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## Permit Application Review Renewal of Temporary Covered Source Permit (CSP) No. 0029-03-CT Application No. 0029-04

**Permit No.:** 0029-03-CT

**Application No.:** 0029-04

**Applicant:** Hawaiian Dredging Construction Company

**Facility:** 660 TPH Portable Crushing and Screening Plant  
with 810 HP Diesel Engine Generator

**SIC Code:** 1442 (construction sand and gravel)

**Location:** Various sites, State of Hawaii

**Initial Location:** 91-063 Malakole Street  
Kapolei, HI 96707 (Oahu)

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## **I. Background**

Hawaiian Dredging Construction Company (HDCC) submitted a renewal application for its 660 TPH portable crushing and screening plant. The application was received by the Department of Health (DOH) on 9/30/03, along with a check for \$500.

Since March 2004, the 660 TPH crusher has not been operating and is currently stored at the HDCC Malakole equipment yard in Kapolei, adjacent to the Grace Pacific Precast facility. Although HDCC has no current plans for using the crusher, it submitted a permit renewal application in the event that the crusher is needed for a future project. HDCC proposes to maintain the following operating restrictions for its 810 HP diesel engine generator (DEG):

- Limit DEG fuel to Diesel No. 2 with sulfur content not to exceed 0.5% by weight.
- Limit DEG total fuel consumption to 82,992 gallons in any rolling 12-month period. Based on a maximum fuel consumption rate of 39.9 gph, this results in an equivalent hourly limit of 2080 hours per rolling 12-month period.

HDCC also proposes the following new alternative operating scenario:

- Allow replacement of a similar-sized DEG in the event that the current DEG is in need of repair to function properly.

## **Process**

Material is placed in the feeder leading to the 660 TPH primary crusher. The crushed material then goes to the screen and material passing through the screen is conveyed to stockpiles. The oversize material is fed to the 380 TPH secondary cone crusher and back to the screen. All equipment is powered by the 810 HP DEG.

## **II. Equipment Description**

In addition to the crusher, the facility includes a grizzly feeder, cone crusher, triple deck screen, and a DEG to power the plant.

The cone crusher, screen, and DEG permitted under this permit (CSP 0029-03-CT) are also permitted under CSP 0467-01-CT, which encompasses a 1500 TPH portable crushing and screening plant. However identification of the equipment common to both permits was not consistent and contained errors.

HDCC had initially acquired its equipment from Balzer Pacific which assigned its own model and serial numbers to equipment components. These Balzer Pacific identification numbers differed from those assigned by the original manufacturer. Although the permit renewal application does not propose any change to facility equipment, the equipment list has been corrected to reference model and serial numbers assigned by the original manufacturer.

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### II. Equipment Description

<b>Table 1: Equipment</b>						
<b>Unit</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Maximum Capacity</b>	<b>Manuf. Date</b>	<b>Notes</b>
Primary jaw crusher	Cedarapids	3042	43480	660 TPH	1992	Model and serial nos. verified on 11/5/04.
Cone crusher	Cedarapids Eljay	RC54	2310792	380 TPH	2000	Also permitted under CSP 0467. Updated equipment info per 11/22/04 fax from K. Lee.
Vibrating grizzly feeder	Cedarapids	4217VGF	43479	42" x 17'	1992	Updated equipment info per 11/22/04 fax from K. Lee.
3-deck Screen	Cedarapids	5163-26	34C1492	5' x 17'	1992	Also permitted under CSP 0467. Updated equipment info per 12/13/04 email from K. Lee.
DEG	Caterpillar	3412DI	81Z09827	39.9 gph	1992	Also permitted under CSP 0467. No change to equipment identification no.
<p>Note: The DEG is mounted inside a trailer which can be towed. Fuel supplied by delivery truck, is stored in a 600 gallon tank mounted inside the trailer. (Ref: Permit application review dated 6/30/99, page 2, paragraph 1.3.</p>						

**III. Air Pollution Controls**

Although there are no control devices, sulfur dioxide emissions are controlled using fuel containing no more than 0.5% sulfur by weight.

A water spray system is operated and maintained to control fugitive dust emissions. Water spray bars are operated at the following locations:

- Feeder to primary crusher;
- Exit of primary jaw crusher;
- Transfer to triple deck screen; and
- Exit of secondary cone crusher.

In addition, a water spray truck is used on facility grounds to control fugitive dust emissions from unpaved roads and stockpiles.

**IV. Applicable Requirements**

1. Hawaii Administrative Rules (HAR), Title 11

Chapter 59, Ambient Air Quality Standards

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

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

2. PSD Requirements

PSD requirements do not apply because the facility is not considered a major stationary source and is not proposing any modifications to trigger a major modification as defined in 40 CFR 52.21 and HAR Title 11, Chapter 60.1, Subchapter 7.

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### 3. NSPS Requirements

40 Code of Federal Regulations, Part 60, Standards of Performance for New Stationary Sources (NSPS)

Subpart A - General Provisions

Subpart OOO - Standards of Performance for Non-Metallic Mineral Processing Plants

Subpart OOO applies to portable crushed stone plants with capacities greater than 150 TPH which commence construction, reconstruction, or modification after August 31, 1983. Since this facility meets the size and date criteria, it is subject to Subpart OOO.

### 4. NESHAP Requirements

These requirements do not apply because no standard covering the facility's operation or equipment has been promulgated under 40 CFR 61.

### 5. MACT Requirements

These requirements do not apply because the facility is not a major source of hazardous air pollutants and the facility does not belong to a source category or subcategory for which a standard has been promulgated under 40 CFR 63.

### 6. BACT Requirements

A BACT review is required for new or modified sources which will result in a "significant" net emissions increase as defined in HAR §11-60.1-1. Since no modifications are proposed that would affect potential emissions, a BACT review is not required.

### 7. CAM Requirements (40 CFR 64)

The purpose of Compliance Assurance Monitoring (CAM) is to provide reasonable assurance that compliance is being achieved with large emission units that rely on air pollution control devices to meet an emissions limit or standard. CAM applies if the emissions unit:

1. is located at a major source;
2. is subject to an emissions limit or standard;
3. uses a control device to achieve compliance;
4. has potential pre-control emissions that are 100% of the major source level; AND
5. is not otherwise exempt from CAM.

Since the facility is not a major source, CAM does not apply.

### 8. CER Requirements

Consolidated Emissions Reporting (CER) requirements apply if facility emissions equal or exceed levels specified in 40 CFR 51, Subpart A, Appendix A, shown in the following table. CER requirements do not apply because facility emissions do not equal or exceed the CER threshold levels. However annual emissions reporting is required for all covered sources.

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<b>Table 2: Emissions and Triggering Levels</b>		
<b>Pollutant</b>	<b>Facility Emissions (TPY)</b>	<b>CER Type B Level (TPY)</b>
CO	4.83	1000
NOx	18.19	100
PM	18.55	-
PM-10	6.74	100
PM-2.5	2.85	100
SO2	2.87	100
VOC	0.51	100
Pb	-	5
HAPs	0.02	-

9. Synthetic Minor & Major Source applicability

A synthetic minor 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 based on potential emissions that are less than major source levels when the facility is operated at its maximum capacity continuously for 8,760 hr/yr.

**V. Insignificant Activities**

<b>Table 3: Insignificant Activities</b>	
<b>Description</b>	<b>HAR Reference</b>
1 - 600 gallon tank holding diesel fuel for the DEG	11-60.1-82(f)(1) Any storage tank, reservoir, or other container of capacity equal to or <b>less than 40,000 gallons</b> storing volatile organic compounds, except those storage tanks, reservoirs, or other containers subject to any standard or other requirement pursuant to Sections 111 and 112 of the Act.

**VI. Alternative Operating Scenarios**

If the 810 HP DEG is inoperable, a DEG of the same or smaller size will be used as a temporary replacement until the original DEG is repaired and again operable.

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## VII. Project Emissions

Facility emissions consist of point source criteria pollutants from the DEG stack and fugitive dust emissions from crushing operations, travel on unpaved roads and aggregate handling. Updated emission calculations are based on the most current AP-42 sections shown in the following table.

Source	Emission Type	AP-42 Section	Date
DEG	point	3.4	10/96
Crushing operations	fugitive	11.19.2	8/04
Unpaved roads	fugitive	13.2.2	12/03
Aggregate handling	fugitive	13.2.4	1/95

Emission calculations are contained in the enclosure and results are shown in the following table

:

Pollutant	DEG	Crushing Operations	Unpaved Roads	Aggregate Handling	Total
CO	4.83				4.83
NOx	18.19				18.19
PM	0.57	8.99	7.4	1.59	18.55
PM-10	0.33	3.46	2.2	0.75	6.74
PM-2.5	0.27	2.04	0.3	0.24	2.85
SO2	2.87				2.87
TOC	0.51				0.51
Pb	-				-
HAPs	0.02				0.02

## VIII. Air Quality Assessment

An Ambient Air Quality Impact Assessment (AAQIA) is generally performed for new or modified sources. Since the facility is an existing source and the renewal application proposes no modifications to the facility, an AAQIA is not required.

**IX. Significant Permit Conditions**

1. The 660 TPH portable crushing and screening plant is subject to requirements of NSPS Subparts A and OOO.

Purpose: This federal standard applies to portable crushed stone plants with capacities greater than 150 TPH which commence construction, reconstruction, or modification after August 31, 1983.

2. The minimum DEG stack height shall be 13.5 feet.

Purpose: The ambient air quality assessment performed during the previous application review is based on this stack height.

3. The engine shall only be fired on diesel no. 2 with a maximum sulfur content of 0.5% by weight.

Purpose: Per HAR §11-60.1-38(a), no person shall burn any fuel containing an excess of 2% by weight, except for fuel used in ocean-going vessels. Emission calculations are based on the use of diesel no. 2 with a maximum sulfur content of 0.5% by weight.

4. DEG fuel consumption shall be limited to 82,992 gallons in any rolling 12-month period.

Purpose: Emission calculations are based on this limit proposed by the applicant.

5. Reasonable efforts shall be taken to control fugitive emissions from the stone processing plant. This includes the use of water sprays at all crushers, transfer points, loading operations, unpaved roads, and aggregate stockpiles. It also includes maintenance of water sprays in good operating condition.

Purpose: Control PM and PM-10 emissions.

**X. Conclusion**

Hawaiian Dredging proposes to continue operation of its 660 TPH portable crushing and screening plant. Actual emissions may be somewhat less than indicated in this review for the following reasons:

The 660 TPH primary crusher is currently not operating, has been in storage since March 2004, and is not scheduled to operate in the near future.

Issuance of a temporary Covered Source Permit is recommended based on the review of the information provided by the applicant and subject to the significant permit conditions.

April Matsumura  
November 18, 2004