

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

**Application No:** 0626-04

**Permit No.:** 0626-01-CT

**Applicant:** Kiewit Pacific Company

**Facility Title:** 875 TPH Portable Stone Quarrying and Processing Plant with One (1) 1,150 kW Diesel Engine Generator

**Location:** Various Temporary Sites, State of Hawaii  
Initial Location: Koloa, Kauai  
450,980 m E, 2,421,500 m N (NAD-83)

**Responsible Official:** Ben Prock  
Hawaii Area Manager  
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**Application Date:** October 10, 2007

**Proposed Project:**

SICC:1442 (Construction Sand and Gravel)

Kiewit Pacific Company is proposing to modify its existing 875 TPH portable stone quarrying and processing plant with a 1,100 kW diesel engine generator permitted under Temporary Covered Source Permit No. 0626-01-CT. This minor modification proposed to replace the existing 1,100 kW diesel engine generator with a 1,150 kW diesel engine generator due to mechanical problems.

This application is considered to be a minor modification since it meets the minor modification definition per HAR §11-60.1-81:

1. Does not increase the emissions of any air pollutant above the permitted emission limits;
2. Does not result in or increase the emissions of any air pollutant not limited by permit to levels equal to or above:

- a. 500 pounds per year of a hazardous air pollutant;
- b. twenty-five percent of significant amounts of emission as defined in section 11-60.1-1, paragraph (1) in the definition of "significant";
- c. five tons per year of carbon monoxide; or
- d. two tons per year of each regulated air pollutant other than carbon monoxide;
3. Does not violate any applicable requirement;
4. Does not involve significant changes to existing monitoring requirements or any relaxation or significant change to existing reporting or recordkeeping requirements in the permit. Any change to the existing monitoring, reporting, or recordkeeping requirements that reduces the enforceability of the permit is considered a significant change;
5. Does 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. Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement, and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
  - a. A federally enforceable emissions cap assumed to avoid classification as a modification pursuant to any provision of Title I of the Act or subchapter 7; and
  - b. An alternative emissions limit approved pursuant to regulations promulgated pursuant to Section 112(i)(5) of the Act or subchapter 9; and
7. Is not a modification pursuant to any provision of Title I of the Act.

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

**Equipment Description:**

One (1) Caterpillar 1,150 kW diesel engine generator, model 3512, serial no. 24Z08012. Manufactured in 1997.

**Air Pollution Controls:**

Air pollution control is achieved through the use of diesel no. 2 with a maximum sulfur content not to exceed 0.5% by weight.

**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
- Subchapter 8 - Standards of Performance for Stationary Sources
  - 11-60.1-161(25) Standards of Performance for Non-metallic Mineral Processing Plants
- Subchapter 10 - Field Citations

- 40 CFR 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

**Non-applicable Requirements:**

- 40 CFR Part 60 – Standards of Performance for New Stationary Sources
  - Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines – not applicable since the proposed 1,150 kW diesel engine generator was manufactured before the applicability dates.

This source is not subject to PSD requirements because it is not a major stationary source, as defined in HAR Title 11, Chapter 60.1, Subchapter 7 and 40 CFR Part 52, Section 52.21.

This source is not subject to NESHAPS as there are no standards in 40 CFR Part 61 applicable to this facility (stone processing plant operations).

This source is not subject to MACT as the facility is not a major source of HAPS, covered under 40 CFR Part 63.

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

A Best Available Control Technology (BACT) analysis is applicable only to new covered sources and 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 project is considered to be a minor modification to a covered source.

**Compliance Assurance Monitoring (CAM) Applicability:**

CAM is not applicable to this facility since the facility is not a major source of pollutants.

**Consolidated Emissions Reporting Rule (CERR)/In-house Reporting Applicability:**

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. This facility does not emit at the CER triggering levels. Therefore, CER requirements are not applicable. However, annual emissions reporting is required since this is a covered source.

**Facility Emissions Summary** <sup>a,c</sup>

Pollutant	Stone Processing Plant (TPY)	Agg Hand/ Storage Piles (TPY)	Unpaved Roads (TPY)	1,150 kW Diesel Engine Generator (TPY)	Total Emissions Including Fugitive (TPY)	Type B CERR Trigger Level <sup>b</sup> (TPY)	In-house Total Facility Trigger Level (TPY)
SO <sub>x</sub>	-	-	-	6.025	6.025	100	≥25
NO <sub>x</sub>	-	-	-	32.843	32.843	≥100	≥25
CO	-	-	-	4.898	4.898	≥1000	≥250
PM	4.08	7.74	18.73	0.894	31.444	-	≥25
PM <sub>10</sub>	1.61	3.66	5.53	0.894	11.694	≥100	≥25
PM <sub>2.5</sub>	0.30	1.15	0.85	0.894	3.194	≥100	
VOC	-	-	-	1.047	1.047	≥100	≥25
Pb	-	-	-			-	
Be	-	-	-			-	
Hg	-	-	-			-	
HAPS	-	-	-	0.051	0.051	-	≥5

<sup>a</sup>TPY are calculated for 2,080 hr/yr of operation.

<sup>b</sup>Based on actual emissions.

<sup>c</sup>Based on potential emissions.

**Insignificant Activities:**

No change from the initial application. Diesel no. 2 fuel will be stored on site in a 1,000 gallon fuel storage tank.

**Alternative Operating Scenarios:**

No change from the initial application. Temporary replacement of the 1,150 kW diesel engine generator from the site is allowed with restrictions.

**Major Source Applicability:**

A major source as defined in §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 emissions do not meet these limits, and thus, this facility is not classified as a major source.

**Synthetic Minor Applicability:**

A synthetic minor source is a facility that is potentially major (as defined in HAR §11-60.1-1), but is made nonmajor through federally enforceable permit conditions (e.g., limiting the facility's hours of operation and limiting the facility's production rate). This facility is a synthetic minor based on potential emissions (NO<sub>x</sub> and PM) of greater than "major" levels (> 100 TPY) when the facility is operated at 8,760 hr/yr.

**Project Emissions:**

Shown below is a comparison of the emissions from the proposed 1,150 kW diesel engine generator and the existing 1,100 kW diesel engine generator. The results show that the proposed 1,150 kW diesel engine generator can be considered a minor modification.

Pollutant	Proposed 1,150 kW DEG (lb/hr)	Proposed 1,150 kW DEG (tpy)	Existing 1,100 kW DEG (lb/hr)	Existing 1,100 kW DEG (tpy)	Difference (tpy)
NO <sub>x</sub> <sup>1</sup>	31.580	32.843	32.738	34.048	-1.205
CO <sup>1</sup>	4.710	4.898	3.549	3.691	1.207
PM <sup>1</sup>	0.860	0.894	0.545	0.566	0.328
SO <sub>2</sub> <sup>2</sup>	5.794	6.025	5.282	5.494	0.531
TOC <sup>3,1</sup>	1.006	1.047	0.77	0.80	0.247
Benzene <sup>3</sup>	0.009	0.009	0.008	0.008	0.001
Toluene <sup>3</sup>	0.003	0.003	0.003	0.003	0.0
Xylenes <sup>3</sup>	0.002	0.002	0.002	0.002	0.0
Propylene <sup>3</sup>	0.031	0.032	0.028	0.030	0.002
Formaldehyde <sup>3</sup>	0.001	0.001	0.001	0.001	0.0
Acetaldehyde <sup>3</sup>	0.001	0.001	0.001	0.001	0.0
Acrolein <sup>3</sup>	0.001	0.001	0.001	0.001	0.0
Total PAH <sup>3</sup>	0.002	0.002	0.002	0.002	0.0
HAPS		0.051		0.048	0.003

<sup>1</sup>Based on manufacturer's emission rates

<sup>2</sup>Based on sulfur mass balance method

<sup>3</sup>Based on AP-42 emission rates, Tables 3.4-1, 3.4-3, 3.4-4, 10/96

**Ambient Air Quality Impact Assessment:**

An ambient air quality impact assessment was not performed since the Department of Health does not require an ambient air quality impact assessment for minor modifications to a covered source.

**Significant Permit Conditions:**

Condition: Attachment II, Special Condition No. A.1.h.

One (1) Caterpillar 1,150 kW diesel engine generator, model 3512, serial no. 24Z02490.

Purpose: The applicant proposes to replace the existing 1,100 kW diesel engine generator with a 1,150 kW diesel engine generator due to mechanical problems.

**Conclusion and Recommendation:**

Based on the information submitted by the applicant, it is the determination of the Department of Health (DOH) that the proposed minor modification of Temporary Covered Source Permit (CSP) No. 0626-01-CT will be in compliance with the all State and Federal air regulations. Therefore, recommend issuance of a minor modification to Temporary Covered Source Permit (CSP) No 0626-01-CT, subject to the incorporation of the significant permit condition noted above and a 45-day EPA review.

Darin Lum  
11/07