

Minor Modification to a Temporary Covered Source
Review Summary

Application No: 0040-16 (minor modification application)
Permit No.: 0040-01-CT
Applicant: Maui Paving, LLC
Facility Title: 186 tph Hot Mix Asphalt Concrete Plant
Location: Camp 10, Ameron Quarry, Puunene, Maui
Responsible Official: Darrell Goo
Senior Vice President of Operations
(808) 674-8383
Plant Manager: Norman Shinno
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(808) 674-8383
Mailing Address: Maui Paving, LLC
P.O. Box 78
Honolulu, Hawaii 96810
Application Date: Received on February 25, 2015

Proposed Project:

SICC: 2951(Asphalt Paving Mixtures and Blocks)

The asphalt plant produces hot mix asphalt from virgin aggregate, reclaimed asphalt pavement (RAP), and liquid asphalt cement. Virgin aggregate is transferred from storage piles to cold feed storage bins by front-end loaders. From the storage bins, the aggregate falls onto conveyors, which transport the aggregate to a vibrating screen and then to the drum mixer. Front-end loaders also transfer RAP from storage piles to a separate feed bin. The RAP is transported to the lump breaker and then to the drum mixer by conveyors. Liquid asphalt is added to the aggregate and RAP blends in the drum mixer. The final product is transported from the drum mixer to the storage silos by a drag conveyor.

In this minor modification application, the applicant proposes to replace the lump breaker with a scalping screen and replace the thirty-ton (30-ton) reclaimed asphalt pavement (RAP) bin with a recycle feed bin. Also, the applicant proposes to add propane, natural gas, and synthetic natural gas (SNG) as allowable fuels for the drum mixer/dryer and 1.25 MMBtu/hr hot oil heater.

This modification is considered a minor modification since it:

PROPOSED

- (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, except lead;
 - (B) 300 pounds per year of lead;
 - (C) twenty-five (25) percent of significant amounts of emission as defined in section 11-60.1-1, paragraph (1) in the definition of "significant"; or
 - (D) two (2) tons per year of each regulated air pollutant not already identified above;
- (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 minor modification application fee of \$100.00 (non-toxic temporary covered source) was submitted by the applicant and processed.

Equipment Description:

This minor modification application replaces the following equipment and associated appurtenances for the 186 TPH portable drum mix asphalt concrete plant:

- a. The Astec Industries lump breaker (model no. 137-1824, serial no. 86-137) will be replaced with a TelSmith scalping screen (model no. 3X6 SD VK, serial no. 44531).
- b. The thirty ton (30 ton) reclaimed asphalt pavement (RAP) bin will be replaced with an Astec Industries recycle feed bin (model no. RFRB-1014-1, serial no. 14-059-263062).

Air Pollution Controls:

1. Drum mixer dryer burns no. 2 diesel fuel with a maximum sulfur content of 0.5% by weight; propane, natural gas, or SNG; spec used oil; or cooking oil or biodiesel, for controlling SO₂ emissions.
2. Hot oil heater burns no. 2 diesel fuel with a maximum sulfur content of 0.5% by weight, propane, natural gas, or SNG for controlling SO₂ emissions.

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
HAR 11-60.1-31	Applicability
HAR 11-60.1-32	Visible Emissions
HAR 11-60.1-33	Fugitive Dust
HAR 11-60.1-37	Process Industries
HAR 11-60.1-38	Sulfur Oxides from Fuel Combustion
Subchapter 5	Covered Sources
Subchapter 6	Fees for Covered Sources, Noncovered Sources, and Agricultural Burning
HAR 11-60.1-111	Definitions
HAR 11-60.1-112	General Fee Provisions for Covered Sources
HAR 11-60.1-113	Application Fees for Covered Sources
HAR 11-60.1-114	Annual Fees for Covered Sources
HAR 11-60.1-115	Basis of Annual Fees for Covered Sources
Subchapter 8	Standards of Performance for Stationary Sources

Federal Requirements

- 40 CFR Part 60 - Standards of Performance for New Stationary Sources (NSPS)
 - Subpart A - General Provisions
 - Subpart I – Standards of Performance for Hot Mix Asphalt Facilities

This facility is subject to Subpart I since it was constructed after June 11, 1973.

Non-applicable Requirements:

Hawaii Administrative Rules (HAR)

Title 11, Chapter 60.1	Air Pollution Control
Subchapter 7	Prevention of Significant Deterioration Review
Subchapter 9	Hazardous Air Pollutant Sources

Federal Requirements

- 40 CFR Part 52.21 Prevention of Significant Deterioration of Air Quality
- 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs)
- 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards)

Prevention of Significant Deterioration (PSD):

This source is not a major stationary source nor are there modifications proposed that by itself constitute a major stationary source that is subject to PSD review. Therefore, PSD is not applicable.

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 increase emissions above significant levels as defined in HAR §11-60.1-1. A BACT analysis is not applicable since this is a minor modification to a covered source.

Air Emissions Reporting Requirements (AERR):

40 CFR Part 51, Subpart A – Air Emissions Reporting Requirements, is based on the emissions of criteria air pollutants from Type A and B point sources (as defined in 40 CFR Part 51, Subpart A), that emit at the AERR triggering levels as shown in the table below. This facility does not emit at the AERR triggering levels. Therefore, AERR is not applicable.

Although AERR for the facility is not triggered, the Clean Air Branch requests annual emissions reporting for all covered sources and from those facilities that have facility-wide emissions of a single air pollutant exceeding in-house triggering levels. Annual emissions reporting is required for this facility because it is a covered source.

Pollutant	Total Facility Emissions ¹ (tpy)	AERR Triggering Levels ¹ (tpy)		In-House Total Facility Triggering Levels ¹ (tpy)
		1-yr Reporting Cycle (Type A Sources)	3-yr Reporting Cycle (Type B Sources)	
VOC	11.61	≥ 250	≥ 100	≥25
PM/PM ₁₀	18.14/3.38	n/a	n/a	≥25/25
PM ₁₀ /PM _{2.5}	3.38/0.44	≥ 250/250	≥ 100/100	n/a
NO _x	24.82	≥ 2,500	≥ 100	≥25
SO _x	4.89	≥ 2,500	≥ 100	≥25
CO	26.55	≥ 2,500	≥ 1,000	≥250
HAPs (total)	1.69	n/a	n/a	≥5

¹ Based on potential emissions

Compliance Assurance Monitoring (CAM):

40 CFR Part 64

Applicability of the CAM rule is determined on a pollutant specific basis for each affected emission unit. Each determination is based upon a series of evaluation criteria. In order for an emission unit to be subject to CAM, each emission unit must:

- Be located at a major source per Title V of the Clean Air Act Amendments of 1990;
- Be subject to federally enforceable applicability requirements;
- Be fitted with an “active” air pollution control device;

- Have pre-control device potential emissions that exceed applicable major source thresholds;
- Not be subject to certain regulations that specifically exempt it from CAM.

Emission units are any part or activity of a stationary source that emits or has the potential to emit any air pollutant.

These emission units are not subject to CAM since this facility is not a major source.

Insignificant Activities:

No change from the previous renewal application.

Alternative Operating Scenarios:

No change from the previous renewal application.

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 (CO) of greater than “major” levels (> 100 TPY) when the facility is operated at 8,760 hr/yr.

Project Emissions:

Comparison of Potential Emissions by Fuel Type (tpy)

Source	Fuel	PM	CO	NO _x	SO _x	VOC	HAPs
Drum Mixer/Dryer	Fuel Oil No. 2	6.14	24.18	10.23	2.05	8.18	1.62
	Natural Gas	6.14	24.18	4.84	0.63	8.18	0.99
	Propane	6.30	24.07	7.01	0.19	8.29	n/a
	SNG	6.14	24.18	5.32	0.63	8.18	0.99
Hot Oil Heater	Fuel Oil No. 2	0.080	0.05	0.80	2.84	0.010	0.0001
	Natural Gas	0.041	0.05	0.54	0.003	0.059	0.010
	Propane	0.042	0.45	0.78	0.001	0.060	n/a
	SNG	0.041	0.05	0.59	0.003	0.059	0.010

Bold – Indicates highest (worst-case) value

Facility Potential Emissions (tpy)

Source	PM	CO	NO _x	SO _x	VOC	HAPs
Drum Mixer/Dryer w/ Baghouse	6.30	24.18	10.23	2.05	8.29	1.62
Silo Filling Operations	0.11	0.22	n/a	n/a	2.27	0.034
Truck Loadout Activities	0.10	0.25	n/a	n/a	0.77	0.016
Scalping Screens	3.35	n/a	n/a	n/a	n/a	n/a
Conveyor Transfer Activities	0.07	n/a	n/a	n/a	n/a	n/a
Material Transfer Activities	1.68	n/a	n/a	n/a	n/a	n/a
Wind Erosion on Storage Pile	0.35	n/a	n/a	n/a	n/a	n/a
725 kW Cummins Main DEG (1500 hrs)	0.21	0.79	6.92	2.14E-05	0.16	0.008
725 kW Cummins/Onan Emergency DEG (500 hrs)	0.07	0.66	6.88	7.26E-06	0.06	0.003
Truck Traveling on Unpaved Roads	5.82	n/a	n/a	n/a	n/a	n/a
1.25 MMBtu/hr Hot Oil Heater	0.08	0.20	0.80	2.88	0.01	0.002
Lump Breaker (to be removed)	(0.22)	n/a	n/a	n/a	n/a	n/a
Total (Proposed)	18.14	26.55	24.82	4.89	11.61	1.69
Total (Existing)	16.76	26.32	24.83	4.93	11.44	1.68
Change	1.38	0.23	(0.01)	(0.04)	0.17	0.01

Greenhouse Gas Emissions (GHG):

No change from the previous renewal application.

Ambient Air Quality Impact Assessment (AAQIA):

An ambient air quality impact assessment is not required for minor modifications. The proposed replacement of the lump breaker and thirty ton (30 ton) RAP bin with the scalping screen and recycle feed bin results in a decrease in PM emissions. The substitution of propane, natural gas, or SNG for fuel oil no. 2 in the drum mixer and hot oil heater results in insignificant increases of PM, CO, VOC, and HAPs with a decrease in NO_x and SO₂.

Significant Permit Conditions:

- Revised Attachment II, Special Condition No. C.1.d as follows:
 - d. The drum mixer/dryer shall only be fired on the following fuels:
 - i. Fuel oil no. 2 with a maximum sulfur content not to exceed 0.5% by weight;
 - ii. Propane, natural gas, or synthetic natural gas (SNG);
 - iii. Specification used oil meeting requirements of Special Condition No. C.1.e of this Attachment;
 - iv. Cooking oil or biodiesel meeting requirements of Special Condition No. C.1.f of this Attachment; or
 - v. Any combination thereof.

- Revised Attachment II, Special Condition No. C.5 as follows:

5. Hot Oil Heater

The hot oil heater shall only be fired on the following fuels:

- a. Fuel oil no. 2 with a maximum sulfur content not to exceed 0.5% by weight;
- b. Propane, natural gas, or synthetic natural gas (SNG); or
- c. Any combination thereof.

Conclusion and Recommendation:

Recommend issuance of the minor modification to existing Temporary Covered Source Permit No. 0040-01-CT, subject to the significant permit conditions above. A 45-day EPA review period is also required. This permit shall supersede CSP No. 0040-01-CT issued on April 25, 2014 in its entirety.

Reviewer: Darin Lum
Date: 6/2015