BACT requirement for individual rock crushers and screens.

10.e Nonroad Diesel Engines. The proposed diesel engine power units are classified as nonroad engines. Permit requirements are limited to fuel sulfur content and a visible emission limit. The visible emission limit is established as an indicator of proper operation and maintenance of the engine and is not intended to impose BACT.

11. START-UP AND SHUTDOWN/ALTERNATIVE OPERATING SCENARIOS/POLLUTION PREVENTION

11.a Start-up and Shutdown Provisions. Pursuant to SWCAA 400-081 "Start-up and Shutdown", technology based emission standards and control technology determinations shall take into consideration the physical and operational ability of a source to comply with the applicable standards during start-up or shutdown. Where it is determined that a source is not capable of achieving continuous compliance with an emission standard during start-up or shutdown, SWCAA shall include appropriate emission limitations, operating parameters, or other criteria to regulate performance of the source during start-up or shutdown.

Diesel Engines. Diesel engines may exhibit higher than normal opacity during startup. Accordingly, the visual emissions limit for the diesel engine power unit is not applicable during the startup period defined in the permit. The general opacity standard of 20% from SWCAA 400-040 continues to apply during startup and shutdown.

11.b Alternate Operating Scenarios. SWCAA conducted a review of alternate operating scenarios applicable to equipment affected by this permitting action. The permittee did not propose or identify any applicable alternate operating scenarios. Therefore, none were included in the permit requirements.

11.c Pollution Prevention Measures. SWCAA conducted a review of possible pollution prevention measures for the facility. No pollution prevention measures were identified by either the permittee or SWCAA separate or in addition to those measures required under BACT considerations. Therefore, none were included in the permit requirements.

12. EMISSION MONITORING AND TESTING

12.a Emission Testing Requirements – Rock Crushing Equipment. Affected rock crushers and associated screening equipment and belt conveyors are required to perform one-time opacity observations as required by 40 CFR 60 Subpart OOO. All of the crushing and screening equipment affected by this permitting action is subject to the initial testing requirements of 40 CFR 60 Subpart OOO. Opacity observation requirements are provided in Appendix A of this ADP/NEP.

13. FACILITY HISTORY

13.a Previous Permitting Actions. SWCAA has not previously issued any Permits for this facility.

13.b Compliance Status. The following notices of violation have been issued to this facility:

Date	NOV Number	Violation
10/20/2020	10326	Failure to submit an air discharge permit application.

14. PUBLIC INVOLVEMENT OPPORTUNITY

14.a Public Notice for ADP/NEP Application L-717. Public notice for ADP/NEP Application L-717 was published on the SWCAA internet website for a minimum of (15) days beginning on December 22, 2020.

14.b Public/Applicant Comment for ADP/NEP Application L-717. SWCAA did not receive specific comments, a comment period request or any other inquiry from the public regarding this ADP/NEP application. Therefore no public comment period was provided for this permitting action.

14.c State Environmental Policy Act (SEPA). A Mitigated Determination of Nonsignificance (MDNS) was issued on August 29, 2006 by Lewis County for development and operation of a surface mine at Winston Quarry (the initial location proposed for the applicant's equipment). Operation of the proposed rock crushing and screening equipment is consistent with the MDNS issued by Lewis County so SWCAA has determined this project is exempt from SEPA requirements pursuant to WAC 197-11-800(3). WAC 197-11-800(3) exempts projects that only involve repair, remodeling, maintenance, or minor alteration of existing structures, equipment, or facilities, and do not involve material expansions or changes in use. A Determination of SEPA Exempt (SWCAA 21-004) was issued by SWCAA on February 25, 2021.