

Temporary Covered Source Permit (CSP) No. 0660-01-CT Review
Significant Modification Application No. 0660-06

APPLICANT: C. Hayes Excavation

RESPONSIBLE OFFICIAL/POC Mr. Chris Hayes
Owner
(808) 870-6987

INITIAL LOCATION UTM: Zone 4; 592,384 m E, 2,358,002 m N (NAD 83)
Campbell Industrial Park
Kapolei, HI 96707

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Kihei, Hawaii 96753

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SIC 1429 - Crushed and Broken Stone, Not Elsewhere Classified.

PROPOSED PROJECT:

Application 0660-06 is for a significant modification to add a 260 TPH mobile cone crusher to the plant. A 2,080 hour limit was removed from the permit in the last modification due to the exemption of the diesel engines from this permit for propelling the equipment. No other changes have been proposed to the existing permit.

Equipment to be added:

260 TPH Mobile Cone Crusher, Terex Finlay model no. C-1540RS,
serial no. TRX1540RP0MA71176, mfg. date 2010

Existing Equipment:

1. 400 TPH Mobile Jaw Crusher, Nordberg model no. LT105, serial no. 72742;
2. 881 TPH Mobile Screen, Powerscreen Warrior model no. 2400, serial no. PID00126KDGB52773;
3. Various Conveyors; and
4. Water spray system.

AIR POLLUTION CONTROLS:

The crusher is equipped with water spray bars located at the main conveyor belt. Water trucks/water sprays will be used prior to screening material and as necessary to minimize fugitive dust from other plant operations, material transfer points, stockpiles, and plant roads.

Controlled emission factors or a control efficiency of 70%, when a controlled factor is not available, were used for emission calculations.

APPLICABLE REQUIREMENTS:

Hawaii Administrative Rules (HAR) Title 11 Chapter 59

Hawaii Administrative Rules (HAR) Title 11 Chapter 60.1

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,

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

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

Subpart 000 – Standards of Performance for Nonmetallic Mineral Processing Plants is applicable to the crushing and screen plants because the maximum capacity of the crushers are greater than 150 tons/hour, and the plants were manufactured after August 31, 1983.

400 TPH Nordberg Mobile Jaw Crusher was manufactured after 1983 and prior to 2008, based on 2005 manufactures literature.

260 TPH Terex Finlay Mobile Cone Crusher was manufactured in 2010. Equipment that commence construction, modification, or reconstruction on or after April 22, 2008, are subject to more stringent fugitive emission opacity limits.

881 TPH Mobile Screen was manufactured in 2012. Equipment that commence construction, modification, or reconstruction on or after April 22, 2008, are subject to more stringent fugitive emission opacity limits.

Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not applicable to the diesel engines on the crushers and screen because they are used to propel the crushers and screen. The engines are considered nonroad engines 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 (NESHAP), 40 CFR Part 61

This source is not subject to NESHAPs because there are no standards in 40 CFR Part 61 applicable to this facility.

NESHAPs for Source Categories (Maximum Achievable Control Technology (MACT)), 40 CFR Part 63

Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) is not applicable to the diesel engines on the

crushers and screen because they are used to propel the crushers and screen. The engines are considered nonroad engines as defined in 40 CFR §1068.30. Subpart ZZZZ applies to stationary internal combustion engines that are not nonroad engines.

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

This source is not subject to PSD requirements because it is not a major stationary source as defined in 40 CFR §52.21 and HAR, Title 11, Chapter 60.1, Subchapter 7.

Compliance Assurance Monitoring (CAM), 40 CFR 64

This source is 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; and (5) not otherwise be exempt from CAM.

Air Emissions Reporting Requirements (AERR), 40 CFR Part 51, Subpart A

AERR is not applicable because potential emissions from the facility do not exceed AERR thresholds.

DOH In-house Annual Emissions Reporting

The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding in-house reporting levels and for all covered sources. Annual emissions reporting will be required because this facility is a covered source.

Best Available Control Technology (BACT)

This source is not subject to BACT analysis because potential emissions are below significant levels. BACT analysis is required for new sources or modifications to sources that have the potential to emit or increase emissions above significant levels considering any limitations as defined in HAR §11-60.1-1.

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 when the facility is operated without limitations for 8,760 hours/year.

INSIGNIFICANT ACTIVITIES / EXEMPTIONS

The diesel engine powering the 400 TPH crusher is exempt in accordance with HAR §11-60.1-82(d)(4) because the engine is used to propel the crusher.

The diesel engine powering the 881 TPH screening plant is exempt in accordance with HAR §11-60.1-82(d)(4) because the engine is used to propel the screen.

The diesel engine powering the 260 TPH crusher is exempt in accordance with HAR §11-60.1-82(d)(4) because the engine is used to propel the crusher.

ALTERNATIVE OPERATING SCENARIOS

The applicant did not propose any alternate operating scenarios.

PROJECT EMISSIONS

Crushing and Screening Plants

The maximum capacities of the crushers and screen were used to calculate emissions. Water sprays will be used to control PM emissions. Emissions were based on emission factors from AP-42 Section 11.19.2 (8/04) – Crushed Stone Processing and Pulverized Mineral Processing. Wind Erosion emission factors from AP-42 Section 8.19.1 (9/85) - Sand & Gravel Processing.

400 TPH Crushing Plant		
Pollutant	Crushing Plant Emissions (TPY)	Wind Erosion Emissions (TPY)
	8,760 hr/yr	8,760 hr/yr
PM	4.67	0.10
PM-10	1.81	0.05
PM-2.5	0.42	0.01

260 TPH Crushing Plant		
Pollutant	Crushing Plant Emissions (TPY)	Wind Erosion Emissions (TPY)
	8,760 hr/yr	8,760 hr/yr
PM	3.04	0.10
PM-10	1.18	0.05
PM-2.5	0.27	0.01

881 TPH Screening Plant		
Pollutant	Screening Plant Emissions (TPY)	Wind Erosion Emissions (TPY)
	8,760 hr/yr	8,760 hr/yr
PM	14.15	0.10
PM-10	4.76	0.05
PM-2.5	0.73	0.01

Vehicle Travel on Unpaved Roads

The maximum capacities of the crusher and screen were used to calculate emissions. A seventy percent (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.

Vehicle Travel on Unpaved Roads	
Pollutant	Emissions [8,760 hr/yr] (TPY)
PM	60.48
PM-10	14.79
PM-2.5	1.48

Greenhouse Gas (GHG) Emissions

There are no GHG emissions because emissions from the crushing and screening plants are from non-combustion sources.

Total Emissions

Total facility emissions are summarized in the table below.

Total Facility Emissions and Trigger Levels (TPY)					
Pollutant	Emissions	BACT Significant Levels	AERR Thresholds	DOH Levels	Wind Erosion and Vehicle Travel Emissions ^a (Limits)
CO	0	100	1000	250	0
NO _x	0	40	100	25	0
SO ₂	0	40	100	25	0
PM	21.80	25	-	25	60.78
PM-10	7.72	15	100	25	14.94
PM-2.5	1.42	10	100	-	1.51
VOC	0	40	100	25	0
HAPs	0	-	-	5	0

^a Storage pile wind erosion and vehicle traffic emissions from rock crushing activities are not counted toward major source levels or BACT evaluations.

AIR QUALITY ASSESSMENT

An ambient air quality impact analysis (AAQIA) is not required for the proposed screening plant because emissions are fugitive in nature. The Department of Health air modeling guidance generally does not require an ambient air quality impact analysis for fugitive emissions.

SIGNIFICANT PERMIT CONDITIONS

1. Fugitive Emission Limits

- a. The permittee shall not cause to be discharged into the atmosphere from the 400 TPY mobile crusher, fugitive emissions which exhibit greater than fifteen (15) percent opacity from the crusher and ten (10) percent opacity from any transfer point on the belt conveyors or from any affected facility.
- b. The permittee shall not cause to be discharged into the atmosphere from the 260 TPY mobile crusher, fugitive emissions which exhibit greater than twelve (12) percent opacity from the crusher and seven (7) percent opacity from any transfer point on the belt conveyors or from any affected facility.
- c. The permittee shall not cause to be discharged into the atmosphere from the mobile screen, fugitive emissions which exhibit greater than seven (7) percent opacity from any transfer point on the belt conveyors, screening operation, or from any other affected facility.

Reason: 40 CFR 60, Subpart OOO, provisions

CONCLUSION

Based on its proposed operations, the facility is in compliance with State and Federal laws, rules, regulations, and standards with regards to air pollution. Recommend issuance of the covered source permit subject to the incorporation of the significant permit conditions, 30-day public comment period, and 45-day Environmental Protection Agency review period.

Joseph Baumgartner
February 17, 2016