

The Nevada Division of Environmental Protection, Bureau of Air Pollution Control (NDEP-BAPC) has completed its review of all written and verbal comments. When possible, the comments have been grouped into general topics and are underlined below. Following the comments are NDEP-BAPC's responses in bold.

NDEP- BAPC received several comments regarding how often and when (day or night?) facility inspections are conducted by NDEP-BAPC Compliance and Enforcement Staff

***NDEP Response:* It is the goal of the NDEP-BAPC to inspect minor sources at least once every three years. Inspectors from four Bureaus in the NDEP have conducted 17 inspections of the Bango Oil plant since May 2007. The NDEP-BAPC conducted or participated in 14 of those inspections, including four conducted while observing emissions tests. The NDEP-BAPC does not notify or alert any facility, including Bango, in advance of facility inspections, but they are necessarily aware that we may be present to observe source tests. Inspections are conducted during plant operation. NDEP-BAPC compliance and enforcement staff conducted at least one inspection at night.**

NDEP-BAPC received a comment regarding source tests required by the Nevada Air Quality Operating Permit. Who conducts them? Are they supervised?

***NDEP Response:* In general, minor sources are required by their air quality operating permit to conduct source testing on the stacks once after reaching full production, but no later than 180 days from initial start-up, and once again in approximately five years. The NDEP required Bango Oil to conduct emissions tests on five different occasions in 2007-2008 in order to verify the performance of the air pollution control equipment and compliance of the combustion processes with permitted emission limits.**

All emission tests required by the NDEP-BAPC are conducted by independent contractors experienced in emission sampling and testing. An NDEP-BAPC inspector was at the Bango plant to inspect and observe four of the five test programs.

The NDEP-BAPC received comments regarding the NDEP-BAPC's authority to specify facility location

***NDEP Response:* The choice of the location of the facility is not governed by air quality statutes or regulations.**

NDEP-BAPC received several comments regarding light pollution associated with Bango Oil

***NDEP Response:* NDEP-BAPC has no jurisdiction regarding plant lighting.**

It was requested that the NDEP-BAPC conduct an in depth review of the air quality application for revision prior to approval of increased production

***NDEP Response:* An in-depth review of the application for revision to the Class 2 air quality operating permit for Bango Oil was conducted by NDEP-BAPC to evaluate all air quality aspects of the proposed Bango Oil permit revision. The in-depth review, referred to as a technical review, determined that the proposed revision will meet all applicable State and Federal Air Quality requirements including all applicable ambient air quality standards. A copy of the technical review was made available for public review and comment and remains available upon request.**

It was requested that approval of the revised air quality permit be conditioned on Bango Oil acquiring an amended County Special Use Permit

NDEP Response: The county special use permit is a distinctly separate process under county authority.

NDEP-BAPC received several comments stating no Environmental Evaluation (Air Quality Study) was conducted by the NDEP-BAPC. The NDEP-BAPC also received numerous comments regarding concern over emissions associated with Bango Oil affecting public health and welfare. In addition, the NDEP-BAPC received comments regarding the NDEP-BAPC’s evaluation of the secondary ambient air quality standards.

NDEP Response: The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The EPA has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. The criteria pollutants are carbon monoxide, lead, nitrogen dioxide, particulate matter (PM10), ozone, and sulfur dioxide. The criteria pollutants, the standards, and their respective averaging periods are summarized in the table below.

National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour	None	
	35 ppm (40 mg/m ³)	1-hour		
Lead	0.15 µg/m ³	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m ³	Quarterly Average	Same as Primary	
Nitrogen Dioxide	0.053 ppm (100 µg/m ³)	Annual (Arithmetic Mean)	Same as Primary	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour	Same as Primary	
Ozone	0.12 ppm	1-hour	Same as Primary	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Mean)	0.5 ppm (1300 µg/m ³)	3-hour
	0.14 ppm	24-hour		

Prior to issuing an air quality operating permit, an ambient air quality modeling analysis must be conducted. The ambient air quality modeling analysis submitted by Bango Oil and evaluated by NDEP-BAPC staff, pursuant to Nevada air quality regulations, demonstrated compliance with all applicable ambient air quality standards for all applicable averaging periods.

The NDEP-BAPC received numerous comments regarding the Hazardous Waste applicability of the materials processed and produced at Bango Oil

NDEP Response: The product produced by Bango Oil is not considered a hazardous waste in California or Nevada. The State of California has decided to define all used oil as a “state” hazardous waste regardless of its toxicity. This is more stringent than Nevada and Federal regulations. Nevada has adopted the Federal regulations. Federal regulations are triggered when hazardous waste is stored at a facility. Because the raw used oil is not stored but is directly processed or "recycled" by the Bango plant, the federal regulations are not triggered. Facilities like Bango Oil that process or recycle used oil must ensure that it meets specifications regarding the content of certain metals and other constituents established by the U.S. Environmental Protection Agency. Each shipment must be accompanied by a certified analysis, conducted by an independent laboratory, to ensure that the shipment meets those specifications. The Bureau of Waste Management has issued a written determination (March 16, 2006) that allows for the re-refining of used oil and recycled fuel oil that may be defined as hazardous waste in their state of origin but not regulated as hazardous waste in Nevada, as defined in 40 CFR 261.

What is the emergency response plan should a catastrophic event occur at or around Bango Oil and its transportation routes within Churchill County? Is the local fire department and sheriffs department trained and equipped for such an event? Although I am a proponent of there being no increase in production I am also concerned as to whether the county has the training, equipment and logistical support to combat and minimize such an event

NDEP Response: The NDEP-BAPC does not have regulatory authority for emergency response for this facility.

It is my understanding that since Bango Oil received a variance to have their well at a 70' depth. Will this adversely affect residence and business locations? Since initiating the use of their facility I have noticed a change to the quality of my well water. This change is in the form of a pungent odor in the well water. Water quality testing indicates that there is a higher than acceptable level of manganese. Is there a correlation?

NDEP Response: The request for modification that the NDEP-BAPC is processing only covers changes in air quality. Therefore water quality changes are not within the scope of this review.

Applicability of the New Source Review (NSR)/Prevention of Significant Deterioration (PSD) Regulations

NDEP Response: Based on the application submitted, the modification proposed by Bango Oil is not subject to the PSD regulations.

The NDEP-BAPC's received a comment regarding the consideration of increased mobile (vehicle) emissions due to the increased production of the facility.

NDEP Response: Emissions from increased vehicle traffic were not required to be evaluated under this proposed modification.

The NDEP-BAPC received comments requesting Bango Oil conduct a pilot run of the new operation

NDEP Response: Based on NDEP-BAPC review of the application for revision to the Bango Oil Class 2 air quality operating permit and the environmental evaluation, the regulations and air quality standards allow for full operation of the new and modified equipment.

Applicability of NRS 459.520 “Disposal of Hazardous Waste-Regulations Governing Permits” to the NDEP-BAPC

NDEP Response: NRS 459.520 is a statute which governs the permitting of facilities which treat, store or dispose of hazardous waste. These are waste management requirements and are not applicable to the air quality requirements implemented by the NDEP-BAPC.

Concern regarding Sulfur dioxide (SO₂) and sulfuric acid emissions

NDEP Response: As discussed above, an environmental evaluation (air quality study) was conducted to determine the impacts related to emissions of SO₂. The evaluation demonstrated compliance with the applicable ambient air quality standards for SO₂. Emissions of sulfuric acid do not reach the thresholds which require permitting.

There was confusion related to the existing operation, new equipment, and Supplemental Environmental Project (SEP)

NDEP Response: As part of its application for revision, Bango Oil has requested changes in operation of existing equipment and the addition of new equipment.

Changes to the existing equipment includes increasing the recycled fuel oil process rate to 1,200 gallons/hr for the primary recycled fuel-oil re-refining system, decrease emission limit for cooling tower #1, and increasing the process rate and heat input limit for the primary thermal combustor to 284 gallons/hr and 5.8 MMBtu/hr, respectively.

The addition of new equipment includes an additional primary recycled fuel-oil re-refining system, which allows for the processing of an additional 1,200 gallons/hr. The addition of the duplicate primary recycled fuel-oil re-refining system comprises of a 6.67 MMBtu/hr process heater, fractioning tower, evaporators, knock down tank, various valves, motors, heat exchangers, pumps, compressors and a cooling tower.

Also incorporated into the application for revision, is a request for a lube oil processing system (hydrotreating filtration system). The lube oil processing system further refines products from the recycled fuel-oil re-refining systems. The lube oil refining system is limited to processing 1,200 gallons/hr and consists of a 2.56 MMBtu/hr process heater, reactors, high pressure separators, oil stripper, various valves, motors, heat exchangers, pumps, compressors and a cooling tower.

As a means of addressing a part of its air quality violation for constructing process equipment without a permit, Bango Oil proposed a Supplemental Environmental Project (SEP). As part of its SEP, which was agreed upon on February 11, 2009, Bango Oil shall treat all of the water generated by the re-refining

process to achieve the water quality required for surface application or plant reuse. The SEP involves installation and operation of a multiphase, secondary water treatment system to meet this objective. The secondary water treatment system will consist of a "FLOCCIN" emulsion cracking agent, a filter press, a dual element filter, air stripper, and an activated carbon and clay adsorption system. The components of this secondary treatment system will complement operation of the existing, primary Beckart DAF system.

Odors

The NDEP-BAPC began investigating complaints from residents regarding offensive odors in western Churchill County in May 2007. Some complainants identified Bango Oil as the likely source of the odors, whereas other complainants attributed the odors to a nearby paving operation or hot mix asphalt plants. Through 2008, the NDEP-BAPC committed hundreds of man-hours while responding to ~220 complaints, conducting 14 facility inspections, planning and reviewing five expanded emissions tests, and cooperating with Churchill County.

Rather than trying to determine if the odors constituted nuisance violations under NAC 445B.22087 Odors, the NDEP-BAPC directed its resources at identifying possible causes of the problem and addressing them. Most of this work was done in 2007, when the NDEP-BAPC responded to over 150 complaints, conducted eight facility inspections, and planned, observed, and reviewed three emission tests. Inspectors from various bureaus in the NDEP-BAPC concurred that a mild odor is present at the plant, but that it is not overly objectionable. The NDEP-BAPC found that Bango Oil could not be singled out as the source of the residents' complaints. The complaint record is ambiguous: for example, 20 complaints occurred in 2007 on days that the facility was not operating, and 30 others occurred when asphalt plants were operating nearby. Sporadic complaints occasionally correlated with a process change, upset or particular operation at the plant. One complaint was filed, however, while a NDEP-BAPC inspector observing an emission test at the plant noticed no change in conditions. Complaints filed in 2008 with the NDEP-BAPC decreased to 66 but showed the same ambiguous profile as in 2007.

The most strenuous complaints have come from residents of the relatively flat, well-vegetated terrace generally located between Highway 50 and the Carson River. Although the plant could not be singled out as a source, and though the mechanics of concentrating mild odors associated with the plant to generate highly offensive odors over a mile away in the complainants' neighborhood remain uncertain, the NDEP-BAPC took the approach that operations at the facility might be contributing to the residents' complaints. Despite these uncertainties and the fact that no violation was indicated, Bango Oil cooperated fully with NDEP-BAPC investigations to help identify potential sources of odors and implement measures to eliminate or reduce emissions of odor-causing compounds. All of the emission tests conducted after Bango Oil's implementation of procedures or equipment to eliminate or mitigate odors in late 2007 to early 2008 indicated very low concentrations of odor-generating compounds and demonstrated compliance with permitted emission limits for VOCs and other pollutants.

The NDEP-BAPC shared information regarding its complaint investigations and emission testing with Churchill County. The NDEP-BAPC described the mechanics of odor sampling and recommended the services of St. Croix Sensory, a laboratory known for its expertise in odor sampling and investigations. The County purchased odor-measuring equipment from St. Croix Sensory and reportedly collected over 1,700 samples during two sampling programs in 2008 neighborhood. As reported by the County, none of the odors exceeded a two-dilution threshold level.

In summary, the NDEP-BAPC has done everything within its existing authority to investigate and address the relationship of odor complaints in western Churchill County to operations at the Bango Oil facility. Based upon its investigations, the NDEP-BAPC has determined that the odors associated with the immediate environs of the facility do not meet the definition of persistent, strong odors that constitute a nuisance under NAC 445B.22087 Odors. The odor sampling conducted by Churchill County also supports this determination. The NDEP continues to collect information from complainants in hopes of identifying the source of the residents' complaints.