



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
COLUMBIANA COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 02-19765

Fac ID: 0215000300

DATE: 8/16/2005

Redbud Company, The
Dean Hunt
520 West Short St.
Lexington, KY 40507

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

NEDO



**Permit To Install
Terms and Conditions**

**Issue Date: 8/16/2005
Effective Date: 8/16/2005**

FINAL PERMIT TO INSTALL 02-19765

Application Number: 02-19765
Facility ID: 0215000300
Permit Fee: **\$3750**
Name of Facility: Redbud Company, The
Person to Contact: Dean Hunt
Address: 520 West Short St.
Lexington, KY 40507

Location of proposed air contaminant source(s) [emissions unit(s)]:
**13629 White Rd
Madison Twp., Ohio**

Description of proposed emissions unit(s):
Flyash and sludge blending process.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly 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 preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

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 this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

9. Construction of New Sources(s)

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The proposed emissions unit(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 cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(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 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. 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 the requirements of this permit or cannot meet applicable standards.

10. 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.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. 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.

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13. Source Operation and Operating Permit Requirements 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, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. 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.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

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Issued: 8/16/2005

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SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	91.7

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F007 - N-Viro and western fly ash conditioning process line 1 to treat wastewater sludge through contact with flyash or lime. Process includes load-in of material to bottom bins and silos to load-out from the heat pulse piles	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 27.4 tons/yr.
Transfer of Sludge Bottom Bins, Including Infeed Conveyors to the Mixer	OAC rule 3745-31-05(A)(3)	<p>Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average.</p> <p>At all times during the transfer of sludge, the drop height of the truck tailgate shall be minimized to the extent possible to minimize or eliminate visible emissions of fugitive dust.</p> <p>Sludge loaded into the bottom bins shall, at all times, have an inherent moisture content sufficient to minimize or eliminate visible emissions of fugitive dust.</p>

<p>Fly Ash and Lime Silos, Including Screw Conveyors to the Mixer</p>	<p>OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)</p> <p>OAC rule 3745-31-05(A)(3)</p>	<p>See A.2.a below.</p> <p>Each fabric filter(s) serving a silo shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s).</p>
	<p>OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)</p>	<p>See A.2.c below.</p> <p>See A.2.a below.</p>
	<p>OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)</p>	<p>See A.2.b below.</p>
<p>Mixer Loading, Including Load-out via Radial Stacking Conveyor</p>	<p>OAC rule 3745-31-05(A)(3)</p>	<p>The mixer shall be adequately enclosed and moisture via the sludge or water spray bars shall be applied to all material to minimize fugitive emissions. The enclosure and use of moisture shall be sufficient to eliminate visible emissions of fugitive dust during transfer and mixing operations.</p>

2. Additional Terms and Conditions

- 2.a** For facilities in Appendix A areas as defined in OAC rule 3745-17-08(D), the requirements established pursuant to OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B) are equivalent to or less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The requirements established pursuant to OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B) are less stringent than the requirements established

pursuant to OAC rule 3745-31-05(A)(3).

- 2.c** The permittee shall employ the following best available control measures for the above-identified fly ash and lime silos for the purpose of ensuring compliance with the above-mentioned applicable requirements:
- i. fly ash and lime shall be transferred pneumatically to the fly ash and lime silos. The pneumatic system shall be adequately enclosed so as to eliminate at all times visible emissions of fugitive dust. Any visible emissions of fly ash and/or lime dust emanating from the delivery vehicle during transfer shall be cause for the immediate halt of the unloading process and the refusal of the fly ash and/or lime load until the situation is corrected.
 - ii. Each fly ash and lime silo vent shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient so as to eliminate at all times visible emissions of fugitive dust at the point of capture.
- 2.d** Load-out of conditioned fly ash and/or sludge/fly ash mix at a this facility is not expected to generate visible particulate emissions.

B. Operational Restrictions

1. The maximum hourly production rate for this N-Viro and fly-ash conditioning line shall not exceed 120 tons per hour.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain annual records of the sludge and western fly ash received for treatment through this process.
2. The permittee shall perform weekly checks, when the emissions unit is in operation, and when the weather conditions allow, for any visible particulate emissions from the fabric filters serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible particulate emissions shall be recorded electronically or in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. The total duration of any visible emission incident; and

- b. Any corrective actions taken to eliminate the visible emissions.

The information above shall be kept separately for each fabric filter serving this emissions unit.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from each transfer point and truck loading serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. Whether the emissions are representative of normal operations;
 - b. If the emissions are not representative of normal operations, the cause of the visible emissions;
 - c. The total duration of any visible emission incident; and
 - d. Any corrective actions taken to eliminate the visible emissions.

The information above shall be kept separately for each transfer point and truck loading serving this emissions unit.

D. Reporting Requirements

1. The permittee shall submit annual reports that specify the total tons of sludge and fly ash treated by this process. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 of each year and shall cover the previous 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which note the following:
 - a. Identify all days during which any abnormal visible fugitive particulate emissions were observed from each transfer point serving this emissions unit;
 - b. Describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions;

- c. Identify all days during which any visible particulate emissions were observed from any fabric filter serving this emissions unit; and
- d. Describe any corrective actions taken to eliminate the visible particulate emissions.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section A.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation:
Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

- b. Transfer of Sludge Bottom Bins, Including Infeed Conveyors to the Mixer

Emission Limitation: PE shall not exceed 27.4 tons/yr.

Applicable Compliance Method:

Maximum throughput and calculations are based on a maximum throughput of each component of this process, as presented in the application. Emission factors are all from AP-42, Chapter 11.12, 10/01 ed.

Sludge truck unloading into bottom bins 1 and 2 - aggregate transfer, 90% control efficiency (CE)

$$2 * 630,720 \text{ ton/yr(TPY)} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 4.4 \text{ TPY}$$

Bottom bins 1 and onto infeed conveyors 1 and 2 - aggregate transfer, 90% CE

$$2 * 630,720 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 4.4 \text{ TPY}$$

Emissions Unit ID: F007

Infeed conveyors 1 and 2 into mixer - weigh hopper loading, 90% CE
 $2 * 630,720 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 0.4 \text{ TPY}$

Mixer - mixer loading, central mix, controlled
 $1,051,200 \text{ TPY} * 0.011 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 5.8 \text{ TPY}$

Mixer onto radial stacking conveyor - aggregate transfer, 90% CE
 $1,051,200 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 3.6 \text{ TPY}$

Radial mixer onto heat pulse bunker - aggregate transfer, 90% CE
 $1,051,200 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 3.6 \text{ TPY}$

Heat pulse bunker load-out - aggregate transfer, 90% CE
 $1,051,200 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 3.6 \text{ TPY}$

Ash truck unload to silos 1, 2 and 3 - cement unloading, pneumatic
 $3 * 394,200 \text{ TPY} * 0.00099 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 0.6 \text{ TPY}$

Lime truck unload to silo 4 - cement unloading, pneumatic
 $201,480 \text{ TPY} * 0.00099 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 0.1 \text{ TPY}$

Ash silos 1, 2 and 3 to conveyors 1, 2 and 3 - aggregate transfer, 90% CE
 $3 * 394,200 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.3 \text{ TPY}$

Lime silo 4 to conveyor 4 - aggregate transfer, 90% CE
 $201,480 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.1 \text{ TPY}$

Conveyors 1 and 2 to conveyor 5 - aggregate transfer, 90% CE
 $2 * 394,200 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.2 \text{ TPY}$

Conveyors 3 and 4 to conveyor 6 - aggregate transfer, 90% CE
 $(394,200 + 201,480) \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.2 \text{ TPY}$

Conveyors 5 and 6 into mixer - aggregate transfer, 90% CE
 $(788,400+595,680) \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.01) = 0.4 \text{ TPY}$

Total = 27.7 tons PE/yr

- c. Emission Limitation:
 Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the material handling operation(s) identified above shall be determined in accordance with Test Method 9 set forth in "Appendix on Test methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such appendix existed on July 1, 1997.

- d. Emission Limitation:
 There shall be no visible particulate emissions from the fabric filters serving this

Redb
PTI A
Issued: 8/16/2005

Emissions Unit ID: **F007**

emissions unit.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the material handling operation(s) identified above shall be determined in accordance with Test Method 22 set forth in "Appendix on Test methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such appendix existed on July 1, 1997.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F008 - N-Viro and western fly ash conditioning process line 1 to treat wastewater sludge through contact with flyash or lime. Process includes load-in of material to bottom bins and silos to load-out from the heat pulse piles	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 27.4 tons/yr.

Transfer of Sludge Bottom Bins, Including Infeed Conveyors to the Mixer

OAC rule 3745-31-05(A)(3)

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average.

At all times during the transfer of sludge, the drop height of the truck tailgate shall be minimized to the extent possible to minimize or eliminate visible emissions of fugitive dust.

Sludge loaded into the bottom bins shall, at all times, have an inherent moisture content sufficient to minimize or eliminate visible emissions of fugitive dust.

See A.2.a below.

Fly Ash and Lime Silos, Including Screw Conveyors to the Mixer

OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)

OAC rule 3745-31-05(A)(3)

Each fabric filter(s) serving a silo shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s).

See A.2.c below.

OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)

See A.2.a below.

Mixer Loading, Including Load-out via Radial Stacking Conveyor	<p>OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)</p> <p>OAC rule 3745-31-05(A)(3)</p>	<p>See A.2.b below.</p> <p>The mixer shall be adequately enclosed and moisture via the sludge or water spray bars shall be applied to all material to minimize fugitive emissions. The enclosure and use of moisture shall be sufficient to eliminate visible emissions of fugitive dust during transfer and mixing operations.</p>
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2. Additional Terms and Conditions

- 2.a** For facilities in Appendix A areas as defined in OAC rule 3745-17-08(D), the requirements established pursuant to OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B) are equivalent to or less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b** The requirements established pursuant to OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
- 2.c** The permittee shall employ the following best available control measures for the above-identified fly ash and lime silos for the purpose of ensuring compliance with the above-mentioned applicable requirements:
- i. Fly ash and lime shall be transferred pneumatically to the fly ash and lime silos. The pneumatic system shall be adequately enclosed so as to eliminate at all times visible emissions of fugitive dust. Any visible emissions of fly ash and/or lime dust emanating from the delivery vehicle during transfer shall be cause for the immediate halt of the unloading process and the refusal of the fly ash and/or lime load until the situation is corrected.
 - ii. Each fly ash and lime silo vent shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient so as to eliminate at all times visible emissions of fugitive dust at the point of capture.

- 2.d Load-out of conditioned fly ash and/or sludge/fly ash mix at a this facility is not expected to generate visible particulate emissions.

B. Operational Restrictions

1. The maximum hourly production rate for this N-Viro and fly-ash conditioning line shall not exceed 120 tons per hour.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain annual records of the sludge and western fly ash received for treatment through this process.
2. The permittee shall perform weekly checks, when the emissions unit is in operation, and when the weather conditions allow, for any visible particulate emissions from the fabric filters serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible particulate emissions shall be recorded electronically or in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. The total duration of any visible emission incident; and
 - b. Any corrective actions taken to eliminate the visible emissions.

The information above shall be kept separately for each fabric filter serving this emissions unit.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from each transfer point and truck loading serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. Whether the emissions are representative of normal operations;
 - b. If the emissions are not representative of normal operations, the cause of the visible emissions;

- c. The total duration of any visible emission incident; and
- d. Any corrective actions taken to eliminate the visible emissions.

The information above shall be kept separately for each transfer point and truck loading serving this emissions unit.

D. Reporting Requirements

1. The permittee shall submit annual reports that specify the total tons of sludge and fly ash treated by this process. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 of each year and shall cover the previous 12-month period.
2. The permittee shall submit quarterly deviation (excursion) reports which note the following:
 - a. Identify all days during which any abnormal visible fugitive particulate emissions were observed from each transfer point serving this emissions unit;
 - b. Describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions;
 - c. Identify all days during which any visible particulate emissions were observed from any fabric filter serving this emissions unit; and
 - d. Describe any corrective actions taken to eliminate the visible particulate emissions.

These reports are due by the date described in Part I - General Terms and Conditions of this permit under Section A.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

- b. Transfer of Sludge Bottom Bins, Including Infeed Conveyors to the Mixer

Emission Limitation: PE shall not exceed 27.4 tons/yr.

Applicable Compliance Method:

Maximum throughput and calculations are based on a maximum throughput of each component of this process, as presented in the application. Emission factors are all from AP-42, Chapter 11.12, 10/01 ed.

Sludge truck unloading into bottom bins 1 and 2 - aggregate transfer, 90% control efficiency (CE)

$$2 * 630,720 \text{ ton/yr(TPY)} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 4.4 \text{ TPY}$$

Bottom bins 1 and onto infeed conveyors 1 and 2 - aggregate transfer, 90% CE

$$2 * 630,720 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 4.4 \text{ TPY}$$

Infeed conveyors 1 and 2 into mixer - weigh hopper loading, 90% CE

$$2 * 630,720 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 0.4 \text{ TPY}$$

Mixer - mixer loading, central mix, controlled

$$1,051,200 \text{ TPY} * 0.011 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 5.8 \text{ TPY}$$

Mixer onto radial stacking conveyor - aggregate transfer, 90% CE

$$1,051,200 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 3.6 \text{ TPY}$$

Radial mixer onto heat pulse bunker - aggregate transfer, 90% CE

$$1,051,200 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 3.6 \text{ TPY}$$

Heat pulse bunker load-out - aggregate transfer, 90% CE

$$1,051,200 \text{ TPY} * 0.069 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 3.6 \text{ TPY}$$

Ash truck unload to silos 1, 2 and 3 - cement unloading, pneumatic

$$3 * 394,200 \text{ TPY} * 0.00099 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 0.6 \text{ TPY}$$

Lime truck unload to silo 4 - cement unloading, pneumatic

$$201,480 \text{ TPY} * 0.00099 \text{ lb/ton} * \text{ton}/2000 \text{ lb} = 0.1 \text{ TPY}$$

Ash silos 1, 2 and 3 to conveyors 1, 2 and 3 - aggregate transfer, 90% CE

$$3 * 394,200 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.3 \text{ TPY}$$

Lime silo 4 to conveyor 4 - aggregate transfer, 90% CE
 $201,480 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.1 \text{ TPY}$
 Conveyors 1 and 2 to conveyor 5 - aggregate transfer, 90% CE
 $2 * 394,200 \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.2 \text{ TPY}$
 Conveyors 3 and 4 to conveyor 6 - aggregate transfer, 90% CE
 $(394,200 + 201,480) \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.1) = 0.2 \text{ TPY}$
 Conveyors 5 and 6 into mixer - aggregate transfer, 90% CE
 $(788,400+595,680) \text{ TPY} * 0.0051 \text{ lb/ton} * \text{ton}/2000 \text{ lb} * (1-0.01) = 0.4 \text{ TPY}$
 Total = 27.7 tons PE/yr

- c. Emission Limitation:
 Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the material handling operation(s) identified above shall be determined in accordance with Test Method 9 set forth in "Appendix on Test methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such appendix existed on July 1, 1997.

- d. Emission Limitation:
 There shall be no visible particulate emissions from the fabric filters serving this emissions unit.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the material handling operation(s) identified above shall be determined in accordance with Test Method 22 set forth in "Appendix on Test methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such appendix existed on July 1, 1997.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F009 - Storage pile area for treated sludge and flyash/lime from the N-Viro process. Includes load-in and load-out of material and wind erosion.	OAC rule 3745-31-05(A)(3)	There shall be no visible emissions of fugitive dust except for a period of time not to exceed one minute during any sixty-minute observation period. Particulate emissions shall not exceed 36.9 TPY from wind erosion and load-in and load-out operations. The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.
	OAC rule 3745-17-07(B)	The visible emission limitation specified by this rule is less stringent than the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	The control requirements specified by this rule are less stringent than the control requirements established pursuant to OAC rule

3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a** All of the outdoor storage piles at this facility that are associated with the N-Viro process are covered by this permit and are subject to the requirements of OAC rule 3745-31-05.
- 2.b** The permittee shall employ best available control measures for all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to maintain the material with inherently high moisture content and to minimize drop height distance from front-end loaders to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.c** The above-mentioned control measures shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measures shall continue during any such operation until further observation confirms that use of the measure is unnecessary.
- 2.d** The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to process aggregate material with inherently high moisture content to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.e** The above-mentioned control measures shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures are

Emissions Unit ID: F009

necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of additional control measures shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

- 2.f Leachate shall not be used as a dust suppressant.
- 2.g Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.

B. Operational Restrictions

None

C. Monitoring and/or Record keeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile at this facility on a weekly basis.
2. Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile at this facility on a weekly basis.
3. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile at this facility on a weekly basis.
4. No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
5. The purpose of the inspections is to ensure continued compliance for load-in and load-out of a storage pile and for wind erosion from the surface of a storage pile and determine the need for implementing additional control measures. The inspections shall be performed during representative, normal storage pile operating conditions.

6. The permittee may, upon receipt of written approval from the Northeast District Office of Ohio EPA, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
7. The permittee shall maintain records of the following information:
 - a. The date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - b. The date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);
 - c. The dates the control measure(s) were implemented; and
 - d. On a calendar quarter basis, the total number of days the control measure(s) were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 7.d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

D. Reporting Requirements

1. The permittee shall submit deviation (exceedance) reports that identify any of the following occurrences:
 - a. Each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. Each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
2. The deviation reports shall be submitted in accordance with the reporting requirements

of the General Terms and Conditions of this permit.

E. Testing Requirements

1. Compliance with the emission limitations specified in section A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: There shall be no visible emissions of fugitive dust except for a period of time not to exceed one minute during any sixty-minute observation period.

Compliance with the visible emission limitations for the wind erosion and load-in and load-out operations from the storage piles identified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

- b. Emission Limitation:
 Particulate emissions shall not exceed 36.9 TPY from wind erosion and load-in and load-out operations.

Compliance Method:

The permittee shall demonstrate compliance by adding maximum potential emissions from wind erosion and material load in/out from soil storage piles.

The permittee shall demonstrate compliance by adding maximum potential emissions from wind erosion and material load in/out from soil storage piles.

The potential emission rate for wind erosion is calculated as determined by the method from U.S. EPA's Control of Open Fugitive Dust Sources, Equation 4-9 (September 1988), as follows:

$$[1.9 * (s/1.5) * (365 - p)/235 * (f/15)] \text{ lb/acre/day} * 2 \text{ acre} * 365 \text{ days/yr} * \text{ton}/2,000 \text{ lb}$$

where:

s = the silt content (%) of the cover material (assume 25%)

p = number of days with at least 0.01 inches of precipitation per year, 157.8 days (Youngstown)

f = percent of time wind is at least 12 mph, 22.54 % (Youngstown)

The potential emission rate for waste handling is calculated as determined from AP-42, Chapter 13.2.4.3 (1/95), as follows:

$$E = [(0.74) * (0.0032) * (U/5)^{1.3} / (M/2)^{1.2}] \text{ lb/ton} * 2,102,400 \text{ tons/yr} * \text{ton}/2,000 \text{ lb} * 2$$

where:

U = mean wind speed, 10.0 for Youngstown

M = moisture content of the soil, assume 25%

2,102,400 = potential annual material throughput

2 = accounts for load-in and load-out

F. Miscellaneous Requirements

None

Redbud Company, The
 PTI Application: 02-19765
 Issued: 8/16/2005

Facility ID: 0215000300

Emissions Unit ID: F009

SIC CODE 4953 SCC CODE 50300810 EMISSIONS UNIT ID F008

EMISSIONS UNIT DESCRIPTION N-Viro and western fly ash conditioning process line 2 to treat wastewater sludge through contact with flyash or lime. Process includes load-in of material to bottom bins and silos to load-out from the heat pulse piles

DATE INSTALLED 10/01/05

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	NA	27.4	NA	27.4
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____

Redb
PTI A
Issued: 8/16/2005

Emissions Unit ID: **F009**

SIC CODE 4953 SCC CODE 50300810 EMISSIONS UNIT ID F009
 EMISSIONS UNIT DESCRIPTION Storage pile for treated sludge and flyash/lime from the N-Viro process. Includes load-in and load-out of material and wind erosion.
 DATE INSTALLED 10/01/2005

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	NA	36.9	NA	36.9
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Minimize drop height, adequate moisture to minimize fugitive emissions.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: _____