

**PROPOSED**

**PERMIT APPLICATION RENEWAL REVIEW  
TEMPORARY COVERED SOURCE PERMIT No. 0586-01-CT  
Renewal Application No. 0586-03**

**Company:** Royal Contracting Company

**Mailing Address:** 677 Ahua Steet  
Honolulu, HI 96819

**Facility:** 280 TPH Pegson Premiertrak Jaw Crusher with 300 HP (224 bkW) Caterpillar Diesel Engine and additional 7436 Radial Stacking Conveyor

**Location:** Various Temporary Sites, State of Hawaii

**Initial Location:** Off-road, approximately 200m from the end of Makakilo Drive, Oahu

**SIC Code:** 1429 (Crushed and broken stone)

**Responsible Official:** Mr. Leonard Leong  
Vice President  
839-9006

**Contact:** Mr. Leonard Leong

**Consultant:** EnvironMETeo Services Inc.  
(808) 671-8383

**Equipment Description:**

The facility encompasses one 280 TPH Premiertrak Jaw Crusher and its associated appurtenances as in the table below:

Facility Equipment				
Equipment	Manufacturer	Model No.	Serial No.	Manuf. Date
280 TPH Jaw Crusher	Pegson	Premiertrak 26X44	650-101 BB	2004
7436 Radial Stacking Conveyor	Power Screening LLC	7436	7436172	2007
Water Spray Systems	Built in water spray nozzles			

**BACKGROUND**

Royal Contracting Company has submitted a renewal application for a temporary covered source permit to process basalt and concrete. The stone processing plant consists of a jaw crusher with a self contained screen (grizzly) and two conveyors. The jaw crusher is powered by a 300 hp diesel engine which also powers the tracks to propel the crusher. The 300 hp diesel engine was included in the previous permit but is no longer subject to air permitting and is exempt since it is used to propel the crusher (see Insignificant Activities/Exemption section). Rebar and other metal are removed by a built-in magnet.

The previous permit limited the stone processing plant and diesel engine generator to 2,400 hours in any rolling twelve-month (12-month) period. The annual operating limit has been removed from the permit. The 300 hp diesel engine is now considered exempt and the facility's potential to emit @ 8,760 hrs/yr operation is below significant levels.

**Process**

The feed material is dumped into the crusher's grizzly feeder. The material travels on the grizzly feeder to the crusher. From the crusher it falls onto the main conveyor and travels onto a stockpile.

**AIR POLLUTION CONTROLS**

The crusher features a built-in dust suppression system consisting of spray bars with atomizer nozzles. Water trucks/water sprays will be used as necessary to minimize fugitive dust from plant operations, material transfer points, stockpiles, and plant roads.

**APPLICABLE REQUIREMENTS**

**Hawaii Administrative Rules (HAR)**

Title 11 Chapter 59, Ambient Air Quality Standards

Title 11 Chapter 60.1, Air Pollution Control

Subchapter 1, General Requirements

Subchapter 2, General Prohibitions

11-60.1-31, Applicability

11-60.1-32, Visible Emissions

11-60.1-33, Fugitive Dust

Subchapter 5, Covered Sources

Subchapter 6, Fees for Covered Sources, Noncovered Sources, and 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 9, Hazardous Air Pollutant Sources

Subchapter 10, Field Citations

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### **Prevention of Significant Deterioration (PSD) - 40 CFR Part 52, §52.21**

This plant is not subject to PSD because it is not a major stationary source as defined as one of the 28 source categories in 40 CFR §52.21 and HAR, Title 11, Chapter 60.1, Subchapter 7, and the plant's PM emissions do not exceed 250 tons per year.

### **Compliance Assurance Monitoring (CAM) - 40 CFR Part 64**

This plant not subject to CAM because the facility is not a major source. The purpose of 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 100% of the major source level
- (5) Not otherwise be exempt from CAM.

### **Standard of Performance for New Stationary Sources (NSPS), 40 Code of Federal Regulations (CFR) Part 60 (Section 111 of the Act)**

**Subpart 000** – Standards of Performance for Nonmetallic Mineral Processing Plants is applicable to the crushing plant because the maximum capacity of the crusher is greater than 150 tons/hour, and plant was manufactured after August 31, 1983.

**Subpart IIII** – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not applicable to the 300 hp diesel engine because the engine is considered a nonroad engine as defined in 40 CFR §1068.30. Subpart IIII applies to stationary internal combustion engines that are not nonroad engines.

### **National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61**

This source is not subject to NESHAPS (section 112 of the Act) as no hazardous air pollutants are emitted at significant levels and there are no NESHAPS requirements in 40 CFR Part 61 that apply to this facility.

### **NESHAPs for Source Categories, 40 CFR Part 63 (section 112 of the Act)**

**Subpart ZZZZ** – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) is not applicable to these diesel engines because the engine is considered a nonroad engine as defined in 40 CFR §1068.30. Subpart ZZZZ applies to stationary internal combustion engines that are not nonroad engines.

### **Air Emissions Reporting Requirement (AERR), 40 CFR Part 51**

**Subpart A** - AERR is not applicable because emissions from the facility do not exceed AERR triggering levels.

### **DOH Annual Emissions Reporting**

The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding the DOH reporting level(s) and for all covered sources. Annual emissions reporting will be required because this is a covered source.

### **Best Available Control Technology (BACT)**

This source is not subject to BACT analysis because potential to emit emissions for PM and PM-10 does exceed the significant levels. BACT analysis is required for new sources or

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significant modifications to sources that have the potential to emit or increase emissions above significant levels considering any limitations as defined in HAR, Section 11-60.1-1.

<b>Total Facility Emissions and Trigger Levels (TPY) for 280 TPH Crusher For 8,760 Hours/Year</b>						
<b>Pollutant</b>	<b>Emissions (no Limits)</b>	<b>BACT Significant Levels</b>	<b>AERR Thresholds</b>	<b>DOH Levels</b>	<b>Wind Erosion</b>	<b>Vehicle Travel on Dusty Road</b>
<b>CO</b>	<b>0</b>	100	1000	250	<b>0</b>	<b>0</b>
<b>NO<sub>x</sub></b>	<b>0</b>	40	100	25	<b>0</b>	<b>0</b>
<b>SO<sub>2</sub></b>	<b>0</b>	40	100	25	<b>0</b>	<b>0</b>
<b>PM-2.5</b>	<b>0.22</b>	10	100	.	<b>0.31</b>	<b>0.25</b>
<b>PM-10</b>	<b>0.80</b>	15	100	25	<b>0.31</b>	<b>1.17</b>
<b>PM</b>	<b>1.85</b>	25	.	25	<b>0.64</b>	<b>10.42</b>
<b>VOC</b>	<b>0</b>	40	100	25	<b>0</b>	<b>0</b>
<b>HAPs</b>	<b>0</b>	.	.	5	<b>0</b>	<b>0</b>

**Synthetic Minor Source**

A synthetic minor source is a facility that is potentially major as defined in HAR 11-60.1-1, but is made non-major through federally enforceable permit conditions. This facility is not a synthetic minor source because potential emissions do not exceed major source thresholds even when the facility is operated at its maximum capacity continuously for 8,760 hours per year.

**INSIGNIFICANT ACTIVITIES / EXEMPTIONS**

One (1) 500 gallon fuel oil no. 2 storage tank, considered insignificant because it has less than 1 MM BTU input, in accordance with HAR §11-60.1-82(f)(1).

One (1) 300 hp diesel engine, Caterpillar, Model C9, Serial no. 650-101 BB, manufactured in 2004, is exempt since it propels the crusher, and is exempt pursuant to HAR §11-60.1-82(d), which exempts a nonroad internal combustion engines propelling mobile sources.

One (1) 74 HP Diesel Engine generator, Deutz, Model no. BF4L2011, Serial no. 10325690, built in 2007, for the 7436 Radial Stacking Conveyor, is considered insignificant.

**ALTERNATIVE OPERATING SCENERIOS**

None proposed by permittee.

**AIR POLLUTION CONTROLS**

**Fugitive Emissions**

The stone processing plant is equipped with water spray systems to control fugitive emissions from crushing operations. A water truck will be used to control fugitive emissions for the stockpiles, yard area, and unpaved roads.

**PROJECT EMISSIONS**

Emission calculations are attached to this review and are based on operation of the crusher for 8760 hrs/yr.

280 TPH Stone Processing Plant

Emissions were based on the maximum capacity of the crusher. Water spray systems will be used to control PM emissions. The controlled emissions factors from AP-42 Section 11.19.2 (08/04) - Crushed Stone Processing and Pulverized Mineral Processing were used to calculate emissions.

<b>280 TPH Stone Processing Plant</b>	
<b>Pollutant</b>	<b>Emissions (TPY) [8,760 hr/yr]</b>
PM	1.85
PM-10	0.8
PM-2.5	0.22

Storage Piles

Emissions were based on the maximum capacity of the 280 TPH primary jaw crusher. A 70% control efficiency was assumed for water suppression to control fugitive dust. Emissions were based on emission factors from AP-42 Section 13.2.4 (11/06) - Aggregate Handling and Storage Piles.

<b>Storage Piles</b>	
<b>Pollutant</b>	<b>Emissions (TPY) [8,760 hr/yr]</b>
PM	0.31
PM-10	0.31
PM-2.5	0.64

Truck Travelling on Unpaved Road

Emissions were based on the maximum capacity of the 280 TPH primary jaw crusher. A 70% control efficiency was assumed for water suppression to control fugitive dust. Emissions were based on emission factors from AP-42 Section 13.2.2 (11/06) - Unpaved Roads.

<b>Truck Travelling on Unpaved Road</b>	
<b>Pollutant</b>	<b>Emissions (TPY) [8,760 hr/yr]</b>
PM	10.42
PM-10	1.17
PM-2.5	0.25

**AIR QUALITY ASSESSMENT**

**Ambient Air Quality Impact Assessment (AAQIA)** was not performed for this review because there are no proposed modifications and all other emissions are fugitive.

**SIGNIFICANT PERMIT CONDITIONS**

1. The crushers, and associated conveyors are subject to the provisions of 40 CFR Part 60, Subpart A and Subpart OOO, Table 3, provision.

Fugitive Emission Limits

- a. The permittee shall not cause to be discharged into the atmosphere from any crusher, fugitive emissions which exhibit greater than fifteen (15) percent opacity.
- b. The permittee shall not cause to be discharged into the atmosphere from any transfer point on the belt conveyors, screening operation, or from any other affected facility, fugitive emissions which exhibit greater than ten (10) percent opacity.

**CONCLUSION**

Actual emissions should be less than those estimated. Emission calculations were based on the maximum capacity of the 280 TPH crusher.

Based on the information submitted by Royal Contracting Company, it is the determination of the Department of Health that the proposed project will be in compliance with the Hawaii Administrative Rules, Chapter 11-60.1. Recommend issuance of the temporary covered source permit renewal subject to the incorporation of the significant permit conditions, thirty-day (30-day) public comment period, and forty-five day (45-day) Environmental Protection Agency review period.

Jensen I. Kennedy  
May 7, 2015