

STATEMENT OF BASIS

To: Reviewers

Through: Michael Stoll, Operating Permit Program Manager



From: Jamie O'Dell, Senior Environmental Analyst

Subject: Draft Operating Permit 3-1-083, for FMC Wyoming Corporation, FMC Granger Soda Ash facility

Date: February 20, 2007

Attached is a draft renewal Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 6, Section 3 operating permit for the FMC Wyoming Corporation, FMC Granger Soda Ash facility. Trona ore is mined from underground ore beds located beneath the facility and is refined to produce purified soda ash. Emission points at the facility include natural gas fired calciners, coal fired boilers, product dryers, screening, sizing, bagging and loadout equipment, emergency generator engines, a fire pump engine, and various storage units including silos and stockpiles. Currently the facility is operating at a reduced capacity using mine water as the feed stock. As a result of using only mine water, none of the trona ore processing equipment is active, everything prior to the filters is not in operation at this time. Additionally the coal for the boilers is now brought in by truck, not train. This facility is a major source of Hazardous Air Pollutants (HAPs) and the boilers are affected sources under 40 CFR Part 63, Subpart DDDDD.

Permitting History (permit and waivers which no longer have applicable requirements and are discussed in the 30-083 Reviewer's memorandum are not discussed here):

EPA 8A-EE (7/19/1974): was issued by the EPA for construction of the original 1.0 million ton per year (MMTPY) soda ash facility. These units were grandfathered under the State of Wyoming's construction permit program. Original units that are still in operation include 01, 03, 04, 05, 07, 08, 09, 10, 11, 12, 13, 14, 15 & 18. The only applicable condition remaining in this permit is for the permittee to operate and maintain an ambient particulate air monitoring network.

A November 24, 1989 waiver allowed the installation of a lime silo at the facility. There are no applicable requirements for the unit (unit 28) in this waiver.

OP-222 (9/30/1991): allowed increased soda ash production. A fugitive emission control plan is required which describes the procedures for the following:

- 1) using a dust suppressant chemical on the coal stockpile with annual reports,
- 2) using a chemical wet spray on the rail delivery and plant receiving hopper coal handling operations with annual reports, and
- 3) control of the fugitive emissions from the trona ore stockpile activities by watering the equipment operations path during all stockpiling and reclamation activities.

The Fugitive Emission Control Plan was updated by an October 6, 2005 letter from Michael Wendorf of FMC Wyoming Corporation to the operating permit application. The Fugitive Emission Control Plan is included in Appendix A of operating permit 3-1-083. OP-222 also limits the size of the trona ore stockpiles and requires annual reports of the maximum stockpile size and annual throughput of the stockpiles. All other requirements and limits from this permit are either superseded or restated in later WAQSR Chapter 3, Section 2 construction or modification permits.

OP-268 (1/3/1997): approved the conversion of the calciners from coal fired to natural gas, and to increase the ore throughput in the two calciners. This permit required a CO operational plan to minimize CO emissions from the calciner burners. This plan is included as Appendix B of operating permit 3-1-083. Under this permit compliance tests are to be accomplished using Method 5/202. This permit requires Continuous Opacity Monitors (COMs) on each calciner stack to be calibrated and operated in accordance with WAQSR Chapter 5, Section 2.

CT-1321 (10/13/1997): allowed the construction of a new processing line and increased the annual soda ash production to 2.10 MMTPY. The mine water project, consisting of units 41, 42, 43, 44 & 45, was never constructed and all conditions of this permit have expired.

MD-462 (5/16/2000): was issued to increase the instantaneous hourly maximum production limit for the #1 and #2 product dryers and the calciner while maintaining the annual soda ash production limit for the facility. This permit restates the particulate and NO_x emission limits for the calciners, the requirement for the CO minimization plan, and the facility production rate. MD-462A (7/11/2000) amended the permit to include an increase for the instantaneous hourly production rate of the fluid bed dryer (unit 24).

AP-3297 (5/3/2005): was issued to allow the delivery of coal using haul trucks, on a gravel road (the Granger Road) and a plant service road. This waiver requires the Granger road to be treated with a chemical dust suppressant and water to control fugitive emissions. Support records are also required by this waiver.

Changes from the Previous Operating Permit (30-083):

The mine water project permitted under CT-1321, which was never built, would have been subject to 40 CFR Part 60, Subpart OOO for nonmetallic mineral processing plants. In operating permit 30-083, this subpart was included and attached as an appendix. As none of the mine water project was constructed, this subpart was not included in operating permit 3-1-083. Similarly, the boiler to be constructed for the mine water project would have been subject to 40 CFR Part 60, Subpart Db for Industrial-Commercial-Institutional Steam Generating Units. As this unit was never built, this subpart was not included in operating permit 3-1-083.

Facility Mothball and Restart:

In a May 23, 2002 letter from the Division, FMC was notified that the date of expiration for the soda ash facility's entitlement to use its allocated air resources under WAQSR Ch 6, Sec 7, was May 15, 2006. In the letter, the Division noted facility to be mothballed on May 15, 2001.

In a February 11, 2005 from Michael Wendorf, the Division was notified of the resumption of operations at the soda ash facility using mine water. This letter stated that all the trona ore processing equipment will remain idle and the mine water will be introduced into the system at the filter section.

In an August 25, 2005 letter from the Division, FMC was notified that the termination date for allocated air resources at the soda ash plant was negated once the plant becomes operational, regardless of what units are operating. Unless significant modifications are made to units sources, those sources may operate as currently permitted under the WAQSR.

Applicable Requirements:

On January 28, 2004, the Division adopted Chapter 14, Emission Trading Program Regulations, to the WAQSR. Section 3 of this regulation is applicable to any stationary source with actual emissions of 100 TPY or more of sulfur dioxide in calendar year 2000 or any subsequent year. Sources subject to Section 3 are required to submit an annual sulfur dioxide emissions inventory under the guidelines of Section 3 by April 15 of each calendar year. They remain subject to the emission milestone inventory requirements until 2018 or the first control period under the Western Backstop Sulfur Dioxide Trading Program established in Section 2 of Chapter 14. This facility is subject to these requirements.

From permit MD-462A, the facility has an annual soda ash production limit, the calciners have instantaneous maximum production throughputs for when both calciners are in operation and a higher limit when only one calciner is operating. The three plant dryers each have hourly production rate limits and annual production limits in accordance with MD-462A. The trona stockpiles are limited to a maximum size and annual throughput by OP-222.

Each unit at the facility has an opacity limitation from WAQSR Chapter 3, Section 2 or 40 CFR Part 60, Subpart D (Subpart D). As discussed above, OP-222 requires a fugitive emissions control plan to control emissions from the coal stockpile, the rail delivery and receiving hopper, and the trona ore stockpile activities. AP-3297 requires fugitive dust control from the Granger Road. A standard opacity shall be used to determine acceptable fugitive dust control.

The boilers have particulate, SO₂ and NO_x emission limits from 40 CFR Part 60, Subpart D, and permit OP-222. The boilers are also subject to 40 CFR Part 63, Subpart DDDDD (the boilers MACT), and are in the Existing, Large Solid Fuel subcategory for this subpart. The calciners have particulate and NO_x emission limits from permit MD-462A, SO₂ emission limits from permit OP-268. The dryers and a majority of the baghouse controlled sources have particulate emission limits from permit OP-222.

As required by MD-462A, the calciner burners shall be operated in accordance with the CO minimization plan. At the request of the permittee, the Perlite Storage Silo, the Limestone Storage Silo, and the Lime Storage Silo – Leach (units 22, 23 & 27) are limited to 500 hours of annual operations to insure that the units are not subject to the requirements of CAM.

Periodic and Compliance Assurance Monitoring:

Monitoring of visible emissions from the boilers and the calciners consists of Continuous Opacity Monitoring systems (COMs). Periodic monitoring of visible emissions and particulate emissions from units 22, 23, 27 & 28, consists of weekly visible emissions monitoring. Periodic monitoring of visible emissions from the dryers and the other baghouse controlled consists of Compliance Assurance Monitoring (CAM) for particulate emissions.

Fugitive emission control monitoring consists of monitoring and recording the date of application, what was applied (water or chemical), and the amount applied to the surface.

CAM of particulate emissions consists of the following:

- once daily pressure range and liquor flow rate monitoring for the dryers,
- once daily visible emissions monitoring for the baghouse controlled units,
- once daily opacity reading using the COMs for the calciners, and
- continuous opacity readings using the COMs for the boilers.

Periodic monitoring of SO₂ and NO_x emissions from the boilers consists of continuous emission monitors as required by 40 CFR Part 60, Subpart D. Periodic monitoring of NO_x emissions from the calciners consists of annual emissions monitoring using Reference Method testing.

The permittee must monitor the hours of operation of units 22, 23 & 27; the soda ash production rate, and trona ore throughput; and the process rates for the calciners and dryers throughout the year.