

**Minor Modification to a Covered Source Permit  
Review Summary**

**Application File No.:** 0311-07

**Permit No.:** 0311-03-C

**Applicant:** Hawaiian Cement  
Concrete and Aggregate Division

**Facility Title:** Hawaiian Cement  
Concrete and Aggregate Division  
Halawa Aggregates Processing Facility  
99-1100 Halawa Valley Street  
Aiea, Hawaii 96701

UTM coordinates: 613,600 meters east; 2,364,100 meters north  
NAD 83

**Mailing Address:** Hawaiian Cement  
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**Responsible Official:** Mr. John DeLong  
President  
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**Point of Contact:** Mr. Dane Wurlitzer  
Environmental Manager  
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**Application Date:** January 17, 2011

**Proposed Project:**

The Standard Industrial Classification (SIC) Code is 1429 under *Crushed and Broken Stone, Not Elsewhere Classified*.

This is an application for a minor modification of Covered Source Permit No. 0311-03-C. The minor modification proposes to reconfigure belt conveyors at the Wet Mill Plant and replace two sizing screens with one. The modifications replace old equipment and simplify the process. No changes in material throughput are expected with the change. All new equipment handle fully saturated rock and typically produce no visible emissions.

The proposed modification fits the definition of a minor modification because:

1. The modification will not cause an exceedance of any of the operational or emission limits in Section C of Attachment II of the CSP.

2. The modification will not result in or increase the emissions of any air pollutant not limited by the CSP to levels equal to or above any of the levels in paragraphs (2)(A) through (D) of the minor modification definition in HAR §11-60.1-81. Potential emissions were calculated using maximum allowable operating production levels, and AP-42 emission factors. Potential increases due to the new equipment are shown in the Table in the Project Emissions Section. The new equipment will have the potential to increase controlled emissions of particulate matter (PM) by 0.215 tpy, PM<sub>10</sub> by 0.065 tpy, and PM<sub>2.5</sub> by 0.018 tpy. These values are less than the 2 tpy increase specified in paragraph (2)(D) in the definition of a “minor modification” in §11-60.1-81.
3. The modification will not cause a violation of any applicable requirement.
4. The modification will not involve any significant changes to existing monitoring requirements or any relaxation or significant change to existing reporting or recordkeeping requirements in the existing CSP.
5. The modification will not require or change a case-by-case determination of an emission limitation or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis.
6. The modification does not seek to establish or change a permit term or condition such as a synthetic minor emissions cap or alternative emission limit as described in paragraphs (6)(A) or (B) of the minor modification definition in HAR §11-60.1-81.
7. Is not a modification pursuant to any provision of Title I of the Clean Air Act.

### Plant Operations

#### 500 TPH Wet Mill Plant and 600 TPH Dry Mill Plant

The aggregate handling facilities consist of two main process operations; the wet mill plant, and the dry mill plant. The purpose of the wet mill plant is to initially clean and sort quarry rock and to produce aggregate. Oversized material is passed on to the dry mill for grinding and further sizing to produce additional aggregate.

The wet plant maximum capacity is 500 ton per hour. The dry plant maximum capacity is 600 tons per hour. Based on a site visit, typically quarry and wet plant operations are performed from the hours of 7 a.m. to 3 p.m. and the secondary plant is operated from 2 p.m. to 9 p.m. This distribution of hours is primarily to disburse the electrical load of the facility. Hawaiian Cement has applied for approval to operate the Halawa facility for up to 10 hours per day for 7 days per week, 52 weeks per year. The maximum expected daily operating time of 10 hours per day is intended to apply separately to each operation with up to 4 hours of overlap. The total annual operating hours for each plant is 3,640 hours per year.

The application fee for a minor modification of a covered source permit of \$100.00 was received and processed.

**Equipment Changes:**

The following equipment at the Wet Plant is being deleted:

C-8 Radial Stacking Conveyor
SC-8 Inclined Wet Sizing Screen
SC-9 Inclined Wet Sizing Screen
C-31 Belt Conveyor
C-32 Belt Conveyor
C-33 Belt Conveyor
C-34 Belt Conveyor

The following equipment shall replace those deleted at the Wet Plant:

C-36 Belt Conveyor
SC-11 Horizontal Wet Sizing Screen
C-37 Belt Conveyor
C-37A Belt Conveyor
C-38 Belt Conveyor
C-39 Belt Conveyor

**Air Pollution Controls:**

Fugitive dust control for the stone processing equipment is accomplished by the application of water at critical locations and times to assure an adequate moisture content of the material being processed or conveyed. Water sprays are used to suppress particulate matter created at transfer points which are not enclosed, stockpiles and unpaved roads (water truck). Aggregate and sand that is damp from washing (wet screening operations) was assumed to have a 100 percent control efficiency.

**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

11-60.1-38 Sulfur Oxides from Fuel Combustion

Subchapter 5 Covered Sources

Subchapter 6 Fees for Covered Sources, Non-Covered 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  
Subchapter 10 Field Citations

Federal Requirements

40 CFR Part 60 - Standards of Performance for New Stationary Sources (NSPS)  
Subpart A - General Provisions Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants (applicable to the wet mill plant, quarry plant's 653 tph portable jaw crusher, 625 tph roller cone crusher, 8 x 24 screening tower, 7 x 20 wash screen, and 2500 ft of conveyors).

**Non-applicable Requirements:**

Hawaii Administrative Rules (HAR)

Chapter 11-60.1 Air Pollution Control  
Subchapter 7 Prevention of Significant Deterioration  
Subchapter 9 Hazardous Air Pollutant Sources

Federal Requirements

40 CFR Part 52.21 - Prevention of Significant Deterioration of Air Quality  
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPS)  
40 CFR Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards)

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

PSD review applies to new major stationary sources and major modifications to these types of sources. This source is not a major stationary source, therefore, a PSD review is not required.

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

A Best Available Control Technology (BACT) analysis is required for new covered sources or significant modifications to covered sources that have the potential to emit or a net emissions increase above significant levels as defined in HAR §11-60.1-1. A BACT analysis is not applicable since this modification is not a significant modification.

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

40 CFR Part 51, Subpart A - Emission Inventory Reporting Requirements, determines CER based on the emissions of criteria air pollutants from Type B point sources (as defined in 40 CFR Part 51, Subpart A), that emit at the CER triggering levels as shown in the table below.

Pollutant	Type B CER Triggering Levels <sup>1</sup> (tpy)	Pollutant	In-house Total Facility Triggering Levels <sup>2</sup> (tpy)	Total Facility Emissions <sup>2</sup> (tpy)
NO <sub>x</sub>	≥100	NO <sub>x</sub>	≥25	36.03
SO <sub>2</sub>	≥100	SO <sub>2</sub>	≥25	8.80
CO	≥1000	CO	≥250	16.11
PM <sub>10</sub> /PM <sub>2.5</sub>	≥100/100	PM/PM <sub>10</sub>	≥25/25	PM = 92.32 PM <sub>10</sub> = 31.97
VOC	≥100	VOC	≥25	0.68
		HAPS	≥5	3.70 E-03

<sup>1</sup>Based on actual emissions  
<sup>2</sup>Based on potential emissions

This facility does not emit at the CER triggering levels. Therefore, CER requirements are not applicable.

Although CER for the facility is not triggered, the Clean Air Branch requests annual emissions reporting from those facilities that have facility-wide emissions of a single air pollutant exceeding in-house triggering levels. Since the total emissions of NO<sub>x</sub> and PM/PM<sub>10</sub> within the facility is greater than 25 tons per year, annual emissions reporting for the facility will be required for in-house recordkeeping purposes.

**Compliance Assurance Monitoring (CAM):**

40 CFR Part 64

Applicability of the CAM Rule is determined on a pollutant specific basis for each affected emission unit. Each determination is based upon a series of evaluation criteria. In order for a source to be subject to CAM, each source must:

- Be located at a major source per Title V of the Clean Air Act Amendments of 1990;
- Be subject to federally enforceable applicable requirements;
- Have pre-control device potential emissions that exceed applicable major source thresholds;
- Be fitted with an “active” air pollution control device; and
- Not be subject to certain regulations that specifically exempt it from CAM.

Emission units are any part or activity of a stationary source that emits or has the potential to emit any air pollutant.

CAM is not applicable to this facility because, per EPA, watersprays used at the transfer points are not to be considered as active air pollution control devices, since they are passive air pollution control devices. Also, the silos with baghouses do not have emission limits.

**Synthetic Minor Source:**

A synthetic minor source is a facility that is potentially major (as defined in HAR Section 11-60.1-1), but is made non-major through federally enforceable permit conditions. This facility is a synthetic minor based on potential emissions of particulate matter greater than “major” levels when the stone quarrying and processing plant is operated at the maximum capacity for 8,760 hours per year. Operating permit limits make the facility non-major.

**Insignificant Activities:**

No additional insignificant activities are proposed.

**Alternate Operating Scenarios:**

No alternative operating scenarios are proposed.

**Project Emissions:**

**Table 2 - Emission Changes Due to New Equipment**

Point	Emission Source	PM (lb/hr)	PM (tpy)	PM <sub>10</sub> (lb/hr)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (lb/hr)	PM <sub>2.5</sub> (tpy)
F22A	Deister Wet Screen to Conveyor C-10 or C10A	0	0	0	0	0.001	0
F27	Conveyor C-10A to Conveyor C-10B	0	0	0.013	0	0.001	0
WP02	Tunnel Conveyor C-14 to Water Bin	0.070	0.102	0.018	0.033	0.005	0.009
WP04	Conveyor C-10B to Scrubber (SCR-1)	0.011	0.019	0.003	0	0.001	0
WP05	Water Bin to Scrubber (SCR-1)	0.067	0	0.022	0	0.006	0
WP19	Conveyor (C-36) to Screen (SC-11)	0.039	0	0.013	0	0.004	0
WP20	Screen (SC-11)	0.605	0	0.204	0	0.014	0
WP21	Screen (SC-11) to Conveyor (C-37)	0.011	0	0.004	0	0.001	0
WP22A	Conveyor (C-37) to C-37A	0.011	0.02	0.004	0.007	0.001	0.002
WP22	Conveyor (C-37A) to Storage Pile	0.011	0.02	0.004	0.007	0.001	0.002
WP23	Screen (SC-11) to Conveyor (C-38)	0.022	0	0.007	0	0.002	0
WP24	Conveyor (C-38) to Storage Pile	0.022	0.039	0.007	0.013	0.002	0.004
WP25	Screen (SC-11) to Conveyor (C-39)	0.008	0	0.003	0	0.001	0
WP28	Conveyor (C-39) to Storage Pile	0.008	0.015	0.003	0.005	0.001	0.001
WP31	Screen (SC-11) to Sump	0.001	0	0	0	0	0
WP36	Screw Conveyor to Pile (Mud)	0.007	0	0.002	0	0.001	0
Total			0.215		0.065		0.018

**Ambient Air Quality Assessment:**

An ambient air quality impact analysis was not performed for this minor modification application since the Department of Health's air modeling guidance generally exempts an ambient air quality impact analysis for fugitive dust sources.

**Significant Permit Conditions:**

Attachment IIA for the Aggregate Processing Facility was revised with the following changes:

• **Special Condition No. C.2.c.**

c. Water sprays shall be operated and maintained at the following locations to minimize fugitive emissions:

[i. At the wet mill plant's conveyor transfer point (C2 to C3) before screen (SC1),]

i[i]. At the quarry plant's 653 tph portable jaw crusher, 625 tph roller cone crusher, 8 x 24 screening tower, 7 x 20 wash screen, and 2500 ft of conveyors, and

ii[i]. The water sprays shall be maintained in good operating condition and utilized as necessary during operation of the associated equipment. In addition, a water truck shall be maintained and utilized on the grounds of the facility as necessary to minimize fugitive dust on haul roads and storage piles.

• **Special Condition No. C.3.a.**

a. The permittee shall not cause to be discharged into the atmosphere any visible emissions from the wet mill plant's wet screening operations and subsequent screening operations and belt conveyors that process saturated material in the production line up to the stockpiles. The wet screening operations start at the transfer point from conveyor C9 to the 7 x 20 wash screen [C3 to screen SC1]. A *wet screening operation* means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

**Conclusion and Recommendations:**

Issuance of a Minor Modification to Covered Source Permit (CSP) No. 0311-03-C is recommended based on the review of information provided by the applicant and subject to the significant permit conditions noted above, and a 45-day EPA review period. The new equipment will increase controlled emissions of PM, PM<sub>10</sub> and PM<sub>2.5</sub> by less than 1 tpy each.

Reviewer: Darin Lum  
Date: 11/2011