

# PROPOSED

Reviewed by: CBS  
April 10, 2007

## Temporary Covered Source Permit (CSP) No. 0040-01-CT Review Application for Renewal No. 0040-12

**Applicant:** Maui Paving, LLC (fka Grace Pacific Corporation)

### **Equipment Description:**

This permit encompasses the following equipment and associated appurtenances for the 186 tph portable drum mix asphalt concrete plant:

- a. 186 tph Astec Industries parallel flow drum mixer/dryer (model no. PDM-630-C, serial no. 87-135);
- b. Astec Industries baghouse (model no. PBH-30, serial no. 87-135, with 18 oz Nomex bags);
- c. 1.25 MMBtu/hr HEATEC hot oil heater (model no. HCS-100, serial no. 097-110);
- d. 725 kW Cummins/Onan diesel engine generator (model no. KTA38-G2, serial no. E950577135);
- e. Four (4) Astec Industries compartment cold feed system (model no. PFC-1012-4SS, serial no. 87-135, 15 ton capacity);
- f. Specmaker screen (serial no. 343M224);
- g. Astec Industries batcher [gob hopper] (model no. SEB-216, serial no. 87-135);
- h. Astec Industries coater (serial no. 83-134, 5' L x 2' W x 3' H);
- i. Hot elevator;
- j. Two (2) storage silos (200 ton capacity); and
- k. Various conveyors

### **Initial Equipment Location:**

Camp 10, Ameron Quarry  
Puunene, Maui

### **Responsible Official:**

Norman T. Shinno  
Plant Manager  
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### **Point of Contact:**

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### **Consultant:**

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## Proposed Project:

This application for permit renewal stated that there are no changes to the equipment or operations since the last application for modification no. 0040-11. However, the applicant decided to separate the recycled asphalt pavement (RAP) crushing plant since it may be relocated to other sites in the future. The RAP plant is permitted under 0555-01-NT under a different model and serial number because the previous identification was incorrect. Therefore, there will be no increase in emissions or concentrations (overall decrease). The process description is as follows:

Virgin aggregate, RAP, and liquid asphalt cement are the three ingredients that can be used to produce the asphalt. Virgin aggregate is received via belt conveyor from the adjacent Grace Pacific quarry, is stored in stockpiles, and transferred to the cold feed storage bins by front-end loader. The aggregate travels by conveyors to a vibrating scalping screen and then to the drum mixer. RAP is transferred from stockpiles into a recycle bin via front-end loader and travels to the crushing and screening system and then to the drum mixer via conveyor. Liquid asphalt is added to the RAP and aggregate in the drum mixer, and the finished product is discharged from the drum mixer onto a conveyor. From this conveyor, the finished product is transferred to storage bins for truck loading. At present, RAP is not used at the Maui site. A diesel engine generator (DEG) provides power to the equipment and lighting at the facility.

This permit review is based on the application dated March 2, 2006 and revision dated November 30, 2006. A check for \$500.00 will be processed for a renewal of a non-major CSP application. CSP No. 0040-01-C dated March 19, 2002 and its amendments dated December 6, 2002; December 4, 2003; and May 8, 2006 will be superseded, in its entirety, upon issuance of this renewal.

## Applicable Requirements:

The AC plant is subject to NSPS, specifically 40 CFR Part 60 Subpart I - Standards of Performance for Hot Mix Asphalt Facilities because this facility has been constructed after June 11, 1973.

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  
        11-60.1-32 Visible Emissions  
        11-60.1-33 Fugitive Dust  
        11-60.1-37 Process Industries  
        11-60.1-38 Sulfur Oxides From Fuel Combustion  
    Subchapter 5 - Covered Sources  
    Subchapter 6 - Fees for Covered Sources, Sections 111-116  
    Subchapter 8 - Standards of Performance for Stationary Sources  
    Subchapter 10 - Field Citations

This is a Synthetic Minor source since CO and NO<sub>x</sub> emissions would be greater than 100 tpy (major source) if this source was to operate continuously at maximum potential.

## Non-Applicable Requirements:

40 CFR Part 61 - National Emission Standard for Hazardous Air Pollutants (NESHAPS) is not applicable because there is no standard for AC plants.

## PROPOSED

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40 CFR Part 63 - Maximum Achievable Control Technology (MACT) is not applicable since the facility is not a major source of hazardous air pollutants (HAPS) emissions (10 tpy of individual or 25 tpy of any combination of HAPS).

Prevention of Significant Deterioration (PSD) is not applicable 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**). However, annual emissions reporting is required for covered sources.

**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	10.13	$\geq 250$	$\geq 100$	$\geq 25$
PM	15.09	n/a	n/a	$\geq 25$
PM <sub>10</sub> /PM <sub>2.5</sub>	7.17	$\geq 250$	$\geq 100$	$\geq 25$
NO <sub>x</sub>	36.83	$\geq 2,500$	$\geq 100$	$\geq 25$
SO <sub>x</sub>	9.06	$\geq 2,500$	$\geq 100$	$\geq 25$
CO	33.79	$\geq 2,500$	$\geq 1,000$	$\geq 250$
HAPs (total)	0.069	n/a	n/a	$\geq 5$

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 no increase in emissions. Therefore BACT does not apply.

### Insignificant Activities/Exemptions:

No new insignificant activities/exemptions were proposed.

The following equipment are insignificant by HAR 11-60.1-82(f)(1) - storage tanks  $<40,000$  gal:

1. two (2) 3,870 gallon recycled oil tanks;
2. 10,310 gallon fuel tank;
3. 25,000 gallon liquid asphalt tank;

# PROPOSED

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4. 650 gallon fuel tank; and
5. 250 gallon fuel tank.

## Alternative Operating Scenarios:

Temporary replacement of DEG with equal or less emissions with similar stack parameters.

## Project Emissions:

There is no significant change in emissions from the previous permit review (only removal of the RAP crusher). The potential facility emissions based on permit limits are shown in **Table 2**. All emissions are based on 2,076 hrs/yr of operation except for the hot oil heater which may operate continuously (8,760 hrs/yr). Also, fuel oil no. 2 with a maximum sulfur content of 0.5% by weight was assumed for all combustion equipment except for the AC plant which used cooking oil/biodiesel as the worst case scenario for certain pollutants.

The emissions in **Table 2** were calculated using current AP-42 emission factors and the hours of operation listed above. For detailed calculations please refer to the Appendix A in the application.

**Table 2**  
**Potential Facility Emissions <sup>1</sup>**

	186 tph AC Plant <sup>2</sup> (tpy)	Handling & Storage Piles (tpy)	Load-Out & Silo Filling (tpy)	Unpaved Roads (tpy)	725 kW DEG (tpy)	Hot Oil Heater (tpy)	Total w/ Permit Limits (tpy)	Total 8,760 hr/yr
SO <sub>2</sub>	2.12	0	0	0	3.88	3.06	9.06	28.38
NO <sub>x</sub>	11.31	0	0	0	24.58	0.94	36.83	151.44
CO	26.58	0	0.49	0	6.53	0.19	33.79	141.78
PM	6.37	1.64	0.21	6.02	0.77	0.08	15.09	63.34
PM <sub>10</sub> /PM <sub>2.5</sub>	4.44	0.78	0.21	1.47	0.44	0.04	7.17	30.09
VOC	6.27	0	3.16	0	0.69	0.01	10.13	42.70
HAPs	0.024	0	0.009	0	0.032	0.004	0.069	0.27

Note:

1. All emissions are based on a 2,076 hr/yr operational limit except for the hot oil heater which is permitted to operate 8,760 hr/yr.
2. The NO<sub>x</sub>, CO, and VOC emissions include the worst case scenario of burning all cooking oil or biodiesel (see application no. 0040-10/11 for details. Sample calculations:  
NO<sub>x</sub> = 10.62 + 0.69 = 11.31 tpy  
CO = 25.10 + 1.48 = 26.58 tpy  
VOC = 6.18 + 0.09 = 6.27 tpy

The maximum expected PM emission rate for the AC plant is 6.14 lb/hr. Therefore, this facility complies with HAR 11-60.1-37 - Process Industries which limits PM emissions to  $E = 4.10 p 0.67 = \underline{136 \text{ lb/hr}}$  (where p = maximum input of material in tph = 186 tph), but not greater than 40 lb/hr.

## Ambient Air Quality Assessment:

## PROPOSED

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Since this permit application does not propose any changes to the existing facility, there will be no increase in emissions. Therefore, a new ambient air quality assessment (AAQA) is not required.

An AAQA was not performed for the previous application nos. 0040-10/11 because the increase in emissions were insignificant. However, AAQAs were performed for application nos. 0040-08 (hot oil heater only), 0040-02 (DEG only), and 0040-01 (original). Please refer to those applications for AAQA details. A new AAQA was not conducted for the CSP renewal application no. 0040-05.

### Other Issues:

None.

### Significant Permit Conditions:

1. NSPS Subpart I requirements;
2. the AC plant shall be powered only by the DEG (to monitor hours of operation);
3. the combined total of cooking oil and biodiesel fired in the drum mixer/dryer cannot exceed 360,000 gallons in any 12-month period (to remain below significant levels of CO);
4. the fuel consumption of the DEG cannot exceed 112,104 gallons in any 12-month period (to meet state ambient air quality standards for NOx);
5. standard spec used oil, cooking oil, and biodiesel conditions (to ensure odors are contained);
6. V.E. conditions (to monitor opacity);
7. alternate operating scenario for replacement DEG;
8. standard baghouse conditions (to ensure PM are being controlled); and
9. install a separate fuel meter to the drum mixer/dryer to record spec used oil, cooking oil, and biodiesel consumption (to ensure that significant levels are not exceeded – pursuant to telephone conversation dated 12/13/06 between Chris Steele/Grace Pacific and Corey Shibata/DOH).

### 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 Maui Paving, LLC. Therefore, a renewal to a temporary covered source permit for Maui Paving, LLC subject to the above permit conditions, 30-day public notice period, and 45-day EPA review is recommended.