PROPOSED

PERMIT APPLICATION REVIEW
COVERED SOURCE PERMIT (CSP) NO. 0317-02-C
Application for Modification No. 0317-05

Applicant: Mauna Loa Macadamia Nut Corporation,
a subsidiary of The Hershey Company

Facility: Mauna Loa Macadamia Nut Plant

Location: 16-701 Macadamia Road, Keaau, Hawaii
UTM – 289,428 Meters East and 2,174,789 Meters North (NAD83)

Mailing Address: Mauna Loa Macadamia Nut Corporation
a subsidiary of The Hershey Company
16-701 Macadamia Road
Keaau, Hawaii 96749-8020

Equipment:

a. Kipper & Sons Engineers, Inc. biomass/oil fired boiler, serial no. 1174 (25,000 lb/hr steam capacity/35.7 MMBtu/hr with 15 MMBtu/hr Peabody oil burner), equipped with a PPC Industries electrostatic precipitator, job no. 1249, model no. S10-820-1S.

b. The International Boiler Works Co. biomass/oil fired boiler, identification no. 10960, model no. IDH-16 (6,000 lb/hr steam capacity/9.2 MMBtu/hr with 8.1 MMBtu/hr S.T. Johnson oil burner).

c. 300 kW Caterpillar diesel engine generator, model no. D353TA, serial no. 46B7533, unit no. 4101.

d. 300 kW Caterpillar diesel engine generator, model no. D353TA, serial no. 46B7209, unit no. 4102.

Responsible Official: Mr. Charles K.H. Young
Title: Plant Manager
Company: Mauna Loa Macadamia Nut Corporation
Phone: (808) 966-8691

Contact: Mr. Lino Javier
Title: Sr. Plant Manager
Company: Mauna Loa Macadamia Nut Corporation
Phone: (808) 966-8695

Consultant: Mr. Fred Peyer
Company: EMET Services, Inc.
Address: 94-515 Ukee Street
Waipahu, Hawaii 96797
Phone: (808) 671-8383
Cell: (808) 479-4945

1. Background

1.1 Mauna Loa Macadamia Nut Corporation, a subsidiary of The Hershey Company, has applied for a permit modification to increase the stack diameter for its back-up boiler to prevent problems with back pressure. The reduced stack exit diameter specified in the existing permit for the back-up boiler was based on results from an ISCST3 air modeling

assessment. According to the applicant, the reduced stack diameter creates excessive back pressure which at times leads to flames shooting out the boiler door, with potential injury to the operators. Also, the back pressure causes difficulty in maintaining the steam pressure to run the plant chiller. As such, the applicant requested a modification to increase the backup boiler's stack exit diameter from 6 inches to 10 inches and used an AERMOD model to determine compliance with the air standards.

1.2 The back-up boiler was manufactured prior to 1972 and previously grandfathered from permit requirements. The back-up boiler requires permitting because Mauna Loa Macadamia Nut Corporation has become a major source.

1.3 Permitted equipment for the facility include a 35.7 MMBtu/hr main boiler, smaller 9.2 MMBtu/hr back-up boiler, and two 300 kW diesel engine generators. The main boiler burns used oil with maximum sulfur content of 2% by weight and macadamia nut shells (biomass). The back-up boiler is disconnected from the used oil fuel line and burns macadamia nut shells only. Only one boiler can operate at any one time. Each diesel engine generator is fired on fuel oil No. 2 with maximum sulfur content of 0.5% by weight. The diesel engine generators can operate simultaneously and are used to generate additional electricity for the plant. Future plans are to replace the two 300 kW diesel engine generators with other units.

1.4 The boilers produce steam for running the plant. High pressure steam from the main boiler is run through a turbine to generate electricity. Low pressure steam from either the turbine or back-up boiler is used to run the chiller for air conditioning and to dry macadamia nuts. Boiler steam also provides heat for plant processes.

1.5 There is only a limit on the amount of used oil that can be fired by the main boiler. The existing permit limits main boiler used oil consumption to 350,000 gallons per year. There are no gallon per year fuel or operating hour limits specified for the 300 kW diesel engine generators or the back-up boiler.

1.6 The maximum macadamia nut shell fuel consumption for the boilers is as follows:

Main Boiler

(25,000 lb steam/hr) x (1,000 Btu/lb) x (factor 0.7) = 35.7 MMBtu/hr

(35.7 MMBtu/hr) x (lb nut shells/0.010052 MMBtu) x (8,760 hr/yr) x (ton/2,000 lb) = 15,556 TPY

Back-up Boiler

(6,000 lb steam/hr) x (1,000 Btu/lb) x (factor 0.65) = 9.2 MMBtu/hr

(9.2 MMBtu/hr) x (lb nut shells/0.010052 MMBtu) x (8,760 hr/yr) x (ton/2,000 lb) = 4,009 TPY

1.7 The back-up boiler is not equipped with an air pollution control device for meeting the state emissions limit of 0.4 pound of particulate per 100 pounds of biomass burned. Source testing the back-up boiler in 2006 disclosed a particulate emission of 0.38 lb/100 lb biomass burned. The back-up boiler was operating at approximately 37% capacity during the source test. Information from this source test such as exhaust flow rate and temperature were used as input parameters for the air quality modeling assessment. A

summary of the source performance test results are provided in the permit application on Page 9.

1.8 The Standard Industrial Classification Code for this facility is 0173.

2. Applicable Requirements

2.1 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
  - 11-60.1-38 Sulfur Oxides from Fuel Combustion
  - 11,60.1-39 Storage of Volatile Organic Compounds
- 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

2.2 40 Code of Federal Regulations (CFR) Part 60 – New Source Performance Standards (NSPS), Subpart Dc, Standards of Performance for Small Industrial-Comercial-Institutional Steam Generating Units does not apply to the boilers because the units were constructed prior to 1989.

2.3 40 CFR Part 60, NSPS, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not applicable to the 300 kW diesel engine generators because the units were manufactured prior to April 1, 2006. If new units are selected that are manufactured after April 1, 2006, the requirements from Subpart IIII will be incorporated into the permit upon its modification.

2.4 40 CFR Part 63 - National Emissions Standards for Hazardous Air Pollutants (NESHAPs), Subpart ZZZZ – NESHAPs for Stationary Reciprocating Internal Combustion Engines is applicable to the 300 kW diesel engine generators because the units are located at an area source of HAP emissions and commenced construction before June 12, 2006. An area source of HAP emissions is a source that is not a major source of HAP emissions. Requirements based on a 402 hp rating apply to the diesel engine generators based on a conversion of the rated unit capacity from kilowatt to horsepower.

2.5 Prevention of Significant Deterioration (PSD) review applies to new major stationary sources and major modifications to these types of sources. This facility is not a major stationary source as defined in the PSD regulations because the plant does not belong to the source categories specified in HAR §11-60.1-131 under definition of a major PSD source and maximum potential emissions of any single air pollutant are below 250 TPY.

As such, PSD review is not required. The facility, though, is a major source as defined in HAR §11-60.1 because emissions of CO and NO_X each exceed 100 TPY.

2.6.1 Mauna Loa Macadamia Nut Corporation is subject to 40 CFR, Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources upon permit renewal or significant modification to a pollutant specific emissions unit for which the proposed revision is applicable because all of the following apply:

a. The facility is a major source as defined in the CAM regulation. Potential CO and NO_x emissions are each greater than 100 tons per year.

b. The biomass/oil fired boilers are subject to a state emissions limit for particulate matter. Pursuant to HAR 11-60.1-36, emissions from biomass boilers shall not exceed 0.4 pounds of particulate matter per 100 pounds of biomass burned.

c. An electrostatic precipitator is used for the main boiler to comply with the State's particulate emissions limit.

d. Potential pre-control air pollution control device emissions for the main boiler are greater than 100 TPY particulate matter. Post control particulate emissions, however, are less than 100 TPY.

e. The facility is not otherwise exempt from CAM.

2.6.2 Pursuant to 40 CFR §64.5 (b), a CAM submittal is required as part of the renewal application. The CAM submittal shall be in accordance with 40 CFR §64.4.

2.6.3 Although the back-up boiler is subject to the State particulate emissions limit for burning biomass, the CAM regulation does not apply to this unit because an air pollution control device is not used to achieve compliance with the particulate emissions limit.

2.7 Annual emissions reporting will be required because this plant is a covered source.

2.8 The consolidate emissions reporting rule (CERR) is applicable because NO_X emissions from the facility exceed reporting levels pursuant to 40 CFR §51, Subpart A for type B sources. See table below.

CERR APPLICABILITY			
Pollutant	Facility Emissions	CERR Triggering Levels (TPY)	
		1 year cycle (type A sources)	3 year cycle (type B sources)
PM_{10}	58.9	≥ 250	≥ 100
SO_2	69.7	≥ 2,500	≥ 100
NO_X	156	≥ 2,500	≥ 100
VOC	14.9	≥ 250	≥ 100
CO	128.4	≥ 2,500	≥ 1,000

2.9 A best available control technology (BACT) analysis is not required because there are no increases in potential emissions from the permit modification to increase the back-up

boiler's stack exit diameter.

2.10 The facility is not a synthetic minor source because the facility is already a major source. The NO_X and CO emissions from this facility are each above 100 TPY.

3. Insignificant Activities

3.1 Tanks less than 40,000 gallons in capacity are insignificant activities pursuant to HAR §11-60.1-82(f)(1). Tanks less than 40,000 gallons in capacity at the facility are listed as follows:

Tank No.	Liquid Stored	Capacity (gallons)
1	fuel oil No. 2	8,000
2	used oil	8,000
3	used oil	8,000
4	used oil	4,000
5	used oil	4,000
6	fuel oil No. 2	50
7	fuel oil No. 2	50
8	used oil	75
9	used oil	75

4. Alternate Operating Scenarios

4.1 The existing permit specifies an alternate operating scenario for the diesel engine generators that allows temporary replacement of each permitted diesel engine generator with another unit of similar or smaller size than the primary unit if equipment malfunction or overhaul is required.

5. Air Pollution Control

5.1 Particulate from the main boiler is controlled by a PPC industries ESP. The manufacturer indicated that the ESP should be shut down for cleaning if the output voltage is below 22 kV for an extended period (more than two hours). Available literature for the ESP disclosed the following:

a. Exhaust gas with particulate is drawn from the boiler into one side of the ESP.

b. Inside the ESP, high voltage electrodes impart a negative charge to particles in the gas stream.

c. Negatively charged particles attract to positively charged and grounded collecting surfaces.

d. Particles from the exhaust continue to build-up on positively charged collecting plates as the boiler operates.

e. At periodic intervals, the plates are rapped with a sonic horn rapper and particulate falls into the hopper.

f. The rappers deliver hammer blows of pre-set intensity at pre-set intervals to the plate headers.

g. A vertical shock wave is created in each plate causing the collected material to shear off and fall into the hopper.

h. A mechanical screw conveyor removes collected particulate from the hopper.

6. Project Emissions

6.1 Emissions of NO_X, CO, VOC, PM, PM_{10}, $PM_{2.5}$, and HAPs from the diesel engine generators were based on AP-42, Section 3.3 (10/96), Gasoline and Diesel Industrial Engines. A mass balance calculation was used to determine SO_2 emissions based on the maximum allowable fuel sulfur content of 0.5% and the 27.1 gallon per hour fuel consumption for each unit at 100% load. It was assumed that 96% of the PM is PM_{10} and 90% of the PM is $PM_{2.5}$ based on AP-42, Appendix B.2, Table B.2-2 for gasoline and diesel fired internal combustion engines. The g/s and lb/hr emission rates were based on a worst-case firing rate of 3.8 MMBtu/hr. The worst-case firing rate was based on the maximum fuel consumption for each unit and a heating value for diesel of 140,000 Btu/gallon. Emission estimates are shown in Enclosure (1) and summarized below.

DIESEL ENGINE GENERATORS			
Pollutant	Emission Rate Each Unit		Emissions (TPY- 2 units)
	lb/hr	g/s	No Limits
			8,760 hr/yr
SO_2	1.91	0.241	16.7
NO_X	8.6	1.086	75.3
CO	3.604	0.455	4.0
VOC	1.366	0.172	12.0
PM	1.214	0.153	10.6
PM_{10}	1.176	0.149	10.3
$PM_{2.5}$	1.100	0.139	9.6
Total HAPS	---------	----------	0.209

6.2 Boiler emissions for firing macadamia nut shells were based on 8,760 hr/yr operation. The state limit for biomass boilers that is not to exceed 0.4 lb of particulate per 100 lb of biomass burned was applied to determine PM emissions for the filterable portion. An emission factor from AP-42, Section 1.6(9/03), Wood Residue Combustion In Boilers was used to determine the condensable portion of the particulate matter emission. The filterable and condensable emissions were added together to account for the total particulate emissions. It was assumed that 74% of the PM is PM_{10} and 65% of the PM is $PM_{2.5}$ based on AP-42 data for the main boiler with ESP. It was assumed that 90% of the PM is PM_{10} and 76% of the PM is $PM_{2.5}$ based on AP-42 data for the back-up boiler with no air pollution controls. A mass balance calculation was used to determine SO_2 emissions assuming a maximum sulfur content of 0.05% for the shells. The 0.05%

macadamia nut shell sulfur content was reported in the December 2002 Analysis of Hawaii Biomass Energy Resources for Distributed Energy Applications. The analysis was prepared for the State of Hawaii Department of Business, Economic Development and Tourism by the University of Hawaii Natural Energy Institute. Emissions of CO were based on the December 2002 source test results for the main boiler that disclosed 17.99 lb/hr of CO for firing 1.14 tons of macadamia nut shells over a 1-hour period. Emissions of other pollutants were determined with emission factors from AP-42, Section 1.6 (9/03), Wood Residue Combustion In Boilers. Maximum potential boiler emissions are summarized in the table below and shown in Enclosure (2).

BOILER EMISSIONS (MACADAMIA NUT SHELLS)						
Pollutant	Boiler Emission Rate				TPY Emission	
	Main Boiler		Back-up Boiler		Limited	No Limits
	g/s	lb/hr	g/s	lb/hr	one boiler (main boiler as worst-case)	two boilers
PM (see note a)	1.794	14.2	0.539	4.3	64.9	83.6
PM_{10} (see note a)	1.384	11.0	0.485	3.8	48.0	64.8
$PM_{2.5}$ (see note a)	1.216	9.6	0.410	3.2	42.2	56.4
NO_X	2.209	17.5	0.569	4.5	76.6	96.3
CO	3.539	28.0	0.913	7.2	122.8	154.5
SO_2	0.448	3.5	0.116	0.9	15.5	19.5
VOCs	-------	---------	--------	--------	2.7	3.4
HAPs					5.975	7.516

a: Particulate emissions include both filterable and condensable portions.

6.3 Emissions from the main boiler for firing used oil were based on a fuel limit of 350,000 gallons per year. Emission factors from AP-42, Section 1.11 (10/96), Waste Oil Combustion were used to determine PM, PM_{10}, NO_X, CO, SO_2, VOC, and HAP emissions. It was assumed that the ESP provided a 90% control efficiency for reducing particulate matter from waste oil combustion. A fuel heating value of 135,000 Btu/gallon for waste oil was used for the calculations. An ash content of 0.65% for residual oil to represent that for waste oil was also assumed. The SO_2 emissions were based on a maximum 2% fuel sulfur content allowed for the used oil. Emissions of arsenic, cadmium, chromium, lead, and PCBs were based on the maximum used oil limits specified for these pollutants in parts per million. It was assumed that 45% of the total PM was $PM_{2.5}$ based on AP-42, Appendix B.2, Table B.2-2 for boilers firing mixed fuels including petroleum fuels. Maximum potential boiler emissions for firing used oil are summarized in the table below and shown in Enclosure (3).

BOILER EMISSIONS (Used Oil)		
Pollutant	Boiler Emission Rate	TPY Emission

PROPOSED

	Main Boiler		limited 350,000 gal/yr Total Combined	No Limits 8,760 hr/yr
	g/s	lb/hr		
PM	0.060	0.477	0.8	2.1
PM_{10}	0.052	0.412	0.6	1.8
$PM_{2.5}$	0.027	0.214	0.3	0.9
NO_X	0.224	1.778	2.8	7.8
CO	0.029	0.233	0.4	1.0
SO_2	3.002	23.778	37.5	104.1
VOCs	-------	-------	0.2	0.5
HAPs	-------	-------	0.483	1.337

6.4 Total yearly emissions from operating the plant are listed below as follows:

TOTAL EMISSIONS				
Pollutant	Potential Emissions (TPY)			
	Diesel Engines	Boilers	All Units	All Units
	No Limits	Limited (operation of main boiler as worst-case)	Limited (boilers only)	No Limits
SO_2	16.7	53	69.7	140.3
NO_X	75.3	79.4	156	179.4
CO	4.0	123.2	128.4	159.5
VOC	12.0	2.9	14.9	15.9
PM	10.6	65.7	73.6	93.6
PM_{10}	10.3	48.6	58.9	76.9
$PM_{2.5}$	9.6	42.5	52.1	65.5
Total HAPs	0.209	6.458	6.458	9.062

7. Air Quality Assessment

7.1 An ambient air quality impact analysis (AAQIA) was performed for the back-up boiler to evaluate the modification to increase the stack exit diameter. The main boiler and diesel engine generators were not included in the modeling assessment because there are no modifications proposed for this equipment. Emissions from the existing equipment are considered to be part of the background concentrations. An AERMOD model was used for the assessment using a Lakes Environmental Version AERMOD View 6.4.0 program. Modeling assumptions are listed below.

a. Elevated terrain was used for the model. Digital terrain elevation data with 10 meter resolution for the Hilo and Keaau Ranch quadrants, Zone 5 in NAD83 format was entered into the model.

b. Rural dispersion parameters were assumed for the facility.

c. Buildings at the facility were imported into the model. The EPA building profile input

program (BPIP) was used to evaluate effects of building downwash.

d. Upper air and surface meteorological files with data from the Hilo Airport from year 1990 were used to evaluate pollutant impacts except for 24-hour $PM_{2.5}$ impacts. For 24-hour $PM_{2.5}$ impacts, five years of upper air and surface meteorological data from Hilo airport (1988, 1989, 1990, 1991, and 1992) was used to determine the highest of the eighth-highest impact among the five years of data. Meteorological files from years 1988 to 1992 are the most recent files available for use. Five years of off-site data was used to determine compliance with the 24-hour $PM_{2.5}$ standard because one year of site-specific data was not available for the modeling assessment.

e. A 1,470 meter x 1,470 meter receptor grid with 2,500 receptors was used to determine maximum pollutant impacts. Each receptor was separated by a 30 meter distance.

7.2 The following background concentrations were used for the assessment:

a. PM_{10} and $PM_{2.5}$ – 24 and annual averaging periods collected in 2008 from the Kihei air quality monitoring station on Maui. This monitoring station is closest to Hilo with data for PM_{10} and $PM_{2.5}$ that is not a special purpose monitoring station. For 2008, the Hilo air quality monitoring stations was a special purpose monitoring station for particulate. The special purpose monitoring stations were established to monitor particulate from volcanic eruptions. Volcanic eruptions are considered natural events and therefore may be excluded from the ambient air quality impact analysis.

b. NO_X – annual averaging period collected in 2008 from the Kapolei air quality monitoring station on Oahu. This station is closest to Hilo with data for NO_X.

c. CO – 1 hour and 8 hour averaging periods collected in 2008 from the Honolulu air quality monitoring station on Oahu. This station is closest to Hilo with data for CO.

d. SO_2 – 3-hour, 24-hour, and annual averaging periods collected in 2007 from the Hilo air quality monitoring station on the Big Island. For 2008, the Hilo air quality monitoring stations was a special purpose monitoring station for SO_2.

7.3 The table below lists the emission rates and stack parameters used in the modeling analysis for the back-up boiler.

SOURCE	STACK	EMISSION RATES (g/s)					STACK PARAMETERS			
		NO_X	SO_2	CO	$PM_{2.5}$	PM_{10}	Height (ft)	Temp. ^{O}K (^{O}F)	Dia. (in)	Flow Rate (ft^3/min)
Backup Boiler (biomass)	1	0.569	0.116	0.913	0.410	0.485	40[a]	465 (378)[b]	10.0[a]	4,516[b]

a: Based on information provided by the applicant.
b: Based on information from source testing.

7.4 Modeling results, shown in the table below, indicate compliance with the ambient air quality standards for the modification to increase the back-up boiler's stack exit diameter from 6 inches to 10 inches.

PREDICTED AMBIENT AIR QUALITY IMPACTS						
AIR	AVERAGING	IMPACT	BACKGROUND	TOTAL	AIR STANDARD	PERCENT

PROPOSED

POLLUTANT	TIME	(ug/m^3)	(ug/m^3)	IMPACT (ug/m^3)	(ug/m^3)	STANDARD
SO_2	3 –Hour 24 – Hour Annual	16 12 2	548 167 10	564 179 12	1,300 365 80	44 49 15
NO_2	Annual	10	8	18	70	26
CO	1 – Hour 8 – Hour	177 106	2,405 1,145	2,747 1,969	10,000 5,000	27 23
PM_{10}	24 – Hour Annual	50 9	78 20	128 29	150 50	85 58
$PM_{2.5}$ (see note a)	24 – Hour Annual	18.89 7.3	16 5.5	34.89 12.8	35 15	99.7 85

a: For attainment demonstrations, the $PM_{2.5}$ standard is based on a 3-year average of the 98th percentile 24-hour average and a 3-year average of the annual mean at each ambient monitor. Pursuant to the User's Guide for The AMS/EPA Regulatory Model AERMOD (EPA-454/B-03-001, September 2004), for purposes of demonstrating compliance with the ambient air quality standards, the eighth highest value is an unbiased surrogate for the 98th percentile 24-hour average concentration. The average of the eighth highest $PM_{2.5}$ impact across 5 years of National Weather Service meteorological data (1988, 1989, 1990, 1991, and 1992) was used for demonstrating compliance with the 24-hour ambient air quality standard.

8. Significant Permit Conditions

8.1 The main boiler shall only be fired on macadamia nut shells (biomass) or used oil.

8.2 The back-up boiler shall only be fired on macadamia nut shells (biomass).

8.3 The used oil fired by the main boiler shall not exceed 350,000 gallons in any rolling twelve-month (12-month) period.

8.4 The main boiler and back-up boiler shall not operate simultaneously.

Reason for 8.1 through 8.4: These conditions were incorporated into the permit based on what was proposed by the applicant. The conditions are also necessary for compliance with the ambient air quality standards.

8.5 The stack exhaust exit diameter may be increased for the back-up boiler. The maximum exhaust exit diameter for the back-up boiler shall not exceed 10 inches.

Reason for 8.5: The stack exhaust diameter which is limited to 6 inches in the existing permit can be increased to a maximum 10 inch diameter because modeling predicted compliance with the ambient air quality standards for the stack alteration.

8.6. Each boiler shall not exceed emissions of 0.4 pounds of PM per 100 pounds of biomass burned while the boiler is fired on biomass or biomass in combination with used oil.

Reason for 8.6: This condition is required to apply the State particulate emissions limit specified for biomass boilers.

8.7 The permittee shall not discharge or cause the discharge of nitrogen oxides (NO_X) as NO_2 from each diesel engine generator in excess of 520 ppmvd corrected at 15% O_2 and 8.6 lb/hr.

8.8 A fuel injection timing retard (FITR) of four (4) degrees shall be maintained at all times for operation of each diesel engine generator.

Reason for 8.7 and 8.8: These conditions were previous permit conditions to ensure that nitrogen oxide emissions do not exceed that determined after an initial source test for the diesel engine generators at a 4 degree FITR setting. The FITR was proposed by the applicant as BACT for controlling NO_X. To account for possible fuel nitrogen content variability, engine differences, and long term wear, the BACT limitation for NO_X was established at 10% above the maximum emissions determined from source testing. The emission rate was established as follows:

(7.85 lb/hr)(1.10) = 8.6 lb/hr

(473 ppm)(1.10) = 520 ppm at 15% O_2

8.9 Incorporate requirements from 40 CFR, Part 63, Subpart ZZZZ for the existing diesel engine generators.

Reason for 8.9: Incorporate pursuant to Paragraph 2.4.

9. Conclusion and Recommendation:

Maximum potential emissions were based on worst-case conditions (maximum rated capacity of the boilers and diesel engine generators). Actual capacity of the units will vary depending on operating load. The main boiler is equipped with an ESP to control particulate emissions for firing biomass in combination with used oil. An air modeling assessment for the back-up boiler operating with the main boiler and diesel engine generators showed compliance with the ambient air quality standards for operating with 10 inch stack exit diameter. Recommend issuance of the covered source permit subject to the incorporation of the significant permit conditions, 30-day public comment period, and 45-day review by EPA.

April 26, 2010
Mike Madsen