

**Temporary Covered Source Permit (CSP) No. 0607-01-CT Review**  
**Application for Significant Modification No. 0607-02**

**Applicant:** Pacific Property and Development Corporation

**Equipment Description:**

Existing from CSP No. 0607-01-CT

1. 280 tph BL Pegson mobile crusher (model no. Premiertrak 26" x 44", serial no. 650109 BDHA) which includes the following:
  - a. 335 HP Caterpillar diesel engine (model no. C-9, serial no. CLJ04971, 18.3 gal/hr fuel rate);
  - b. Jaw crusher;
  - c. Two conveyors;
  - d. Water sprays.

New

2. 380 tph Cedarapids/El-Jay cone crusher (model no. 54", serial no. 23E0580) which includes the following:
  - a. Cone crusher;
  - b. One conveyor;
  - c. Water sprays.

Added from NSP No. 0602-01-NT

3. 400 tph Chieftain power screen (model no. 1400, serial no. 6603430) which includes the following:
  - a. 11' x 5' screens;
  - b. Three conveyors;
  - c. Exempt diesel engine
4. Water sprays.

**Air Pollution Controls:**

The water sprays were proposed to control fugitive dust near the equipment and work site. The efficiency factor for direct water suppression is generally 70%, however 35% efficiency is used for soil that is moistened prior to screening.

**Initial Equipment Location:**

Lot 6 in Puunoa Subdivision Phase II  
Lahaina, Maui (based on latest relocation request)

**Mailing Address:**

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**Responsible Official / Point of Contact:**

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**Consultant:**

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**Proposed Project:**

This is a significant modification to add a 380 tph cone crusher and 400 tph power screen (previously permitted by NSP No. 0602-01-NT). The cone crusher will be powered by an external source while the power screen has an exempt diesel engine. All equipments will be subject to NSPS Subpart OOO and each equipment will be limited to 2,080 hrs/yr of operation. The general operations of the equipments will continue to process stone as previously permitted. The equipments will operate at various locations and may operate simultaneously or separately. The Standard Industrial Classification Code (SICC) for this facility is 1429 - Crushed and Broken Stone, Not Elsewhere Classified.

This permit review is based on the application dated April 30, 2007. The check for the application fee of \$1,000.00 for a significant modification to a non-air toxic temporary covered source permit (with increases greater than 40 tpy) will be processed and the receipt will be enclosed with the issued permit. NSP No. 0602-01-NT will be closed upon issuance of this CSP since the mobile crusher and diesel engine generator were sold to Pacific Concrete Coring & Cutting in Lihue, Kauai. CSP No. 0607-01-CT dated February 10, 2006 will be superseded, in its entirety, upon issuance of this CSP.

**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
    - 11-60.1-38 Sulfur Oxides from Fuel Combustion
  - Subchapter 5 - Covered Sources
  - Subchapter 6 - Fees for Covered Sources, Sections 111 -115
  - Subchapter 8 - Standards of Performance for Stationary Sources
    - 11-60.1-161 New Source Performance Standards
  - Subchapter 10 - Field Citations

40 CFR Part 60 - New Source Performance Standard (NSPS) Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants is applicable since the manufacture date of the equipments are after August 1983 and each portable crusher has a maximum capacity greater than 150 tph.

A Best Available Control Technology (BACT) analysis is required for new sources or modifications to existing sources that would result in a net significant emissions increase as defined in HAR, Section 11-60.1-1. This is an existing source with a significant increase in PM emissions. Therefore, a BACT analysis is required (see **Table 2**). The applicant proposed to use water sprays to control fugitive dust. Water sprays are considered BACT for other sources that have similar activities, thus water sprays are an acceptable method of BACT.

**Non-Applicable Requirements:**

40 CFR Part 60 - New Source Performance Standard (NSPS) Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines does not apply since the portable diesel engine is considered a ‘non-road’ engine as defined in 40 CFR 1068.30.

40 CFR Part 61 - National Emission Standard for Hazardous Air Pollutants (NESHAPS) does not apply since there is no standard for diesel engines or stone processing equipment.

40 CFR Part 63 - Maximum Achievable Control Technology (MACT) does not apply since there is no standard for diesel engines or stone processing equipment.

Prevention of Significant Deterioration (PSD) does not apply since this is not a major stationary source.

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 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 precontrol emissions that are greater than the major source level [ $>100$  tpy]; and (5) not otherwise be exempt from CAM. CAM is not applicable to the plant since item 1 does not apply.

Consolidated Emissions Reporting Rule (CERR) is not applicable because emissions from the facility are less than reporting levels pursuant to 40 CFR 51, Subpart A (see **Table 1**).

**Table 1 - CERR**

Pollutant	Facility Emissions (tpy)	CERR Triggering Levels (tpy)		Internal Reporting Threshold (tpy)
		1-yr Reporting Cycle (Type A Sources)	3-yr Reporting Cycle (Type B Sources)	
VOC	0.16	$\geq 250$	$\geq 100$	$\geq 25$
PM	91.17	n/a	n/a	$\geq 25$
PM <sub>10</sub> /PM <sub>2.5</sub>	23.72	$\geq 250$	$\geq 100$	$\geq 25$
NO <sub>x</sub>	4.11	$\geq 2,500$	$\geq 100$	$\geq 25$
SO <sub>x</sub>	1.22	$\geq 2,500$	$\geq 100$	$\geq 25$
CO	0.66	$\geq 2,500$	$\geq 1,000$	$\geq 250$
HAPs (total)	0.015	n/a	n/a	$\geq 5$

Also, the internal reporting requirement is to sum the individual emissions sources and if the sum of an individual pollutant exceeds the threshold limits, then annual emissions reporting is required. Since this is a covered source, internal reporting does apply.

Synthetic Minor requirements do apply because this facility would be a major source ( $>100$  tpy) if the facility operated continuously (8,760 hr/yr) at maximum capacity (see **Table 2**). Based on the power screen operating continuously (processing top soil), the PM emissions has the potential to exceed 100 tpy.

**Insignificant Activities/Exemptions:**

HAR 11-60.1-62(d)(4) - fuel burning equipment with a heat input capacity less than 1 MMBtu/hr. The 110 HP diesel engine that power the screener is exempt since the heat input is less than 1 MMBtu/hr.

$$(110 \text{ HP output} \times 2542.5 \text{ Btu/HP input}) / 35\% \text{ efficiency} = \underline{0.799 \text{ MMBtu/hr}}$$

**Alternative Operating Scenarios:**

The applicant proposed to replace diesel engines in the case of an emergency.

**Project Emissions:**

The project emissions that were calculated by the consultant could not be deciphered. Therefore, the Department of Health (DOH) used the existing calculations from the previous permit reviews (for the mobile crusher and power screen). The DOH then calculated potential emissions for the added cone crusher. Manufacturer's data was used when available for the diesel engine. All other emission factors were taken from current AP-42 emission factors for the diesel engine, stone processing, and handling/storage piles.

Emissions from unpaved roads were not calculated since the processed material will be used on site (not imported or exported). The DOH's policy is to not include fugitive emissions from unpaved roads if the trucks are owned by another business. In **Table 2**, the maximum potential annual emissions for the facility, as permitted, were calculated using the proposed limitations with controls (2,080 hrs/yr for each equipment).

For detailed emission factors, hourly emission rates, and calculations see permit reviews for application nos. 0607-01 and 0602-01 for the existing mobile crusher and power screen respectively, and **ENCLOSURES 1** and **2** for the cone crusher.

Table 2 – Potential Facility Emissions

	Existing 0607-01-CT (tpy) <sup>1</sup>		Existing 0602-01-NT (tpy) <sup>1,2</sup>		New Cone Crusher Fugitive <sup>1,3</sup> (tpy)	New Handling / Storage Piles Fugitive <sup>1,3</sup> (tpy)	Total w/ Limits <sup>1,3</sup> (tpy)	Signif Level  (tpy)	Total 8,760 hr/yr <sup>3,4</sup> (tpy)
	DEG	Fugitive <sup>3</sup>	DEG	Fugitive <sup>3</sup>					
SO <sub>2</sub>	1.22	0	0	0	0	0	1.22	≥40	5.14
NO <sub>x</sub>	4.11	0	0	0	0	0	4.11	≥40	17.31
CO	0.66	0	0	0	0	0	0.66	≥100	2.78
PM	0.06	3.76	0	85.53	0.67	1.15	91.17	≥25	383.97
PM <sub>10</sub> /PM <sub>2.5</sub>	0.06	1.67	0	21.30	0.29	0.40	23.72	≥15	99.90
VOC	0.16	0	0	0	0	0	0.16	≥40	.67
HAPs	0.015	0	0	0	0	0	0.015	n/a	0.064

Note:

1. The emissions were based on each equipment operating 2,080 hr/yr at maximum capacity.
2. The Existing 0602-01-NT fugitive emissions include the power screen only and were prorated from its previous 2,000 hr/yr limited. The mobile crusher and DEG were sold to another business.
3. All fugitive emissions include controlled emission factors (as mentioned previously) for water sprays.
4. The Total 8,760 hr/yr emissions were prorated from the Total w/ Limits.

**Ambient Air Quality Analysis:**

A new ambient air quality analysis (AAQA) is not required since there is no proposed change to the diesel engine or its hours of operations. Also, an AAQA is generally not required for fugitive/intermittent sources. Therefore, the previous AAQA for 0607-01-CT still apply.

**Other Issues:**

None.

**Significant Existing Permit Conditions:**

1. Standard DE conditions;
2. Standard stone processing conditions;
3. 2,080 hr/yr limit for the mobile crusher and its diesel engine (to meet SAAQS); and
4. NSPS Subpart OOO requirements.

**Significant New Permit Conditions:**

1. Add the power screen and cone crusher to the equipment list; and
2. The added equipments will be subject to the same conditions as mentioned above.

**Conclusion and Recommendation:**

In conclusion, it is the Department of Health's preliminary determination that the facility will comply with all State and Federal laws, rules, regulations, and standards with regards to air pollution. This determination is based on the application submitted by Pacific Property & Development Corporation. Therefore, a significant modification to a covered source permit for Pacific Property & Development Corporation is recommended subject to the following:

1. The above special conditions;
2. 30-day public review period; and
3. 45-day EPA review period.