

STATE OF NEW MEXICO
BEFORE THE ENVIRONMENTAL IMPROVEMENT BOARD



IN THE MATTER OF PROPOSED REPEAL OF:
20.2.37 NMAC – *Petroleum Processing Facilities*

No. EIB 16-02 (B)

NEW MEXICO ENVIRONMENT DEPARTMENT'S
NOTICE OF SUBMISSION OF WRITTEN PUBLIC COMMENT

The New Mexico Environment Department (“NMED”) hereby submits the attached letter, dated April 30, 2014, representing the comments of Western Refining on the proposed repeal of 20.2.37 NMAC. The letter was inadvertently omitted from NMED Exhibit 6 - Stakeholder letters and public comments received. NMED regrets the omission, but submits it at this time for the Board’s consideration in this matter as a written public comment.

Respectfully submitted,

/s/ John B. Verheul

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *Notice of Submission* was served on the following parties on this the 4 day of August, 2016 via the stated delivery methods below:

Hand delivery:

Ms. Pam Castaneda, Administrator
Environmental Improvement Board
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Santa Fe, New Mexico 87505

Email:

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/s/ John B. Verheul

John B. Verheul

April 30, 2014

Via email: Mark.jones@state.nm.us

Mr. Mark Jones
Environmental Analyst
New Mexico Environment Department
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505

Mr. Jones,

On April 1, 2014, the New Mexico Environment Department (NMED) sent a letter to stakeholders regarding review of 20.2.37 NMAC for Petroleum Processing Facilities (Part 37). In the letter, NMED requests comments from potentially affected facilities regarding the stringency and necessity of the regulation. Western Refining Southwest, Inc. (Western) appreciates the opportunity to participate in the rule review process. This letter provides Western's initial response to NMED's request for information.

1. Is your facility subject to Part 37? If so, are you an existing or new facility under Part 37?

The Western Gallup Refinery is subject to Part 37 as both an existing facility and a new facility. The original refinery was constructed prior to July 1, 1974. Units constructed after this date are subject to Part 37 as a new facility.

2. Are there any federal regulations or other requirements limiting mercaptan, H₂S, CO, PM, or NH₃ emissions with which you are also required to comply? Are these requirements, more, equally, or less stringent than Part 37 (20.2.37.200-205)? Please explain.

Existing federal New Source Performance Standards (NSPS) and Maximum Achievable Control Technology Standards (MACT) provide comprehensive air quality emissions control, monitoring, recordkeeping, and reporting requirements for petroleum refineries. In its present form, Part 37 is largely redundant in the area of control requirements, and less stringent in the area of monitoring and compliance assurance. The attachment to this letter provides an initial overview of Part 37 as it compares to federal regulations that apply to air quality emission from the Gallup Refinery. The work group should perform additional detailed analysis pertaining to stringency and redundancy between Part 37 and federal air quality rules.

3. Is your facility subject to any federal regulations or other requirements for hydrocarbon separation or blowdown systems? Are these requirements more, equally, or less stringent than Part 37 (20.2.37.206-207)? Please explain.

To clarify, the relevant rules are 20.2.37.204-205. The attachment to this letter provides an initial overview of Part 37 as it compares to federal regulations that apply to air quality emission from the Gallup Refinery.

4. In general, what are your recordkeeping and reporting practices for Part 37?

Under current Operating Permit P021-R1-M1 and NSR Permit No. 0633-M11R5, all reporting requirements are covered under Rule 20.2.72. Part 37 does not specifically require ongoing monitoring or recordkeeping for compliance purposes. Since the reporting requires are established under Rule, 20.2.72, Should NMED elect to repeal Part 37, it would not affect Gallup Refinery's current reporting and recordkeeping requirements.

5. Do you have preferences on whether the rule is revised, repealed or no action taken? Please explain.

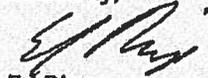
Western prefers that Part 37 be repealed in its entirety. Federal rules governing air quality emissions from refineries are robust and comprehensive. Petroleum refineries are covered by a myriad of emission standard rules (NSPS and MACT), a well as New Source Review and Operating permitting requirements.

6. Would you be interested in participating in a work group for further analysis of this rule?

Western is interested in participating in this work group.

Thank you for the opportunity to provide the comments in this letter. Western would be happy to participate in the upcoming work group for the rule. In the meantime, feel free to call me at to further discuss the contents of this letter.

Sincerely,



Ed Riege
Environmental Manager, Gallup Refinery
Western Refining Southwest, Inc.

Attachment

Attachment

Initial Comparison of Part 37 Rules with Federal Standards

20.2.37.200 MERCAPTAN AND HYDROGEN SULFIDE:

A. Mercaptan: The owner or operator of a petroleum processing facility shall not permit, cause, suffer or allow mercaptan emissions to the atmosphere unless:

- (1) the total mercaptan emissions do not exceed 0.25 pounds per hour; or
- (2) the gas stream containing mercaptan has passed through a steam condenser (if necessary to achieve combustion) and combustion device which is well maintained and designed to achieve complete combustion or any other device which is at least as efficient to prevent mercaptan emissions to the atmosphere.

Comments: No federal rules presently regulate mercaptan directly for petroleum refineries. There are no known mercaptan emissions sources at the refinery.

B. Sulfur recovery plant: Hydrogen sulfide: The owner or operator of a petroleum or processing facility, sulfur recovery plant, the feedstock of which is in whole or in part a product of petroleum processing shall not permit, cause, suffer or allow hydrogen sulfide emissions to the atmosphere unless:

- (1) the stack emissions do not exceed 10 ppm by volume in the undiluted effluent gas stream or streams; or
- (2) the effluent gas stream containing hydrogen sulfide is passed through a device capable of oxidizing the hydrogen sulfide to sulfur dioxide.

Comments: This requirement is essentially based on the SO₂ standards under the New Source Performance Standards (NSPS) for Petroleum Refineries (40 CFR Part 60 Subparts J, §60.104). However, §60.104 was specifically promulgated for Claus-type sulfur recovery units (SRU). Without specifying the type of SRU, the Part 37 rule imposes requirements on SRUs that are not designed to meet the requirements. Gallup Refinery's SRUs are not Claus sulfur recovery units; therefore this section of Part 37 is not applicable.

C. Sulfur recovery plant: Hydrogen sulfide alarm system: The owner or operator of a petroleum processing facility or sulfur recovery plant commencing operation after January 1, 1975, shall not flare gas containing more than 10 ppm of hydrogen sulfide without maintaining in good working order an alarm system connected to the flare which will signal non-combustion of the gas.

Comments: Under both NSPS and MACT rules, there are more stringent monitoring requirements for the presence of the flare pilot to ensure that waste gas to the flare is combusted. This requirement is redundant to the flare pilot monitoring requirements under NSPS and MACT rules.

20.2.37.201 CARBON MONOXIDE:

A. Existing facility: The owner or operator of an existing petroleum processing facility shall not permit, cause, suffer or allow carbon monoxide emissions to the atmosphere from a catalyst cracking recirculation or regeneration unit in excess of 20,000 ppm by volume in the undiluted effluent gas stream or streams.

B. New facility: The owner or operator of a new petroleum processing facility shall not permit, cause, suffer or allow carbon monoxide emissions to the atmosphere in excess of 500 ppm by volume in the undiluted effluent gas stream or streams.

Comments: The emission limit for existing facilities is basically obsolete since CO emissions from the

FCCU are subject to the MACT UUU limit of 500 ppmv as a surrogate for organic HAP emissions. The Part 37 limit for new facilities is equivalent to the NSPS Subpart J standard for CO emissions from a FCCU. However, Part 37 for new sources does not specify this limit to be applicable only to FCCU and has therefore caused confusion to refineries.

20.2.37.202 PARTICULATE MATTER:

A. Petroleum processing facility: general: The owner or operator of a petroleum processing facility shall not permit, cause, suffer or allow particulate matter emission to the atmosphere in excess of 0.05 grains per dry standard cubic foot of exit gas exclusive of emissions from catalyst cracking recirculation and regeneration units and tube carbon removal.

B. Existing catalyst cracking regeneration unit: The owner or operator of an existing (the fabrication, erection or installation of which was commenced prior to August 14, 1974) catalyst cracking recirculation or regeneration unit or tube carbon removal process operated in conjunction with a petroleum processing facility shall not permit, cause, suffer or allow emissions during regeneration or cleaning to:

(1) equal or exceed an opacity of 40% except for a period not to exceed five minutes during which the opacity is not to exceed 60%. The five minute period during which the opacity exceeds 40%, but may not exceed 60%, may not occur more frequently than three times per day; or

(2) consist of one hundred pounds or more of particulate matter per hour.

C. New facility: catalyst cracking regeneration unit:

(1) The owner or operator of a new petroleum processing facility shall not permit, cause, suffer or allow particulate matter emissions to the atmosphere from the catalytic cracking regenerator vessel in excess of 1.0 Kg/1000 Kg (1.0 lb/1000 lb) of coke burnoff or visible emissions of thirty percent (30%) opacity or greater except for one six-minute average opacity reading in any one-hour period:

Comments: The requirements for New FCCU facility is essentially same as the NSPS Subpart J regulates particulate matter (PM) emissions from FCC Regeneration Units (40 CFR §60.102). Emissions are limited to 2 lb/ton (1 lb/1000 lb) and 30% opacity over a six-minute period. Therefore, the Part 37 requirement is redundant with federal rules. In addition, PM emissions are regulated as surrogate for inorganic HAP emissions under the MACT UUU, which has equivalent PM emission limits. Although Gallup's FCCU is considered as Existing unit, it must comply with the new facility requirements due to MACT UUU. However, Part 37 does not recognize the MACT UUU requirements and the refinery has been tracking compliance for both the existing and new facility requirements that are very confusing. Therefore, Western recommends to repeal this requirements.

(2) Where the gases discharged by the catalytic cracking regenerator vessel pass through an incinerator or waste heat boiler in which auxiliary or supplemental liquid or solid fossil fuel is burned, particulate matter in excess of the 1.0 Kg/1000 Kg (1.0 lb/1000 lb) coke burnoff emission rate may be emitted to the atmosphere, except that the incremental rate of particulate matter emissions shall not exceed 43.0 g/MJ (0.10 lb/million Btu) of heat input attributed to such liquid or solid fossil fuel;

Comments: Currently, none of the refineries are using liquid or solid fossil fuel as auxiliary fuel in the waste heat boiler. In addition, this Part 37 provision is the same as the requirement found in NSPS Subpart J. Therefore, the Part 37 requirements are redundant with federal rules.

D. Determination methods:

(1) Opacity: Opacity of visible emissions from a catalytic cracking regenerator vessel shall be determined consistent with the method set forth by the US EPA in 40 CFR Part 60, Appendix A, Method 9, or any other equivalent method receiving prior approval from the Department. The time period for taking opacity readings shall be for a minimum of six minutes;

Comments: Should the refinery elect to determine the PM limits based opacity, the MACT UUU requires opacity to be determined by a continuous opacity monitoring system (COMS). This continuous monitoring system is more stringent and complete than using Method 9. This Part 37 requirement is obsolete as the COMS is required.

- (2) **Compliance:** Compliance with the particulate emission limitation set forth in this Part shall be determined consistent with the methods and procedures set forth by the US EPA in 40 CFR, Part 60, Subpart J, Section 60.106, or any other equivalent methods or procedures receiving prior approval from the Department. A test method shall consist of three runs, each run consisting of a sample of 30 dry standard cubic feet (68 degrees Fahrenheit, 29.92 inches of Hg). Test results from the three runs shall be averaged in the determination of the emission limit. Upon the request of the Department, the owner or operator shall perform stack testing according to the method stated above. The owner or operator shall report the results of such tests in the format and time period specified by the Department. The owner or operator shall inform the Department of the dates and time of such testing so that the Department may have the opportunity to have an observer present during testing.
- (3) **Emission limitations:** Particulate matter emission limitations established by this Part shall be determined by a method consistent with the method set forth by the US EPA in 36 Federal Register 24888-24890 or any other method that the Department has determined to be of equal or greater accuracy.

Comments: As stated in the Part 37 language above, compliance and emission limitations are consistent with federal standards. Therefore this Part 37 requirement is redundant.

20.2.37.203 AMMONIA: The owner or operator of a petroleum processing facility shall not permit, cause, suffer or allow ammonia emissions to the atmosphere in excess of 25 ppm by volume in the undiluted effluent gas stream or streams.

Comments: There are no federal regulations that directly regulate ammonia from refineries. Western applies anhydrous ammonia for the SWAAT unit. The ammonia is regulated under 40 CFR Part 68 with no release under normal operation conditions. Although not currently applied at Western, refineries have been required to use ammonia as a control reagent for the selective catalytic reduction (SCR) for NO_x emission control. For the NO_x control requirement, ammonia slip is necessary to achieve desired control efficiency. The ammonia emission limits should be established based on process unit basis rather than as a general limit. Western recommends that this requirement be repealed.

20.2.37.204 HYDROCARBON SEPARATION FACILITY:

A. The owner or operator of an existing petroleum processing facility that processes ten thousand b.s.d. (barrel stream day) or more of crude oil or condensate feedstock or produces waste liquor containing six hundred gallons a day or more of hydrocarbons shall not permit, cause, suffer or allow discharge of any waste liquor containing hydrocarbons without first having treated the liquor in:

- (1) a hydrocarbon separation facility that is maintained in good working order; or
- (2) any other device which is at least as efficient to prevent hydrocarbon discharge to the atmosphere.

B. The owner or operator of a new petroleum processing facility that produces waste liquor containing 600 gallons a day or more of hydrocarbons or processes ten thousand b.s.d. (barrel stream day) or more of crude oil or condensate feedstock, shall not permit, cause, suffer or allow discharge of any waste liquor containing hydrocarbons without first having treated the liquor in:

- (1) a hydrocarbon separation facility that is maintained in good working order and equipped with a complete roof cover enclosing the liquid contents; or
- (2) any other device is at least as efficient to prevent hydrocarbon discharge to the

atmosphere.

Comments: This requirement is unclear as to what is being regulated for refineries and has not been identified as having applicable requirements for refineries. The rule as stated above has no specific control or emission limits. The waste liquor, if meant for the process wastewater, is regulated under 40 CFR Part 61 – the Benzene Waste Operations NESHAP (BWON) rule, which provides specific requirements for preventing HAP emissions to the atmosphere. Western recommends that this rule be repealed as it is unclear and with no specific limits.

20.2.37.205 FACILITIES – STORAGE – HANDLING – PUMPING – BLOWDOWN SYSTEM:

A. Existing facility - tanks: The owner or operator of an existing petroleum processing facility shall not place, store, or hold in a stationary tank or other container having a storage capacity equal to or greater than 250,000 gallons (946.4 m³):

(1) any organic compound having a true vapor pressure greater than 11.0 pounds per square inch (75 kPa) under maximum actual storage pressure conditions, unless the tank or other container is:

(a) a pressure vessel capable of maintaining working pressures sufficient at all times to minimize vapor or gas loss to the atmosphere; or

(b) equipped with any other system which is at least as efficient at all times to minimize vapor or gas loss to the atmosphere; or

(2) any organic compounds having a true vapor pressure of 3.0 (20.7 kPa) through 11.0 pounds per square inch (75 kPa) under maximum actual storage pressure conditions, unless the tank or other container is designed, equipped and maintained with:

(a) a floating roof, consisting of an external floating roof, internal floating cover, or covered floating roof, which is equipped with a closure seal or seals maintained in good repair to close the space between the roof or cover edge and tank wall;

(b) a well-maintained vapor-recovery system consisting of: (1) a vapor-gathering system capable of collecting the organic compound vapors and gases discharged; and (2) a vapor-disposal system capable of processing the organic vapors and gases so as to minimize their emission to the atmosphere; or

(c) any other device which is at least as efficient at all times to minimize vapor or gas loss to the atmosphere.

B. New facility - tanks: The owner or operator of a new petroleum processing facility shall not place, store or hold in a stationary tank or other container having a storage capacity equal to or greater than 65,000 gallons (246.1 m³):

(1) any organic compound having a true vapor pressure greater than 11.0 pounds per square (75 kPa) inch under maximum actual storage pressure conditions, unless the tank or other container is:

(a) a pressure vessel capable of maintaining working pressures sufficient at all times to minimize vapor or gas loss to the atmosphere; or

(b) equipped with any other system which is at least as efficient at all times to minimize vapor or gas loss to the atmosphere;

(2) any organic compound having a true vapor pressure of 1.5 (10.3 kPa) through 11.0 pounds per square inch (75 kPa) under maximum actual storage pressure conditions, unless the tank or other container is designed, equipped and maintained with:

(a) a floating roof, consisting of an external floating roof, internal floating cover, or covered floating roof, which is equipped with a closure seal or seals maintained in good repair to close the space between the roof or cover edge and tank wall;

(b) a well-maintained vapor recovery system consisting of:

(i) a vapor-gathering system capable of collecting organic compound vapors and gases discharged; and

(ii) a vapor-disposal system capable of processing the organic vapor and gases so as to minimize their emissions to the atmosphere; or

(c) any other device which is at least as efficient at all times to minimize vapor or

- gas loss to the atmosphere;
- (3) any organic compound having a true vapor pressure of 1.5 pounds per square inch (10.3 kPa) or greater under maximum actual storage pressure conditions without the tank or other container being equipped with gauging and sampling devices which are gas tight except when gauging or sampling is taking place; or
 - (4) any organic liquid having a true vapor pressure less than 1.5 pounds per square inch (10.3 kPa) under maximum actual storage pressure conditions without the tank or other container being equipped with a conservation vent or other device is at least as efficient to minimize vapor or gas loss to the atmosphere.

Comments: Petroleum storage tanks are covered under NSPS Subparts K, Ka, and Kb:

NSPS K: Applies to storage vessels constructed, modified, or reconstructed between March 8, 1974 and May 1978 with a capacity of 40,000 to 65,000 gallons; and storage vessels constructed or modified between June 11, 1973 and May 19, 1978 with a capacity of 65,000 gallons or greater. Liquids with a vapor pressure of at least 1.5 psia have control requirements under NSPS K. The requirements in Subpart K are at least as stringent as those in Part 37.

NSPS Ka: Subpart Ka applies to petroleum liquids storage vessels with a capacity of more than 40,000 gallons and that were constructed, modified, or reconstructed after May 18, 1978. The rule specifies control requirements for all liquids with a vapor pressure of 1.5 psia or greater. These controls are at least as stringent as those specified in Part 37.

NSPS Kb: This Subpart applies to petroleum liquid storage vessels with a capacity of at least 19,813 gallons that were constructed, modified, or reconstructed after July 23, 1984. The liquids regulated under this subpart include any liquids that may result in the emission of any volatile organic compound. Exceptions include vessels with a capacity greater than 39,890 gallons storing a liquid with a vapor pressure of 0.51 psia; and vessels between 19,813 and 39,890 gallons storing a liquid with a vapor pressure of less than 2.18 psia.

In addition to the NSPS provisions, the EPA regulates HAPs from storage vessels through MACT Subpart CC (NESHAP for Petroleum Refineries). This regulation adds additional control, monitoring, recordkeeping, and reporting provisions for storage vessels at the site.

Based on the above, it is evident that the current set of federal rules for petroleum liquid storage tanks cover a broad range of tanks and liquids, and have control requirements that are at least as stringent as Part 37. Western recommends that the to-be-formed stakeholder group perform a more detailed stringency comparison. In the event that the conclusion stands that the federal rules are more stringent, Western recommends that the storage tank provisions of Part 37 be repealed.

C. New facility - loading facility: The owner or operator of a new petroleum processing facility shall not permit, cause, suffer or allow the loading or unloading into any tank, truck, trailer or tank car any organic compound having a Reid vapor pressure of 1.5 pounds per square inch or greater, unless:

- (1) the loading facility is equipped with:
 - (a) a loading arm having a vapor collection adapter that forces a vapor-tight seal between the adapter and the hatch and having a means of collecting the vented vapors to minimize their emission to the atmosphere that is maintained in good repair; or
 - (b) any other device which is at least as efficient to prevent vapor or gas loss to the atmosphere; and
- (2) a means is provided to prevent organic compound drainage from the loading device when it is removed from the hatch of any tank, truck, trailer, or tank car or to accomplish complete drainage before its removal.

Comments: New, existing, and reconstructed loading racks at petroleum refineries for product with

vapor pressure greater than 1.5 psia are regulated under MACT Subpart CC (which refers to Subpart R for Gasoline Distribution Facilities) and Subpart EEEE (Organic Liquids Distribution). The federal requirements provide specific emission limits, control, testing, reporting, and record-keeping requirements that are enforceable. Western recommends this element of the rule be repealed.

D. New facility - pumps and compressors: The owner or operator of a new petroleum processing facility shall not permit, cause, suffer or allow the use of a rotating pump or compressor which handles any organic compound having a Reid vapor pressure of 1.5 pounds per square inch or greater, unless the pump or compressor is equipped to prevent mechanical seals or other devices of equal or greater efficiency to prevent liquid or vapor losses.

Comments: Emissions from new, modified, and reconstructed fugitive components, pumps, and compressors are comprehensively regulated under NSPS Subparts GGG and GGGa. Therefore, Western recommends that this requirement be repealed.

E. New facility - blowdown system: The owner or operator of a new petroleum processing facility shall not permit, cause, suffer or allow the operation of a blowdown system without disposing of the gases in a manner which will minimize hydrocarbon emission to the atmosphere. If combustion is the means of disposal, it shall be by:

- (1) smokeless flare; or
- (2) any other method that is equally effective to achieve complete combustion.

Comments: There are no normal blowdown systems such as coker unit at the Gallup Refinery. The only regulated blowdown process (not a blowdown system) is the Platformer catalyst regeneration process. This is regulated under MACT UUU. For units using a flare or other combustion device, emissions are typically regulated under MACT UUU. Although the Gallup Refinery does not have such system, Western recommends that this requirement be repealed.