CSP 0242–01-CT

TEMPORARY COVERED SOURCE AIR PERMIT (NSP) ENGINEERING REVIEW
MINOR MODIFICATION NO. **0242-10**
PERMIT NO. **0242-01-CT**

REVIEWER	PR
DATE	07.15.2008
FACILITY	Goodfellow Brothers, Inc. 780 TPH Stone Processing Plant with 1MW or 1.36 MW Diesel Engine Generator and 1,100 TPH Mobile Stone Processing Plant with Integral Diesel Engines
LOCATION	Aliamanu Military Reservation, Honolulu, Hawaii 96819
R. OFFICIAL	Ms. Amy Sands 1.808.879.8868
CONTACT	Mr. Dennis McCarthy 1.808.268.8088
MAIL ADDRESS	Goodfellow Brothers, Inc. P.O. Box 220 Kihei, HI 96753

EQUIPMENT

1. One (1) 350 TPH Mobile Jaw Crusher
   Model No. BL-PEGSON 4242SR; Serial No. 420239EGSR; Equip. No. K-205
   Production Rate = 350 TPH

2. One (1) 174 HP Caterpillar Diesel Engine
   Model No. C-9, Serial No. MBD05048
   Fuel Consumption = 17.1 gal/hr; Diesel Fuel #2 (0.5% max S)
   Exhaust Diameter = 0.127m, Height = 3.44m
   Velocity = 76.0 m/s; Flow Rate = 0.96 m^3/s; Temp = 740.0 K

PERMIT BACKGROUND

Applicant is adding a new 350 TPH mobile impact crusher to an existing permit, 0242-01. The proposed addition of the crusher meets all requirements for a minor modification.
The current permit covers most of Goodfellow Brother's, Inc. equipment inventory of crushers, screen trailers, and diesel engine generators. The permitted inventory of equipment also includes crushers with integrated diesel engines. To allow operational flexibility, the permit lists the maximum quantity and type of equipment allowed at a site, which allows GBI may use any or all of the equipment listed.

PROCESS BACKGROUND

SICC: 1429
Goodfellow Brothers, inc. owns and operates a variety of crushers, screens, and conveyors for stone processing activities. The equipment is used to crush basalt and other materials for construction purposes. Materials are batch-dropped into a primary crusher. The stockpiles either remain throughout the duration of the project or are moved by a front-end loader.
The equipment is deployed to various locations and may be erected in several different configurations depending on the project requirements.

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
    - 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

This source is **not subject to NSPS** (New Source Performance Standards).

40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not applicable since the diesel engines on the mobile crushers are considered nonroad engines because the diesel engines propel the crusher as well as provide power to operate the crushers.

40 CFR Part 60, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines is not applicable to the diesel engines because the facility is not a major source of HAPs.

40 CFR Part 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants, is applicable to the mobile crusher because equipment was manufactured after 1983 and the primary crusher has a capacity greater than 150 TPH.

This source is **not subject to NESHAPS** (National Emission Standards for Hazardous Air Pollutants for Source Categories) as no hazardous air pollutants are emitted at significant levels (>= 10 TPY HAP or >= 25 TPY for total HAPs) and this source is not listed under 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants) or 40 CFR 63 applicable to this facility.

This source is **not subject to MACT** (Maximum Achievable Control Technology) since the source is not a major source of hazardous air pollutants (HAPS) emissions (>10 TPY single hap or >25 TPY for total haps).

This source is **not subject to PSD** (Prevention of Significant Deterioration) 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; (criteria air pollutant > 100 or 250 TPY as applicable).

This source is **not subject to CAM** (compliance assurance monitoring) since the facility is not classified as a major source (criteria pollutant > 100 TPY); has no pre-control device potential emissions exceeding applicable major source thresholds; nor fitted with an “active” air pollution control device; and not or not part of a facility with total emissions exceeding major source threshold.

This source is **not subject to CERR** (Consolidated Emissions Reporting Requirements) since 40 CFR Part 51, Subpart A – Emissions Inventory Reporting Requirements, determines CERR based on facility wide emissions of each air pollutant at the CERR triggering levels. The emissions do not exceed respective CERR threshold levels. Also by definition a temporary source cannot be a major source and as such, emissions data will not be required to be inputted into the National Emissions Inventory (NEI) database.

The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding the DOH reporting level(s). Based on current emissions, the facility is subject to annual emissions reporting.

This source is **not subject to BACT** (Best Available Control Technology) analysis because the increase emissions from the proposed facility remain below significant emissions levels. The addition of the 250 TPH crusher to the inventory will not result in an emission increase in allowable emissions. The permit only allowed one 700 TPH primary and one 400 TPH secondary jaw crusher to be operated at each site.

TOTAL EMISSIONS

Total facility emissions are summarized within the tables below.

Table 1: Emissions Rates

Pollutant	1.36MW DEG 1,600 hrs (TPY)	1 MW DEG 1,600 hrs (TPY)	525 hp DE 1,800 hrs (TPY)	425 hp DE 1,800 hrs (TPY)
PM_{10}	0.3	0.5	0.1	0.1
SO_x	5.4	4.6	0.9	0.7
NO_x	27.2	29.2	6.5	4.5
VOC[1]	1.0	0.8	0.1	0.1
CO	2.2	7.8	0.6	1.1

Table 2: Comparison of Emissions to CAB Trigger Levels

Pollutant	780 TPH Non-Mobile Plant 1,600 hrs (TPY)	1,100 TPH Mobile Plant 1,800 hrs (TPY)	CAB Trigger (TPY)
PM_{10}	31	17	25
SO_x	7	5.8	25
NO_x	52	36.6	25
VOC[1]	3	1.0	25
CO	7	9.7	250

1 - total organic compounds (TOC) as volatile organic compounds (VOC)

Table 3: Maximum Allowable Emissions for the Non-mobile and Mobile Plants

Pollutant	780 TPH Non-Mobile Plant 1,600 hrs (TPY)	1,100 TPH Mobile Plant 1,800 hrs (TPY)
PM_{10}	31	17
SO_x	7	5.8
NO_x	52	36.6
VOC[1]	3	1.0
CO	7	9.7

1 - total organic compounds (TOC) as volatile organic compounds (VOC)

INSIGNIFICANT ACTIVITIES (CSP) / EXEMPTIONS (NSP)

The diesel engines on the radial stackers and the 661 TPH screen are insignificant activities because the heat inputs are less than 1 MMBtu/hr.

ALTERNATIVE OPERATING SCENERIOS

No new alternate operating scenarios were proposed. Currently, Goodfellow Brothers, Inc. is allowed to use a temporary replacement for their diesel engine generators should one of them unexpectedly go out-of-service.

FACILITY EMISSIONS CALCULATIONS

Given the existing operational limits in CSP 0242-01-CT, the proposed addition of a new 350 TPH Mobile Impact Crusher does not increase emissions of any air pollutant above the permitted emission limits; does not result in the emission of any air pollutant not previously emitted; and does not increase the emissions of any air pollutant no limited by the permit.

AIR QUALITY ASSESSMENT

An ambient air quality analysis (AAQA) was conducted in the previous review to demonstrate compliance with state and national ambient air quality standards. There are no emission increases above the permitted limits to require the performance of a new ambient air quality analysis.

FACILITY IDENTIFICATION

A major source as defined in Section 11-60.1-1 of HAR Title 11, has the potential to emit any HAP of 10 TPY or more, or 25 TPY or more of any combination of HAPs, or 100 TPY or more of any air pollutant. Calculated emission(s) do not exceed these limits and thus, this facility <u>is classified as a minor source</u>.

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 <u>is a synthetic minor source</u> because potential emissions do exceed the major source threshold when the facility is operated at its maximum capacity continuously for 8,760 hours per year.

CONCLUSION

Based on the information submitted by Goodfellow Brothers, Inc., it is the determination of the Department of Health (DOH) that the proposed facility will be in compliance with the Hawaii Administrative Rules (HAR), Chapter 11-60.1 and State and Federal ambient air quality standards.

Issuance of an initial temporary CSP No. 0242-01-CT is recommended based on the review of the information provided by the applicant.