

PROPOSED

TEMPORARY COVERED SOURCE PERMIT RENEWAL REVIEW (0446-02-CT) RENEWAL APPLICATION NO. 0446-06

APPLICANT: Tajiri Lumber, Ltd.

LOCATION: Various Temporary Sites, State of Hawaii

RESPONSIBLE OFFICIAL: Mr. Keith Y. Tajiri
President
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SIC CODE 1442 (Construction Sand and Gravel)

BACKGROUND:

This application is for the renewal of covered source permit (CSP) 0446-02-CT. The application was received on May 4, 2012. No modifications to the current permit have been proposed by the applicant.

EQUIPMENT:

- One (1) 270 TPH Extec Pit-Bull Primary Jaw Crusher (Serial No. 5661) with integrated conveyors and watersprays
- 163 hp Deutz Diesel Engine, Model No. BF6M1013E, Serial No. 336624

AIR POLLUTION CONTROL EQUIPMENT:

Air pollution control for the crusher consists of a water spray nozzle located at the main conveyor belt. A control efficiency of 70% will be credited to the emission points after the material has been crushed.

APPLICABLE REQUIREMENTS:

Hawaii Administrative Rules (HAR)

Chapter 11-59, Ambient Air Quality Standards

Chapter 11-60.1, Air Pollution Control

Subchapter 1, General Requirements

Subchapter 2, General Prohibitions

11-60.1-31 Applicability

Visible Emissions

11-60.1-31 Fugitive Dust

11-60.1-38 Sulfur Oxides from Fuel Combustion

Subchapter 5, Covered Sources

Subchapter 6, Fees for Covered Sources, Noncovered Sources, &
Agricultural Burning

11-60.1-111 Definitions

11-60.1-112 General fee provisions for covered sources

11-60.1-113 Application fees for covered sources

11-60.1-114 Annual fees for covered sources

11-60.1-115 Basis of annual fees for covered sources

Subchapter 8, Standards of Performance for Stationary Sources

11-60.1-161 New Source Performance Standards

Subchapter 10, Field Citations

FEDERAL REQUIREMENTS

40 Code of Federal Regulations (CFR) Part 60 Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants is an applicable requirement for the Extec crusher because the maximum design capacity greater is greater than 150 TPH and construction commenced after August 31, 1983. The standard includes stricter visible emissions requirements and annual source testing to verify compliance with the requirements.

NON-APPLICABLE REQUIREMENTS:

40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart IIII is not an applicable requirement pursuant to 40 CFR §60.4200, which states:

“The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines...”

The diesel engine is not considered to be a stationary CI internal combustion engine because it will not remain in a single location on a permanent basis, as reflected by the temporary covered source permit. Therefore the diesel engine is not subject to 40 CFR Part 60 Subpart IIII.

40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

The diesel engines are not subject to 40 CFR 63 Subpart ZZZZ due to the fact that they are nonroad engines. Nonroad engines are exempt from NESHAPS regulation pursuant to 40 CFR §63.6585, which states:

“A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differs from mobile RICE in that a stationary RICE is not a non-road engine as defined in 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.”

Pursuant to 40 CFR §1068.30 a non-road engine is defined as:

“Nonroad engine means:

- (1) Except as discussed in paragraph (2) of this definition, a nonroad engine is an internal combustion engine that meets any of the following criteria:
 - (i) It is (or will be) used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers).
 - (ii) It is (or will be) used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers).
 - (iii) By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one

location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

- (2) An internal combustion engine is not a nonroad engine if it meets any of the following criteria:
- (i) The engine is used to propel a motor vehicle, an aircraft, or equipment used solely for competition.
 - (ii) The engine is regulated under 40 CFR Part 60, (or otherwise regulated by a federal New Source Performance Standard promulgated under Section 111 of the Clean Air Act (42 U.S.C. 7411)).
 - (iii) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than twelve (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. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two (2) years) and that operates at that single location approximately three (3) months (or more) each year. See §1068.31 for provisions that apply if the engine is removed from the location.”

The engine is classified as a nonroad engine because is portable or transportable, is not used to propel a motor vehicle, an aircraft, or equipment used solely for competition, is not regulated under 40 CFR 60, and will not remain at a location for more than twelve (12) consecutive months. Since the engine is a nonroad engine, it is not subject to the requirements of 40 CFR 63 Subpart ZZZZ.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD), 40 CFR 52.21:

A PSD review is not required because the facility is not a major stationary source of air pollution (criteria air pollutant \geq 100 TPY for listed sources or \geq 250 TPY for all other sources). CO₂ emissions are addressed in the greenhouse gas tailoring rule.

COMPLIANCE ASSURANCE MONITORING (40 CFR Part 64):

Compliance Assurance Monitoring (CAM) is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are greater than the major source level [>100 tpy]; and (5) not otherwise be exempt from CAM. CAM is not applicable to the facility because it is not a major source.

Annual Emissions Reporting Requirement (AERR) is not applicable because emissions from the facility are less than reporting levels pursuant to 40 CFR 51, Subpart A (see following table):

AERR & BACT Comparison

Pollutant	Facility Emissions (tpy)	Continuous Emissions (tpy) ^a	AERR Triggering Levels (tpy)		BACT Significant Levels (tpy)
			1-yr Reporting Cycle (Type A Sources)	3-yr Reporting Cycle (Type B Sources)	
VOC	0.47	0.47	≥ 250	≥ 100	≥40
NO _x	21.63	21.63	≥ 2,500	≥ 100	≥40
SO _x	1.42	1.42	≥ 2,500	≥ 100	≥40
CO	4.66	4.66	≥ 2,500	≥ 1,000	≥100
PM ₁₀	9.6	9.6	≥ 250	≥ 100	≥15
PM _{2.5}	4.37	4.37	≥ 250	≥ 100	≥10
HAPs (total)	0.03	0.03	n/a	n/a	≥5
CO ₂ e	791.10	791.10	n/a	n/a	≥40,000

^a Emissions @ 8,760 hours per year.

Synthetic Minor Applicability

The facility is not a synthetic minor source because the facility does not exceed the 100 ton per year major source threshold for all pollutants other than CO₂ if operated continuously (8,760 hr/yr) at maximum capacity. Refer to AERR & BACT table for continuous emission estimates.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REQUIREMENTS:

A BACT analysis is required for new sources and significant modifications to sources that have the potential to emit or increase emissions above significant levels, as defined in 11-60.1-1, considering any limitations, enforceable by the Director, on the source to emit a pollutant. Currently, there are no BACT requirements. For this renewal, BACT is not an applicable requirement because no changes have been proposed to the current air permit that increase emissions.

INSIGNIFICANT ACTIVITIES/EXEMPTIONS:

None

ALTERNATE OPERATING SCENARIOS:

None

PROJECT EMISSIONS:

Emissions from the equipment are unchanged for this permit renewal. Emission factors were obtained from the following AP-42 sections:

- section 11.19.2 (8/04) for emissions from crushing
- section 13.2.4 ((11/06)for aggregate handling and storage piles
- section 3.3 (10/96) for the diesel engine

A summary of the emissions from the equipment is provided in the following table. For a detailed breakdown of the emissions, refer to the attached emission calculations.

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Pollutant	EMISSIONS			
	(lb/hr)	(g/s)	Max (TPY)	Limited (TPY)
DIESEL ENGINE GENERATOR				
SO _x	0.3248	0.0409	1.42	1.42
NO _x	4.9392	0.6223	21.63	21.63
CO	1.0640	0.1341	4.66	4.66
TOC	0.1077	0.0136	0.47	0.47
PM _{2.5}	0.3472	0.0437	1.52	1.52
PM ₁₀	0.3472	0.0437	1.52	1.52
CRUSHER				
PM _{2.5}	0.6509	0.0820	2.85	2.85
PM ₁₀	1.8438	0.2323	8.08	8.08
TOTAL PM_{2.5}	0.9981	0.1258	4.37	4.37
TOTAL PM₁₀	2.19	0.28	9.60	9.60

HAP	EMISSIONS			
	(lb/hr)	(g/s)	Max (TPY)	Limited (TPY)
BENZENE	1.04E-03	1.32E-04	0.005	0.005
TOLUENE	4.58E-04	5.77E-05	0.002	0.002
XYLENES	3.19E-04	4.02E-05	0.001	0.001
PROPYLENE	2.89E-03	3.64E-04	0.013	0.013
NAPHTHALENE	9.50E-05	1.20E-05	4.160E-04	4.160E-04
1,3-BUTADIENE	4.38E-05	5.52E-06	1.918E-04	1.918E-04
FORMALDEHYDE	1.32E-03	1.67E-04	0.006	0.006
ACETALDEHYDE	8.59E-04	1.08E-04	0.004	0.004
ACROLEIN	1.04E-04	1.31E-05	4.538E-04	4.538E-04
TOTAL			0.03	0.03

AIR QUALITY ASSESSMENT:

An ambient air quality assessment is not required for a permit renewal with no proposed modifications to existing permit conditions.

OTHER ISSUES:

None

SIGNIFICANT PERMIT CONDITIONS:

None

CONCLUSION AND RECOMMENDATION:

Recommends issuance of the permit renewal pending 45-day EPA review and 30-day public comment periods.

Kevin Kihara
August 18, 2014