

STATE OF NEVADA

Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administrator

February 13, 2009

Randall Soule
Bango Oil, LLC
16640 Wedge Parkway
Reno, Nevada 89511

RE: Request for Revision of Class II Air Quality Operating Permit AP2992-1473, Facility ID A0511

Dear Mr. Soule:

The application submitted by Bango Oil, LLC requesting a revision of Class II Air Quality Operating Permit AP2992-1473 has been reviewed by my staff under legal authority from Nevada Revised Statutes 445B.100 through 445B.640 and pursuant to regulations in Nevada Administrative Code 445B.001 through 445B.3791. Based on staff review and recommendation, I am hereby issuing the revised Class II Air Quality Operating Permit AP2992-1473, with appropriate restrictions. The revised Class II Air Quality Operating Permit AP2992-1473 must be posted conspicuously at or near the source.

The draft copy of the revised Class II Air Quality Operating Permit AP2992-1473 was open for public comments and/or objections during the public notice period September 17, 2008 through October 17, 2008. There were several comments from local residents that requested a public hearing. A notice for a public hearing was published in the Lahontan Valley News on December 24, 2008. A public hearing was held in Fallon on January 28, 2009. The deadline to submit comments regarding the revision was extended to the end of the public hearing. NDEP-BAPC responded to the comments from the public hearing. A response to the comments has been prepared and will be provided under separate cover. The draft copy of the revised Class II Air Quality Operating Permit AP2992-1473 was modified to include a schedule of compliance for phasing out the re-generative clay filtration system (emission unit S2.004) and phasing out the thermal combustor (emission unit 2.006).

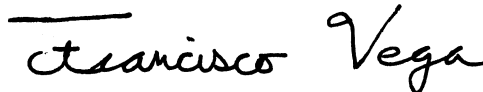
Enclosed is your copy of the revised Air Quality Operating Permit AP2992-1473. The revised permit included reconfiguration of the existing emission unit descriptions; increasing the recycled fuel oil process rate from 925 gallons/hr to 1,200 gallons/hr for System 1; decreasing the emission limits for Cooling Tower #1 (System 3) based on TDS analysis of cooling water; increasing the heat input rate for the thermal combustor (System 4) from 1.988 MMBtu/hr to 5.796 MMBtu/hr; increasing the volume of oily waste water that is treated by the thermal combustor from 142 gallons/hr to 284 gallons/hr; increasing the emission limits for the thermal combustor; adding System 5 (S2.007-S2.008), System 6 (S2.009), System 7 (S2.010-S2.011), and System 8 (S2.012); and adding a 1.68 MMBtu/hr steam boiler to the non-permitted equipment list. In accordance with Nevada Revised Statute 445B.340, you may appeal the department's action of issuance of this revised operating permit within 10 days after you receive the permit. Appeals may be filed with the State Environmental Commission, 901 South Stewart Street, Carson City, Nevada, 89701, telephone 775-687-9308.



The Bango Oil, LLC facility is located in Hydrographic Area (HA) 101. HA 101 is a Prevention of Significant Deterioration (PSD) triggered basin for NOx. Once an area has been triggered, established increments for each pollutant triggered must be tracked to insure that any future source modification or new construction does not cause an exceedance of the increment. This can affect any future changes that Bango Oil, LLC may propose. For example, increased production or additional equipment may require Bango Oil, LLC to install better controls on existing equipment.

Please review your revised permit carefully to understand all conditions, restrictions, monitoring, and recordkeeping requirements. Please note the schedules of compliance for emission units S2.004 and S2.006 in Section VIII. If you have any questions, please call Randy Phillips of my staff, at 775-687-9362.

Sincerely,

A handwritten signature in cursive script that reads "Francisco Vega". The signature is written in black ink and is positioned above the typed name and title.

Francisco Vega
Supervisor, Permitting Branch
Bureau of Air Pollution Control

FV/rp
Enclosures – Class II Air Permit
Hand delivered – February 13, 2009



BUREAU OF AIR POLLUTION CONTROL

901 SOUTH STEWART STREET SUITE 4001

CARSON CITY, NEVADA 89701-5249

p: 775-687-9350 • www.ndep.nv.gov/bapc • f: 775-687-6396

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC (BANGO FACILITY) (hereinafter referred to as Permittee)

Mailing Address: 16640 WEDGE PARKWAY, RENO, NEVADA 89511

Physical Address: 22211 BANGO ROAD, FALLON, NEVADA 89406

General Facility Location: 22211 BANGO ROAD, FALLON, NEVADA 89406
NW1/4 OF SECTION 23, T19N, R26E MDB&M
HA 101 – CARSON DESERT / CHURCHILL COUNTY
NORTH 4,374.15 KM, EAST 324.48 KM, UTM (NAD 83, ZONE 11)

Emission Unit List (12 Emission Units):

A. System 1 – Primary Recycled Fuel Oil Re-Refining System #1

- S 2.001 8.9 MMBtu/hr Process Heater (Oil Heater #1, mfd by Phoenix, mdl# 8.9, s/n 90603)
- S 2.002 Unit #1 Oil Re-Refining Process - Thermal Dehydrators (12 Heated Tanks @ 25,000 Gallons each), Fractionating Tower (Flash Vessel); two Wiped Film Evaporators, Liquid Knock Down Tank, Valves, Motors, Heat Exchangers, Pumps, Compressors

B. System 2 – Secondary Recycled Fuel Oil Re-Refining System

- S 2.003 4.7 MMBtu/hr Process Heater (Oil Heater #2, mfd by Phoenix, mdl# 4.7, s/n 80502)
- S 2.004 Re-Generative Clay Filtration Process (Enervac System)

C. System 3 – Cooling Tower #1

- S 2.005 Water Cooling Tower #1 with Drift Eliminators (mfd by Baltimore Air Coil, mdl# 3000)

D. System 4 – Water Treatment System

- S 2.006 5.796 MMBtu/hr Thermal Combustor (mfd by Boiler Control Supply, mdl# ME-28)

E. System 5 – Primary Recycled Fuel Oil Re-Refining System #2

- S 2.007 6.67 MMBtu/hr Process Heater (Oil Heater #3)
- S 2.008 Unit #2 Oil Re-Refining Process - Fractionating Tower (Flash Vessel); two Wiped Film Evaporators, Liquid Knock Down Tank, Valves, Motors, Heat Exchangers, Pumps, Compressors

F. System 6 – Cooling Tower #2

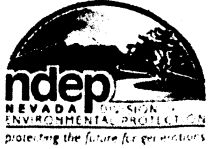
- S 2.009 Water Cooling Tower #2 with Drift Eliminators (mfd by Baltimore Air Coil, mdl# 3000)

G. System 7 – Hydrotreating Filtration System

- S 2.010 2.56 MMBtu/hr Process Heater (Oil Heater #4)
- S 2.011 Hydrotreating Process - Guard Bed Reactor, Hydrotreating Reactors, Hot and Cold High Pressure Separators, Base Oil Stripper, Valves, Motors, Heat Exchangers, Pumps, Compressors

H. System 8 – Cooling Tower #3

- S 2.012 Water Cooling Tower #3 with Drift Eliminators (mfd by EVAPCO, mdl# AT-8-39-B)



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section I. General Conditions

- A. **Severability** (Nevada Administrative Code (NAC) 445B.315.3(c))
Each of the conditions and requirements of this Operating Permit is severable and, if any are held invalid, the remaining conditions and requirements continue in effect.
- B. **Prohibited Acts** (Nevada Revised Statute (NRS) 445B.470)
Permittee shall not knowingly:
1. Violate any applicable provision, the terms or conditions of any permit or any provision for the filing of information;
 2. Fail to pay any fee;
 3. Falsify any material statement, representation or certification in any notice or report; or
 4. Render inaccurate any monitoring device or method, required pursuant to the provisions of NRS 445B.100 to 445B.450, inclusive, or 445B.470 to 445B.640, inclusive, or any regulation adopted pursuant to those provisions.
- C. **Prohibited Conduct: Concealment of Emissions** (NAC 445B.225)
Permittee shall not install, construct, or use any device which conceals any emission without reducing the total release of regulated air pollutants to the atmosphere.
- D. **Compliance/Noncompliance** (NAC 445B.315.3(d))
Permittee shall comply with all conditions of this Operating Permit. Any noncompliance constitutes a violation and is grounds for:
1. An action for noncompliance;
 2. Revising, revoking, reopening and revising, or terminating the Operating Permit; or
 3. Denial of an application for a renewal of the Operating Permit.
- E. NAC 445B.315.3(e)
The need to halt or reduce activity to maintain compliance with the conditions of this Operating Permit is not a defense to noncompliance with any conditions of this Operating Permit.
- F. NAC 445B.315.3(f)
The director may revise, revoke and reissue, reopen and revise, or terminate the operating permit for cause.
- G. NAC 445B.315.3(g)
This Operating Permit does not convey any property rights or any exclusive privilege.
- H. NAC 445B.315.3(h)
Permittee shall provide the Bureau of Air Pollution Control, within a reasonable time, with any information that the Bureau of Air Pollution Control requests in writing to determine whether cause exists for revising, revoking and reissuing, reopening and revising or terminating this Operating Permit or to determine compliance with the conditions of this Operating Permit.
- I. **Fees** (NAC 445B.315.3(i))
Permittee shall pay fees to the Bureau of Air Pollution Control in accordance with the provisions set forth in NAC 445B.327 and 445B.331.
- J. **Right to Entry** (NAC 445B.315.3(j))
Permittee shall allow the Bureau of Air Pollution Control personnel, upon the presentation of credentials, to:
1. Enter upon the premises of Permittee where:
 - a. The stationary source is located;
 - b. Activity related to emissions is conducted; or
 - c. Records are kept pursuant to the conditions of this Operating Permit;
 2. Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of this Operating Permit;
 3. Inspect, at reasonable times, any facilities, practices, operations, or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to this Operating Permit; and
 4. Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of this Operating Permit or applicable requirements.
- K. **Certification** (NAC 445B.315.3(k))
A responsible official of Permittee shall certify that, based on information and belief formed after reasonable inquiry, the statements made in any document required to be submitted by any condition of this Operating Permit are true, accurate and complete.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section I. General Conditions (continued)

L. Testing and Sampling (NAC 445B.252)

1. To determine compliance with NAC 445B.001 to 445B.3689, inclusive, before the approval or the continuance of an operating permit or similar class of permits, the director may either conduct or order the owner of any stationary source to conduct or have conducted such testing and sampling as the director determines necessary. Testing and sampling or either of them must be conducted and the results submitted to the director within 60 days after achieving the maximum rate of production at which the affected facility will be operated, but not later than 180 days after initial startup of the facility and at such times as may be required by the director.
2. Tests of performance must be conducted and data reduced in accordance with the methods and procedures of the test contained in each applicable subsection of this section unless the director:
 - a. Specifies or approves, in specific cases, the use of a method of reference with minor changes in methodology;
 - b. Approves the use of an equivalent method;
 - c. Approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific stationary source is in compliance; or
 - d. Waives the requirement for tests of performance because the owner or operator of a stationary source has demonstrated by other means to the director's satisfaction that the affected facility is in compliance with the standard.
3. Tests of performance must be conducted under such conditions as the director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the director such records as may be necessary to determine the conditions of the performance test. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a performance test unless otherwise specified in the applicable standard. (NAC 445B.252.3)
4. Permittee shall give notice to the director 30 days before the test of performance to allow the director to have an observer present. A written testing procedure for the test of performance must be submitted to the director at least 30 days before the test of performance to allow the director to review the proposed testing procedures. (NAC 445B.252.4)
5. Each test of performance must consist of at least three separate runs using the applicable method for that test. Each run must be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the runs apply. In the event of forced shutdown, failure of an irreplaceable portion of the sampling train, extreme meteorological conditions or other circumstances with less than three valid samples being obtained, compliance may be determined using the arithmetic mean of the results of the other two runs upon the director's approval. (NAC 445B.252.5)
6. All testing and sampling will be performed in accordance with recognized methods and as specified by the director. (NAC 445B.252.6)
7. The cost of all testing and sampling and the cost of all sampling holes, scaffolding, electric power and other pertinent allied facilities as may be required and specified in writing by the director must be provided and paid for by the owner of the stationary source. (NAC 445B.252.7)
8. All information and analytical results of testing and sampling must be certified as to their truth and accuracy and as to their compliance with all provisions of NAC 445B.001 to 445B.3689, inclusive, and copies of these results must be provided to the director no later than 60 days after the testing or sampling, or both.

M. Maximum Opacity of Emissions (NAC 445B.22017)

1. Except as otherwise provided in this section and NAC 445B.2202, Permittee may not cause or permit the discharge into the atmosphere from any emission unit opacity equal to or greater than 20 percent. Opacity must be determined by one of the following methods:
 - a. If opacity is determined by a visual measurement, it must be determined as set forth in Reference Method 9 in Appendix A of 40 C.F.R. Part 60.
 - b. If a source uses a continuous monitoring system for the measurement of opacity, the data must be reduced to 6-minute averages as set forth in 40 CFR § 60.13(h).
2. The provisions of this section and NAC 445B.2202 do not apply to that part of the opacity that consists of uncombined water. The burden of proof to establish the application of this exemption is upon the person seeking to come within the exemption.

N. Exceptions for Stationary Sources (NAC 445B.2202)

The provisions of NAC 445B.22017 do not apply to:

1. Smoke from the open burning described in NAC 445B.22067;
2. Smoke discharged in the course of training air pollution control inspectors to observe visible emissions, if the facility has written approval of the commission;
3. Emissions from an incinerator as set forth in NAC 445B.2207;
4. Emissions of stationary diesel-powered engines during warm-up for not longer than 15 minutes to achieve operating temperatures.



BUREAU OF AIR POLLUTION CONTROL

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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section I. General Conditions (continued)

- O. Odors (NAC 445B.22087)
Permittee may not discharge or cause to be discharged, from any stationary source, any material or regulated air pollutant which is or tends to be offensive to the senses, injurious or detrimental to health and safety, or which in any way interferes with or prevents comfortable enjoyment of life or property.
- P. Assertion of Emergency as Affirmative Defense to Action for Noncompliance (NAC 445B.326.1)
Permittee may assert an affirmative defense to an action brought for noncompliance with a technology-based emission limitation contained in the Operating Permit if the holder of the Operating Permit demonstrates through signed, contemporaneous operating logs or other relevant evidence that:
1. An emergency (as defined in NAC 445B.056) occurred and the holder of the Operating Permit can identify the cause of the emergency;
 2. The facility was being properly operated at the time of the emergency;
 3. During the emergency, the holder of the Operating Permit took all reasonable steps to minimize excess emissions; and
 4. Permittee submitted notice of the emergency to the director within 2 working days after the emergency. The notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken to restore the normal operation of the facility.
 5. In any action for noncompliance, Permittee, by asserting the affirmative defense of any emergency, has the burden of proof.
- Q. Revocation and Reissuance (NAC 445B.3265)
1. This Operating Permit may be revoked if the control equipment is not operating. (NAC 445B.3265.1)
 2. This Operating Permit may be revoked by the director upon determination that there has been a violation of NAC 445B.001 to 445B.3689, inclusive, or the provisions of 40 CFR § 52.21, or 40 C.F.R. Part 60 or 61, Prevention of Significant Deterioration, New Source Performance Standards, and National Emission Standards for Hazardous Air Pollutants adopted by reference in NAC 445B.221. (NAC 445B.3265.2)
 3. The revocation is effective 10 days after the service of a written notice, unless a hearing is requested. (NAC 445B.3265.3)

*****End of General Conditions*****



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section II. General Construction Conditions

A. NAC 445B.250 (State Only Requirement)

Notification

The Director will be notified in writing of the following for **S2.006 through S2.012**:

1. The date construction (or reconstruction as defined under NAC 445B.247) of the affected facility is commenced, postmarked no later than 30 days after such date.
2. The anticipated date of initial startup of an affected facility, postmarked no more than 60 days and no less than 30 days prior to such date.
3. The actual date of initial startup of the affected facility, postmarked within 15 days after such date.

B. Notification (NAC 445B.250.4, NAC 445B.346.2)

The Bureau of Air Pollution Control will be notified in writing of any physical or operational change to an existing facility which may increase the emission rate of any regulated air pollutant to which a standard applies, unless that change is specifically exempted under an applicable section or in NAC 445B.239 or 445B.242 and the exemption is not denied under those sections. The notice must be postmarked 60 days or as soon as practicable before the change is commenced and must include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The director may request additional relevant information subsequent to this notice.

*******End of General Construction Conditions*******



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section IIA. Specific Construction Requirements

D. **Emission Unit S2.006** Location North 4,374.12 km, East 324.49 km, UTM (Zone 11, NAD 83)

System 4 – Water Treatment System

S 2.006 5.796 MMBtu/hr Thermal Combustor (mfd by Boiler Control Supply, mdl# ME-28)

1. **Air Pollution Equipment** (NAC 445B.308.7, NAC 445B.346.1)
Emissions from **S2.006** shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from **S2.006** shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC compounds in oily waste water. Oily waste water is collected from on-site operations and stored in a 10,000 gallon storage tank.

Stack Height: 27.0 ft
Stack Diameter: 1.8 ft x 1.8 ft
Stack Velocity: 16.4 ft/sec
Stack Temperature: 1510 °F

2. **Test Methods and Procedures** (NAC 445B.252, NAC 445B.22017, NAC 445B.346.2)
Within 60 days after achieving the maximum production rate at which **S2.006** will be operated, but no later than 180 days after initial startup of the facility, Permittee shall determine compliance with the emission limits established in Section V.D.2 of this operating permit by conducting performance tests on the exhaust stack of **S2.006** as follows:
 - a. Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.006** consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - b. Conduct and record a Method 7E performance test for nitrogen oxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.006** consisting of three (3) valid runs. The Method 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - c. Conduct and record a Method 15 performance test for reduced sulfur species (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.006** consisting of three (3) valid runs. The Method 15 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - d. Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.006** consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- e. For the purposes of demonstrating compliance with the opacity standard established in Section V.D.2 of this operating permit, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- f. Performance tests required under this section that are conducted below the maximum allowable throughput, as established in Section V.D.3 of this operating permit, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- g. Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



BUREAU OF AIR POLLUTION CONTROL

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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section IIA. Specific Construction Requirements (continued)

E. Emission Units S2.007 and S2.008 Location North 4,374.15 km, East 324.49 km, UTM (Zone 11, NAD 83)

System 5 – Primary Recycled Fuel Oil Re-Refining System #2		
S	2.007	6.67 MMBtu/hr Process Heater (Oil Heater #3)
S	2.008	Unit #2 Oil Re-Refining Process - Fractionating Tower (Flash Vessel); two Wiped Film Evaporators, Liquid Knock Down Tank, Valves, Motors, Heat Exchangers, Pumps, Compressors

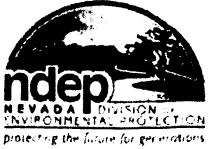
- Air Pollution Equipment (NAC 445B.308.7, NAC 445B.346.1)
Emissions from **S2.007** shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from **S2.007** shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC emissions from the waste gas recovery and energy conservation system.

VOC emissions from **S2.008** shall be controlled by a vacuum recovery system. VOC emissions from **S2.008** that are controlled by the vacuum recovery system discharge through a waste gas recovery and energy conservation system for thermal destruction as fuel in **S2.007**. In emergency situations, such as an upset/shutdown of **S2.007**, VOC emissions from **S2.008** that are controlled by the vacuum recovery system may bypass the waste gas recovery and energy conservation system and discharge into carbon canister #2.

S2.007 Stack Height: 40.0 ft
S2.007 Stack Diameter: 1.8 ft
S2.007 Stack Velocity: 28.0 ft/sec
S2.007 Stack Temperature: 1017 °F

- Test Methods and Procedures (NAC 445B.252, NAC 445B.22017, NAC 445B.346.2)
Within 60 days after achieving the maximum production rate at which **System 5** will be operated, but no later than 180 days after initial startup of the facility, Permittee shall determine compliance with the emission limits established in Section V.E.2 of this operating permit by conducting performance tests on the exhaust stack of **S2.007** as follows:
 - Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.007** consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - Conduct and record a Method 7E performance test for nitrogen oxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.007** consisting of three (3) valid runs. The Method 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - Conduct and record a Method 10 performance test for carbon monoxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.007** consisting of three (3) valid runs. The Method 10 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - Conduct and record a Method 15 performance test for reduced sulfur species (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.007** consisting of three (3) valid runs. The Method 15 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
 - Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.007** consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$
 - For the purposes of demonstrating compliance with the opacity standard established in Section V.E.2 of this operating permit, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
 - Performance tests required under this section that are conducted below the maximum allowable throughput, as established in Section V.E.3 of this operating permit, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
 - Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section IIA. Specific Construction Requirements (continued)

G. Emission Units S2.010 and S2.011 Location North 4,374.15 km, East 324.55 km, UTM (Zone 11, NAD 83)

System 7 – Hydrotreating Filtration System	
S	2.010 2.56 MMBtu/hr Process Heater (Oil Heater #4)
S	2.011 Hydrotreating Process - Guard Bed Reactor, Hydrotreating Reactors, Hot and Cold High Pressure Separators, Base Oil Stripper, Valves, Motors, Heat Exchangers, Pumps, Compressors

1. Air Pollution Equipment (NAC 445B.308.7, NAC 445B.346.1)
 Emissions from S2.010 shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from S2.010 shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC emissions from the waste gas recovery and energy conservation system.

VOC emissions from S2.011 shall be controlled by a vacuum recovery system. VOC emissions from S2.011 that are controlled by the vacuum recovery system discharge through a waste gas recovery and energy conservation system for thermal destruction as fuel in S2.010. In emergency situations, such as an upset/shutdown of S2.010, VOC emissions from S2.011 that are controlled by the vacuum recovery system may bypass the waste gas recovery and energy conservation system and discharge into carbon canister #3.

- S2.010 Stack Height: 40.0 ft
- S2.010 Stack Diameter: 1.2 ft
- S2.010 Stack Velocity: 6.9 ft/sec
- S2.010 Stack Temperature: 1510 °F

2. Test Methods and Procedures (NAC 445B.252, NAC 445B.22017, NAC 445B.346.2)
 Within 60 days after achieving the maximum production rate at which System 7 will be operated, but no later than 180 days after initial startup of the facility, Permittee shall determine compliance with the emission limits established in Section V.G.2 of this operating permit by conducting performance tests on the exhaust stack of S2.010 as follows:

- a. Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.010 consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
- b. Conduct and record a Method 15 performance test for reduced sulfur species (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.010 consisting of three (3) valid runs. The Method 15 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
- c. Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.010 consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- d. For the purposes of demonstrating compliance with the opacity standard established in Section V.G.2 of this operating permit, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- e. Performance tests required under this section that are conducted below the maximum allowable throughput, as established in Section V.G.3 of this operating permit, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- f. Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.

*****End of Specific Construction Requirements*****



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section III. General Operating Conditions

A. Facilities Operation (NAC 445B.227)

Permittee may not:

1. Operate a stationary source of air pollution unless the control equipment for air pollution which is required by applicable requirements or conditions of this Operating Permit is installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of this Operating Permit.

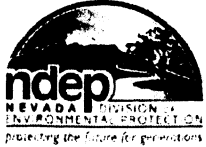
B. Excess Emissions (NAC 445B.232; NAC 445B.346.2)

1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive, must be approved by the director and performed during a time designated by the director as being favorable for atmospheric ventilation.
2. The director must be notified in writing of the time and expected duration at least 24 hours in advance of any scheduled maintenance which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
3. The director must be notified in writing or by telephone of the time and expected duration at least 24 hours in advance of any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
4. The director must be notified of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during startup or shutdown of such equipment. The telephone number for the notification is (775) 687-4670.
5. Permittee, as the owner or operator of an affected facility, shall provide the director, within 15 days after any malfunction, upset, startup, shutdown, or human error which results in excess emissions, sufficient information to enable the director to determine the seriousness of the excess emissions. The information must include at least the following:
 - a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
 - b. The estimated magnitude of the excess emissions expressed in opacity or in units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
 - c. The time and duration of the excess emissions.
 - d. The identity of the equipment causing the excess emissions.
 - e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
 - f. The steps taken to limit the excess emissions.
 - g. Documentation that the equipment for controlling air pollution, process equipment, or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

C. Permit Revision (NAC 445B.287.1.b)

A revision of this operating permit is required pursuant to the requirements of NAC 445B.3465 before the stationary source may be modified.

*******End of General Operating Conditions*******



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section IV. General Monitoring and Recordkeeping

- A. **Records Retention** (NAC 445B.315.3(b))
Permittee shall retain records of all required monitoring data and supporting information for 5 years from the date of the sample collection, measurement, report or analysis. Supporting information includes, but is not limited to, all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.

- B. **Reporting** (NAC 445B.346.3)
Permittee will promptly report to the director any deviations from the requirements of this Operating Permit. The report to the director will include the probable cause of all deviations and any action taken to correct the deviations. For this Operating Permit, prompt is defined as submittal of a report within 15 days of the deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC 445B.232 and under condition III.B of this permit.

- C. **Yearly Reports** (NAC 445B.315.3(h), NAC 445B.346.2)
Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, and emissions. These reports will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year.

*******End of General Monitoring and Recordkeeping Conditions*******



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions

A. Emission Units S2.001 and S2.002 Location North 4,374.16 km, East 324.48 km, UTM (Zone 11, NAD 83)

System 1 – Primary Recycled Fuel Oil Re-Refining System #1

S	2.001	8.9 MMBtu/hr Process Heater (Oil Heater #1, mfd by Phoenix, mdl# 8.9, s/n 90603)
S	2.002	Unit #1 Oil Re-Refining Process - Thermal Dehydrators (12 Heated Tanks @ 25,000 Gallons each), Fractionating Tower (Flash Vessel); two Wiped Film Evaporators, Liquid Knock Down Tank, Valves, Motors, Heat Exchangers, Pumps, Compressors

1. Air Pollution Equipment (NAC 445B.308.7, NAC 445B.346.1)

Emissions from S2.001 shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from S2.001 shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC emissions from the waste gas recovery and energy conservation system.

VOC emissions from S2.002 shall be controlled by a vacuum recovery system. VOC emissions from S2.002 that are controlled by the vacuum recovery system discharge through a waste gas recovery and energy conservation system for thermal destruction as fuel in S2.001. In emergency situations, such as an upset/shutdown of S2.001, VOC emissions from S2.002 that are controlled by the vacuum recovery system may bypass the waste gas recovery and energy conservation system and discharge into carbon canister #1.

- S2.001 Stack Height: 40.0 ft
- S2.001 Stack Diameter: 1.8 ft
- S2.001 Stack Velocity: 27.98 ft/sec
- S2.001 Stack Temperature: 1017 °F

2. Emission Limits (NAC 445B.308.7, NAC 445B.346.1)

On and after the date of startup of System 1, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of S2.001, the following pollutants in excess of the following specified limits:

- a. The discharge of PM to the atmosphere will not exceed 0.39 pounds per hour, nor more than 1.71 tons per year.
- b. The discharge of PM₁₀ to the atmosphere will not exceed 0.39 pounds per hour, nor more than 1.71 tons per year.
- c. The discharge of sulfur dioxide to the atmosphere will not exceed 5.40 pounds per hour, nor more than 23.65 tons per year.
- d. The discharge of nitrogen oxides to the atmosphere will not exceed 2.26 pounds per hour, nor more than 9.92 tons per year.
- e. The discharge of carbon monoxide to the atmosphere will not exceed 0.85 pounds per hour, nor more than 3.72 tons per year.
- f. The discharge of volatile organic compounds to the atmosphere will not exceed 0.037 pounds per hour, nor more than 0.16 tons per year.
- g. The opacity from the stack discharge of S2.001 will not equal or exceed 20 percent in accordance with NAC 445B.22017.

3. Operating Parameters (NAC 445B.308.7; NAC 445B.346.1)

- a. The maximum allowable heat input rate for S2.001 will not exceed 8.9 MMBtu per any one-hour period, combusting a maximum of 67.4 gallons per hour of #2 distillate fuel (process oil and by-product light ends from re-refining process).
- b. The maximum allowable volume of recycled fuel oil for S2.002 is 1,200 gallons per hour (28.6 barrels per hour).
- c. The sulfur content of the #2 distillate fuel combusted in S2.001 will not exceed 0.5% by weight.
- d. S2.002 is limited to the re-refining of recycled fuel oil that may be designated as hazardous waste in their state of origin, but are not regulated as hazardous waste as defined in 40 CFR 261.
- e. The maximum thermal fluid temperature for S2.001 shall be 580 °F.
- f. Hours
S2.001 and S2.002 each, may operate 24 hours per day and 8,760 hours per calendar year.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

A. Emission Units S2.001 and S2.002 (continued)

4. Monitoring, Testing and Reporting (NAC 445B.308.7; NAC 445B.346.2)

a. Monitoring and Recordkeeping (NAC 445B.308.5; NAC 445B.346.2)

Permittee, upon the issuance date of this permit will:

- (1) Monitor and record the #2 distillate fuel consumption rate in gallons for **S2.001** on a daily basis.
- (2) Monitor and record the hours of operation for **S2.001** and **S2.002** each, on a daily basis.
- (3) Monitor and record the sulfur content of the #2 distillate fuel combusted in **S2.001** on a quarterly basis.
- (4) Monitor and record the volume of recycled fuel oil for each delivery that is received on site in gallons.
- (5) Monitor and record the volume of recycled fuel oil that is processed in **S2.002** on a daily basis in gallons.
- (6) Monitor and record the thermal fluid temperature for **S2.001** on a continuous, one-minute average, daily basis.
- (7) The required monitoring and recordkeeping established in (1) through (6) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily #2 distillate fuel consumption in gallons for **S2.001**, for the corresponding date.
 - (c) The total daily hours of operation for **S2.001** and **S2.002**, for the corresponding date.
 - (d) The corresponding average hourly #2 distillate fuel consumption in gallons per hour for **S2.001**. The average hourly #2 distillate fuel consumption rate will be determined from the total daily consumption rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Sulfur analysis of the #2 distillate fuel that is combusted in **S2.001** to ensure compliance with the limits specified in 3.c of this section.
 - (f) The volume of recycled fuel oil for each delivery that is received on site.
 - (g) The total daily volume of recycled fuel oil that is processed in **S2.002**, for the corresponding date.
 - (h) The corresponding average hourly recycled fuel oil that is processed in gallons per hour for **S2.002**. The average hourly recycled fuel oil process rate will be determined from the total daily recycled fuel oil process rate and the total daily hours of operation recorded in (c) and (g) above.
 - (i) The thermal fluid temperature for **S2.001** to ensure compliance with the limits specified in 3.e of this section.
- (8) Maintain records from the recycled fuel oil supplier(s) that certifies the recycled fuel oil feedstock complies with 40 CFR 279.

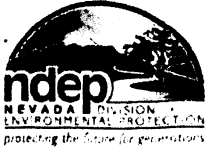
b. Performance/Compliance Testing (NAC 445B.252.1)

At least 90 days prior to the date of expiration of this permit, but no earlier than 365 days from the date of expiration of this permit, Permittee will conduct and record the following performance tests on the exhaust stack of **S2.001**:

- (1) Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.001** consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (2) Conduct and record a Method 7E performance test for nitrogen oxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.001** consisting of three (3) valid runs. The Method 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (3) Conduct and record a Method 10 performance test for carbon monoxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.001** consisting of three (3) valid runs. The Method 10 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (4) Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.001** consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s). In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- (5) For the purposes of demonstrating compliance with the opacity standard established in 2.g of this section, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- (6) Performance tests required under this section that are conducted below the maximum allowable throughput, as established in 3 of this section, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- (7) Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

B. Emission Units S2.003 and S2.004 Location North 4,374.16 km, East 324.47 km, UTM (Zone 11, NAD 83)

System 2 – Secondary Recycled Fuel Oil Re-Refining System

S	2.003	4.7 MMBtu/hr Process Heater (Oil Heater #2, mfd by Phoenix, mdl# 4.7, s/n 80502)
S	2.004	Re-Generative Clay Filtration Process (Enevac System)

1. Air Pollution Equipment (NAC 445B.308.7, NAC 445B.346.1)

Emissions from **S2.003** shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from **S2.003** shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC emissions from the waste gas recovery and energy conservation system.

VOC emissions from **S2.004** shall be controlled by a vacuum recovery system. VOC emissions from **S2.004** that are controlled by the vacuum recovery system discharge through a waste gas recovery and energy conservation system for thermal destruction as fuel in **S2.003**.

- S2.003** Stack Height: 40.0 ft
- S2.003** Stack Diameter: 1.8 ft
- S2.003** Stack Velocity: 14.0 ft/sec
- S2.003** Stack Temperature: 796 °F

2. Emission Limits (NAC 445B.308.7, NAC 445B.346.1)

On and after the date of startup of **System 2**, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.003**, the following pollutants in excess of the following specified limits:

- a. The discharge of PM to the atmosphere will not exceed 0.14 pounds per hour, nor more than 0.62 tons per year.
- b. The discharge of PM₁₀ to the atmosphere will not exceed 0.14 pounds per hour, nor more than 0.62 tons per year.
- c. The discharge of sulfur dioxide to the atmosphere will not exceed 0.62 pounds per hour, nor more than 2.72 tons per year.
- d. The discharge of nitrogen oxides to the atmosphere will not exceed 0.65 pounds per hour, nor more than 2.85 tons per year.
- e. The discharge of carbon monoxide to the atmosphere will not exceed 0.85 pounds per hour, nor more than 3.72 tons per year.
- f. The discharge of volatile organic compounds to the atmosphere will not exceed 0.37 pounds per hour, nor more than 1.62 tons per year.
- g. The opacity from the stack discharge of **S2.003** will not equal or exceed 20 percent in accordance with NAC 445B.22017.

3. Operating Parameters (NAC 445B.308.7; NAC 445B.346.1)

- a. The maximum allowable heat input rate for **S2.003** will not exceed 4.7 MMBtu per any one-hour period, combusting a maximum of 35.6 gallons per hour of #2 distillate fuel (process oil and by-product light ends from re-refining process).
- b. The maximum allowable volume of refined oil products for **S2.004** is 700 gallons per hour.
- c. The sulfur content of the #2 distillate fuel combusted in **S2.003** will not exceed 0.5% by weight.
- d. The maximum thermal fluid temperature for **S2.003** shall be 380 °F.
- e. Hours
S2.003 and **S2.004** each, may operate 24 hours per day and 8,760 hours per calendar year.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

B. Emission Units S2.003 and S2.004 (continued)

4. Monitoring, Testing and Reporting (NAC 445B.308.7; NAC 445B.346.2)

a. Monitoring and Recordkeeping (NAC 445B.308.5; NAC 445B.346.2)

Permittee, upon the issuance date of this permit will:

- (1) Monitor and record the #2 distillate fuel consumption rate in gallons for **S2.003** on a daily basis.
- (2) Monitor and record the hours of operation for **S2.003** on a daily basis.
- (3) Monitor and record the hours of operation for **S2.004** when refined oil products are being processed.
- (4) Monitor and record the hours of operation when the regenerative process is being conducted for **S2.004**.
- (5) Monitor and record the volume of recycled fuel oil that is processed in **S2.004** on a daily basis in gallons.
- (6) Monitor and record the thermal fluid temperature for **S2.003** on a continuous, one-minute average, daily basis.
- (7) The required monitoring and recordkeeping established in (1) through (6) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily #2 distillate fuel consumption in gallons for **S2.003**, for the corresponding date.
 - (c) The total daily hours of operation for **S2.003** for the corresponding date.
 - (d) The corresponding average hourly #2 distillate fuel consumption in gallons per hour for **S2.003**. The average hourly #2 distillate fuel consumption rate will be determined from the total daily consumption rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) The total daily volume of refined oil products that is processed in **S2.004**, for the corresponding date.
 - (f) The total daily hours of operation for **S2.004** when refined oil products are being processed, for the corresponding date.
 - (g) The corresponding average hourly refined oil products that is processed in gallons per hour for **S2.004**. The average hourly recycled fuel oil process rate will be determined from the total daily refined oil products process rate and the total daily hours of operation recorded in (e) and (f) above.
 - (h) The total hours for each regenerative process that is conducted for **S2.004**.
 - (i) The thermal fluid temperature for **S2.003** to ensure compliance with the limits specified in 3.d of this section.

b. Performance/Compliance Testing (NAC 445B.252.1)

At least 90 days prior to the date of expiration of this permit, but no earlier than 365 days from the date of expiration of this permit, Permittee will conduct and record the following performance tests on the exhaust stack of **S2.003**:

- (1) Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.003** consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (2) Conduct and record a Method 7E performance test for nitrogen oxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.003** consisting of three (3) valid runs. The Method 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (3) Conduct and record a Method 10 performance test for carbon monoxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.003** consisting of three (3) valid runs. The Method 10 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (4) Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.003** consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s). In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- (5) For the purposes of demonstrating compliance with the opacity standard established in 2.g of this section, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- (6) Performance tests required under this section that are conducted below the maximum allowable throughput, as established in 3 of this section, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- (7) Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

Permit No. AP2992-1473

CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

C. Emission Unit S2.005 Location North 4,374.15 km, East 324.46 km, UTM (Zone 11, NAD 83)

System 3 – Cooling Tower #1

S 2.005 Water Cooling Tower #1 with Drift Eliminators (mfd by Baltimore Air Coil, mdl# 3000)

1. Air Pollution Equipment (NAC 445B.308.7; NAC 445B.346.1)
Emissions from S2.005 shall be controlled by drift eliminators.

Stack Height: 11.0 ft
Stack Diameter: 9.0 ft
Stack Velocity: 29.5 ft/sec
Stack Temperature: Ambient
2. Emission Limits (NAC 445B.308.7; NAC 445B.346.1)
On and after the date of startup of S2.005, Permittee will not discharge or cause the discharge into the atmosphere from the cooling tower stack of S2.005, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM to the atmosphere will not exceed 0.10 pounds per hour, nor more than 0.45 tons per year.
 - b. The discharge of PM₁₀ to the atmosphere will not exceed 0.10 pounds per hour, nor more than 0.45 tons per year.
 - c. The opacity from the cooling tower stack discharge of S2.005 will not equal or exceed 20 percent in accordance with NAC 445B.22017.
3. Operating Parameters (NAC 445B.308.7; NAC 445B.346.1)
 - a. The maximum circulating water flow rate for S2.005 will not exceed 800 gallons per minute.
 - b. The maximum total dissolved solids (TDS) content for S2.005 will not exceed 1,260 milligrams per liter (1,260 ppm).
 - c. The use of chromium-based water treatment chemicals is prohibited.
 - d. Hours
S2.005 may operate 24 hours per day and 8,760 hours per calendar year.
4. Monitoring, Testing and Reporting (NAC 445B.308.7; NAC 445B.346.2)
 - a. Monitoring and Recordkeeping
Permittee, upon the issuance date of this permit will:
 - (1) Monitor and record the circulation water flow rate in gallons for S2.005 on a daily basis.
 - (2) Monitor and record the hours of operation for S2.005 on a daily basis.
 - (3) The required monitoring established in (1) and (2) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily circulating water flow rate in gallons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The average volume flow rate, in gallons per minute, of the circulating water on a daily basis.
 - b. Performance/Compliance Testing (NAC 445B.252.1)
Permittee will:
 - (1) Sample and analyze the circulating water for Total Dissolved Solids (TDS) at six-month intervals.
 - (2) Record the TDS value from the sampling in 4.b.(1).



BUREAU OF AIR POLLUTION CONTROL

Facility ID No. A0511

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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

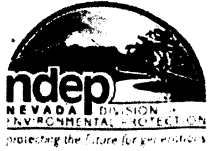
D. **Emission Unit S2.006** Location North 4,374.12 km, East 324.49 km, UTM (Zone 11, NAD 83)

System 4 – Water Treatment System

S 2.006 5.796 MMBtu/hr Thermal Combustor (mfd by Boiler Control Supply, md# ME-28)

1. **Air Pollution Equipment** (NAC 445B.308.7, NAC 445B.346.1)
Emissions from **S2.006** shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from **S2.006** shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC compounds in oily waste water. Oily waste water is collected from on-site operations and stored in a 10,000 gallon storage tank.

Stack Height: 27.0 ft
Stack Diameter: 1.8 ft x 1.8 ft
Stack Velocity: 16.4 ft/sec
Stack Temperature: 1510 °F
2. **Emission Limits** (NAC 445B.308.7, NAC 445B.346.1)
On and after the date of startup of **S2.006**, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.006**, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM to the atmosphere will not exceed 0.13 pounds per hour, nor more than 0.58 tons per year.
 - b. The discharge of PM₁₀ to the atmosphere will not exceed 0.13 pounds per hour, nor more than 0.58 tons per year.
 - c. The discharge of sulfur dioxide to the atmosphere will not exceed 3.59 pounds per hour, nor more than 15.73 tons per year.
 - d. The discharge of nitrogen oxides to the atmosphere will not exceed 1.32 pounds per hour, nor more than 5.77 tons per year.
 - e. The discharge of carbon monoxide to the atmosphere will not exceed 0.33 pounds per hour, nor more than 1.44 tons per year.
 - f. The discharge of volatile organic compounds to the atmosphere will not exceed 0.059 pounds per hour, nor more than 0.26 tons per year.
 - g. The opacity from the stack discharge of **S2.006** will not equal or exceed 20 percent in accordance with NAC 445B.22017.
3. **Operating Parameters** (NAC 445B.308.7; NAC 445B.346.1)
 - a. The maximum allowable heat input rate for **S2.006** will not exceed 5.796 MMBtu per any one-hour period, combusting a maximum of 43.9 gallons per hour of #2 distillate fuel (process oil and by-product light ends from re-refining process).
 - b. The sulfur content of the #2 distillate fuel combusted in **S2.006** will not exceed 0.5% by weight.
 - c. **S2.006** shall be maintained and operated in accordance with the manufacturer's specifications.
 - d. Waste water generated at Permittee facility may consist of water and oily water originating from vapors condensed from the thermal dehydrators tanks, vapors collected from the distillation process, sour water and condensed steam from the hydrotreating filtration process, storm waters collected from secondary containment structures on site, and waters from the cleaning of process equipment and storage tanks.
 - e. The maximum allowable volume of waste water that is combusted in **S2.006** is 284 gallons per hour.
 - f. **S2.006** shall have a flow meter device installed and maintained to measure the waste water being injected into **S2.006**.
 - g. The minimum process temperature of the combustion chamber of **S2.006** shall be 1400 °F.
 - h. Waste water will not be injected into **S2.006** if the process temperature falls below 1400 °F.
 - i. A continuous temperature recording device shall be installed and used to measure and record the process temperature of **S2.006**.
 - j. A continuous CO sensor shall be installed and used to measure and record the CO concentration (in ppm) of **S2.006**.
 - k. **S2.006** will shut down if the CO concentration exceeds 60 ppm for a duration of more than 5 minutes.
 - l. The CO sensor shall be maintained and operated in accordance with the manufacturer's specifications.
 - m. An oxygen sensor and oxygen trim device shall be installed and used in accordance with the manufacturer's specifications.
 - n. **Hours**
S2.006 may operate 24 hours per day and 8,760 hours per calendar year.



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

D. Emission Unit S2.006 (continued)

4. Monitoring, Testing and Reporting (NAC 445B.308.7; NAC 445B.346.2)

a. Monitoring and Recordkeeping (NAC 445B.308.5; NAC 445B.346.2)

Permittee, upon the issuance date of this permit will:

- (1) Monitor and record the #2 distillate fuel consumption rate in gallons for S2.006 on a daily basis.
- (2) Monitor and record the hours of operation for S2.006 on a daily basis.
- (3) Monitor and record the volume of waste water that is processed in S2.006 on a daily basis in gallons.
- (4) Monitor and record the process temperature of the combustion chamber for S2.006 on a continuous basis.
- (5) Monitor and record the time and date when the process temperature falls below 1400 °F and requires S2.006 to be shutdown.
- (6) Monitor and record the CO concentration of the combustion chamber for S2.006 on a continuous basis.
- (7) Monitor and record the time and date when the CO concentration exceeds 60 ppm and requires S2.006 to be shutdown.
- (8) For any unplanned shutdown event, record any corrections to S2.006 that corrected the unplanned shutdown event.
- (9) The required monitoring and recordkeeping established in (1) through (8) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily #2 distillate fuel consumption in gallons for S2.006, for the corresponding date.
 - (c) The total daily hours of operation for S2.006 for the corresponding date.
 - (d) The corresponding average hourly #2 distillate fuel consumption in gallons per hour for S2.006. The average hourly #2 distillate fuel consumption rate will be determined from the total daily consumption rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) The total daily volume of waste water processed in S2.006 in gallons, for the corresponding date.
 - (f) The corresponding average hourly volume of waste water processed in S2.006 in gallons per hour. The average hourly volume of waste water processed will be determined from the total daily volume processed and the total daily hours of operation recorded in (c) and (e) above.
 - (g) The process temperature of the combustion chamber.
 - (h) The CO concentration of the combustion chamber.
 - (i) The times and dates when S2.006 has an unplanned shutdown event as a result of a CO concentration exceedance, low process temperature, or some other event that initiates shutdown.
- (10) Any corrections made to S2.006 that corrected an unplanned shutdown event.
- (11) Maintain records of maintenance and operation in accordance with the manufacturer's specifications for S2.006.
- (12) Maintain records of maintenance and operation in accordance with the manufacturer's specifications for the CO sensor. Records shall at a minimum contain calibration data for the CO sensor and any adjustments made to the CO sensor.
- (13) Maintain records of maintenance and operation in accordance with the manufacturer's specifications for the oxygen sensor and oxygen trim device. Records shall at a minimum contain calibration data for the oxygen sensor and any adjustments made to the oxygen sensor.

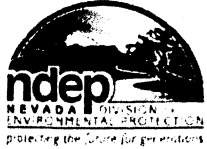
b. Performance/Compliance Testing (NAC 445B.252.1)

At least 90 days prior to the date of expiration of this permit, but no earlier than 365 days from the date of expiration of this permit, Permittee will conduct and record the following performance tests on the exhaust stack of S2.006:

- (1) Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.006 consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
- (2) Conduct and record a Method 7E performance test for nitrogen oxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.006 consisting of three (3) valid runs. The Method 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A.
- (3) Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.006 consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s). In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- (4) For the purposes of demonstrating compliance with the opacity standard established in 2.g of this operating permit, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- (5) Performance tests required under this section that are conducted below the maximum allowable throughput, as established in 3 of this section, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- (6) Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



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CLASS II AIR QUALITY OPERATING PERMIT

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Section V. Specific Operating Conditions (continued)

E. **Emission Units S2.007 and S2.008** Location North 4,374.15 km, East 324.49 km, UTM (Zone 11, NAD 83)

System 5 – Primary Recycled Fuel Oil Re-Refining System #2

S	2.007	6.67 MMBtu/hr Process Heater (Oil Heater #3)
S	2.008	Unit #2 Oil Re-Refining Process - Fractionating Tower (Flash Vessel); two Wiped Film Evaporators, Liquid Knock Down Tank, Valves, Motors, Heat Exchangers, Pumps, Compressors

1. **Air Pollution Equipment** (NAC 445B.308.7, NAC 445B.346.1)
Emissions from **S2.007** shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from **S2.007** shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC emissions from the waste gas recovery and energy conservation system.

VOC emissions from **S2.008** shall be controlled by a vacuum recovery system. VOC emissions from **S2.008** that are controlled by the vacuum recovery system discharge through a waste gas recovery and energy conservation system for thermal destruction as fuel in **S2.007**. In emergency situations, such as an upset/shutdown of **S2.007**, VOC emissions from **S2.008** that are controlled by the vacuum recovery system may bypass the waste gas recovery and energy conservation system and discharge into carbon canister #2.

S2.007 Stack Height: 40.0 ft
S2.007 Stack Diameter: 1.8 ft
S2.007 Stack Velocity: 28.0 ft/sec
S2.007 Stack Temperature: 1017 °F

2. **Emission Limits** (NAC 445B.308.7, NAC 445B.346.1)
On and after the date of startup of **System 5**, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.007**, the following pollutants in excess of the following specified limits:
- a. The discharge of PM to the atmosphere will not exceed 0.15 pounds per hour, nor more than 0.67 tons per year.
 - b. The discharge of PM₁₀ to the atmosphere will not exceed 0.15 pounds per hour, nor more than 0.67 tons per year.
 - c. The discharge of sulfur dioxide to the atmosphere will not exceed 4.17 pounds per hour, nor more than 18.27 tons per year.
 - d. The discharge of nitrogen oxides to the atmosphere will not exceed 1.53 pounds per hour, nor more than 6.70 tons per year.
 - e. The discharge of carbon monoxide to the atmosphere will not exceed 0.38 pounds per hour, nor more than 1.68 tons per year.
 - f. The discharge of volatile organic compounds to the atmosphere will not exceed 0.069 pounds per hour, nor more than 0.30 tons per year.
 - g. The opacity from the stack discharge of **S2.007** will not equal or exceed 20 percent in accordance with NAC 445B.22017.
3. **Operating Parameters** (NAC 445B.308.7; NAC 445B.346.1)
- a. The maximum allowable heat input rate for **S2.007** will not exceed 6.67 MMBtu per any one-hour period, combusting a maximum of 50.5 gallons per hour of #2 distillate fuel (process oil and by-product light ends from re-refining process).
 - b. The maximum allowable volume of recycled fuel oil for **S2.008** is 1,200 gallons per hour (28.6 barrels per hour).
 - c. The sulfur content of the #2 distillate fuel combusted in **S2.007** will not exceed 0.5% by weight.
 - d. **S2.008** is limited to the re-refining of recycled fuel oil that may be designated as hazardous waste in their state of origin, but are not regulated as hazardous waste as defined in 40 CFR 261.
 - e. The maximum thermal fluid temperature for **S2.007** shall be 580 °F.
 - f. **Hours**
S2.007 and **S2.008** each, may operate 24 hours per day and 8,760 hours per calendar year.



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Section V. Specific Operating Conditions (continued)

E. Emission Units S2.007 and S2.008 (continued)

4. Monitoring, Testing and Reporting (NAC 445B.308.7; NAC 445B.346.2)

a. Monitoring and Recordkeeping (NAC 445B.308.5; NAC 445B.346.2)

Permittee, upon the issuance date of this permit will:

- (1) Monitor and record the #2 distillate fuel consumption rate in gallons for S2.007 on a daily basis.
- (2) Monitor and record the hours of operation for S2.007 and S2.008 each, on a daily basis.
- (3) Monitor and record the sulfur content of the #2 distillate fuel combusted in S2.007 on a quarterly basis.
- (4) Monitor and record the volume of recycled fuel oil for each delivery that is received on site in gallons.
- (5) Monitor and record the volume of recycled fuel oil that is processed in S2.008 on a daily basis in gallons.
- (6) Monitor and record the thermal fluid temperature for S2.007 on a continuous, one-minute average, daily basis.
- (7) The required monitoring and recordkeeping established in (1) through (6) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily #2 distillate fuel consumption in gallons for S2.007, for the corresponding date.
 - (c) The total daily hours of operation for S2.007 and S2.008, for the corresponding date.
 - (d) The corresponding average hourly #2 distillate fuel consumption in gallons per hour for S2.007. The average hourly #2 distillate fuel consumption rate will be determined from the total daily consumption rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) Sulfur analysis of the #2 distillate fuel that is combusted in S2.007 to ensure compliance with the limits specified in 3.c of this section.
 - (f) The volume of recycled fuel oil for each delivery that is received on site.
 - (g) The total daily volume of recycled fuel oil that is processed in S2.008, for the corresponding date.
 - (h) The corresponding average hourly recycled fuel oil that is processed in gallons per hour for S2.008. The average hourly recycled fuel oil process rate will be determined from the total daily recycled fuel oil process rate and the total daily hours of operation recorded in (c) and (g) above.
 - (i) The thermal fluid temperature for S2.007 to ensure compliance with the limits specified in 3.e of this section.
- (8) Maintain records from the recycled fuel oil supplier(s) that certifies the recycled fuel oil feedstock complies with 40 CFR 279.

b. Performance/Compliance Testing (NAC 445B.252.1)

At least 90 days prior to the date of expiration of this permit, but no earlier than 365 days from the date of expiration of this permit, Permittee will conduct and record the following performance tests on the exhaust stack of S2.007:

- (1) Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.007 consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (2) Conduct and record a Method 7E performance test for nitrogen oxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.007 consisting of three (3) valid runs. The Method 7E emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (3) Conduct and record a Method 10 performance test for carbon monoxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.007 consisting of three (3) valid runs. The Method 10 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (4) Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of S2.007 consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s). In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOC) mass emission rate on a propane basis as follows:

$$[\text{TGOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- (5) For the purposes of demonstrating compliance with the opacity standard established in 2.g of this section, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- (6) Performance tests required under this section that are conducted below the maximum allowable throughput, as established in 3 of this section, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- (7) Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



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CLASS II AIR QUALITY OPERATING PERMIT

Issued to: BANGO OIL, LLC

Section V. Specific Operating Conditions (continued)

F. **Emission Unit S2.009** Location North 4,374.15 km, East 324.50 km, UTM (Zone 11, NAD 83)

System 6 – Cooling Tower #2

S 2.009 Water Cooling Tower #2 with Drift Eliminators (mfd by Baltimore Air Coil, mdl# 3000)

1. **Air Pollution Equipment** (NAC 445B.308.7; NAC 445B.346.1)
Emissions from S2.009 shall be controlled by drift eliminators.

Stack Height: 11.0 ft
Stack Diameter: 9.0 ft
Stack Velocity: 29.5 ft/sec
Stack Temperature: Ambient
2. **Emission Limits** (NAC 445B.308.7; NAC 445B.346.1)
On and after the date of startup of S2.009, Permittee will not discharge or cause the discharge into the atmosphere from the cooling tower stack of S2.009, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM to the atmosphere will not exceed 0.10 pounds per hour, nor more than 0.45 tons per year.
 - b. The discharge of PM₁₀ to the atmosphere will not exceed 0.10 pounds per hour, nor more than 0.45 tons per year.
 - c. The opacity from the cooling tower stack discharge of S2.009 will not equal or exceed 20 percent in accordance with NAC 445B.22017.
3. **Operating Parameters** (NAC 445B.308.7; NAC 445B.346.1)
 - a. The maximum circulating water flow rate for S2.009 will not exceed 800 gallons per minute.
 - b. The maximum total dissolved solids (TDS) content for S2.009 will not exceed 1,260 milligrams per liter (1,260 ppm).
 - c. The use of chromium-based water treatment chemicals is prohibited.
 - d. **Hours**
S2.009 may operate 24 hours per day and 8,760 hours per calendar year.
4. **Monitoring, Testing and Reporting** (NAC 445B.308.7; NAC 445B.346.2)
 - a. **Monitoring and Recordkeeping**
Permittee, upon the issuance date of this permit will:
 - (1) Monitor and record the circulation water flow rate in gallons for S2.009 on a daily basis.
 - (2) Monitor and record the hours of operation for S2.009 on a daily basis.
 - (3) The required monitoring established in (1) and (2) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily circulating water flow rate in gallons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The average volume flow rate, in gallons per minute, of the circulating water on a daily basis.
 - b. **Performance/Compliance Testing** (NAC 445B.252.1)
Permittee will:
 - (1) Sample and analyze the circulating water for Total Dissolved Solids (TDS) at six-month intervals.
 - (2) Record the TDS value from the sampling in 4.b.(1).



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Section V. Specific Operating Conditions (continued)

G. **Emission Units S2.010 and S2.011** Location North 4,374.15 km, East 324.55 km, UTM (Zone 11, NAD 83)

System 7 – Hydrotreating Filtration System

S	2.010	2.56 MMBtu/hr Process Heater (Oil Heater #4)
S	2.011	Hydrotreating Process - Guard Bed Reactor, Hydrotreating Reactors, Hot and Cold High Pressure Separators, Base Oil Stripper, Valves, Motors, Heat Exchangers, Pumps, Compressors

1. Air Pollution Equipment (NAC 445B.308.7, NAC 445B.346.1)

Emissions from **S2.010** shall be uncontrolled, discharging through the exhaust stack to the outside atmosphere. Emissions from **S2.010** shall consist of the combustion products related to fuel combustion of process oil and by-product light ends from the re-refining process and combustion products from the thermal destruction of VOC emissions from the waste gas recovery and energy conservation system.

VOC emissions from **S2.011** shall be controlled by a vacuum recovery system. VOC emissions from **S2.011** that are controlled by the vacuum recovery system discharge through a waste gas recovery and energy conservation system for thermal destruction as fuel in **S2.010**. In emergency situations, such as an upset/shutdown of **S2.010**, VOC emissions from **S2.011** that are controlled by the vacuum recovery system may bypass the waste gas recovery and energy conservation system and discharge into carbon canister #3.

S2.010 Stack Height: 40.0 ft
S2.010 Stack Diameter: 1.2 ft
S2.010 Stack Velocity: 6.9 ft/sec
S2.010 Stack Temperature: 1510 °F

2. Emission Limits (NAC 445B.308.7, NAC 445B.346.1)

On and after the date of startup of **System 7**, Permittee will not discharge or cause the discharge into the atmosphere from the exhaust stack of **S2.010**, the following pollutants in excess of the following specified limits:

- a. The discharge of PM to the atmosphere will not exceed 0.057 pounds per hour, nor more than 0.25 tons per year.
- b. The discharge of PM₁₀ to the atmosphere will not exceed 0.057 pounds per hour, nor more than 0.25 tons per year.
- c. The discharge of sulfur dioxide to the atmosphere will not exceed 1.55 pounds per hour, nor more than 6.81 tons per year.
- d. The discharge of nitrogen oxides to the atmosphere will not exceed 0.57 pounds per hour, nor more than 2.50 tons per year.
- e. The discharge of carbon monoxide to the atmosphere will not exceed 0.14 pounds per hour, nor more than 0.63 tons per year.
- f. The discharge of volatile organic compounds to the atmosphere will not exceed 0.025 pounds per hour, nor more than 0.11 tons per year.
- g. The opacity from the stack discharge of **S2.010** will not equal or exceed 20 percent in accordance with NAC 445B.22017.

3. Operating Parameters (NAC 445B.308.7; NAC 445B.346.1)

- a. The maximum allowable heat input rate for **S2.010** will not exceed 2.56 MMBtu per any one-hour period, combusting a maximum of 19.4 gallons per hour of #2 distillate fuel (process oil and by-product light ends from re-refining process).
- b. The maximum allowable volume of refined oil products for **S2.011** is 1,200 gallons per hour.
- c. The sulfur content of the #2 distillate fuel combusted in **S2.010** will not exceed 0.5% by weight.
- d. The maximum temperature for the oil-gas feed mixture being processed inside coils in the radiant and convective zones of **S2.010** shall be 700 °F.
- e. Hours
S2.010 and **S2.011** each, may operate 24 hours per day and 8,760 hours per calendar year.



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Section V. Specific Operating Conditions (continued)

G. Emission Units S2.010 and S2.011 (continued)

4. Monitoring, Testing and Reporting (NAC 445B.308.7; NAC 445B.346.2)

a. Monitoring and Recordkeeping (NAC 445B.308.5; NAC 445B.346.2)

Permittee, upon the issuance date of this permit will:

- (1) Monitor and record the #2 distillate fuel consumption rate in gallons for **S2.010** on a daily basis.
- (2) Monitor and record the hours of operation for **S2.010** on a daily basis.
- (3) Monitor and record the hours of operation for **S2.011** when refined oil products are being processed.
- (4) Monitor and record the hours of operation when the hydrotreating process is being conducted for **S2.011**.
- (5) Monitor and record the volume of refined oil products that is processed in **S2.011** on a daily basis in gallons.
- (6) Monitor and record the temperature of the oil-gas feed mixture inside the coils of **S2.010** on a continuous, one-minute average, daily basis.
- (7) The required monitoring and recordkeeping established in (1) through (6) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily #2 distillate fuel consumption in gallons for **S2.010**, for the corresponding date.
 - (c) The total daily hours of operation for **S2.010** for the corresponding date.
 - (d) The corresponding average hourly #2 distillate fuel consumption in gallons per hour for **S2.010**. The average hourly #2 distillate fuel consumption rate will be determined from the total daily consumption rate and the total daily hours of operation recorded in (b) and (c) above.
 - (e) The total daily volume of refined oil products that is processed in **S2.011**, for the corresponding date.
 - (f) The total daily hours of operation for **S2.011** when refined oil products are being processed, for the corresponding date.
 - (g) The corresponding average hourly refined oil products that is processed in gallons per hour for **S2.011**. The average hourly refined oil products process rate will be determined from the total daily refined oil products process rate and the total daily hours of operation recorded in (e) and (f) above.
 - (h) The total hours for each hydrotreating process that is conducted for **S2.011**.
 - (i) The temperature of the oil-gas feed mixture inside the coils of **S2.010** to ensure compliance with the limits specified in 3.d of this section.

b. Performance/Compliance Testing (NAC 445B.252.1)

At least 90 days prior to the date of expiration of this permit, but no earlier than 365 days from the date of expiration of this permit, Permittee will conduct and record the following performance tests on the exhaust stack of **S2.010**:

- (1) Conduct and record a Method 6 performance test for sulfur dioxide emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.010** consisting of three (3) valid runs. The Method 6 emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s).
- (2) Conduct and record a Method 25A performance test for volatile organic compound emissions (or equivalent EPA reference method as approved by the director) on the exhaust stack of **S2.010** consisting of three (3) valid runs. The Method 25A emissions test must be conducted in accordance with 40 CFR Part 60, Appendix A. All performance tests must be conducted at the maximum production rate of the emission unit(s). In the absence of molecular speciation data, the VOC mass emission rate shall be calculated from the carbon (total gaseous organic carbon, or TGOOC) mass emission rate on a propane basis as follows:

$$[\text{TGOOC mass emission rate}] \times [1.22] = \text{VOC mass emission rate}$$

- (3) For the purposes of demonstrating compliance with the opacity standard established in 2.g of this section, opacity observations shall be conducted concurrently with the performance test and in accordance with Reference Method 9 in Appendix A of 40 CFR Part 60. The minimum total time of observations shall be six minutes (24 consecutive observations recorded at 15-second intervals).
- (4) Performance tests required under this section that are conducted below the maximum allowable throughput, as established in 3 of this section, shall be subject to the director's review to determine if the throughputs during the performance tests were sufficient to provide adequate compliance demonstration. Should the director determine that the performance tests do not provide adequate compliance demonstration, the director may require additional performance testing.
- (5) Permittee shall comply with the requirements of Section I.L.3 through I.L.8 for all performance testing.



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Section V. Specific Operating Conditions (continued)

H. Emission Unit **S2.012** Location North 4,374.13 km, East 324.56 km, UTM (Zone 11, NAD 83)

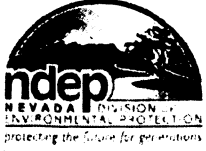
System 8 – Cooling Tower #3

S 2.012 Water Cooling Tower #3 with Drift Eliminators (mfd by EVAPCO, mdl# AT-8-39-B)

1. **Air Pollution Equipment** (NAC 445B.308.7; NAC 445B.346.1)
Emissions from **S2.012** shall be controlled by drift eliminators.

Stack Height: 11.0 ft
Stack Diameter: 4.0 ft
Stack Velocity: 29.5 ft/sec
Stack Temperature: Ambient
2. **Emission Limits** (NAC 445B.308.7; NAC 445B.346.1)
On and after the date of startup of **S2.012**, Permittee will not discharge or cause the discharge into the atmosphere from the cooling tower stack of **S2.012**, the following pollutants in excess of the following specified limits:
 - a. The discharge of PM to the atmosphere will not exceed 0.034 pounds per hour, nor more than 0.15 tons per year.
 - b. The discharge of PM₁₀ to the atmosphere will not exceed 0.034 pounds per hour, nor more than 0.15 tons per year.
 - c. The opacity from the cooling tower stack discharge of **S2.012** will not equal or exceed 20 percent in accordance with NAC 445B.22017.
3. **Operating Parameters** (NAC 445B.308.7; NAC 445B.346.1)
 - a. The maximum circulating water flow rate for **S2.012** will not exceed 264 gallons per minute.
 - b. The maximum total dissolved solids (TDS) content for **S2.012** will not exceed 1,260 milligrams per liter (1,260 ppm).
 - c. The use of chromium-based water treatment chemicals is prohibited.
 - d. **Hours**
S2.012 may operate 24 hours per day and 8,760 hours per calendar year.
4. **Monitoring, Testing and Reporting** (NAC 445B.308.7; NAC 445B.346.2)
 - a. **Monitoring and Recordkeeping**
Permittee, upon the issuance date of this permit will:
 - (1) Monitor and record the circulation water flow rate in gallons for **S2.012** on a daily basis.
 - (2) Monitor and record the hours of operation for **S2.012** on a daily basis.
 - (3) The required monitoring established in (1) and (2) above, will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:
 - (a) The calendar date of any required monitoring.
 - (b) The total daily circulating water flow rate in gallons, for the corresponding date.
 - (c) The total daily hours of operation for the corresponding date.
 - (d) The average volume flow rate, in gallons per minute, of the circulating water on a daily basis.
 - b. **Performance/Compliance Testing** (NAC 445B.252.1)
Permittee will:
 - (1) Sample and analyze the circulating water for Total Dissolved Solids (TDS) at six-month intervals.
 - (2) Record the TDS value from the sampling in 4.b.(1).

*****End of Specific Operating Conditions*****



BUREAU OF AIR POLLUTION CONTROL

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CLASS II AIR QUALITY OPERATING PERMIT

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Section VI. Emission Caps

A. No Emission Caps Defined.

*******End of Emission Caps*******



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Section VII. Surface Area Disturbance Conditions

Surface area disturbance less than 5 acres

A. Fugitive Dust (NAC 445B.22037)

1. Permittee may not cause or permit the handling, transporting, or storing of any material in a manner which allows or may allow controllable particulate matter to become airborne.
2. Except as otherwise provided in subsection 4, Permittee may not cause or permit the construction, repair, demolition, or use of unpaved or untreated areas without first putting into effect an ongoing program using the best practical methods to prevent particulate matter from becoming airborne. As used in this subsection, "best practical methods" includes, but is not limited to, paving, chemical stabilization, watering, phased construction, and revegetation.
3. Except as provided in subsection 4, Permittee may not disturb or cover 5 acres or more of land or its topsoil until Permittee has obtained an Operating Permit for surface area disturbance to clear, excavate, or level the land or to deposit any foreign material to fill or cover the land.
4. The provisions of subsections 2 and 3 do not apply to:
 - a. Agricultural activities occurring on agricultural land; or
 - b. Surface disturbances authorized by a permit issued pursuant to NRS 519A.180 which occur on land which is not less than 5 acres or more than 20 acres.

*****End of Surface Area Disturbance Conditions*****



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Section VIII. Schedules of Compliance

- A. Under the terms of the proposed Administrative Settlement and Order executed on February 11, 2009 by the Permittee and the Administrator, Nevada Division of Environmental Protection, the Permittee shall install and operate a multiphase, secondary water treatment system that treats all of the water generated by the re-refining process to achieve the water quality required for surface application or plant reuse. The components of this secondary treatment system shall complement operation of the existing primary Beckart DAF system. The treated water shall not be expected to meet drinking water quality standards.
- B. On or before **December 31, 2009**, Permittee shall phase out use of the re-generative clay filtration process (emission unit S2.004, System 2) and the thermal combustor (emission unit S2.006, System 4). Neither of these emission units shall be operated after **December 31, 2009**.

*******End of Schedule of Compliance Conditions*******



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Section IX. Amendments

February 12, 2007

Change company name and mailing address. Update UTM coordinates to NAD83. Slight increase to emissions for S2.001. Add performance test requirements to S2.001 in Section IIA. Add process heater #2 (S2.008). Reduce VOC annual emissions cap for System 2 from 48.18 tons to 44.0 tons. Plant has been reconfigured so that the VOC emissions from S2.006 (System 2) may be ducted to S2.001 process heater #1 burner or to a carbon canister. Remove insignificant activity thermal oxidizer from non-permitted equipment list.

January 25, 2008

Reconfigure permit to reflect current operating conditions. Revise emission limits for process heaters #1 and #2. Emission limits for process heaters #1 and #2 based on source tests. Add thermal combustor. Remove VOC emissions cap. Add 235 kW emergency generator to non-permit equipment list.

February 13, 2009 – Application Log # 09AP0046 for Revision

- Reconfigure emission unit descriptions.
- System 1 (S2.002) - Increase recycled fuel oil process rate from 925 gallons/hr to 1,200 gallons/hr.
- System 3 (S2.005) - Decrease emission limits for Cooling Tower #1 based on TDS analysis of cooling water.
- System 4 (S2.006) - Increase heat input rate for thermal combustor from 1.988 MMBtu/hr to 5.796 MMBtu/hr. Increase oily waste water that is treated by thermal combustor from 142 gallons/hr to 284 gallons/hr. Increase emission limits for thermal combustor.
- System 5 (S2.007-S2.008), System 6 (S2.009), System 7 (S2.010-S2.011), System 8 (S2.012) – New systems added.
- Add 1.68 MMBtu/hr steam boiler to non-permitted equipment list.
- Add Schedules of Compliance

This permit:

1. **Is non-transferable. (NAC 445B.287.3)**
2. **Will be posted conspicuously at or near the stationary source. (NAC 445B.318.5)**
3. **Will expire and be subject to renewal five (5) years from: January 25, 2005 . (NAC 445B.315)**
4. **A completed application for renewal of an operating permit must be submitted to the director on the form provided by him with the appropriate fee at least 70 calendar days before the expiration date of this operation permit. (NAC 445B.3473.2)**
5. **Any party aggrieved by the Department’s decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department’s action. (NRS 445B.340)**

THIS PERMIT EXPIRES ON: January 25, 2010

Signature Francisco Vega
 Issued by: Francisco Vega
 Supervisor, Permitting Branch
 Nevada Bureau of Air Pollution Control

Phone: (775) 687-9343 Date: February 13, 2009

rp rp rp rp
01/05 02/07 01/08 02/09

CLASS II NON-PERMIT EQUIPMENT LIST

Appended to Permit #AP2992-1473

Emission Unit #	Emission Unit Description
IA1.001 - IA1.023	23 Storage Tanks for Petroleum Liquids, 25,000 gallons each, NAC 445B.288.2(d)
IA1.024	10,000 Gallon Oily Waste Water Storage Tank
IA1.025	60 HP Fire Pump Engine, NAC 445B.288.2(g)(1)
IA1.026	235 kW (315 HP) Emergency Diesel Generator, NAC 445B.288.2(h)
IA1.027	1.68 MMBtu/hr Steam Boiler (fueled with process oil/light ends)