



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
FRANKLIN 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: 01-8048

DATE: October 6, 1999

Buckeye Landscape Services, Inc.
Fred Smith
2585 Billingsley Road
Columbus, OH 43235

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
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA
DAPC, CDO
Dan Tobin Pontiac/GMC



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: October 6, 1999

FINAL PERMIT TO INSTALL 01-8048

Application Number: 01-8048
APS Premise Number: 0125002401
Permit Fee: **\$800**
Name of Facility: Buckeye Landscape Services, Inc.
Person to Contact: Fred Smith
Address: 2585 Billingsley Road
Columbus, OH 43235

Location of proposed air contaminant source(s) [emissions unit(s)]:
2585 Billingsley Road
Columbus, Ohio

Description of proposed emissions unit(s):
300 HP TUB GRINDER, MULCH PILES, TUB GRINDER LOADING/UNLOADING ACTIVITIES.

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

Buckeye Landscape Services, Inc.

PTI Application: **01-8048**

October 6, 1999

Facility ID: **0125002401**

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 Related to Monitoring and Recordkeeping 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 are inadequate 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 prove to be inadequate 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 application must be made to the Director for the installation or modification of any other emissions unit(s).

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 thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

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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>
PM	9.58
NO _x	40.73
CO	8.77
SO ₂	2.69
OC	3.25

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Facility ID: **0125002401**

Emissions Unit ID: **P001**

PART II: SPECIAL TERMS AND CONDITIONS

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>
11,250 lbs/hr tub grinder powered by a 300 hp diesel engine; processed mulch piles; loading and unloading activities associated with tub grinder	OAC rule 3745-17-07 (A) OAC rule 3745-31-05 OAC rule 3745-17-11 (B)(5)(a) OAC rule 3745-18-06 (G) OAC rule 3745-17-11(B)(1)

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Applicable Emissions
Limitations/Control Measures

no visible emissions from the tub grinder, processed mulch pile(s), and loading and unloading activities associated with the tub grinder (See 2.a. and 2.b. below);
2.18 pounds (lbs) particulate matter (PM) per hour and 9.58 tons PM per year;

Emissions from the diesel engine shall not exceed the following rates:

- Nitrogen Oxides (NO_x):
9.31 pounds per hour, 40.73 tons per year;
- Carbon Monoxide (CO):
2.00 pounds per hour, 8.77 tons per year;
- Sulfur Dioxide (SO₂):
0.62 pound per hour, 2.69 tons per year;
- Organic Compounds (OC):
0.74 pound per hour, 3.25 tons per year.

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.

PM emissions from the diesel

engine exhaust stack shall not exceed 0.310 lb per MMBtu of actual heat input.

SO₂ emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.

less stringent than the PM limit established pursuant to OAC rule 3745-31-05

2. Additional Terms and Conditions

- 2.a** The permittee shall employ reasonably available control measures for the tub grinder, processed mulch pile(s), and the loading and unloading activities associated with the tub 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>
tub grinder	hourly
loading and unloading activities associated with the tub 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 Ohio EPA, Central District Office, 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., tub grinder, processed mulch pile(s), and the loading and unloading activities associated with the tub grinder) at the minimum inspection frequency specified above whenever the emissions unit is in operation:
 - a. the date and time of each observation;
 - b.
 - c. 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.

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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-

Visible emission observations performed 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)(d) of OAC rule 3745-17-03.

2. Emission Limitation-

2.18 lbs PM per hour and 9.58 tons PM per year

Applicable Compliance Method-

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

Hourly PM Emissions from Grinding:

$(0.35 \text{ lb PM/hour-ton of wood processed})^* \times (11,250 \text{ lbs wood/hour}) \times (\text{ton}/2000 \text{ lbs}) \times (1-0.8)^{**} = 0.39 \text{ lb PM/hour}$

*The emission factor of "0.35 lb PM/hour-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 PM/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 PM emissions by 80%.

Hourly PM Emissions from Processed Mulch Piles:

$(1.0 \text{ lb PM/ton}) \times (11,250 \text{ lbs wood/hour}) \times (\text{ton}/2000 \text{ lbs}) \times (1-0.8)^{***} = 1.13 \text{ lbs PM/hour}$

***Table 2.17-1 also lists an emission factor for loading and unloading from sawdust piles as 1.0 lb PM/ton. However, the accompanying text notes that these are rough estimates and that good judgement should be used to determine more efficient estimates. Since the 1.0 lb PM/ton 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 PM emissions by 80%.

Hourly PM Emissions from Diesel Engine:

PM emissions from the diesel engine are based on the emission factor of 0.0022 lb PM/hp-hr from AP-42, 5th Edition (October 1996), Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (300 hp) as follows:

$(0.0022 \text{ lb PM/hp-hr}) \times (300 \text{ hp}) = 0.66 \text{ lb PM/hour}$

Total Hourly PM Emissions:

$0.39 + 1.13 + 0.66 = 2.18 \text{ lbs/hour}$

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

Annual PM Emissions:

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

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3. Emission Limitation-

Emissions shall not exceed the following rates:

NO_x: 9.31 pounds per hour, 40.73 tons per year;

CO: 2.00 pounds per hour, 8.77 tons per year;

SO₂: 0.62 pound per hour, 2.69 tons per year;

OC: 0.74 pound per hour, 3.25 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, 5th Edition (October 1996), Table 3.3-1, "Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines" and the rated capacity of the diesel engine (300 hp). The hourly emission rates are multiplied by 8760 hours and converted to tons to obtain the annual emissions.

4. 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).

5. Emission Limitation-

PM 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, 5th Edition (October 1996), 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)

6. Emission Limitation-

SO₂ emissions from the diesel engine exhaust stack shall not exceed 0.5 lb per MMBtu of actual heat input.

Applicable Compliance Method-

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

F. Miscellaneous Requirements

None.