

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

OHIO E.P.A.

MAY 23 2014

ENVIRONMENTAL PROTECTION AGENCY DIRECTOR'S JOURNAL

May 23, 2014

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

Mr. Robert Spoerri
Beneficial Reuse Management/Gypsoil, LLC
372 W Ontario, Suite 501
Chicago, IL 60654

By: Kathy Muhl Date: 5-23-14

**Subject: Beneficial Reuse Management/Gypsoil, LLC
LAMP Permit Approval for Beneficial use of FGD Gypsum
Exemption**

Effective Date: May 23, 2014

Expiration Date: May 22, 2019

Dear Mr. Spoerri:

The Ohio Environmental Protection Agency (Ohio EPA) has reviewed the land application management plan (LAMP) permit application submitted on April 4, 2014 by Beneficial Reuse Management/Gypsoil, LLC. (BRM) at the request of the DTE Energy Monroe Power Plant (Monroe Power Plant) pursuant to Chapters 6111 and 3734 of the Ohio Revised Code (ORC) for the proposed beneficial use of flue gas desulfurization gypsum (FGD gypsum) generated by the Monroe Power Plant in Detroit, Michigan. The submitted LAMP permit application proposes to beneficially use FGD gypsum as an agricultural soil amendment and nutrient source. BRM will transport the FGD gypsum to northern Ohio farms for land application. Pursuant to the authority of the Director of Ohio EPA (Director) under ORC Chapters 6111 and 3734, this LAMP permit for the Monroe Power Plant is approved subject to compliance with all conditions below.

Further, the Director has determined that granting an exemption from the applicable solid waste provisions of ORC Chapter 3734 to use FGD gypsum in quantities and under the circumstances specifically authorized in this LAMP permit is unlikely to adversely affect the public health or safety or the environment. Therefore, pursuant to ORC Section 3734.02(G), BRM and any recipient of FGD gypsum from the Monroe Power Plant under this LAMP permit are hereby exempted from the applicable solid waste provisions of ORC Chapter 3734 and rules adopted thereunder specific to the land application of FGD gypsum as authorized in this permit approval.

Conditions

1. The BRM LAMP permit is approved for the beneficial use of FGD gypsum from the Monroe Power Plant as an agricultural soil amendment and nutrient source in accordance with the LAMP permit application submitted on April 4, 2014, which is attached and incorporated herein. All other beneficial uses must be separately approved by Ohio EPA. Only FGD gypsum from the Monroe Power Plant, as identified in this LAMP, is eligible for beneficial use under this permit.
2. The Director, or his authorized representative(s), may enter the site(s) authorized for land application of FGD gypsum at any reasonable time for the purpose of conducting inspections, collecting samples of FGD gypsum or conducting tests pertaining to the beneficial use of FGD gypsum from Monroe Power Plant as an agricultural soil amendment.
3. Issuance of this permit does not relieve BRM of the duty to comply with all applicable federal, state, and local laws, ordinances, and regulations, except as exempted herein.
4. BRM shall notify Ohio EPA if it discovers a change in the generating process or if the raw materials used in the generating process of the FGD gypsum change. Under such circumstances, the Director may request that BRM submit a revised LAMP application for approval. For the purposes of this LAMP permit, a substantial change in the raw materials is a change to a lower quality fuel or a lower quality limestone which results in FGD gypsum with additional constituents or a higher concentration of constituents.
5. The following shall be maintained by BRM for a minimum of five years after the beneficial use of the FGD gypsum and made available to Ohio EPA upon request:
 - a. Records of the annual volume of FGD gypsum that is beneficially used;
 - b. Records identifying the recipients or distributors of FGD gypsum and the volume provided to each recipient or distributor during the previous year;
 - c. A sampling plan detailing where samples of FGD gypsum are to be collected, how those samples are to be collected, how frequently those samples are to be collected, and a list of constituents that are used to analyze the samples;
 - d. All laboratory reports of all analyses of the FGD gypsum.
6. BRM shall collect and analyze at least one sample per year of the FGD gypsum intended for beneficial use and BRM shall collect and analyze additional

samples if there are substantial changes in the generation process or the raw materials used.

- a. The samples collected shall be representative of the FGD gypsum beneficially used for the calendar year.
 - b. BRM shall have the sample(s) analyzed for the constituents listed in Table I.
 - c. The reported detection limit for the analysis shall be below the limit specified for each constituent in Table I.
 - d. BRM shall employ analytical methods that generate constituent results in units consistent with the units in Table I.
7. Concentrations of any constituents in the FGD gypsum cannot exceed the limits for the specified constituents listed in Table I.

Table I

Constituents	Total (mg/kg)*
Arsenic	41
Barium	15,000
Beryllium	160
Boron	16,000
Cadmium	39
Chromium, total	180,000
Copper	1,500
Lead	300
Mercury	10
Molybdenum	75
Nickel	420
Selenium	100
Thallium	0.78
Zinc	2,800

* - dry weight basis

8. The permittee shall provide an analysis of the constituents in Table I upon the request of the Director.
9. BRM shall analyze the FGD gypsum for the constituents necessary for users to determine the appropriate maximum agronomic application rate as determined by a qualified agronomist and/or soil test analysis.
10. Each year, BRM shall submit a report regarding the beneficial use of the FGD gypsum for the previous calendar year. The annual report shall include the total amount, in tons, of FGD gypsum sold or distributed for beneficial use and the analytical results for any analysis(es) performed pursuant to Condition 7.
11. BRM shall include in the annual report required in Condition 10 the following:

"I certify, under penalty of law, that the information used to determine compliance with the requirements contained in Chapters 3734. and 6111. of the Ohio Revised Code, and all rules thereunder, for the period beginning (insert date of last certification statement) and ending (insert current certification statement date) was prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

12. The certification statement shall be signed by one of the following persons: In the case of a corporation, by a principal executive officer of at least the level of vice president or the principal executive officer's duly authorized representative, if such representative is responsible for the overall operation of the facility. In the case of a partnership, a general partner. In the case of a sole proprietorship, the proprietor. The signature shall constitute personal affirmation that all statements or assertions of fact in the records are true and complete and comply fully with applicable state requirements and shall subject the signatory to liability under ORC Section 2921.13.
13. The annual report shall be sent to the following address:

Ohio EPA
Division of Materials and Waste Management – AAEU
P.O. Box 1049
Columbus, OH 43216-1049

14. Storage and beneficial use of the FGD gypsum shall not create a nuisance and shall not adversely affect public safety or health or the environment. Should a

nuisance condition develop, or a determination be made by Ohio EPA that storage or beneficial use of FGD gypsum is a threat to human health or the environment, then permission to use this material may be revoked upon written notification from the Director. Immediately upon the effective date of any such revocation, beneficial use of FGD gypsum from the Monroe Power Plant under this LAMP permit shall cease.

15. The Director shall be notified in writing within seven days if BRM discovers noncompliance with this LAMP permit. The Director may add, delete, or change any conditions to this LAMP permit to protect human health or the environment.
16. BRM shall supply distributors and end users with a copy of this LAMP permit approval.
17. This permit to beneficially use FGD gypsum from the Monroe Power Plant shall expire at midnight on the expiration date shown above. In order to receive authorization to beneficially use FGD gypsum beyond the above date of expiration, BRM shall submit such information and forms as are required by Ohio EPA no later than 180 days prior to the above date of expiration.

The FGD gypsum shall be beneficially used in strict accordance with the conditions of this LAMP permit and as outlined in the LAMP permit application submitted for this approval to the Director. Approval of this LAMP permit does not constitute an assurance that use of the FGD gypsum in accordance with the approved LAMP permit will be in compliance with all Ohio laws and regulations.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to ORC Section 3745.04. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit it is demonstrated that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, Ohio 43215

Sincerely,



Craig W. Butler
Director

DH

Attachment: LAMP

cc: Jason Sparks, Beneficial Reuse Management
Dennis Leonard, DTE Energy, Monroe Power Plant
Alex Smaili, DSW, NWDO
Jeremy Scoles, DMWM, NWDO

Re: Beneficial Reuse Management/Gypsoil
Permit – Short Term
Approval
Beneficial Use
Out of State
BENU020365

Permit – Short Term
Exemption



**Management Plan
For the Land Application
of
FGD Gypsum in Ohio for Agronomic Use**

Introduction

This document outlines a management plan developed by Beneficial Reuse Management, LLC/Gypsoil (BRM) to use synthetic gypsum generated from the flue gas desulfurization (FGD) process used at coal-fired electric generating station as a soil amendment and nutrient source in Ohio. This document is being submitted to fulfill the information requirements outlined in **OAC 3745-27-05 (A)(4)** and to request that DTE Energy Electric Company be issued an approval, as outlined in this plan, to use FGD gypsum from the from the Monroe Power Plant (MONPP) owned and operated by DTE Energy Electric Company, a subsidiary of DTE Energy for agricultural use. This plan addresses the requirements outlined in the aforementioned rule and application form including the following topics.

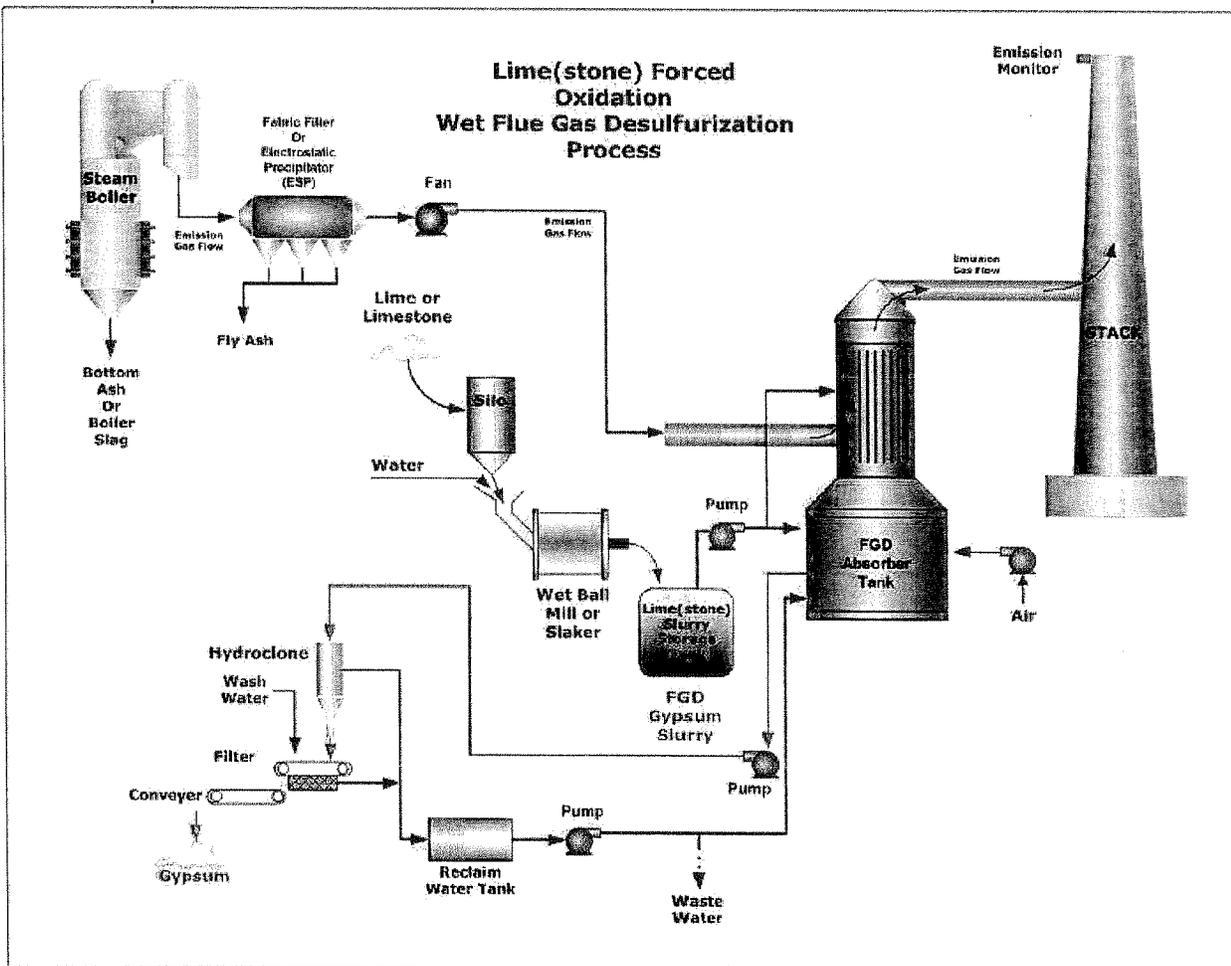
- Source and process generating the synthetic gypsum
- Beneficial Reuse Management's current operational experience in the agricultural use of gypsum
- Lab analysis of the pertinent environmental and agronomic constituents of the synthetic gypsum and a comparison of these results to those levels defined
- Environmental guidelines for transport, storage, and application
- Reporting and monitoring

1. Source of the gypsum and process generating the synthetic

The source of synthetic gypsum to be supplied to the agricultural market in Ohio will be from The Monroe Power Plant (MONPP). MONPP is a coal-fired power plant located in Monroe, Michigan on the western shore of Lake Erie. It is owned by the DTE Energy Electric Company, a subsidiary of DTE Energy. The plant was constructed in the early 1970s and was completed in 1974. The plant has 4 generating units, each with an output of 810 megawatts. The FGD systems at MONPP Units 1,3, 4, went into service at various times from 2009 thru 2013. The Unit 2 FGD system will be operational in May 2014. The FGD systems on each of these units are wet limestone forced oxidation systems that currently produce gypsum for the wallboard market. These four units currently use use a blend of low sulfur western and mid sulfur eastern coal. Units 3 and 4 also have been burning Pet Coke on a regular, not always consistent, basis since last November. When Pet Coke is used in these units the heat input from this fuel is 10% of overall heat input. These four units will produce a combined total of 400,000 tons/ year of synthetic gypsum.

These generating units have pulverized coal fired boilers that are equipped with Flue Gas Desulfurization (FGD) Systems that produce a high quality, high purity calcium sulfate material called synthetic gypsum. Prior to scrubbing of the flue gas for sulfur dioxide, the fly ash is removed from the combustion stream either using an electrostatic precipitator or a baghouse. Next limestone is pulverized in ball mills and mixed with water to produce a reagent slurry that is used in the FGD system. The calcium carbonate (CaCO_3) slurry is used to remove sulfur dioxide (SO_2) from the flue gas producing calcium sulfite (CaSO_3) and calcium sulfate (CaSO_4). The combined products are then processed through a forced oxidation system to complete the conversion from calcium sulfite to calcium sulfate.

The calcium sulfate slurry is sprayed with water to remove soluble salts and then de-watered resulting in a synthetic gypsum material that is ready to be used as an agricultural soil amendment. Typically the synthetic gypsum from these type of systems is >95% pure calcium sulfate and a free moisture content of 10% to 15% containing about 20% calcium and >16% sulfur. A schematic outlining the major aspects of the FGD systems at these facilities is presented below.



The amount of material that would be used for agriculture in Ohio from this plant is highly dependent on the location of its use and the cost of delivery. It is anticipated that gypsum would be supplied for markets primarily in the northern half of the state but could be delivered in other areas if the economics of distribution and sale are feasible.

2. Beneficial Reuse Management's current operational experience in land spreading gypsum

Beneficial Reuse Management is currently managing the marketing and distribution of more than 350,000 tons of synthetic gypsum annually in over 20 states adjacent to and east of the Mississippi River under regulatory permits or approvals issued by these state's environmental and agricultural agencies. In the states where BRM markets gypsum, its use in agriculture varies. Gypsum use in the agriculture is well established as a soil amendment and a nutrient source. For instance in Wisconsin gypsum is used in agriculture as both a soil amendment to improve the workability of clay soils and as a nutrient source for the potato industry in central Wisconsin and for some forage crops. In the Eastern and Southeastern US, gypsum has a long history of use as a nutrient for peanut growers.

In Ohio, BRM currently manages the marketing and distribution of FGD gypsum from the Indianapolis Power and Light Harding Street Plant, the Pleasants Power Station owned by Allegheny Energy, Inc., and the Dayton Power and Light J M Stuart Station. From November 1st 2012 through October 31st 2013 BRM sold a total of approximately 41,000 tons of gypsum in Ohio from these plants. Attached is the current license issued by the Ohio Department of Agriculture to market and sell this gypsum.

3. Lab analysis of the pertinent environmental and agronomic constituents of the synthetic gypsum

The lab analysis of seven representative samples of synthetic gypsum from **MNOPP** for a variety of chemical parameters is presented in Table 1 below. These samples were taken when Units 3&4 were burning Pet Coke and are representative of the routine operation of the plant. The raw data from the lab analysis is attached at the end of this document.

The parameters that were analyzed were those recommended by the Ohio EPA and those heavy metals that are typically required of land spreading programs of municipal wastewater sludge, and agronomic nutrients of concern.

Table 1 Waste characterization limits

<u>Pollutant</u>	<u>CAS RN</u>	Maximum Pollutant Limits (mg/kg)	DTE MNOPP	Source of Maximum Limit
Aluminum	7429-90-5	77,000.0	843	USEPA RSL
Antimony	7440-36-0	31.0	<5.0 ND	USEPA RSL
Arsenic	7440-38-2	6.70	1.67	OEPA VAP GLBSV
Barium	7440-39-3	15,000.0	58.3	USEPA RSL
Beryllium	7440-41-7	160.0	<0.5 ND	USEPA RSL
Boron	7440-42-8	16,000.0	< 5.0 ND	USEPA RSL
Cadmium	7440-43-9	39.0	<0.5 ND	USEPA 503
Chromium VI	18540-29-9	230.0	<1 ND	OEPA VAP GLBSV
Cobalt	7440-48-4	23.0	< 1 ND	USEPA RSL
Copper	7440-50-8	1,500.0	3.4	USEPA 503
Iron	7439-89-6	55,000.0	948	USEPA RSL
Lead	7439-92-1	300.0	<5.0 ND	USEPA 503
Manganese	7439-96-5	1,800.0	43.8	USEPA RSL
Mercury	7439-97-6	5.60	0.54	USEPA RSL
Molybdenum	7439-98-7	75.0	<1.0 ND	USEPA 503
Nickel	7440-02-0	420.0	3.1	USEPA 503
Selenium	7782-49-2	100.0	12.7	USEPA 503
Silver	7440-22-4	390.0	<1.0 ND	USEPA RSL
Thallium	7440-28-0	6.10	<0.5 ND	OEPA VAP GLBSV
Vanadium	7440-62-2	390.0	13	USEPA RSL
Zinc	7440-66-6	2,800.0	10.3	USEPA 503

USEPA RSL= Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites-Residential Soil Ingestion pathway limits

OEPA VAP GLBSV= Ohio EPA Voluntary Action Program Generic Leach-Based Soil Values for Residential Soil

USEPA 503= Limits for metals in biosolids from Part 503 of Title 40 of the Code of Federal Regulations

The table below presents a comparison of the concentrations of selected metals in FGD gypsum, mined gypsum, and soils in the US. This table presented by Dr. Peter Grevatt USEPA, Office of Solid Waste, concerning the agricultural and industrial uses of FGD gypsum was developed from a number of sources. These sources are identified in a footnote on the bottom of the table.

The data presented in this table indicates that the metal concentrations in FGD gypsum, including those FGD gypsum sources proposed for use are comparable to mined gypsum it will replace and the concentrations are within the range of most metals in soils.

From an agronomic basis FGD gypsum is purer than mined gypsum and contains a greater percentage of calcium and sulfur than mined gypsum. (New Horizons in Soil Science, Issue #2 — 2010, Using Flue Gas Desulfurization (FGD) Gypsum in Wisconsin, Dept. of Sol Science, UW-Madison/UW-Extension). Mined gypsum averages 19% Calcium and 15% and FGD gypsum averages 23% and 19% on a dry weight basis.

Raw data from Midwest Labs attached to this report indicates that FGD gypsum from the **MNOPP** contains over 16% sulfur and 22% calcium on average as received weight basis. The moisture content generally remains less than 10%.

MNOPP routinely samples FGD gypsum multiple times on a daily at its own laboratory to ensure the quality of its material. It does this to ensure that the quality of the material is acceptable to the wallboard market. Recent information is presented in the table below. A copy of the raw data is available on request.

MNOPP Units 1, 2, 3 FGD Gypsum				
Purity (%), Chlorides (ppm), pH, Moisture (%)				
February 24, 2014				
No of Samples	Gypsum Purity	pH	Chlorides	Moisture
9	>95	7.16 – 7.74	<45	<10

Trace Constituents in FGD Gypsum, Mined Gypsums, and Natural Soils			
Trace Constituent	FGD Gypsum (ppm)	Mined Gypsum (ppm)	National Background in Soils Lower 25th percentile (ppm)
Antimony	2.0-9.1	0.02 -0.28	0.3
Arsenic	0.6-4.0	0.19-3.0	4.21
Cadmium	0.2- 1.2	<2-0.5	0.19
Chromium	1.3-42.0	8.7-30.5	28.6
Lead	0.8-12.0	All <5	14.5
Mercury	0.01- 1.4	0.00044- 0.025	0.039
Molybdenum	0.5 -12.0	All <3	0.44
Nickel	0.73-20.1	<4 -11.9	11.8
Selenium	2.0-30.0	11.3-21.1	0.21
Thallium	0.6-2.0	All <15	0.3
Vanadium	<1-73.2	<2-12.7	45.9
Zinc	3.4-47.5	13.1-27.5	36.8

DOE 2007 Unpublished data.
 US Department of Energy, EPA.
 2007 Unpublished data, Office of

Research and Development, U.S. Environmental Protection Agency, EPA, 2007 Unpublished data. Elovic, P., R. H. Institute, OSU, 2006 Gypsum for Agricultural Use in Ohio. Product, Ohio State University Extension, Columbus, OH. ANR-06-01. Shaidet, S. and Boemgen, 1884. *Element Concentration in Soil and Other Materials of the Coal-terminous United States*. US Geological Survey Professional Paper 1270. Washington, D.C.: US Government Printing Office. USGS 2006 *Mid-Atlantic Region Coal-terminous United States*. US Geological Survey. Contaminant Scale Tables of the United States and Open-File Report 2005-1253, US Geological Survey.

**SOLID WASTE
 APPROVED**
 OHIO ENVIRONMENTAL PROTECTION AGENCY
 MAY 23 2014
 AS EVIDENCED BY COPY OF
 LETTER OF APPROVAL
 HERETO ATTACHED

Based upon the laboratory analysis of the FGD gypsum presented In Section 3 of this document and application at the agronomic rates outlined here, there will be no environmental impact of the FGD gypsum if used as a soil amendment or nutrient source.

Lab analysis of the synthetic gypsum will be performed annually on the samples from **(MNOPP)**. The specific parameters included in the lab analysis to be submitted to the Ohio EPA include those contained in the raw data attached to this report completed by Midwest Labs. That data also contains specific agronomic parameters needed to license this material in Ohio with the Department of Agriculture as a soil amendment and nutrient source. Lab analysis would also be conducted if a change in the plants operation would significantly alter the chemical constituents of concern.

4. Beneficial Use and Gypsum Application Rates

Beneficial Use

The documents entitled “ Agricultural Uses For Flue Gas Desulfurization (FGD) Gypsum “ dated March 2008 (EPA530-F-008-09) and A Review of Agricultural and Other Land Application Uses of Flue Gas Desulfurization Products, Electric Power Research Institute (EPRI), March 2006 outline some of the benefits to agriculture from the land application of both mined gypsum and synthetic FGD gypsum.

According to the US Environmental Protection Agency and EPRI, one of the primary uses for gypsum in agriculture is to improve the physical property of soils. Soils with higher clay content can suffer from excessive crusting which inhibits the infiltration of water and nutrients. Also gypsum is used as a nutrient source for certain crops such as peanuts, potatoes, and forage crops.

Experience by Beneficial Reuse Management and others have determined that the application of 1 to 2 tons per acre every 1 to 2 years is the general guideline used to improve the quality of certain clay soils to improve their ability to efficiently use water and fertilizers.

Gypsum Application Rates

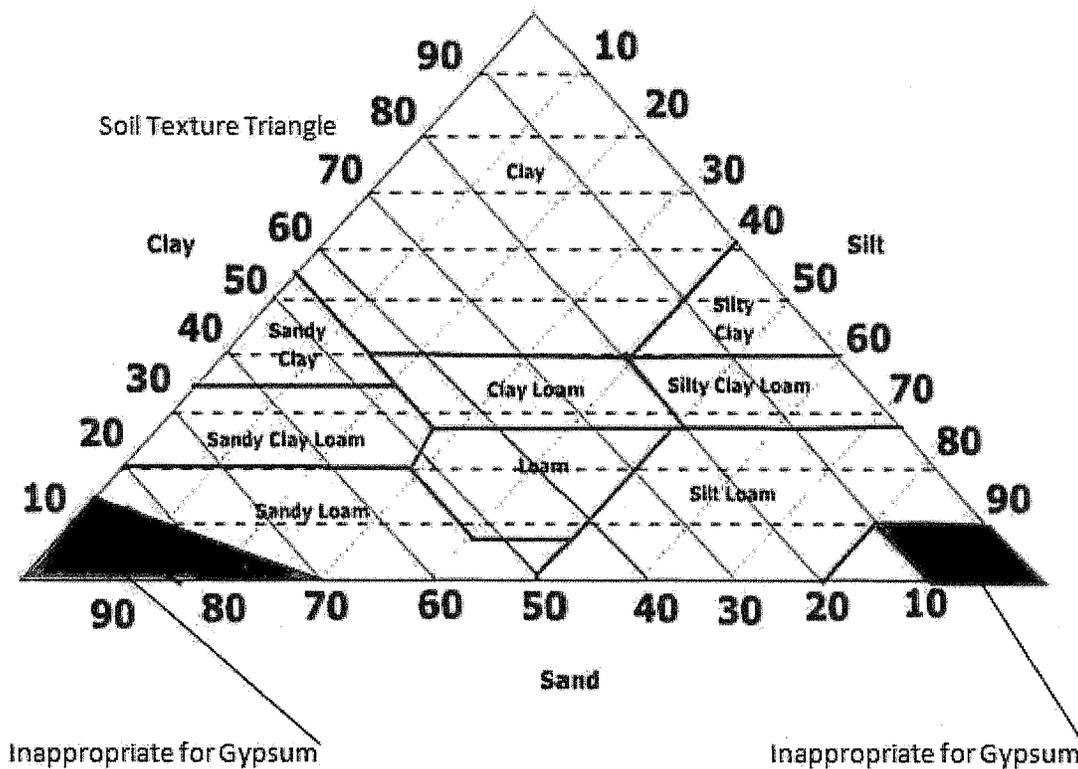
For Ohio, the following guideline will be used to determine specific application rates to individual farms. In order to assure that gypsum is applied at the appropriate agronomic rates on individual farm fields BRM will:

- Consult with staff at the Ohio State University Extension Service and others in the agronomic community to determine appropriate rates for using gypsum for use as a soil amendment and nutrient source.
- Develop and distribute informational brochures and user information sheets complying with the land spreading approval criteria outlined here.

- Gypsum shall be applied only to soils classified as acceptable throughout the top 3 feet of soil profile.

The appropriateness and application rates of gypsum for each farm as a soil amendment source being considered will be determined on the following applicable criteria with the maximum application rate not to exceed two tons per acre per year.

- Soils not appropriate for gypsum as a soil amendment are soils in which the Cation Exchange Capacity (CEC) is less than 5 meq and represented in the following Soil Texture Triangle. This soil triangle will only be used as a first step guide to eliminate certain soils at all from consideration.



- Available soil test results or the NRCS Web Soil Survey will be used to determine the soil CEC. to determine gypsum application rates including:
 - Cation Exchange Capacity (5 meq or greater).

CEC	Gypsum Application Rate (lbs/acre/per year)
5 -< 10	1000
10 - 15	2000
>15	4000

- % Base Saturation for Calcium (<75%).
- % Base Saturation for Magnesium (>13%).

- Other observations of soil properties will also be used to supplement the CEC information including:
 - Soil Texture.
 - Soil is tight, compactable.
 - Water infiltration is slow, leaving water ponded in the field.
 - Rainwater moves off the field causing erosion of soil and crop residue.
 - Soils get hard when they dry out.
 - Soils are tight in the wheel tracks even though the soil is moist.
 - Soils seal up and stay wet after a rain.
 - Soil penetrometer indicates compacted zones in the soil profile.
 - When digging crop roots, the soil clings tightly to the roots making it difficult to expose the roots without separating them from the plant.
- Observations of the performance of field equipment including:
 - It is difficult to prepare a good seedbed with tillage and control planting depth due to the presence of clods.
 - It is difficult to maintain uniform seed depth with the no-till planter due to variations in soil structural conditions.
 - It is difficult to pull tillage and/or application equipment through the field due to tight soil structure.
- Observations of crop development including:
 - Crop roots are limited by soil tightness or compaction layers.
 - Crop roots are swelled and crooked from growing through compacted soil.
 - Crops have trouble emerging evenly through the soil surface.
 - After the crop emerges, there are uneven growth patterns throughout the field.
 - When the corn crop is in the V2-V6 stages there are signs of a purple color in the plant.
 - When the corn crop begins to bolt after V6, signs of Potassium deficiency begin to appear.
- Observations of the biological systems including:
 - Crop residues break down slowly and are still present 1-3 years later.
 - There is a marked absence of earthworm activity.
 - Soils smell swampy after rainfall events.

5. Environmental guidelines for transport, storage, and land application

Gypsum will be transported via covered truck from **MNOPP** to locations in Ohio where it will be unloaded and stored temporarily at distribution sites. From these locations it will be distributed either directly to farms or to agricultural service businesses that provide routine services to the agricultural industry for final distribution to an individual farm location.

The following guidelines will be followed as the gypsum moves through the logistical chain:

Transport

- Delivery will be scheduled as close to the actual application date as practical.
- Vehicles will be loaded to comply with State licensing and load limits.
- Loaded vehicles will be covered to prevent gypsum from escaping during transport.
- Loaded vehicles will have sealed tailgates to prevent gypsum from escaping during transport.

Storage

- All in-field stockpile locations must meet the following criteria
 - Synthetic gypsum contains enough moisture so that it minimizes windblown dust when being off-loaded or during short term storage prior to application. Unloading of gypsum into field stockpiles during high winds will be avoided.
 - Stockpiles will be configured such that rainwater does not flow toward the gypsum stockpile.
 - All gypsum will be stored at least 200 feet from any residence or public building, 200 feet from surface waters or a subsurface conduit to a subsurface feature and 500 feet from any potable water well.
 - Stockpile locations which support the immediate application of product will be formed into a peak to allow water to form a crust and be shed off the pile.
- BRM distribution sites
 - Will be outside any floodplain, floodway or area with seasonal high water table, which could cause off-site movement of gypsums.
 - Will consist of surface soil or other appropriate materials, which have been graded to allow water to drain away from the stockpile. If necessary, perimeter walls will be in place to allow for efficient storage and loading of the gypsum.
 - Stockpiles will be placed where they deter unauthorized persons from becoming a nuisance.
 - Due to the nature of the gypsum and the frequency of inventory movement, nuisance animals are not expected to colonize on the stockpile site.
 - A facility containing a stockpile will be designed and constructed to protect both ground and surface water as well as the public. The design of the distribution facility will take into account the proximity to water supplies and soil drainage considerations. The stockpile may either be covered or placed under roof or designed with berms and impervious surfaces. The design criteria for these distribution sites are contained in an attachment to this document.

Land Application

- Product will be loaded from stockpile locations using a loader in such a way as to minimize wastage of product and the mingling of foreign material into the loads.
- All gypsum will be spread at least 500 feet from a community water supply well or potable well and 200 feet from surface waters. Application will be avoided prior to an impending rainstorm or when fields have received greater than ¼ inch rainfall within the 24-hour period preceding the intended gypsum application.
- Gypsum will not be applied to land during precipitation or on land which is saturated or ponded with water or when precipitation is imminent.
- Application of gypsum will not be made during high wind situations.

6. Reporting

An annual report on the amount of gypsum sold in Ohio will be submitted to the Ohio EPA. This report will contain the total annual tonnage of FGD gypsum sold in the state as reported to the Ohio Department of Agriculture. As previously mentioned, BRM currently holds a fertilizer license issued by the Ohio Department of Agriculture to market and sell FGD gypsum from various sources. Once approval of this application has been issued this material will be added to the label for sale with the Department of Agriculture and requirements for its sale and use will be followed.

