



State of Ohio Environmental Protection Agency

Street Address:

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Columbus, OH 43215

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Lazarus Gov. Center  
P.O. Box 1049  
Columbus, OH 43216-1049

**RE: FINAL PERMIT TO INSTALL  
SUMMIT COUNTY  
Application No: 16-02437  
Fac ID: 1677000252**

**CERTIFIED MAIL**

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

**DATE: 4/4/2006**

All Ohio Landscaping Inc  
Mark Malbin  
2636 Brecksville Road  
Richfield, OH 44286-9073

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, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

ARAQMD



**Permit To Install  
Terms and Conditions**

**Issue Date: 4/4/2006  
Effective Date: 4/4/2006**

**FINAL PERMIT TO INSTALL 16-02437**

Application Number: 16-02437  
Facility ID: 1677000252  
Permit Fee: **\$7000**  
Name of Facility: All Ohio Landscaping Inc  
Person to Contact: Mark Malbin  
Address: 2636 Brecksville Road  
Richfield, OH 44286-9073

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**5649 Akron Cleveland Rd  
Hudson, Ohio**

Description of proposed emissions unit(s):  
**Horizontal grinder.**

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 recordkeeping 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 recordkeeping 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 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)**

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.

**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.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	32.0
PM10	17.9
NOx	96.6
CO	20.8
SO2	6.3
OC	7.9
VOC	7.9

**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>
P902 - 500 hp Gruendler horizontal grinder	OAC rule 3745-31-05(A)(3)	no visible emissions from the horizontal grinder, processed mulch pile(s), and loading and unloading activities associated with the horizontal grinder (See 2.a. and 2.b. below);  2.84 pounds (lbs) particulate emission (PE) per hour and 12.4 tons PE per year;  2.64 pounds (lbs) particulate matter - ten microns (PM10) per hour and 11.5 tons PM10 per year;  Emissions from the diesel engine shall not exceed the following rates:  Nitrogen Oxides (NO <sub>x</sub> ): 15.44 pounds per hour, 67.6 tons per year; Carbon Monoxide (CO): 3.33 pounds per hour, 14.6 tons per year; Sulfur Dioxide (SO <sub>2</sub> ): 1.02 pound per hour, 4.4 tons per year; Organic Compounds (OC): 1.26 pound per hour, 5.5 tons per year.

OAC rule 3745-17-07(A)	Volatile Organic Compounds (VOC): 1.26 pound per hour, 5.5 tons per year.  See A.2.d and B.1 below.
OAC rule 3745-17-11(B)(5)(a)	Visible particulate emissions from the diesel engine exhaust stack shall not exceed 20% opacity as a six minute average, except as provided by rule.
OAC rule 3745-18-06 (G)	PM emissions from the diesel engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.
OAC rule 3745-17-11(B)(1)	SO2 emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.  The PE emission limitation established by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ reasonably available control measures for the horizontal grinder, processed mulch pile(s), and the loading and unloading activities associated with the horizontal grinder for the purpose of ensuring compliance with the “no visible emissions” requirement. In accordance with the permittee’s permit application, the permittee has committed to watering on an “as needed” basis to ensure compliance.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

**2.b** The above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the “no visible emissions” requirement. Any required

implementation of the control measure(s) shall continue until further observation confirms that use of the control measure(s) is unnecessary.

- 2.c Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.
- 2.d The pounds per hour and tons per year NOX, CO, SO2, and OC limits 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.

**B. Operational Restrictions**

- 1. This emissions unit shall be operated with diesel fuel with a sulfur content less than 0.5% by weight.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. Except as otherwise provided in this section, the permittee shall perform inspections to determine if visible particulate emissions are being emitted from the operations listed below in accordance with the following minimum frequencies:

<u>operation(s)</u>	<u>minimum inspection frequency</u>
horizontal grinder	hourly
loading and unloading activities associated with the horizontal grinder	hourly
processed mulch piles	daily

- 2. The above-mentioned inspections shall be performed during representative, normal operating conditions.
- 3. The permittee may, upon receipt of written approval from the Akron Regional Air Quality Management District (ARAQMD), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the "no visible emissions" requirement.
- 4. The permittee shall note the following in an operations log for each operation (i.e., horizontal grinder, processed mulch pile(s), and the loading and unloading activities associated with the horizontal grinder) at the minimum inspection frequency specified above whenever the emissions unit is in operation:

- a. the date and time of each observation;
  - b. the presence or absence of any visible emissions;
  - c. whether it was determined by the permittee that it was necessary to implement the control measures;
  - d. the dates and times the control measures were implemented; and,
  - e. the name of the person reporting each observation.
5. The operations log shall be maintained on site.
  6. The permittee shall maintain a record of the sulfur content of each shipment of diesel fuel received for burning in this emissions unit.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency; and,
  - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.
2. The permittee shall submit deviation (excursion) reports which identify each day when a fuel other than low sulfur diesel fuel was burned in this emissions unit.
3. 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. Emission limitation:  
No Visible Emissions

Applicable Compliance Method:

Compliance with the visible emission limitations for the transfer points 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, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

2. Emission Limitation:  
2.84 lbs PE per hour and 12.4 tons PE per year

Applicable Compliance Method:

The calculations used to determine the permitted emission limits are as follows:

Hourly PE Emissions from Grinding:

$$(0.35 \text{ lb PE/ton of wood processed})^* \times (25 \text{ tons of wood/hour}) \times (1-0.8)** = 1.75 \text{ lb PE/hour}$$

\*The emission factor of "0.35 lb PE/ton of wood processed" is taken from Ohio EPA document Reasonably Available Control Measures for Fugitive Dust Sources ("RACM") Table 2.17-1 for wood sawing/grinding.

\*\*Since the 0.35 lb PE/hour-ton of wood processed emission factor does not include rain days and watering, it is likely that a conservative estimate of the emission reductions from these practices will reduce PE emissions by 80%.

Hourly PE Emissions from Diesel Engine:

PE emissions from the diesel engine are based on the emission factor of 0.0022 lb PE/hp-hr from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (500 hp) as follows:

$$(0.0022 \text{ lb PE/hp-hr}) \times (500 \text{ hp}) = 1.09 \text{ lb PE/hour}$$

Total Hourly PE Emissions:

$$1.75 + 1.09 = 2.84 \text{ lbs/hour}$$

This emissions unit shall be deemed to be in compliance with the lbs PE/hour limit if there are no visible emissions observed from the horizontal grinder, processed mulch piles, and the loading and unloading activities associated with the horizontal grinder.

Annual PE Emissions:

The hourly PE emission rate is multiplied by 8760 hours and converted to tons to obtain the annual PE emissions.

3. Emission Limitation:  
2.64 lbs PM10 per hour and 11.5 tons PM10 per year

Applicable Compliance Method:

The calculations used to determine the permitted emission limits are as follows:

Hourly PM10 Emissions from Grinding:

$$(0.31 \text{ lb PM10/ton of wood processed}) * X (25 \text{ tons of wood/hour}) X (1-0.8)** = 1.55 \text{ lb PM10/hour}$$

\*The emission factor of "0.31 lb PM10/ton of wood processed" is taken from Ohio EPA document Reasonably Available Control Measures for Fugitive Dust Sources ("RACM") Table 2.17-1 for wood sawing/grinding.

\*\*Since the 0.31 lb PM10/hour-ton of wood processed emission factor does not include rain days and watering, it is likely that a conservative estimate of the emission reductions from these practices will reduce PM10 emissions by 80%.  
The emission factor for PM10 is based on a maximum of 25% of the total PE emissions being PM10 size from the particle size distribution presented in AP-42 Table B.2.2 (Category 6 for Grain Handling.)

Hourly PM10 Emissions from Diesel Engine:

PM10 emissions from the diesel engine are based on the emission factor of 0.0022 lb PM10/hp-hr from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (500 hp) as follows:

$$(0.0022 \text{ lb PM10/hp-hr}) X (500 \text{ hp}) = 1.09 \text{ lb PM10/hour}$$

Total Hourly PM10 Emissions:

$$1.55 + 1.09 = 2.64 \text{ lbs/hour}$$

This emissions unit shall be deemed to be in compliance with the lbs PM10/hour limit if there are no visible emissions observed from the horizontal grinder, processed mulch piles, and the loading and unloading activities associated with the horizontal grinder.

Annual PM10 Emissions:

The hourly PM10 emission rate is multiplied by 8760 hours and converted to tons to obtain the annual PM10 emissions.

4. Emission Limitation:  
Emissions shall not exceed the following rates:

NO<sub>x</sub>: 15.44 pounds per hour, 67.6 tons per year;  
CO: 3.33 pounds per hour, 14.6 tons per year;

SO<sub>2</sub>: 1.02 pound per hour, 4.4 tons per year;  
OC: 1.26 pound per hour, 5.5 tons per year.  
VOC: 1.26 pound per hour, 5.5 tons per year.

**Applicable Compliance Method:**

Compliance with the emission limitations identified above for the diesel engine shall be determined by using the emission factors from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (400 hp). The hourly emission rates are multiplied by 8760 hours and converted to tons to obtain the annual emissions.

**5. Emission Limitation:**

Visible particulate emissions from the diesel engine exhaust stack shall not exceed 20% opacity as a six minute average, except as provided by rule.

**Applicable Compliance Method:**

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**6. Emission Limitation:**

PE and PM<sub>10</sub> emissions from the diesel engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.

**Applicable Compliance Method:**

Compliance with the emissions limitation for the diesel engine identified above shall be determined by using the emission factor for particulates from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines." This emission factor is 0.31 lb particulate/MMBtu (fuel input) for diesel fuel. (Note: this emission factor is equivalent to the emission factor of 0.0022 lb PM/hp-hr)

**7. Emission Limitation:**

SO<sub>2</sub> emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.

**Applicable Compliance Method:**

Compliance with the emissions limitation for the diesel engine identified above shall be determined by using the emission factor for SO<sub>x</sub> from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines." This emission factor is 0.29 lb SO<sub>x</sub>/MMBtu (fuel input) for diesel fuel.

**All Ohio Landscaping Inc**  
**PTI Application: 16-02437**  
**Issued: 4/4/2006**

**Facility ID: 1677000252**  
**Emissions Unit ID: P902**

**F. Miscellaneous Requirements**

None

**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>
P903 - Top Soil Screener with feed hopper, conveyor, screener, and 15 hp diesel engine	OAC rule 3745-31-05(A)(3)	no visible emissions from the feed hopper, conveyor, screener, and processed top soil pile(s), and loading and unloading activities associated with the top soil screening process (See 2.a. and 2.b. below);  2.03 pounds (lbs) particulate emission (PE) per hour and 8.9 tons PE per year;  0.53 pounds (lbs) particulate matter - ten microns (PM10) per hour and 2.3 tons PM10 per year;  Emissions from the diesel engine shall not exceed the following rates:  Nitrogen Oxides (NO <sub>x</sub> ): 0.46 pound per hour, 2.0 tons per year; Carbon Monoxide (CO): 0.10 pound per hour, 0.4 ton per year; Sulfur Dioxide (SO <sub>2</sub> ): 0.03 pound per hour, 0.1 ton per year; Organic Compounds (OC):

OAC rule 3745-17-07(A)	0.04 pound per hour, 2.2 tons per year. Volatile Organic Compounds (VOC): 0.04 pound per hour, 2.2 tons per year.
OAC rule 3745-17-11(B)(5)(a)	See A.2.d and B.1 below.  Visible particulate emissions from the diesel engine exhaust stack shall not exceed 20% opacity as a six minute average, except as provided by rule.
OAC rule 3745-18-06 (G)	PM emissions from the diesel engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.
OAC rule 3745-17-11(B)(1)	SO2 emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.  The PE emission limitation established by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

## 2. Additional Terms and Conditions

- 2.a** The permittee shall employ reasonably available control measures for the feed hopper, conveyor, screener, and processed top soil pile(s), and loading and unloading activities associated with the top soil screening process for the purpose of ensuring compliance with the “no visible emissions” requirement. In accordance with the permittee’s permit application, the permittee has committed to watering on an “as needed” basis to ensure compliance.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.b** The above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring

section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the "no visible emissions" requirement. Any required implementation of the control measure(s) shall continue until further observation confirms that use of the control measure(s) is unnecessary.

- 2.c Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.
- 2.d The pounds per hour and tons per year NOX, CO, SO2, and OC limits 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.

**B. Operational Restrictions**

- 1. This emissions unit shall be operated with diesel fuel with a sulfur content less than 0.5% by weight.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. Except as otherwise provided in this section, the permittee shall perform inspections to determine if visible particulate emissions are being emitted from the operations listed below in accordance with the following minimum frequencies:

<u>operation(s)</u>	<u>minimum inspection frequency</u>
feed hopper	hourly
screen	hourly
loading and unloading activities associated with the feed hopper and screen	hourly
processed top soil piles	daily

- 2. The above-mentioned inspections shall be performed during representative, normal operating conditions.
- 3. The permittee may, upon receipt of written approval from the Akron Regional Air Quality Management District (ARAQMD), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the "no visible emissions" requirement.
- 4. The permittee shall note the following in an operations log for each operation (i.e., feed hopper, conveyor, screener, and processed top soil pile(s), and loading and unloading

activities associated with the top soil screening process) at the minimum inspection frequency specified above whenever the emissions unit is in operation:

- a. the date and time of each observation;
  - b. the presence or absence of any visible emissions;
  - c. whether it was determined by the permittee that it was necessary to implement the control measures;
  - d. the dates and times the control measures were implemented; and,
  - e. the name of the person reporting each observation.
5. The operations log shall be maintained on site.
  6. The permittee shall maintain a record of the sulfur content of each shipment of diesel fuel received for burning in this emissions unit.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency; and,
  - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.
2. The permittee shall submit deviation (excursion) reports which identify each day when a fuel other than low sulfur diesel fuel was burned in this emissions unit.
3. 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. Emission limitation:  
No Visible Emissions

Applicable Compliance Method:

Compliance with the visible emission limitations for the transfer points 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, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

2. Emission Limitation:  
2.03 lbs PE per hour and 8.9 tons PE per year

Applicable Compliance Method:

The calculations used to determine the permitted emission limits are as follows:

Hourly PE Emissions from Grinding:

$(0.30 \text{ lb PE/ton of top soil processed}) * X (33.33 \text{ tons of top soil/hour}) X (1-0.8)** = 2.00 \text{ lb PE/hour}$

\*The emission factor of “0.30 lb PE/ton of top soil screened” is taken from Ohio EPA document Reasonably Available Control Measures for Fugitive Dust Sources (“RACM”) Table 2.18-1 for screening sand and gravel.

\*\*Since the 0.30 lb PE/hour-ton of top soil screened emission factor does not include rain days and watering, it is likely that a conservative estimate of the emission reductions from these practices will reduce PE emissions by 80%.

Hourly PE Emissions from Diesel Engine:

PE emissions from the diesel engine are based on the emission factor of 0.0022 lb PE/hp-hr from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, “Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines” and the rated capacity of the diesel engine (15 hp) as follows:

$(0.0022 \text{ lb PE/hp-hr}) X 15 \text{ hp} = 0.03 \text{ lb PE/hour}$

Total Hourly PE Emissions:

$2.00 + 0.03 = 2.03 \text{ lbs/hour}$

This emissions unit shall be deemed to be in compliance with the lbs PE/hour limit if there are no visible emissions observed from the feed hopper, conveyor, screener, and processed top soil pile(s), and loading and unloading activities associated with the top soil screening process.

Annual PE Emissions:

The hourly PE emission rate is multiplied by 8760 hours and converted to tons to obtain the annual PE emissions.

3. Emission Limitation:  
0.53 lbs PM10 per hour and 2.3 tons PM10 per year

Applicable Compliance Method:

The calculations used to determine the permitted emission limits are as follows:

Hourly PM10 Emissions from Grinding:

$$(0.075 \text{ lb PM10/ton of top soil processed}) * X (33.33 \text{ tons of top soil/hour}) X (1-0.8)** = 0.50 \text{ lb PM10/hour}$$

\*The emission factor of "0.075 lb PM10/ton of top soil screened" is taken from Ohio EPA document Reasonably Available Control Measures for Fugitive Dust Sources ("RACM") Table 2.18-1 for screening sand and gravel.

\*\*Since the 0.075 lb PM10/hour-ton of top soil screened emission factor does not include rain days and watering, it is likely that a conservative estimate of the emission reductions from these practices will reduce PM10 emissions by 80%. The emission factor for PM10 is based on a maximum of 25% of the total PE emissions being PM10 size from the particle size distribution presented in AP-42 Table B.2.2 (Category 6 for Grain Handling.)

Hourly PM10 Emissions from Diesel Engine:

PM10 emissions from the diesel engine are based on the emission factor of 0.0022 lb PM10/hp-hr from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (15 hp) as follows:

$$(0.0022 \text{ lb PM10/hp-hr}) X (15 \text{ hp}) = 0.03 \text{ lb PM10/hour}$$

Total Hourly PM10 Emissions:

$$0.50 + 0.03 = 0.53 \text{ lbs/hour}$$

This emissions unit shall be deemed to be in compliance with the lbs PM10/hour limit if there are no visible emissions observed from the feed hopper, conveyor, screener, and processed top soil pile(s), and loading and unloading activities associated with the top soil screening process.

Annual PM10 Emissions:

The hourly PM10 emission rate is multiplied by 8760 hours and converted to tons to obtain the annual PM10 emissions.

4. Emission Limitation:  
Emissions shall not exceed the following rates:

NO<sub>x</sub>: 0.46 pound per hour, 2.0 tons per year;  
CO: 0.10 pound per hour, 0.4 ton per year;  
SO<sub>2</sub>: 0.03 pound per hour, 0.1 ton per year;  
OC: 0.04 pound per hour, 0.2 ton per year.  
VOC: 0.04 pound per hour, 0.2 ton per year.

**Applicable Compliance Method:**

Compliance with the emission limitations identified above for the diesel engine shall be determined by using the emission factors from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (400 hp). The hourly emission rates are multiplied by 8760 hours and converted to tons to obtain the annual emissions.

5. Emission Limitation:  
Visible particulate emissions from the diesel engine exhaust stack shall not exceed 20% opacity as a six minute average, except as provided by rule.

**Applicable Compliance Method:**

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

6. Emission Limitation:  
PE and PM<sub>10</sub> emissions from the diesel engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.

**Applicable Compliance Method:**

Compliance with the emissions limitation for the diesel engine identified above shall be determined by using the emission factor for particulates from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines." This emission factor is 0.31 lb particulate/MMBtu (fuel input) for diesel fuel. (Note: this emission factor is equivalent to the emission factor of 0.0022 lb PM/hp-hr)

7. Emission Limitation:  
SO<sub>2</sub> emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.

**Applicable Compliance Method:**

Compliance with the emissions limitation for the diesel engine identified above shall be determined by using the emission factor for SO<sub>x</sub> from AP-42, 5<sup>th</sup> Edition (October 1996),

Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines." This emission factor is 0.29 lb SO<sub>x</sub>/MMBtu (fuel input) for diesel fuel.

**F. Miscellaneous Requirements**

None

**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>
P904 - Cheetah mulch Coloring System with 200 hp diesel engine/electric generator	OAC rule 3745-31-05(A)(3)	no visible emissions from the processed mulch pile(s), and loading and unloading activities associated with the mulch coloring drum (See 2.a. and 2.b. below);  2.43 pounds (lbs) particulate emission (PE) per hour and 10.7 tons PE per year;  0.93 pounds (lbs) particulate matter - ten microns (PM10) per hour and 4.1 tons PM10 per year;  Emissions from the diesel engine shall not exceed the following rates:  Nitrogen Oxides (NO <sub>x</sub> ): 6.147 pounds per hour, 27.0 tons per year; Carbon Monoxide (CO): 1.33 pounds per hour, 5.8 tons per year; Sulfur Dioxide (SO <sub>2</sub> ): 0.41 pound per hour, 1.8 tons per year; Organic Compounds (OC): 0.50 pound per hour, 2.2 tons per year.

OAC rule 3745-17-07(A)	Volatile Organic Compounds (VOC): 0.50 pound per hour, 2.2 tons per year.  See A.2.d and B.1 below.
OAC rule 3745-17-11(B)(5)(a)	Visible particulate emissions from the diesel engine exhaust stack shall not exceed 20% opacity as a six minute average, except as provided by rule.
OAC rule 3745-18-06 (G)	PM emissions from the diesel engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.
OAC rule 3745-17-11(B)(1)	SO2 emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.  The PE emission limitation established by this rule is less stringent than the PE emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

**2.a** The permittee shall employ reasonably available control measures for the mulch coloring drum, processed mulch pile(s), and the loading and unloading activities associated with the horizontal grinder for the purpose of ensuring compliance with the “no visible emissions” requirement. In accordance with the permittee’s permit application, the permittee has committed to watering on an “as needed” basis to ensure compliance.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

**2.b** The above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the “no visible emissions” requirement. Any required

implementation of the control measure(s) shall continue until further observation confirms that use of the control measure(s) is unnecessary.

- 2.c Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.
- 2.d The pounds per hour and tons per year NOX, CO, SO2, and OC limits 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.

**B. Operational Restrictions**

- 1. This emissions unit shall be operated with diesel fuel with a sulfur content less than 0.5% by weight.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. Except as otherwise provided in this section, the permittee shall perform inspections to determine if visible particulate emissions are being emitted from the operations listed below in accordance with the following minimum frequencies:

<u>operation(s)</u>	<u>minimum inspection frequency</u>
mulch coloring drum	hourly
loading and unloading activities associated with the mulch coloring drum	hourly
processed mulch piles	daily

- 2. The above-mentioned inspections shall be performed during representative, normal operating conditions.
- 3. The permittee may, upon receipt of written approval from the Akron Regional Air Quality Management District (ARAQMD), modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the "no visible emissions" requirement.
- 4. The permittee shall note the following in an operations log for each operation (i.e., mulch coloring drum, processed mulch pile(s), and the loading and unloading activities associated with the mulch coloring drum) at the minimum inspection frequency specified above whenever the emissions unit is in operation:

- a. the date and time of each observation;
  - b. the presence or absence of any visible emissions;
  - c. whether it was determined by the permittee that it was necessary to implement the control measures;
  - d. the dates and times the control measures were implemented; and,
  - e. the name of the person reporting each observation.
5. The operations log shall be maintained on site.
  6. The permittee shall maintain a record of the sulfur content of each shipment of diesel fuel received for burning in this emissions unit.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency; and,
  - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.
2. The permittee shall submit deviation (excursion) reports which identify each day when a fuel other than low sulfur diesel fuel was burned in this emissions unit.
3. 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. Emission limitation:  
No Visible Emissions

Applicable Compliance Method:

Compliance with the visible emission limitations for the transfer points 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, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

2. Emission Limitation:  
2.43 lbs PE per hour and 10.7 tons PE per year

Applicable Compliance Method:

The calculations used to determine the permitted emission limits are as follows:

Hourly PE Emissions from Grinding:

$(0.30 \text{ lb PE/ton of mulch loaded})^* \times (33.33 \text{ tons of mulch/hour}) \times (1-0.8)^{**} = 2.00 \text{ lb PE/hour}$

\*The emission factor of "0.30 lb PE/ton of mulch loaded" is taken from Ohio EPA document Reasonably Available Control Measures for Fugitive Dust Sources ("RACM") Table 2.17-1 for wood sawing/grinding.

\*\*Since the 0.30 lb PE/hour-ton of mulch loaded emission factor does not include rain days and watering, it is likely that a conservative estimate of the emission reductions from these practices will reduce PE emissions by 80%.

Hourly PE Emissions from Diesel Engine:

PE emissions from the diesel engine are based on the emission factor of 0.0022 lb PE/hp-hr from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (200 hp) as follows:

$(0.0022 \text{ lb PE/hp-hr}) \times (200 \text{ hp}) = 0.43 \text{ lb PE/hour}$

Total Hourly PE Emissions:

$2.00 + 0.43 = 2.43 \text{ lbs/hour}$

This emissions unit shall be deemed to be in compliance with the lbs PE/hour limit if there are no visible emissions observed from the mulch coloring drum, processed mulch piles, and the loading and unloading activities associated with the mulch coloring drum.

Annual PE Emissions:

The hourly PE emission rate is multiplied by 8760 hours and converted to tons to obtain the annual PE emissions.

3. Emission Limitation:  
0.93 lbs PM10 per hour and 4.1 tons PM10 per year

Applicable Compliance Method:

The calculations used to determine the permitted emission limits are as follows:

Hourly PM10 Emissions from Grinding:

$(0.075 \text{ lb PM10/ton of mulch loaded}) * X (33.33 \text{ tons of mulch/hour}) X (1-0.8)** = 0.50 \text{ lb PM10/hour}$

\*The emission factor of "0.075 lb PM10/ton of mulch loaded" is taken from Ohio EPA document Reasonably Available Control Measures for Fugitive Dust Sources ("RACM") Table 2.17-1 for wood sawing/grinding.

\*\*Since the 0.075 lb PM10/hour-ton of mulch loaded emission factor does not include rain days and watering, it is likely that a conservative estimate of the emission reductions from these practices will reduce PM10 emissions by 80%.

The emission factor for PM10 is based on a maximum of 25% of the total PE emissions being PM10 size from the particle size distribution presented in AP-42 Table B.2.2 (Category 6 for Grain Handling.)

Hourly PM10 Emissions from Diesel Engine:

PM10 emissions from the diesel engine are based on the emission factor of 0.0022 lb PM10/hp-hr from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (200 hp) as follows:

$(0.0022 \text{ lb PM10/hp-hr}) X (200 \text{ hp}) = 0.43 \text{ lb PM10/hour}$

Total Hourly PM10 Emissions:

$0.50 + 0.43 = 0.93 \text{ lbs/hour}$

This emissions unit shall be deemed to be in compliance with the lbs PM10/hour limit if there are no visible emissions observed from the mulch coloring drum, processed mulch piles, and the loading and unloading activities associated with the mulch coloring drum.

Annual PM10 Emissions:

The hourly PM10 emission rate is multiplied by 8760 hours and converted to tons to obtain the annual PM10 emissions.

4. Emission Limitation:  
Emissions shall not exceed the following rates:

NO<sub>x</sub>: 6.17 pounds per hour, 27.0 tons per year;  
CO: 1.33 pounds per hour, 5.8 tons per year;

SO<sub>2</sub>: 0.41 pound per hour, 1.8 tons per year;  
OC: 0.50 pound per hour, 2.2 tons per year.  
VOC: 0.50 pound per hour, 2.2 tons per year.

**Applicable Compliance Method:**

Compliance with the emission limitations identified above for the diesel engine shall be determined by using the emission factors from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (400 hp). The hourly emission rates are multiplied by 8760 hours and converted to tons to obtain the annual emissions.

**5. Emission Limitation:**

Visible particulate emissions from the diesel engine exhaust stack shall not exceed 20% opacity as a six minute average, except as provided by rule.

**Applicable Compliance Method:**

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**6. Emission Limitation:**

PE and PM<sub>10</sub> emissions from the diesel engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.

**Applicable Compliance Method:**

Compliance with the emissions limitation for the diesel engine identified above shall be determined by using the emission factor for particulates from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines." This emission factor is 0.31 lb particulate/MMBtu (fuel input) for diesel fuel. (Note: this emission factor is equivalent to the emission factor of 0.0022 lb PM/hp-hr)

**7. Emission Limitation:**

SO<sub>2</sub> emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.

**Applicable Compliance Method:**

Compliance with the emissions limitation for the diesel engine identified above shall be determined by using the emission factor for SO<sub>x</sub> from AP-42, 5<sup>th</sup> Edition (October 1996), Section 3.3, Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines." This emission factor is 0.29 lb SO<sub>x</sub>/MMBtu (fuel input) for diesel fuel.

**F. Miscellaneous Requirements**

None