STATEMENT OF BASIS

To: Reviewers

From: Lori Bocchino, Operating Permit Program Manager
Maggie Endres, Operating Permit Program

Subject: Draft Operating Permit 3-2-124, M-I LLC, Greybull Bentonite Processing Plant

Date: August 20, 2013

Attached is a draft renewal Wyoming Air Quality Standards and Regulations (WAQSR) Ch 6, Sec 3 operating permit for the Greybull Bentonite Processing Plant. Raw bentonite from the stockpile area is crushed, ground and dried in either of two types of mills. The processed material is then pneumatically sized and transported to holding tanks for shipment, or packaged for shipment. Raw bentonite from stockpiles is also crushed, dried and screened for granular operation. Emission sources at the plant are controlled by baghouses.

Permitting History: The following permits/waivers are listed to document the permitting history. Those listed in this first paragraph have no remaining applicable requirements. The original plant consisted of two baghouse controlled crushers (ES1), two dryers and three mills controlled by an ESP (ES2), and three baghouse controlled tank vents (ES3). CT-16 (8/18/75)/OP-29 (5/18/77): were issued for the construction and operation of a new bentonite facility controlled by baghouses, including a bag packer (ES4), fines silo (ES7), disintegrator (ES8), and two impact mills (ES9 and 10). MD-21 (2/27/78): allowed modifications to existing mills to convert from natural gas to coal firing. The permittee notified the Division by letter dated 2/13/02 that MD-21 was no longer relevant. The option for coal firing is no longer allowed. CT-334 (11/26/80)/OP-126 (3/13/84): allowed construction and operation of a bagging and handling facility controlled by baghouses, including a Mollers packer storage tank which is now called the truck warehouse packer (ES5), and a Mollers rotary packer (ES6) which is now called a truck warehouse packer (ES6b).

Permit CT-759 (9/15/87): was issued for construction of a loadout facility, controlled by a baghouse, for loading crushed and dried bentonite into open railcars (ES16). The permit limits fugitive emissions from the railcar loading operation to 20 percent opacity.

The waivers in this paragraph have no remaining requirements. Waiver AP-SG9 (6/16/99): allowed installation of a granular screening system to scalp off the granular portion of the crushed and dried material from the #1 rotary dryer, to be controlled with an existing baghouse (ES3). Waiver AP-591 (8/11/00): was issued for construction of a baghouse controlled bulk storage silo (ES20).

Permit MD-658 (8/21/01): allowed modifications to include a granular bentonite product line, reduce particulate emissions to reflect control equipment in place, and route the number two drier exhaust from the ESP (ES2) to a new baghouse (ES21). Additional baghouse sources included the main granular (ES17), granular storage (ES18), and a loadout aspirator (ES19). Particulate emission limits are set for various sources. A 7% opacity limit is established for units ES1, 3, 16, 17, 18 and 19. The new product line is subject to the requirements of 40 CFR 60 Subpart OOO, discussed below.

Waiver AP-1445 (1/07/04): allowed the addition of a crude ore loadout to consist of a bin and conveyor, and a retractable spout. Particulate emissions from the loadout were to be controlled by an existing baghouse (ES15). Particulate emission limits are set for ES15. Under waiver AP-1971 (8/31/04) a separate baghouse (ES23) was added for the bin and conveyor part of the loadout system. Particulate emission limits are set for ES23. By letter dated 3/19/09, the Division will accept EPA Reference Method 9 testing following the procedure outlined in Subpart OOO to determine compliance with the emissions limits. Both waivers indicate that the crude ore loadout is subject to the requirements of 40 CFR 60 Subpart OOO.

Waiver AP-2629 (12/14/04): allowed the modification of a packer baghouse (ES14) by the installation of a new fan and internal dust collector components to increase dust collector capacity. Particulate emission limits are set for ES14.

Waiver AP-7703 (8/15/08): allowed construction of a bulk storage silo with an associated bin vent (ES20) and two rail loadout spouts with filter modules (P1 and P2). Waiver requirements include: startup notifications; a fugitive emissions limit for the rail loadout; particulate and visible emissions limits and daily visual observations for ES20, P1 and P2; initial performance testing; and compliance with any requirements of 40 CFR 60 Subpart OOO. Visible emissions from other sources not already addressed by a permit or subpart are limited to 20 percent.

Waiver AP-8591 (11/10/08): authorized a one-time bagging event (ES25) of 2,000 tons of specialty product, which would require the screened bentonite to be transferred directly to a small portable hopper/bagger. This waiver was superseded by Waiver AP-8642 (1/20/09): which indicates that the screening process, ES25, will be handling by a third party contractor. The waiver requires 15-days notification of shut-down of the hole-plug bagging operation.

Waiver wv-8892 (2/17/09): allowed modification to the crushed and dried loadout system (ES23), including construction of an additional line the existing #2 dryer baghouse (ES21). The addition of the line to ES21 makes the unit subject to 40 CFR 60, Subpart OOO requirements.

Waiver AP-9436 (6/18/09): allowed the addition of a portable vacuum for use at the facility. Fugitive emissions from the portable vacuum sources are limited to 20 percent.

Waiver AP-9437 (6/18/09): allowed removal of three waste bentonite/trash piles.

Waiver wv-9792 (10/29/09): allows stockpiling operations. The waiver requires that all work areas, disturbed areas and stockpiles, and unpaved portions of the haul road, be treated with water and/or chemical dust suppressants on a schedule sufficient to control fugitive dust.

Waiver wv-10000 (12/30/09)/corrected (1/25/10): modified baghouse ES18, originally permitted under MD-658 as a control on an extruder system. The extruder system has been shut down and removed from the plant. Baghouse ES18 now controls emissions from the granular rail loadout system. This waiver sets opacity and particulate emissions limits, requires daily visual observations, and indicates that ES18 is subject to the requirements of 40 CFR 60 Subpart OOO.

Waiver wv-9997 (1/13/11): allows replacement of the warehouse packing system (ES5 and 6) with an automated system. The waiver requires performance testing for ES5.

MD-12068 (9/20/11): authorized modifications including installation of a larger packing system than originally planned under wv-9997, affecting sources ES4, 5, 6 and 34. The ESP (ES2) was replaced with four baghouses for the dryer #1 (ES30) and three Raymond mills (ES31-33). With the exception of ES4, the waiver sets opacity and particulate emissions limits for the sources, and requires daily visual observations. The waiver requires source ES4 be removed within 60 days of startup of the new packing system. Particulate testing is required at least every five years for ES6 and ES30-33, with notification and retesting required if a source tests outside the permitted limits.

MD-14198 (5/24/13): allows the use of the Old Warehouse Packer (ES4) and limits the hours of operation of the Old Warehouse Packer (ES4), the Truck Warehouse Packer Tank (ES5), and the Truck Warehouse Packer (ES6b).

Applicable Requirements:
In addition to the permit requirements listed above, several units are subject to the requirements of 40 CFR 60 Subpart OOO - *Standards of Performance for Nonmetallic Mineral Processing Plants* (ES1, 3, 6b, 7, 15-21, 23, 25 34, P1 and P2).

Based on size, several storage tanks are not subject to 40 CFR 60 Subpart K, Ka or Kb, for storage vessels for petroleum liquids. The dryers and furnaces at the facility are direct fired and have no applicable requirements.

Periodic and Compliance Assurance Monitoring (CAM):
For the baghouse controlled equipment subject to requirements of WAQSR Chapter 7, Section 3 CAM for particulate emissions (units ES1-10, 12-21, 23, and 30-34), daily Method 22-like monitoring for visible emissions will be conducted. As indicated by permit MD-12068, particulate testing is also required at least every five years for ES6b and ES30-33.

The loadout spouts filter modules (ES35 and ES36), which are not subject to CAM, will also be monitored daily for visible emissions.

Operating hours for the Old Warehouse Packer (ES4), the Truck Warehouse Packer Tank (ES5), and the Truck Warehouse Packer (ES6b) shall be monitored to verify compliance with operational limits.