State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

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

CERTIFIED MAIL

RE: FINAL PERMIT TO INSTALL MODIFICATION
BUTLER COUNTY
Application No: 14-05634
Fac ID: 1409010712

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

DATE: 9/4/2007

Shepherd Middletown Company
Rob Paxton
3444 Yankee Road
Middletown, OH 45044

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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

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

Sincerely,

Michael W. Ahern

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

CC: **USEPA** **HCDES**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 14-05634

Application Number:	14-05634
Facility ID:	1409010712
Permit Fee:	**$500**
Name of Facility:	Shepherd Middletown Company
Person to Contact:	Rob Paxton
Address:	3444 Yankee Road Middletown, OH 45044

Location of proposed air contaminant source(s) [emissions unit(s)]:
3444 Yankee Road
Middletown, **Ohio**

Description of proposed emissions unit(s):
Modify PTI to change control device operating parameters.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
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 (i.e., postmarked) quarterly 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

Pollutant	Tons Per Year
PE/PM10	0.42
NOx	5.39

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.

Operations, Property, and/or Equipment - (P004) - Iron Nitrate Solution Tank and Dissolver - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.3 pound per day and 0.05 ton per year. Particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.3 pound per day and 0.05 ton per year. Nitrogen oxide (NOx) emissions shall not exceed 7.4 pounds per day and 1.35 tons per year. See terms and conditions A.2.a and A.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-23-06(B).
OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% opacity, as a six-minute average.

2.b The hourly and annual emission limitations outlined are based upon the emission unit's Potential to Emit (PTE). Therefore, no hourly or annual records are required to demonstrate compliance with these limits.

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2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitation, mass emission limitations, and the use of a caustic wet scrubber for PE control and a peroxide scrubber for NOx emission control.

B. Operational Restrictions

1. The pressure drop across the caustic scrubber shall be continuously maintained at a value of not less than 12 inches of water at all times while the emissions unit is in operation.

2. The caustic scrubber water flow rate shall be continuously maintained at a value between 130 and 165 gallons per minute to the packed tower and between 70 and 90 gallons per minute to the venturi at all times while the emissions unit is in operation.

3. The pH of the caustic scrubber liquor shall be maintained within the range of 8.0 to 10.0.

4. The pressure drop across the peroxide scrubber shall be continuously maintained at a value of not less than 0.20 inches of water at all times while the emissions unit is in operation.

5. The peroxide scrubber liquid flow rate shall be continuously maintained at a value between 25 and 45 gallons per minute at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop across the scrubber, pH of the scrubbing liquor, and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. The pressure drop across the caustic scrubber, in inches of water, on a once per day basis.

   b. The caustic scrubber flow rate, in gallons per minute, on a once per day basis.

   c. The operating times for the capture (collection) system, control device, and monitoring equipment, and the associated emissions unit.

   d. The pH of the caustic scrubber liquor, on a once per day basis.

   e. The pressure drop across the peroxide scrubber, in inches of water, on a once per day basis.

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f. The peroxide scrubber liquid flow rate, in gallons per minute, on a once per day basis.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

   a. The pressure drop across the caustic scrubber.

   b. The caustic scrubber water flow rate.

   c. The pH of the caustic scrubber liquor.

   d. The pressure drop across the peroxide scrubber.

   e. The peroxide scrubber liquid flow rate.

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 in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   Emission Limitation:

   0.3 lb/day PE/PM-10
   0.05 TPY PE/PM-10
   7.4 lbs/day NOx
   1.35 TPY NOx

   Applicable Compliance Method:

   Compliance with the PE/PM10 and NOx emission limitations outlined in this permit shall be demonstrated by the emission factors, control efficiencies (if applicable) and the operational parameters as submitted in the request for modification to PTI application 14-05634, submitted on April 26, 2007.

   Testing performed by Shepherd Chemical Middletown determined a correlation factor of 0.0038176 pounds of NO emissions per gallon of acid usage in this emissions unit.

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Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. Compliance with the operational restriction in term and condition B.1. shall be demonstrated by the record keeping in term and condition C.1.a.

3. Compliance with the operational restriction in term and condition B.2. shall be demonstrated by the record keeping in term and condition C.1.b.

4. Compliance with the operational restriction in term and condition B.3. shall be demonstrated by the record keeping in term and condition C.1.c.

5. Compliance with the operational restriction in term and condition B.4. shall be demonstrated by the record keeping in term and condition C.1.d.

6. Compliance with the operational restriction in term and condition B.5. shall be demonstrated by the record keeping in term and condition C.1.e.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for this emissions unit in Permit to Install 14-05634 issued on February 24, 2005.

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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.

Operations, Property, and/or Equipment -(P006) - Bismuth Nitrate Solution Tank and Dissolver - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.3 pound per day and 0.05 ton per year. Particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.3 pound per day and 0.05 ton per year. Nitrogen oxide (NOx) emissions shall not exceed 4.1 pounds per day and 0.75 ton per year. See terms and conditions A.2.a and A.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-23-06(B).
OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% opacity, as a six-minute average.

2.b The hourly and annual emission limitations outlined are based upon the emission unit's Potential to Emit (PTE). Therefore, no hourly or annual records are required to demonstrate compliance with these limits.

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2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitation, mass emission limitations, and the use of a caustic wet scrubber for PE control and a peroxide scrubber for NOx emission control.

B. Operational Restrictions

1. The pressure drop across the caustic scrubber shall be continuously maintained at a value of not less than 12 inches of water at all times while the emissions unit is in operation.

2. The caustic scrubber water flow rate shall be continuously maintained at a value between 130 and 165 gallons per minute to the packed tower and between 70 and 90 gallons per minute to the venturi at all times while the emissions unit is in operation.

3. The pH of the caustic scrubber liquor shall be maintained within the range of 8.0 to 10.0.

4. The pressure drop across the peroxide scrubber shall be continuously maintained at a value of not less than 0.20 inches of water at all times while the emissions unit is in operation.

5. The peroxide scrubber liquid flow rate shall be continuously maintained at a value between 25 and 45 gallons per minute at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop across the scrubber, pH of the scrubbing liquor, and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. The pressure drop across the caustic scrubber, in inches of water, on a once per day basis.

   b. The caustic scrubber flow rate, in gallons per minute, on a once per day basis.

   c. The operating times for the capture (collection) system, control device, and monitoring equipment, and the associated emissions unit.

   d. The pH of the caustic scrubber liquor, on a once per day basis.

   e. The pressure drop across the peroxide scrubber, in inches of water, on a once per day basis.

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f. The peroxide scrubber liquid flow rate, in gallons per minute, on a once per day basis.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

   a. The pressure drop across the caustic scrubber.

   b. The caustic scrubber water flow rate.

   c. The pH of the caustic scrubber liquor.

   d. The pressure drop across the peroxide scrubber.

   e. The peroxide scrubber liquid flow rate.

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 in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   Emission Limitation:

   0.3 lb/day PE/PM-10
   0.05 TPY PE/PM-10
   4.1 lbs/day NOx
   0.75 TPY NOx

   Applicable Compliance Method:

   Compliance with the PE/PM10 and NOx emission limitations outlined in this permit shall be demonstrated by the emission factors, control efficiencies (if applicable) and the operational parameters as submitted in the request for modification to PTI application 14-05634, submitted on April 26, 2007.

   Testing performed by Shepherd Chemical Middletown determined a correlation factor of 0.0038176 pounds of NO emissions per gallon of acid usage in this emissions unit.

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Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. Compliance with the operational restriction in term and condition B.1. shall be demonstrated by the record keeping in term and condition C.1.a.

3. Compliance with the operational restriction in term and condition B.2. shall be demonstrated by the record keeping in term and condition C.1.b.

4. Compliance with the operational restriction in term and condition B.3. shall be demonstrated by the record keeping in term and condition C.1.c.

5. Compliance with the operational restriction in term and condition B.4. shall be demonstrated by the record keeping in term and condition C.1.d.

6. Compliance with the operational restriction in term and condition B.5. shall be demonstrated by the record keeping in term and condition C.1.e.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for this emissions unit in Permit to Install 14-05634 issued on February 24, 2005.

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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.

Operations, Property, and/or Equipment -(P007) - Copper Nitrate Solution Tank and Dissolver - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.7 pound per day and 0.13 ton per year. Particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.7 pound per day and 0.13 ton per year. Nitrogen oxide (NOx) emissions shall not exceed 7.2 pounds per day and 1.31 tons per year. See terms and conditions A.2.a and A.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-23-06(B).
OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% opacity, as a six-minute average.

2.b The hourly and annual emission limitations outlined are based upon the emission unit's Potential to Emit (PTE). Therefore, no hourly or annual records are required to demonstrate compliance with these limits.

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2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitation, mass emission limitations, and the use of a caustic wet scrubber for PE control and a peroxide scrubber for NOx emission control.

B. Operational Restrictions

1. The pressure drop across the caustic scrubber shall be continuously maintained at a value of not less than 12 inches of water at all times while the emissions unit is in operation.

2. The caustic scrubber water flow rate shall be continuously maintained at a value between 130 and 165 gallons per minute to the packed tower and between 70 and 90 gallons per minute to the venturi at all times while the emissions unit is in operation.

3. The pH of the caustic scrubber liquor shall be maintained within the range of 8.0 to 10.0.

4. The pressure drop across the peroxide scrubber shall be continuously maintained at a value of not less than 0.20 inches of water at all times while the emissions unit is in operation.

5. The peroxide scrubber liquid flow rate shall be continuously maintained at a value between 25 and 45 gallons per minute at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop across the scrubber, pH of the scrubbing liquor, and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. The pressure drop across the caustic scrubber, in inches of water, on a once per day basis.

   b. The caustic scrubber flow rate, in gallons per minute, on a once per day basis.

   c. The operating times for the capture (collection) system, control device, and monitoring equipment, and the associated emissions unit.

   d. The pH of the caustic scrubber liquor, on a once per day basis.

   e. The pressure drop across the peroxide scrubber, in inches of water, on a once per day basis.

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f. The peroxide scrubber liquid flow rate, in gallons per minute, on a once per day basis.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

   a. The pressure drop across the caustic scrubber.

   b. The caustic scrubber water flow rate.

   c. The pH of the caustic scrubber liquor.

   d. The pressure drop across the peroxide scrubber.

   e. The peroxide scrubber liquid flow rate.

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 in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   Emission Limitation:

   0.7 lb/day PE/PM-10
   0.13 TPY PE/PM-10
   7.2 lbs/day NOx
   1.31 TPY NOx

   Applicable Compliance Method:

   Compliance with the PE/PM10 and NOx emission limitations outlined in this permit shall be demonstrated by the emission factors, control efficiencies (if applicable) and the operational parameters as submitted in the request for modification to PTI application 14-05634, submitted on April 26, 2007.

   Testing performed by Shepherd Chemical Middletown determined a correlation factor of 0.0038176 pounds of NO emissions per gallon of acid usage in this emissions unit.

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Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. Compliance with the operational restriction in term and condition B.1. shall be demonstrated by the record keeping in term and condition C.1.a.

3. Compliance with the operational restriction in term and condition B.2. shall be demonstrated by the record keeping in term and condition C.1.b.

4. Compliance with the operational restriction in term and condition B.3. shall be demonstrated by the record keeping in term and condition C.1.c.

5. Compliance with the operational restriction in term and condition B.4. shall be demonstrated by the record keeping in term and condition C.1.d.

6. Compliance with the operational restriction in term and condition B.5. shall be demonstrated by the record keeping in term and condition C.1.e.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for this emissions unit in Permit to Install 14-05634 issued on February 24, 2005.

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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.

Operations, Property, and/or Equipment -(P008) - Nickel Nitrate Solution Tank and Dissolver - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.5 pound per day and 0.09 ton per year. Particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.5 pound per day and 0.09 ton per year. Nitrogen oxide (NOx) emissions shall not exceed 5.4 pounds per day and 0.99 ton per year. See terms and conditions A.2.a and A.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-23-06(B).
OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% opacity, as a six-minute average.

2.b The hourly and annual emission limitations outlined are based upon the emission unit's Potential to Emit (PTE). Therefore, no hourly or annual records are required to demonstrate compliance with these limits.

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2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitation, mass emission limitations, and the use of a caustic wet scrubber for PE control and a peroxide scrubber for NOx emission control.

B. Operational Restrictions

1. The pressure drop across the caustic scrubber shall be continuously maintained at a value of not less than 12 inches of water at all times while the emissions unit is in operation.

2. The caustic scrubber water flow rate shall be continuously maintained at a value between 130 and 165 gallons per minute to the packed tower and between 70 and 90 gallons per minute to the venturi at all times while the emissions unit is in operation.

3. The pH of the caustic scrubber liquor shall be maintained within the range of 8.0 to 10.0.

4. The pressure drop across the peroxide scrubber shall be continuously maintained at a value of not less than 0.20 inches of water at all times while the emissions unit is in operation.

5. The peroxide scrubber liquid flow rate shall be continuously maintained at a value between 25 and 45 gallons per minute at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop across the scrubber, pH of the scrubbing liquor, and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. The pressure drop across the caustic scrubber, in inches of water, on a once per day basis.

   b. The caustic scrubber flow rate, in gallons per minute, on a once per day basis.

   c. The operating times for the capture (collection) system, control device, and monitoring equipment, and the associated emissions unit.

   d. The pH of the caustic scrubber liquor, on a once per day basis.

   e. The pressure drop across the peroxide scrubber, in inches of water, on a once per day basis.

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f. The peroxide scrubber liquid flow rate, in gallons per minute, on a once per day basis.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

   a. The pressure drop across the caustic scrubber.

   b. The caustic scrubber water flow rate.

   c. The pH of the caustic scrubber liquor.

   d. The pressure drop across the peroxide scrubber.

   e. The peroxide scrubber liquid flow rate.

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 in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   Emission Limitation:

   0.5 lb/day PE/PM-10
   0.09 TPY PE/PM-10
   5.4 lbs/day NOx
   0.99 TPY NOx

   Applicable Compliance Method:

   Compliance with the PE/PM10 and NOx emission limitations outlined in this permit shall be demonstrated by the emission factors, control efficiencies (if applicable) and the operational parameters as submitted in the request for modification to PTI application 14-05634, submitted on April 26, 2007.

   Testing performed by Shepherd Chemical Middletown determined a correlation factor of 0.0038176 pounds of NO emissions per gallon of acid usage in this emissions unit.

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Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. Compliance with the operational restriction in term and condition B.1. shall be demonstrated by the record keeping in term and condition C.1.a.

3. Compliance with the operational restriction in term and condition B.2. shall be demonstrated by the record keeping in term and condition C.1.b.

4. Compliance with the operational restriction in term and condition B.3. shall be demonstrated by the record keeping in term and condition C.1.c.

5. Compliance with the operational restriction in term and condition B.4. shall be demonstrated by the record keeping in term and condition C.1.d.

6. Compliance with the operational restriction in term and condition B.5. shall be demonstrated by the record keeping in term and condition C.1.e.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for this emissions unit in Permit to Install 14-05634 issued on February 24, 2005.

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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.

Operations, Property, and/or Equipment -(P009) - Nickel Nitrate Solution Tank and Dissolver - Modification

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 0.5 pound per day and 0.09 ton per year. Particulate matter 10 microns and less in diameter (PM10) shall not exceed 0.5 pound per day and 0.09 ton per year. Nitrogen oxide (NOx) emissions shall not exceed 5.4 pounds per day and 0.99 ton per year. See terms and conditions A.2.a and A.2.b. The requirements of this rule also include compliance with the requirements of OAC rule 3745-23-06(B).
OAC rule 3745-17-07(A)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a Visible particulate emissions from any stack associated with this emissions unit shall not exceed 10% opacity, as a six-minute average.

2.b The hourly and annual emission limitations outlined are based upon the emission unit's Potential to Emit (PTE). Therefore, no hourly or annual records are required to demonstrate compliance with these limits.

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2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitation, mass emission limitations, and the use of a caustic wet scrubber for PE control and a peroxide scrubber for NOx emission control.

B. Operational Restrictions

1. The pressure drop across the caustic scrubber shall be continuously maintained at a value of not less than 12 inches of water at all times while the emissions unit is in operation.

2. The caustic scrubber water flow rate shall be continuously maintained at a value between 130 and 165 gallons per minute to the packed tower and between 70 and 90 gallons per minute to the venturi at all times while the emissions unit is in operation.

3. The pH of the caustic scrubber liquor shall be maintained within the range of 8.0 to 10.0.

4. The pressure drop across the peroxide scrubber shall be continuously maintained at a value of not less than 0.20 inches of water at all times while the emissions unit is in operation.

5. The peroxide scrubber liquid flow rate shall be continuously maintained at a value between 25 and 45 gallons per minute at all times while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop across the scrubber, pH of the scrubbing liquor, and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall collect and record the following information each day:

   a. The pressure drop across the caustic scrubber, in inches of water, on a once per day basis.

   b. The caustic scrubber flow rate, in gallons per minute, on a once per day basis.

   c. The operating times for the capture (collection) system, control device, and monitoring equipment, and the associated emissions unit.

   d. The pH of the caustic scrubber liquor, on a once per day basis.

   e. The pressure drop across the peroxide scrubber, in inches of water, on a once per day basis.

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f. The peroxide scrubber liquid flow rate, in gallons per minute, on a once per day basis.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

   a. The pressure drop across the caustic scrubber.

   b. The caustic scrubber water flow rate.

   c. The pH of the caustic scrubber liquor.

   d. The pressure drop across the peroxide scrubber.

   e. The peroxide scrubber liquid flow rate.

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 in sections A.1 and A.2 of these terms and conditions shall be determined in accordance with the following methods:

   Emission Limitation:

   0.5 lb/day PE/PM-10
   0.09 TPY PE/PM-10
   5.4 lbs/day NOx
   0.99 TPY NOx

   Applicable Compliance Method:

   Compliance with the PE/PM10 and NOx emission limitations outlined in this permit shall be demonstrated by the emission factors, control efficiencies (if applicable) and the operational parameters as submitted in the request for modification to PTI application 14-05634, submitted on April 26, 2007.

   Testing performed by Shepherd Chemical Middletown determined a correlation factor of 0.0038176 pounds of NO emissions per gallon of acid usage in this emissions unit.

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Emission Limitation:

Visible particulate emissions from any stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. Compliance with the operational restriction in term and condition B.1. shall be demonstrated by the record keeping in term and condition C.1.a.

3. Compliance with the operational restriction in term and condition B.2. shall be demonstrated by the record keeping in term and condition C.1.b.

4. Compliance with the operational restriction in term and condition B.3. shall be demonstrated by the record keeping in term and condition C.1.c.

5. Compliance with the operational restriction in term and condition B.4. shall be demonstrated by the record keeping in term and condition C.1.d.

6. Compliance with the operational restriction in term and condition B.5. shall be demonstrated by the record keeping in term and condition C.1.e.

F. Miscellaneous Requirements

1. The terms and conditions in this permit to install shall supercede the terms and conditions for this emissions unit in Permit to Install 14-05634 issued on February 24, 2005.

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