

**Temporary Covered Source Permit Renewal**  
**Review Summary**

**Application File No.:** 0436-04

**Permit No.:** 0436-01-CT

**Applicant:** West Hawaii Concrete

**Facility:** 250 TPH Stone Crushing and Screening Plant with 325 hp Diesel Engine Generator

**Equipment Location:** Various locations throughout the state  
Initial Location: Kamuela, Hawaii  
UTM: 2,209,550N; 224,400 E (NAD-83)

**Responsible Official:** George Purdy  
Aggregates Division Manager  
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**Contact:** James Morrow  
Consultant  
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**Application Date:** Received on June 12, 2009

**Proposed Project:**

**SICC:** 1429 (Crushed and Broken Stone, Not Elsewhere Classified)

The applicant is applying for a renewal of a temporary covered source permit. No changes to the means and methods of operation are being proposed. The plant is a stone processing facility. A 25 hp feeder feeds the vibrating hopper and impact crusher. A conveyor transports the crushed material to a screen. Material too large to pass through the first deck of the screen is fed back into the crusher via conveyor. Material that passes through the first deck but not the second is discharged as a mid-size material and transported via conveyor to the mid-size stacker. Material passing through both decks of the screen is discharged as fines and is transported via conveyor to the fines stacker. A 325 hp diesel engine generator, which is integrated into the 250 TPH crusher, powers the crusher, screen, and conveyors. Fugitive dust is controlled by water sprays at the hopper and stackers. All other areas use manual watering to control fugitive dust. Due to the size and manufacture date of the crusher, the crusher is subject to 40 CFR Part 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants.

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### Equipment Description:

- a. 250 TPH Eagle Rock Crusher Co., Jumbo 1200 Closed Circuit Plant, model no. 33D4204, serial no. 10901
- b. 325 hp diesel engine generator, Cummins model no. NTA855P, engine no. 11654364, SO no. 60827
- c. Horizontal shaft impactor, 37" x 48" feed opening, model RC-12
- d. Vibrating Grizzly feeder
- e. 2-Deck Vibrating Screen 5' x 16'
- f. Various conveyors
- g. Two (2) portable radial stackers

### Air Pollution Controls:

Water sprays are mounted at the entry of the vibrating hopper and at the end of the radial stackers to control fugitive dust from the crushing operations. Manual watering, including the use of water trucks, will control fugitive dust from the stockpiles and unpaved roads.

### 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

11-60.1-32 Visible Emissions

11-60.1-33 Fugitive Dust

11-60.1-37 Process Industries

11-60.1-38 Sulfur Oxides from Fuel Combustion

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 10, Field Citations

### New Source Performance Standards (NSPS):

The 250 TPH crusher was manufactured in 1992 and is subject to 40 CFR, Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Subpart OOO states that portable stone crushing plants with capacities greater than 150 TPH that commence construction, reconstruction, or modification after August 31, 1983 is subject to the requirements

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of the subpart.

**NESHAP/MACT:**

Stone processing is not a NESHAP source.

40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines is not applicable to the 325 hp diesel engine generator because it is a non-road engine as defined in 40 CFR §1068.30 and thus not a Stationary RICE as defined in 40 CFR §63.6675.

**Prevention of Significant Deterioration (PSD):**

PSD does not apply since this facility is not a major source.

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

A Best Available Control Technology (BACT) analysis is required for new or modified emission units if the net increase in pollutant emissions exceeds significant levels as defined in HAR §11-60.1-1. This is an existing facility and no modifications are being proposed, thus BACT is not applicable.

**Compliance Assurance Monitoring (CAM):**

The purpose of 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 Code of Federal Regulations, 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; and (5) not otherwise be exempt from CAM. Since the facility is not a major source, CAM does not apply.

**CERR (Consolidated Emission Reporting Rule):**

40 CFR part 51, Subpart A – Emission Inventory Reporting Requirements, determines the annual emissions reporting frequency based on the actual emissions of each pollutant from any individual emission point within the facility that emits at or above the triggering levels. Since the trigger levels are at or above the major source levels and by definition, a temporary source cannot be a major source, the facility is not subject to annual emission reporting under CERR. The Department does however require facilities to report their annual emissions if the facility-wide emissions exceed the Department's trigger levels. The Department uses the data for in-house recordkeeping purposes. The table in the Project Emission section summarizes the Department's trigger levels and illustrates the facility's applicability.

**Synthetic Minor:**

A synthetic minor is a facility that without limiting conditions, physical or operational, emits above the major triggering levels as defined by HAR 11-60.1-1 for either criteria pollutant(s) or hazardous air pollutant(s). This facility is not a synthetic minor.

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**Insignificant Activities/Exemptions:**

No insignificant activities were identified in the application.

**Alternate Operating Scenarios:**

The applicant did not propose any alternate operating scenarios.

**Project Emissions:**

**Emissions from the 325 hp Diesel Engine**

Pollutant	Emission Factors (lb/MMBtu)	Capacity (gal/hr)	Heat Rate (MMBtu/hr)	Emissions (lb/hr)	Operational Limits (hrs/yr)	Emissions (tpy)
SO <sub>2</sub>	0.50	16.90	2.366	1.18	4000	2.37
NO <sub>x</sub>	4.41	16.90	2.366	10.43	4000	20.87
CO	0.95	16.90	2.366	2.25	4000	4.50
PM	0.31	16.90	2.366	0.733	4000	1.47
PM <sub>10</sub>	0.31	16.90	2.366	0.733	4000	1.47
PM <sub>2.5</sub>	0.28	16.90	2.366	0.660	4000	1.32
VOC	0.35	16.90	2.366	0.83	4000	1.66
Acetaldehyde	7.67 E-04	16.90	2.366	1.81 E-03	4000	3.63 E=-3
Acrolein	9.25 E-05	16.90	2.366	2.19 E-04	4000	4.38 E-04
Benzene	9.33 E-04	16.90	2.366	2.21 E-03	4000	4.41 E-03
1,3 Butadiene	3.91 E-05	16.90	2.366	9.25 E-05	4000	1.85 E-04
Formaldehyde	1.18 E-03	16.90	2.366	2.79 E-03	4000	5.58 E-03
Toluene	4.09 E-04	16.90	2.366	9.68 E-04	4000	1.94 E-03
Xylenes	2.85 E-04	16.90	2.366	6.74 E-04	4000	1.35 E-03
Total PAH	1.68 E-04	16.90	2.366	3.97 E-04	4000	7.95 E-04

Based on AP-42 (10/96), Tables 3.3-1 and 3.3-2

**Fugitive Emissions from the 250 TPH Plant, Storage Piles, Unpaved Roads**

Equipment	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)
250 TPH Stone Processing Plant	2.09 <sup>1</sup>	0.77 <sup>1</sup>	0.11 <sup>1</sup>
Storage Pile	3.56 <sup>2</sup>	1.69 <sup>2</sup>	0.26 <sup>2</sup>
Unpaved Roads	2.87 <sup>3</sup>	0.70 <sup>3</sup>	0.07 <sup>3</sup>
Total	8.52	3.16	0.44

<sup>1</sup> Based on AP-42 (8/04), Table 11.19.2-2

<sup>2</sup> Based on AP-42 (10/95), Section 13.2.4, see application

<sup>3</sup> Based on AP-42 (11/06), Section 13-2.2, see application

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### Emissions for the 250 TPH Crushing Operation and 325 hp Diesel Engine

Pollutant	325 hp DEG Emissions (tpy)	Fugitive Emissions from 250 TPH Plant, Storage Piles, Unpaved Roads (tpy)	Total Facility Emissions (tpy)	DOH Trigger Levels (tpy)	CER Trigger Levels (tpy)
PM	1.47	8.52	9.99	25	N/A
PM <sub>10</sub>	1.47	3.16	4.63	25	100
PM <sub>2.5</sub>	1.32	0.44	1.76	N/A	100
SO <sub>x</sub>	2.37		2.37	25	100
NO <sub>x</sub>	20.87		20.87	25	100
CO	4.50		4.50	250	1000
VOC	1.66		1.66	25	100

#### Ambient Air Quality Assessment:

An ambient air quality assessment is not required for this application because there are no proposed changes for this permit renewal.

#### Conclusion and Recommendations:

The applicant is proposing to continue operating a 250 TPH stone crushing and screening plant equipped with a 325 hp diesel engine generator. The equipment will operate a maximum of 4,000 hours per year. Compliance of the annual limitation will be monitored by the use of a non-resetting hour meter on the diesel engine. Air pollution controls at the facility consist of water sprays at various locations. Issuance of a Temporary Covered Source Permit is recommended based on the review of the information provided by the applicant and the conservative nature of the calculations. A 30-day public comment period and 45-day EPA review period are also required.

Reviewer: Darin Lum  
Date: 8/2010