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Facility Name: **US-Doe Mound Plant**

Application Number: **08-3941**

Date: **Draft PTI (Date will be entered upon final issuance)**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations.

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Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

Facility Name: **US-Doe Mound Plant**Application Number: **08-3941**Date: **Draft PTI (Date will be entered upon final issuance)**AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **US-Doe Mound Plant** located in **Montgomery** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F003	Portable Concrete and Demolition Debris Crushing, Screening & Material Handling Operation Powered by a 0.765 mmBtu/hr Diesel Engine	Compliance with the applicable regulations and specified allowable emission rates; water misting during crushing, screening and material handling; recordkeeping; reporting	3745-31-05	<p>Crusher: 0.96 lb/hr and 0.77 TPY Particulate; 5% opacity visible emission limitation as a 3-minute average</p> <p>Diesel Engine: 3.37 lbs/hr and 2.70 TPY Nitrogen Oxides; 0.73 lb/hr and 0.58 TPY Carbon Monoxide; 0.22 lb/hr and 0.18 TPY Sulfur Dioxide; 0.310 lb particulate-/mmBtu of actual heat input and 0.19 TPY Particulate; 0.28 lb/hr and 0.22 TPY Organic Compounds;</p>

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F003 cont'd				5% visible emission limitation as a 3-minute average
			3745-17-07	The particulate emission limit based on the rule is less stringent than the limit above.
			3745-17-11 (B)(1)	<u>Crusher:</u> The particulate emission limit based on the rule is less stringent than the limit above.
			3745-17-11 (B)(5)(a)	<u>Diesel Engine:</u> The particulate emission limit is the same as the BAT limit.
			40 CFR Part 61, Subpart H	See Standard Terms and Conditions.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
Particulate	0.96
Nitrogen Oxide	2.70
Carbon Monoxide	0.58
Sulfur Dioxide	0.18
Organic Compounds	0.22

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NESHAP REQUIREMENTS

The following source(s) are subject to the applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as promulgated by the United States Environmental Protection Agency under 40 CFR Part 61.

<u>Source Number</u>	<u>Source Description</u>	<u>NESHAP Regulation (Subpart)</u>
F003	Portable Debris Crushing operation	H

The application and enforcement of these standards are delegated to Ohio EPA. The requirements of 40 CFR Part 61 are also federally enforceable.

Pursuant to the NESHAP, the source owner/operator is required to report the following milestones:

- a. date of commencement of construction (no later than 30 days after such date);
- b. anticipated date of initial start-up (not more than 60 days or less than 30 days prior to such date);
- c. actual date of initial start-up (within 15 days after such date); and,
- d. date of performance testing (at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, OH 43216-3669

and **Regional Air Pollution Control**
451 West Third Street
Dayton, Ohio 45422

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

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MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Regional Air Pollution Control, 451 West Third Street, Dayton, Ohio 45422.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

CONSTRUCTION COMPLIANCE CERTIFICATION

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Additional Terms and Conditions:

1. The hourly emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.
2. Compliance with the emission limitations for the crushing, screening and material handling operation shall be achievable through the application of misting water.

B. Operational Restrictions:

1. The permittee is required to apply water misting when the emissions unit F003 is in operation.
2. The permittee shall burn only distillate fuel oil in this emissions unit.
3. The maximum annual operating hours for this emissions unit shall not exceed 1600 based upon a rolling, 12-month summation of the operating hours.

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To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Operating Hours</u>
1	133
1-2	266
1-3	399
1-4	532
1-5	665
1-6	798
1-7	931
1-8	1064
1-9	1197
1-10	1330
1-11	1463
1-12	1600

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

C. Monitoring and/RecordKeeping Requirements:

1. The permittee shall conduct daily checks of the water misting application, while the emissions unit F003 is in operation and record the findings in a log.
2. The permittee shall maintain monthly records of the following information:
 - a. the operating hours for each month; and,
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the operating hours.
3. The permittee shall perform daily checks, when the emissions unit is in operation for any visible emissions. The presence or absence of any visible emissions from the emissions unit shall be noted in an operations log.

4. For each day during which the permittee burns a fuel other than distillate fuel oil, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
5. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

D. Reporting Requirements:

1. The permittee shall submit semi-annual written reports which (a) identify all days during which any visible particulate emissions were observed and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (Regional Air Pollution Control) each year and shall cover the previous 6-month period.
2. The permittee shall submit deviation (excursion) reports to the Director (Regional Air Pollution Control) that identify each day when a fuel other than distillate fuel oil was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
3. The permittee shall submit deviation (excursion) reports to the Director (the Regional Air Pollution Control) which identify all exceedance of the rolling, 12-month operating hours limitation and, for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative operating hours levels. Each report shall be submitted within 30 days after the deviation occurs.
4. These deviation (excursion) reports shall be submitted in the following manner:
 - a. reports of any required monitoring and/or record keeping information shall be submitted to the Regional Air Pollution Control; and,

- b. except as otherwise may be provided in the terms and conditions for a specific emissions unit, written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventative measures which have been or will be taken, shall be submitted to the Regional Air Pollution Control. (These reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

E. Testing Requirements and Compliance Determinations:

- 1. Compliance with the emission limitations in these terms and conditions shall be determined in accordance with the following methods:

for the Crusher

- a. Emission Limitation-
0.96 lb/hr Particulate

Applicable Compliance Method-

Compliance shall be determined by multiplying the maximum hourly production rate of 150 tons/hr by the total emission factor of 0.0064 lb particulate/ton* of throughput for crushing, screening, and material handling, as specified in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 11.19, Table 11.19.2-2.

- * Total Emission Factor as determined from the individual emission factors in AP-42, Table 11.19.2-2.

Process

Emission Factor (lb/ton)

screening, controlled	0.00084
primary crushing	0.0007
secondary/tertiary crushing	0.00059
fines crushing, controlled	0.002
fines screening, controlled	0.0021
conveyor transfer point, controlled	4.8 x 10 ⁻⁵

truck unloading, fragmented stone	1.6 x 10 ⁻⁵
truck loading, conveyor, crushed stone	<u>0.0001</u>
Total	0.0064*

- b. Emission Limitation-
0.77 TPY Particulate

Applicable Compliance Method-

Compliance shall be determined by multiplying the maximum hourly production rate of 150 tons by the hours of operation as determined in section C.2.; then multiplying by the total emission factor of 0.0064 lb particulate/ton of throughput* for crushing, screening, and material handling, as specified in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 11.19, Table 11.19.2-2 and converting to tons.

- c. Emission Limitation-
5% opacity visible emission limitation as a 3-minute average

Applicable Compliance Method-

Compliance with the visible emission limitation is presumed through the use of water misting. If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03 (B)(1) using the tests and procedures specified in USEPA Reference Method 9.

For the Diesel Engine:

- d. Emission Limitation-
3.37 lbs/hr Nitrogen Oxides

Applicable Compliance Method-

Compliance shall be based upon the emission factor for diesel fuel engines given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 of 4.41 lb NO_x/mmBtu multiplied by the maximum rated capacity of the diesel engine of 0.765 mmBtu/hr.

- e. Emission Limitation-
2.70 TPY Nitrogen Oxides

Applicable Compliance Method-

Compliance shall be based upon the maximum hourly emission rate of 3.37 lbs/hr multiplied by the number of operating hours as determined in section C.2. and converted to tons.

- f. Emission Limitation-
0.73 lb/hr Carbon Monoxide

Applicable Compliance Method-

Compliance shall be based upon the emission factor for diesel fuel engines given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 of 0.95 lb CO/mmBtu multiplied by the maximum rated capacity of the diesel engine of 0.765 mmBtu/hr.

- g. Emission Limitation-
0.58 TPY Carbon Monoxide

Applicable Compliance Method-

Compliance shall be based upon the maximum hourly emission rate of 0.73 lbs/hr multiplied by the number of operating hours as determined in section C.2. and converted to tons.

- h. Emission Limitation-
0.22 lb/hr Sulfur Dioxide

Applicable Compliance Method-

Compliance shall be based upon the emission factor for diesel fuel engines given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 of 0.29 lb SO₂/mmBtu multiplied by the maximum rated capacity of the diesel engine of 0.765 mmBtu/hr.

- i. Emission Limitation-
0.18 TPY Sulfur Dioxide

Applicable Compliance Method-

Compliance shall be based upon the maximum hourly emission rate of 0.22 lbs/hr multiplied by the number of operating hours as determined in section C.2. and converted to tons.

- j. Emission Limitation-
0.310 lb Particulate/mmBtu of actual heat input

Applicable Compliance Method-
Compliance shall be based upon the emission factor for diesel fuel engines given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 of 0.310 lb PM/mmBtu. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03 (B)(10).

- k. Emission Limitation-
0.19 TPY Particulate

Applicable Compliance Method-
Compliance shall be based upon the emission factor for diesel fuel engines given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 of 0.310 lb PM/mmBtu multiplied by the maximum rated capacity of the diesel engine of 0.765 mmBtu/hr, then multiplied by the number of operating hours as determined in section C.2. and converted to tons.

- l. Emission Limitation-
0.28 lb/hr Organic Compounds

Applicable Compliance Method-
Compliance shall be based upon the emission factor for diesel fuel engines given in AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Section 3.3, Table 3.3-1 of 0.36 lb OC/mmBtu multiplied by the maximum rated capacity of the diesel engine of 0.765 mmBtu/hr.

- m. Emission Limitation-
0.22 TPY Organic Compounds

Applicable Compliance Method-
Compliance shall be based upon the maximum hourly emission rate of 0.28 lbs/hr multiplied by the number of operating hours as determined in section C.2. and converted to tons.

- n. Emission Limitation-
5% opacity visible emission limitation as a 3-minute average

Applicable Compliance Method-
Compliance with the visible emission limitation is presumed through the use of diesel fuel. If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03 (B)(1) using the tests and procedures specified in USEPA Reference Method 9.

F. Miscellaneous Requirements:

Notice to Relocate a Portable or Mobile Source

1. Pursuant to Ohio Administrative Code (OAC) rule 3754-31-03 (A)(1)(p)(i), the permittee of a portable or mobile emissions unit may relocate within the State of Ohio without first obtaining a PTI providing the following criteria are met:
 - a. the portable emissions unit is equipped with the best available control technology for such portable emissions unit;
 - b. the portable emissions unit is operating pursuant to a currently effective permit to operate (PTO);
 - c. the applicant has provided proper notice of intent to relocate the portable emissions unit to the RAPCA and the appropriate field office having jurisdiction over the new site within a minimum of thirty days prior to the scheduled relocation; and,
 - d. in RAPCA's and the appropriate field office's judgement, the proposed site is acceptable under the rule 3745-15-07 of the Administrative Code.
2. In the alternative, pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), the permittee of a portable or mobile emissions unit may relocate within the State of Ohio without first obtaining a PTI providing the following criteria of OAC rule 3745-31-05(F) are met:
 - a. the portable emissions unit permittee possesses an Ohio EPA PTI, PTO or registration status;
 - b. the portable emissions unit is equipped with best available technology;
 - c. the portable emissions unit owner has identified the proposed site to Ohio EPA;

- d. Ohio EPA has determined that the portable emissions unit, at the proposed site, will have an acceptable environmental impact;
 - e. a public notice, consistent with Chapter 3745-47 of the Administrative Code, is published in the county where the proposed site is located;
 - f. the owner of the proposed site has provided the portable emissions unit owner with approval or equivalent declaration that it is acceptable to the site owner to move the portable emissions unit to this proposed site; and,
 - g. the portable emissions unit owner has provided Ohio EPA with fifteen days written notice of the relocation.
3. Any site approvals issued by the Ohio EPA, pursuant to F.1. or F.2. above, shall be valid for no longer than three years and are subject to renewal.

In order for the RAPCA and the appropriate field office having jurisdiction over the new site to determine compliance with all of the above criteria, the owner or operator of the portable or mobile emissions unit must file a " Notice of Intent to Relocate", within the specified time frame (30 or 15 days) prior to the relocation of the emissions unit with the RAPCA (451 W. Third St., Dayton, OH 45422) and the appropriate field office having jurisdiction over the new site. Upon receipt of the notice, the RAPCA and/or appropriate field office having jurisdiction over the new site, will evaluate the request in accordance with the above criteria.

Failure to submit said notification and to receive Ohio EPA approval prior to relocation of the emissions unit may result in fines and civil penalties.

4. This emissions unit is subject to the radionuclide NESHAP, 40 CFR Part 61, Subpart H. The permittee shall secure approval to operate this emissions unit from the United States EPA Region V and shall notify the RAPCA and Ohio EPA of such approval prior to initial operation of the emissions unit.