NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DEC PERMIT NUMBER
4-0103-16/16-0

LITY/PRDGRAM NUMBER(S)
EPA I.D. # NYD080469935

PERMIT
Under the Environmental Conservation Law (ECL)

EFFECTIVE DATE
6/1/92 (6/7/95, 7/20/95, 8/15/95, 10/26/95, 11/30/95 mods)

EXPIRATION DATE(S)
6/1/97

TYPE OF PERMIT (Check All Appropriate Boxes)

☐ NEW ☐ RENEWAL ☒ MODIFICATION ☐ PERMIT TO CONSTRUCT ☒ PERMIT TO OPERATE

☐ ARTICLE 15, TITLE 5: PROTECTION OF WATER	☐ ARTICLE 17, TITLES 7, 8: SPDES	☒ ARTICLE 27, TITLE 9; 6NYCRR 373: HAZARDOUS WASTE MGMT.
☐ ARTICLE 15, TITLE 15: WATER SUPPLY	☒ ARTICLE 19: AIR POLLUTION CONTROL	☐ ARTICLE 34: COASTAL EROSION MANAGEMENT
☐ ARTICLE 15, TITLE 15: WATER TRANSPORT	☐ ARTICLE 23, TITLE 27: MINED LAND RECLAMATION	☐ ARTICLE 36: FLOODPLAIN MANAGEMENT
☐ ARTICLE 15, TITLE 15: LONG ISLAND WELLS	☐ ARTICLE 24: FRESHWATER WETLANDS	☐ ARTICLES 1, 3, 17, 19, 27, 37; 6NYCRR 380: RADIATION CONTROL
☐ ARTICLE 15, TITLE 27: WILD, SCENIC & RECREATIONAL RIVERS	☐ ARTICLE 25: TIDAL WETLANDS	☐ ARTICLE 27, TITLE 3, 6NYCRR 364: WASTE TRANSPORTER
☐ 6NYCRR 608: WATER QUALITY CERTIFICATION	☐ ARTICLE 27, TITLE 7: 6NYCRR 360: SOLID WASTE MANAGEMENT	☐ OTHER:

PERMIT ISSUED TO
Norlite Corporation

TELEPHONE NUMBER
(518) 235-0401

ADDRESS OF PERMITTEE
P.O. Box 694, Cohoes, New York

CONTACT PERSON FOR PERMITTED WORK
Edward Burgher, Director of Compliance

TELEPHONE NUMBER

NAME AND ADDRESS OF PROJECT/FACILITY

LOCATION OF PROJECT/FACILITY
628 South Saratoga Street (State Route 32)

COUNTY	TOWN/CITY/VILLAGE	WATERCOURSE/WETLAND NO.	NYTM COORDINATES
Albany	Cohoes	Salt Kill	E: N:

DESCRIPTION OF AUTHORIZED ACTIVITY: Renewal of prior authorization to operate a hazardous waste management facility for the storage of specified hazardous waste in 214, 55 gallon containers up to 11,770 gallons (conditionally increased to 267, 55 gallon drums up to 14,700 gallons), storage/treatment in fifteen tanks with a total capacity of 144,100 gallons and incineration as a fuel in two rotary kiln industrial furnaces producing lightweight aggregate. Modifications of this permit as per Attachment M.

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, the General Conditions specified (see page 2) and any Special Conditions included as part of this permit.

PERMIT ADMINISTRATOR:
William J. Clarke

ADDRESS NYS DEC, Region 4 Headquarters
1150 North Westcott Road, Schenectady, NY 12306

AUTHORIZED SIGNATURE William J. Clarke

DATE 11/30/95

GENERAL CONDITIONS

Inspections

1. The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71-0301 and SAPA 401(3). A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

Permit Changes and Renewals

2. The Department reserves the right to modify, suspend or revoke this permit when:
   a) the scope of the permitted activity is exceeded or a violation of any condition of the permit or provisions of the ECL and pertinent regulations is found;
   b) the permit was obtained by misrepresentation or failure to disclose relevant facts;
   c) new material information is discovered: or
   d) environmental conditions, relevant technology, or applicable law or regulation have materially changed since the permit was issued.

3. The permittee must submit a separate written application to the Department for renewal, modification or transfer of this permit. Such application must include any forms, fees or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing.

4. The permittee must submit a renewal application at least:
   a) 180 days before expiration of permits for State Pollutant Discharge Elimination System (SPDES), Hazardous Waste Management Facilities (HWMF), major Air Pollution Control (APC) and Solid Waste Management Facilities (SWMF); and
   b) 30 days before the expiration of all other permit types.

5. Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

Other Legal Obligations of Permittee

6. The permittee has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature and by whomever suffered, arising out of the project described in this permit and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from this project.

7. The permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

8. The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required for this project.

Special Conditions

FOR ARTICLE 27 , Title 9; 6 NYCRR Part 373
Hazardous Waste Management Permit

1 This permit is based on the assumption that the information submitted in the permit application submitted 4/4/86, and revised as indicated below (thereafter referred to as the application) is complete and accurate and that the facility will be operated as specified in the application. Any inaccuracies or incompleteness found in the information may be grounds for the termination or modification of this permit and potential enforcement action.

Complete Application Documents

1. 6 NYCRR Part 373 Permit Application dated May, 1992 (Vol I - III), and subsequent revisions as updated May 25, 1995. Revisions 11/21,22/95).
2. Trial Burn Report submitted December 1992, and revisions up to May 25, 1995.
3. Allowable Metals Concentration Report dated December 1991, and subsequent Air Modeling Analysis addendums up to June 1993. Revisions to 5/95.
4. Human Health Risk Assessment Report submitted December, 1991, and subsequent addendums up to June 1993. Revisions to 5/95
5. Environmental Assessment Form 11/93, revised 11/95.

2. The Permittee must operate the facility in strict accordance with the modules and attachments to this permit specified below:

Module I:	Standard Conditions
Module II:	General Facility Conditions
Module III:	Corrective Action Requirements
Module IV:	Waste Minimization Requirements
Module V:	Storage in Containers, Management of tanker and drum transport trucks
Module VI:	Storage/Treatment in Tanks
Module VII:	Incineration and Energy Recovery
Module VIII:	Land Disposal Restrictions
Module IX	Air Emission Standards for Organic Air Emissions
Attachment A	Waste Analysis Plan
Attachment B:	Security, Inspection and Preparedness/Prevention Procedures
Attachment C:	Personnel Training
Attachment D:	Contingency Plan

Special Conditions

FOR ARTICLE 27 , Title 9; 6 NYCRR Part 373

Hazardous Waste Management Permit

Attachment E:	Container Management
Attachment F:	Tank Management
Attachment G:	Incinerator/Energy Recovery Operation
Attachment H:	Closure Plan
Attachment I:	Engineering Drawings
Attachment J:	Best Management Practices Plan
Attachment K	Fugitive Dust Plan and Addendum
Attachment L	Noise Control Plan
Attachment M:	Major/Minor Permit Modifications Summary

3. Pursuant to the Environmental Conservation Law, Article 3-0119, all the analyses performed to comply with the analysis requirements of this permit shall be performed by laboratories certified in the appropriate categories by the New York State Department of Health, Environmental Laboratory Approval Program (ELAP), if ELAP issues certifications in such categories. The permittee shall also: a) assure any vendor laboratory used will use the permittee's sample control numbers, 2) assure the vendor laboratory and its own have a comprehensive quality assurance and control program to address testing procedures and chain of custody of samples and 3) take full responsibility for the results it obtains and uses from vendor and its own laboratories.

4. The Permittee shall inform the Department within 24 hours of analytical results that indicate a PCB concentration of greater than 10 ppm in any individual load. The Permittee shall identify the supplier or generator of the waste load.

5. Any modification to the permit or regulated activities, as well as permit renewals, must be submitted in triplicate for prior approval to the Regional Permit Administrator at NYSDEC, Region 4, 1150 North Westcott Road, Schenectady, New York 12306, with two copies to NYSDEC, Bureau of Material Storage, Combustion & Regulation, 50 Wolf Road, Albany, New York 12233 and USEPA Region II, Hazardous Waste Permits Branch, 290 Broadway, New York, New York 10278. Any submittals of plans, reports, etc. made in order to comply with the permit conditions shall be sent as per Page I-10 of this permit.

Special Conditions

FOR ARTICLE 27 , Title 9; 6 NYCRR Part 373
Hazardous Waste Management Permit

6. An account to fund the Department's monitoring of the permittee's compliance with the terms hereof shall be established with the Department as follows:

   a. The sum of fifty thousand dollars ($50,000,00) shall be submitted to the Department within ten (10) days of the effective date of this permit, with which the monitor fund shall be established. The account balance must be sufficient to meet at least the next nine months' anticipated expenses. Charges against the account shall relate to actual staff time expended for the life of the project from permit effective date through Department approval of the final closure as implemented, and shall be for expenses described by paragraph (b) of this condition. The maximum staff time to be charged to the permittee will not exceed one full time equivalent employee over the life of the facility. Quarterly payments shall be made for the duration of this Permit in accordance with the following provisions:

   b. Costs to be covered by this fund include:

      1) Direct personal service costs and fringe benefits, including the cost of replacement personnel for the regulatory assigned monitor(s);

      2) Direct non-personal service costs, including purchase or lease of a vehicle, if necessary, and its full operating costs;

      3) Inflation increases; and

      4) Overhead or support costs at the approved Federal Indirect Cost Rate.

   c. The Department may revise the required payment on a quarterly basis to include all costs of monitoring to the Department. The quarterly revision may take into account factors such as inflation, salary increases, accrued interest to be applied to the balance, changes in operating hours and procedures and the need for additional on-site monitors.

7. The Permittee shall comply with the recommended control measures found in the approved Noise Impact Analysis, Technical Report AA-1790 (dated 9/24/90) and the Fugitive Dust Control Plan by Sci-Tech (dated 8/30/90). The Permittee shall also implement the Fugitive Dust Plan Addendum by Sci-Tech (dated 10/95 with cover letter dated 10/27/95) according to the approved schedule found in that plan. The permittee shall maintain a Fugitive Dust Plan implementation escrow account initially funded at $565,000. This account can be

Special Conditions
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drawn down according to the schedule of implementation as specific improvements are completed and the Department has conducted a final inspection, determined the specific improvement(s) to be in compliance with the plan and provided a written drawdown authorization. The schedule of implementation is to be revised to specify escrow amount drawdown with the completion of specific dust control measures and submitted for Department review and approval by 12/15/95. Once implemented the permittee shall maintain all fugitive dust control measures in compliance with the plan. In addition, the permittee is also responsible for maintaining compliance with the Norlite Best Management Practices Plan (Revision 1 dated 4/30/92 and as revised 10/26/95).

8. The Permittee shall prepare and submit a Compliance Report on 4/1 of every year describing the facility's record in complying with all DEC permits and the conditions contained therein for the previous twelve months including complaints received and how responded to. It shall also include a projection of key compliance elements and milestones in the forthcoming twelve months.

9. The permittee shall maintain available for inspection at the facility a list and description of all complaints received at this facility and the evaluation of the complaints and actions taken on such complaints.

10. The permittee shall adhere to the truck traffic routing and maximum truck trip numbers identified in the Environmental Assessment Form (EAF) dated 11/93 and most recently revised 11/95. If complaints regarding truck traffic operating during off hours are received which are of a continuing nature and are substantiated by the Department then the Department at its discretion may impose restrictions on the hours which the permittee may allow trucks to enter or exit the facility. Such operating hour restrictions shall be no more stringent than:

    - No trucking operations on Sundays or the following holidays: New Years, Labor Day, Independence Day, Memorial Day, Thanksgiving Day and Christmas Day.*

    - Monday through Friday trucking operations limited to 6:30 AM to 6 PM. Saturday trucking operations limited to 8 AM to 4 PM.*

    *These restrictions shall not apply to emergency fuel/LGF deliveries. Late truck arrivals due to circumstances beyond the operator's control (e.g. weather, traffic and breakdowns) shall be permitted to enter and park in the authorized truck staging or unloading areas.

MODULE I - STANDARD CONDITIONS

A. EFFECT OF PERMIT

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 6 NYCRR Parts 370 through 374, 376, 621 and 624. Applicable regulations are those which are in effect on the date of issuance of this permit.

The Permittee is allowed to treat, store, or dispose of hazardous waste in accordance with the conditions of this permit. Any storage, treatment, or disposal of hazardous waste not authorized in this permit is prohibited unless exempt from 6 NYCRR Part 373. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State or local laws or regulations. Compliance with the terms of this permit does not constitute a defense to any other law providing for protection of public health or the environment.

B. PERMIT ACTIONS

This permit may be modified, revoked, or suspended for cause as specified in 6 NYCRR 621.14. The filing of a request for a permit modification, revocation and reissuance, or suspension; or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

C. SEVERABILITY

The provisions of this permit are severable, and if any

provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. DUTIES AND REQUIREMENTS

(1) Duty to Comply. The Permittee shall comply with all conditions of this permitn Any permit noncompliance constitutes a violation of the ECL Article 27, Title 9 and is grounds for enforcement action; permit suspension, revocation, or modification; or denial of a permit renewal applicationn

(2) Duty to Reapply. If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this Permit, the permittee shall submit a complete application for a new permit at least 180 days before this permit expires and shall obtain a new permitn

(3) Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permitn

(4) Duty to Mitigate. The Permittee shall take all steps to minimize or correct any adverse impact on human health or the environment resulting from noncompliance with this permitn

(5) Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permitn Proper operation and maintenance includes,

but is not limited to, effective performance, adequate funding, adequate operator staffing and training, and adequate process and laboratory controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permito

(6) Inspection and Entry. The Permittee shall allow the Commissioner, or an authorized representative, including authorized EPA representatives, upon the presentation of credentials and other documents as may be required by law too

(a) Enter at reasonable times upon the Permitteeos premises where a regulated activity is located or conducted or areas subject to corrective action pursuant to Module III of this permit, or where records must be kept under the conditions of this permito

(b) Have access to and copy, at reasonable timeso any records that must be kept under the conditions of this permit, including any and all confidential data;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the ECL, any substances or parameters at any location.

(7) Duty to Provide Information. The Permittee shall furnish

to the Commissioner, within a reasonable time, any relevant information which the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or suspending this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this permit.

(8) Twenty-four Hour Reporting. The Permittee shall report to the Commissioner any non-compliance which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:

(a) Information concerning the release of any hazardous waste or constituent which may cause endangerment to public drinking water supplies.

(b) Any information of a release or discharge of hazardous waste or of a fire or explosion at the facility, which could threaten the environment or human health.

(c) (i) Name, address, and telephone number of the operator;

(ii) Name, address, and telephone number of the facility;

(iii) Date, time, and type of incident;

(iv) Name and quantity of materials involved;

(v) The extent of injuries, if any;

(vi) An assessment of actual or potential hazard to the environment and human health inside and

outside the facility, where this is applicable; and

(vii) Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided to the Commissioner within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times), whether the noncompliance has been corrected; and
if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance (See Permit Condition D(4) of Module I). The Permittee need not comply with the five day written notice requirement if the Commissioner waives the requirement and the permittee submits a written report within 15 days of the time the permittee becomes aware of the circumstances.

The oral reports required above may be made by contacting the National Response Center 24-hour toll free number at (800) 424-8802 and the New York State 24-hour oil and hazardous material spill notification number, (800) 457-7362, or any designated telephone number which may subsequently replace the ones listed above.

(9) Unmanifested Waste Report. A report must be submitted to the Commissioner within 2 days of receipt of unmanifested

waste and include the information listed in 6 NYCRR 372.4(c)o

(10) Manifest Discrepancy Report. If a significant discrepancy (as defined by 6 NYCRR Part 372o4(b)(1)) in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within 15 days, the Permittee must submit a written report to the Commissioner. The report must include a copy of the manifest and must meet the information requirements of 6 NYCRR Part 372.4(b)(5)o

(11) Additional Noncompliance Reporting. The Permittee shall report all instances of noncompliance (including release of hazardous waste, fire or explosion) not required to be reported under Module I, Condition D.(8) or (17)o Such noncompliance shall be reported at the time monitoring reports are submitted. The reports shall contain the information listed in Module I, Condition D. (8)(c)(I-vii)n

(12) Anticipated Noncompliance. The Permittee shall give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirementso Compliance with Permit Condition D(3) of Module I is still effective in this situation.

(13) Other Information. Whenever the Permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Commissioner, the Permittee shall immediately submit such facts or informationo

(14) Compliance Schedules. The Permittee must comply with the compliance schedules in this permit. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements (other than submission of specific documents) shall be submitted no later than 14

days following each schedule date.

(15) Annual Reports. The Permittee shall submit an annual report covering facility activities during the calendar year in accordance with the requirements of 6 NYCRR 373a 2.5a(e)a.

(16) Monitoring and Records

(a) Samples and measurements taken for the purpose of monitoringa shall be representative of the monitored activity. The methods used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix 19 and Appendix 35 of 6 NYCRR Part 371 and 376 respectively or an equivalent method approved by the Commissioner. Laboratory Methods must be those specified in Test Methods for Evaluating Solid Waste: Physical & Chemical Methods, EPA Publication SW-846, Third Edition, First Update 1990 or later approved revisions, or an equivalent method, as specified in the Waste Analysis Plan (see Attachment B)a.

(b) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, certification required by 6 NYCRR Part 373-2.5a(c)(2)(ix)a, and records of all data used to complete the application for this permit until closure certification of the facility is approved by DEC. For land disposal facilities, the monitoring data required under 6 NYCRR Part 373-2.6 must be kept throughout the post-closure care period. (See also Module II, Condition L.2)a.

(c) Records of monitoring information shall specifya

(I) The dates, exact place, and times of sampling or measurementsa

(ii) The individuals who performed the sampling or measurements;

(iii) The dates analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The sampling techniques or methods used;

(vi) The analytical techniques or methods used; and

(vii) The results of such analyseso

(d) The Permittee shall conduct a quality assurance program to ensure that the monitoring data are technically accurate and statistically valid. The quality assurance program shall be in accordance with Chapter One and applicable subsections of Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods, EPA Publication SW-846, Third Edition, First Update, 1990 or later approved revisions, or equivalent methods approved by the Departmento

(17) Monitoring Reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.

(18) Reporting Planned Changes. The Permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. See Module I Condition I.

(19) Certification of Construction or Modification. The Permittee may not commence [treatment, storage or disposal of hazardous waste] at a newly constructed facility nor in a modified portion of an existing facility untilo

(a) The Permittee has submitted to the Commissioner by certified mail or hand delivery a letter signed by the Permittee and an independent registered professional engineer stating that the facility has been constructed or modified in compliance with the permito and

(b) (i) The Commissioner has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or

(ii) The Commissioner has either waived the inspection or has not, within 15 days, notified the Permittee of his or her intent to inspect.

(20) Transfer of Permits. This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 6 NYCRR 373-1.6(a)(12)(iii) and 6 NYCRR 373-1.7(a). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 6 NYCRR Part 373a

E. SIGNATORY REQUIREMENT

All reports or other information requested by the Commissioner shall be signed and certified as required by 6 NYCRR 373-1.4(a)(5)a

F. CONFIDENTIAL INFORMATION

The permittee may claim confidential any information required to be submitted by this permit in accordance with 6 NYCRR 370.1(b)a All documentation which the Permittee believes justifies its claim of confidentiality must be submitted in accordance with 6 NYCRR Part 616 with any such claim of confidentiality.

G. DOCUMENTS TO BE SUBMITTED PRIOR TO OPERATION

Not Applicable

H. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent registered professional engineer, a copy of this permit and the following documents, amendments, revisions and modifications to these documentsa

(1) Waste Analysis Plan as required by 6 NYCRR 373-2.2(e)a;

(2) Personnel training documents and records as required by 6 NYCRR 373-2.2(h)(4);

(3) Contingency plan as required by 6 NYCRR 373-2.4(d);

(4) Closure plan as required by 6 NYCRR 373-2.7© and post closure plan as required by 6 NYCRR 373-2.7(h)(2)n

(5) Annually adjusted cost estimate for facility closure and post-closure care as required by 6 NYCRR 373-2.8(c) and 6 NYCRR 373-2.8(e) respectively;

(6) Operating record as required by 6 NYCRR 373-2.5(c)n

(7) Inspection schedules as required by 6 NYCRR 373-2.2(g)(2)n

(8) Assessment of existing tank systems integrity as required by 6 NYCRR 373-2.10(b); and

(9) Groundwater monitoring, testing and analytical data as required by 6 NYCRR 373-2n6.

I. PERMIT MODIFICATIONS (INCLUDING TRANSFERS) AND RENEWALS.

The permit may be modified for cause as allowed under 6 NYCRR 373-1.7 and 621.14. Modifications including transfers and renewals shall be requested in writing as required by 6 NYCRR 621n13 to Regional Permit Administrator, NYS Deptn Environmental Conservation, Region IV, 1150, North Westcott Road, Schenectady, New York 12306. Please refer to Attachment M.

J. ALL REPORTS AND SUBMITTALS

(1) (a) All reports and submittals (except as noted) required by this permit to be submitted to the commissioner or Department of Environmental Conservation shall be sent the following addresseesn

Regional Permit Administrator
Region IV, New York State Department of Environmental Conservation

1150, North Westcott Road, Schenectady,
New York 12306.
(3 Copies)

Chief, Bureau of Material Storage, Combustion & Regulation, Division of Solid and Hazardous Materials, New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7251
(2copies)

Chief, Bureau of Hazardous Compliance & Land Management, Division of Solid and Hazardous Materials, New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7252
(2copies - Module III Corrective Action Requirements only)

Chief, Bureau of Pollution Prevention
Division of Pollution Prevention and Waste Reduction, New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7252
(2 copies - Module IV, Waste Minimization requirements only)

(2) All plans, reports, and schedules required by the terms of this Permit are, upon approval by the Department, incorporated by reference into this Permit. Upon incorporation, the provisions of each such document shall be binding upon Permittee and have the same legal force and effect as the requirements of this Permita

(3) Permittee shall submit plans and reports required by this Permit to the Department for review and commenta

If the Department determines that any plan or report required by this Permit is deficient (in whole or in part)n Permittee shall either promptly respond to the comments or make revisions to the submission consistent with the Departmentns comments. Within a reasonable time frame specified by the Department, a final plan or report shall be submitted to the Department for approval. Extensions of the due date for submittals may be granted by the Department based on the Permitteens documentation that sufficient justificationnfor
the extensions exists.

K. DEFINITIONS

For the purpose of this permit, terms used herein shall have the same meaning as those in 6 NYCRR 370 through 374 and 376, unless this permit specifically states otherwisen Where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

(1) Action Levels. For purposes of this Permit action levels are hazardous constituent concentrations that are protective of human health or the environmentn Where availablen action levels are based on appropriate promulgated standards established for a specific environmental medium. When such promulgated standards are not available, action levels are media specific, hazardous constituent concentrations derived from non-promulgated human health-based levels or environmental health-based levelsn The latter levels being protective of aquatic life or wildlifen An action level may be set at the background level for a hazardous constituent for

which data are inadequate to set a human health or environmental health-based level.

(2) Areas of Concern (AOC). Pursuant to the authority granted by 6 NYCRR 373-1.6(c)(2), an area of concern has been defined for purposes of this Permit to mean an area at the facility, or an off-site area, which is not at this time known to be a solid waste management unit

(SWMU), where hazardous waste and/or hazardous constituents are present, or are suspected to be present as a result of a release from the facility. The term shall include areas of potential or suspected
contamination as well as actual contamination. Such area(s) may require study and a determination of what, if any, Corrective Action may be necessary. All permit references to and conditions for SWMUs shall apply to areas of concern.

(3) Commissioner. For purposes of this Permit "Commissioner" shall mean the Commissioner of the New York State Department of Environmental Conservation (Department), his designee or authorized representative.

(4) Environment. Pursuant to ECL Article 27, Title 9, Section 27.0901, environment means any water, water vapor, any land including land surface or subsurface, air, fish, wildlife, biota and all the natural resources.

(5) Facility. All contiguous land, structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage,

or disposal operation units (e.g.n one or more landfills, surface impoundments or combination of them)n For the purpose of implementing corrective action, "facility" means all contiguous property under the control of the owner or operator seeking a 6 NYCRR Part 373 permitn

(6) Hazardous Constituents. Those constituents listed in Appendix 23 to 6 NYCRR 371 or any constituent listed in Appendix 33 to 6 NYCRR 373-2n

(7) Hazardous Waste. Pursuant to ECL Article 27, Title 9, Section 27.0901, hazardous waste means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may: cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managedn

(8) Release. For purposes of this Permit release includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment of any hazardous waste, including hazardous constituents, unless expressly authorized under the terms of this Permit or otherwise permitted under law (e.g., SPDES permitted discharges)n

(9) Solid Waste Management Unit (SWMU). For purposes of this permit includes any discernible waste management

unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of hazardous or solid wastes as those terms are defined in 6 NYCRR Part 371 and 6 NYCRR Part 373-2o These units include, but are not limited to: landfills, surface impoundments, waste piles, land treatment units, tanks, elementary neutralization units, transfer stations, container storage areas, incinerators, injection wells, recycling units, and closed and abandoned unitso Certain areas associated with production processes which have become contaminated as a result of routine and systematic releases of wastes or hazardous constituents from wastesọ are also considered SWMU's.

MODULE II - GENERAL FACILITY CONDITIONS

A. DESIGN AND OPERATION OF FACILITY

The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface waste.

The Permittee is authorized to store, treat or dispose only the hazardous wastes identified in Module V, Condition A and Module VI, Condition A(1).

B. REQUIRED NOTICES

(1) Deleted.

(2) When the Permittee is to receive hazardous waste from an off-site source, (except when the generator is a subsidiary of a Permittee's parent company) he must inform the generator in writing that he has the appropriate permits for, and will accept, the waste the generator is shipping. The Permittee shall keep a copy of this written notice as part of the operating record [6NYCRR 373-2.2(d)(2)].

C. GENERAL WASTE ANALYSIS

Except as specifically provided otherwise in Module III of this permit, the Permittee shall comply with 373-2.2(e), follow the procedures described in the waste analysis plan, Attachment A, and conduct a quality assurance program as specified in Module I, Condition D.(16)(d).

The Permittee shall verify its waste analysis as part of the quality assurance program. The quality assurance program will be in accordance with current EPA practices (Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Third Edition, 1990 or later approved revisions) or equivalent methods approved by the Department, and ensure that the Permittee maintains proper functional instruments, uses approved sampling and analytical methods, as specified in 6NYCRR Part 371, Appendices 19, 20 and 21, and 6 NYCRR 376 Appendix 35, assures the validity of sampling and analytical procedures and performs correct calculations. Any contract laboratory used by the Permittee to perform analyses pursuant to this permit must be certified by the New York State Department of

Health through the Environmental Laboratory Approval Program for the appropriate category of analysis and must be acceptable to the Department. If the Permittee uses such a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this permit. The requirements of Paragraph 3 of the Schedule of Compliance of Order-on-Consent No. R4-1445-93-01 are incorporated as part of this permit.

D. SECURITY

The Permittee shall comply with the security provisions of 6NYCRR 373-2.2(f) and Attachment B.

E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall comply with 373-2.2(g) and follow the inspection schedule, Attachment B. The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by 6NYCRR 373-2.2(g)(3). Records of inspections shall be kept as required by 6NYCRR 373-2.2(g)(4).

F. PERSONNEL TRAINING

The Permittee shall conduct personnel training as required by 6NYCRR 373-2.2(h)(1), (2), and (3). This training program shall follow the attached outline, Attachment C. The Permittee shall maintain training documents and records as required by 6NYCRR 373-2.2(h)(4) and (5).

G. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste as required by 6NYCRR 373-2.2(i) and as described in Attachment B.

H. LOCATION STANDARDS

Not Applicable.

I. PREPAREDNESS AND PREVENTION

(1) Required Equipment. At a minimum, the Permittee shall equip the facility with the equipment set forth in the contingency plan, Attachment D and as required by 6NYCRR 373-2.3(c).

(2) Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment specified in the previous permit condition as necessary to assure its proper operation in time of emergency, as set forth in the

Inspection Schedule (Attachment B).

(3) Access to Communications or Alarm System. The Permittee shall maintain access to the communications or alarm system as required by 6NYCRR 373-2.3(e), and in accordance with Attachment B.

(4) Required Aisle Space. At a minimum, the Permittee shall, in accordance with Attachment E, maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility in an emergency as required by 6NYCRR 373-2a3(f) and to provide access for inspections as required by 6NYCRR 373-2.9(e)a Aisle space in the container storage area shall be maintained in accordance with Attachment E.

(5) Arrangements with Local Authorities. The Permittee shall attempt to make arrangements with State and local authorities as required by 6NYCRR 373-2.3(g)a If State or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record, and a copy of all correspondence sent to State and local authorities while attempting to meet this requirement should be included in the operating record.

Ja CONTINGENCY PLAN

(1) Implementation of Plan. The Permittee shall comply with 6NYCRR 373-2.4 and follow the contingency plan, Attachment D. The Permittee shall immediately carry out the provisions of the contingency plan, Attachment D, and follow the emergency procedures described by 6NYCRR 373-2.4(g) whenever there is a fire, explosion, or release of hazardous waste or constituents.

(2) After any event requiring implementation of the contingency plan, the Permittee shall not resume hazardous waste management in the affected area until all equipment used during the contingency has been cleaned, recharged or replaced, as appropriatea

(3) Copies of Plan. The Permittee shall comply with the requirements of 6NYCRR 373-2.4(d)a

(4) Amendments to Plan. The Permittee shall review and immediately amend, if necessary, the contingency plan as required by 6NYCRR 373-2.4(e)a

(5) Emergency Coordinator. The Permittee shall comply with the requirements of 6NYCRR 373-2.4(f) concerning the emergency coordinator.

K. MANIFEST SYSTEM

(1) The Permittee shall comply with the manifest requirements of 6NYCRR Part 372 and indicate discrepancies on its manifests in accordance with the procedures specified in 6NYCRR372.4(b).

(2) Any LGF tanker truck heels returned to the generator by the permittee shall be considered a partial rejected load and the permittee shall comply with 6 NYCRR Part 372.4(b)(6) and Appendix 30, Item 19. If the partial rejected shipment results in a significant discrepancy as stated in Part 372.4(b)(1)(i)(a), the permittee shall comply with Part 372.4(b)(4) and (5) and Appendix 30, Item 19. A copy of the original manifest with the required changes to Item 19 must be used by the transporter to return the rejected waste to the generator. This shall apply to all returned waste unless the container was considered empty by definition, Part 371.1(f)

L. RECORD KEEPING AND REPORTING

(1) Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with the applicable portions of 6NYCRR 373-2.5(c).

(2) Availability, Retention, and Disposition of Records. All records, including plans, must be made available to the DEC in accordance with 6NYCRR 373-2.5(d)(1). The retention period for all records is extended automatically during any unresolved enforcement action regarding the facility or as requested by the Commissioner. A copy of records of waste disposal locations and quantities under 6NYCRR 373-2.5(c)(2) must be submitted to the Commissioner and local land authority upon closure of the facility as required by 6NYCRR 373-2.5(d)(3). See Module I, Condition D.16(b).

(3) Annual Report. See Permit Condition D(15) of Module I.

M. CLOSURE

(1) Performance Standard. The Permittee shall close the facility as required by 6NYCRR 373-2.7(b) and in accordance with the closure plan, Attachment H.

(2) Amendment to Closure Plan. The Permittee shall amend the closure plan whenever necessary in accordance with 6NYCRR 373-2.7(c)(3).

(3) Notification of Closure and Partial Closure. The Permittee shall notify the Commissioner at least 60 days prior to the date he expects to begin closure or partial closure of any hazardous waste management unit or facility, as required by 6NYCRR 373-2.7(c)(4)(i).

(4) Time Allowed for Closure. Within 90 days after receiving the final volume of hazardous waste, the Permittee shall treat or remove from the site all hazardous waste and shall complete closure activities in accordance with 6NYCRR 373-2.7(d) and the schedule specified in the closure plan, Attachment H.

(5) Disposal or Decontamination of Equipment, Structures and Soils. During the partial and final closure periods, all contaminated equipment, structures, and soils must be properly disposed of or decontaminated unless otherwise specified in 6NYCRR 2.11(f), 373-2.12(h), 373-2.13(h), or 373-2.14(g). By removing any hazardous waste or hazardous constituents during partial and final closure, the Permittee may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of 6NYCRR Part 372.

(6) Certification of Closure and Partial Closure. Within 60 days of completion of final closure of the facility or within 60 days of partial closure of any hazardous waste management unit, the Permittee shall submit to the Commissioner certifications by the Permittee and by an independent New York State registered professional engineer that the facility (or the hazardous waste management unit) has been closed in accordance with the specifications in the approved closure plan as required by 6NYCRR 373-2.7(f).

(7) Survey Plat. Not Applicable.

N. GENERAL POST-CLOSURE REQUIREMENTS

Not Applicable.

O. COST ESTIMATE FOR FACILITY CLOSURE

The Permittee's most recent closure cost estimate, prepared in accordance with 6NYCRR 373-2.8(c)(1) is specified in Attachment H.

(1) The Permittee must adjust the closure cost estimate for inflation within 60 days prior to each anniversary of the date on which the initial financial instruments were established, as required by 6NYCRR 373-2.8(c)(2).

(2) The Permittee must revise the closure cost estimate whenever there is a change in the facility's closure plan as required by 6NYCRR 373-2.8(c)(3).

(3) The Permittee must keep at the facility the latest closure cost estimate as required by 6NYCRR 373-2.8(c)(4).

P. FINANCIAL ASSURANCE FOR FACILITY CLOSURE

The Permittee shall demonstrate continuous compliance with 6NYCRR 373-2.8(d) or, when applicable, with 6 NYCRR 373-2.8(f) or (g) by providing documentation of financial assurance to the Commissioner, in accordance with the wording in 6NYCRR 373-2.8(j), in at least the amount of the cost estimates required by Module II, Condition O. Changes in financial assurance mechanisms must be approved by the Commissioner pursuant to 6NYCRR 373-2.8(d).

Q. LIABILITY REQUIREMENTS

The Permittee shall demonstrate continuous compliance with the requirements of 6NYCRR 373-2.8(h) and the documentation requirements of 6NYCRR 373-2.8(j), including requirements to have and maintain liability coverage for sudden and, if applicable, non sudden accidental occurrences in the amount of at least $1 million per occurrence ($4.5 million for non-sudden) with an annual aggregate of at least $2 million, ($9 million for non sudden), exclusive of legal defense costs, by providing documentation of the liability mechanisms to the Commissioner.

R. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with 6NYCRR 373-2.8(i) whenever necessary.

MODULE III - CORRECTIVE ACTION REQUIREMENTS FOR SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

A. APPLICABILITY

1. Statute and Regulations. Article 27, Title 9, Section 27-0913, and 6NYCRR 373-2.6(l) requires corrective action, including Corrective Action beyond the facility boundary where necessary to protect human health and the environment, for all releases of hazardous wastes, including hazardous constituents, from any solid waste management unit ("SWMU") at a storage, treatment or disposal facility seeking a 6NYCRR Part 373 permit, regardless of the time at which waste was placed in such unit. Pursuant to 6NYCRR 373-1.6(c)(2) the Commissioner may impose permit conditions as the Commissioner determines necessary to protect human health and the environment (i.e., Areas of Concern (AOC(s)).

2. Summary of Corrective Action Process. Corrective action implementation authorized by 6NYCRR 373-2.6 includes: (a) the RCRA Facility Assessment ("RFA"); (b) the RCRA Facility Investigation ("RFI"); and (c) Corrective Measures ("CM"). The RFA is a three phase process that includes: a Preliminary Review ("PR"); a Visual Site Inspection ("VSI"); and a Sampling Visit ("SV"). The PR is a review of all available information on the individual SWMU(s) and AOC(s). During the PR, and in subsequent phases of the RFA, all of the media (i.e., soil, groundwater, surface water/sediment, air and subsurface gas) that could potentially be impacted by release(s) of hazardous waste, including hazardous constituents, are evaluated. Based on this evaluation, the SWMU(s)/AOC(s) will be characterized as to release potentials.

   Following the PR, a VSI is conducted during which all of the SWMU(s)/AOC(s) either previously or newly discovered, are observed. While performing this reconnaissance, any signs of spills or leakage, stained soil, stressed vegetation, unit deterioration, or any other conditions that may be indicative of a release are assessed. By means of these observations and the findings of the PR, the Commissioner may require the facility to conduct a Sampling Visit (SV) at the unit(s)/area(s) where the release(s) would be suspected.

   The SV can involve any or all of the previously described media at any given SWMU and or Area of Concern (AOC). For those units/areas where releases are clearly

demonstrated in the PR and/or VSI, the SV can be avoided leaving the unit(s)/area(s) to be addressed in the RFI.

The RFA includes preparing the RFA report. This report includes the findings of the various RFA activities and recommendations for further action at those units and areas with demonstrated releases of hazardous wastes, including hazardous constituents. In some cases, where an immediate threat to human health or the environment exists, interim corrective measures may be required.

If the RFA concludes that there is a need for further investigative work the Permittee shall be required to pursue phase two of corrective action, an RFI. The purpose of the RFI is to determine the nature, extent, direction and rate of migration of hazardous wastes, including hazardous constituents, in soils, groundwater, surface water/sediment, subsurface gas and/or air. From these multimedia analyses, the types and concentrations of contaminants present, the boundaries of any contamination (e.g., plumes), and the rate and direction of contaminant movement should be determined in each of the impacted media. Sufficient data shall be generated during the RFI to allow proper assessment of corrective measure alternatives. This may require bench and/or pilot studies to be implemented as part of the RFI. Once all analyses are reviewed, a RFI report is prepared that provides a summation of the data and recommendations for any needed corrective measures.

The culmination of the Corrective Action Program is Corrective Measures ("CM"). The initial stage of the corrective measures phase is the preparation of a Corrective Measures Study ("CMS"). A CMS may be required if concentrations of hazardous constituents in an aquifer, in surface water/sediment, in soils, or in air exceed their corresponding action levels. Such a study may also be required if individual concentrations of hazardous constituents are at or below their action levels, but they still may pose a threat to human health or the environment due to site-specific exposure conditions. The CMS will address alternative corrective measure strategies that are technologically feasible and reliable and which effectively mitigate and minimize damage to, and provides adequate protection of human health and the environment. The Permittee will develop the site-specific CMS using target clean-up levels chosen by the Commissioner to be protective of human health and the environment. Where available, they may be promulgated standards. Where promulgated standards are not available, the Commissioner may use health-based levels, based on Risk-Specific Doses ("RSD") for carcinogens and Reference Doses ("RFD") for systemic

toxicants, or concentration levels protective of the environment that have undergone scientific review. The CMS report should discuss the alternative corrective measure strategies studied, addressing technical, institutional, public health, and environmental issues, and develop the conceptual engineering for the alternative action proposed by the facility. The CMS may not require extensive evaluation of a number of remedial alternatives where a solution is straight forward or only few solutions exist. Such situations could require the Permittee to submit a highly focused CMS.

Following completion of the CMS, the Commissioner will select the corrective measure(s) from the corrective measure alternatives evaluated in the CMS. The commissioner will then initiate a permit modification for the selected corrective measure(s). Subsequent to the permit modification, the owner or operator of the facility will be required to demonstrate financial assurance for completing the approved corrective measure(s).

Permit modification for the approved corrective measure(s) will initiate the final stage of corrective measures, Corrective Measures Implementation ("CMI"). The CMI will address the final design, construction, operation, maintenance, and monitoring of the corrective measure or measures selected.

3. Solid Waste Management Units and Areas of Concern. The conditions of this Module apply to:

   (a) All the SWMUs and AoCs listed in this Module individually or in combinations;

   (b) Any additional SWMU(S) and AOCs identified during the course of groundwater monitoring, field investigations, environmental audits or other means as described in Module Condition C. below; and

   (c) The following known SWMUs and AOCs located on-site and/or off-site.

SWMUs/AOCs

SWMUs

i. Tank Storage Area
ii. Kiln Supply Pumphouse
iii. Incinerator/Energy Recovery Units
iv. Surface Impoundments
v. Waste Piles
vi. Filter/Tank Sludge Storage Areas
vii. Solid waste landfill
viii. Mid-pond

B. STANDARD CONDITIONS FOR CORRECTIVE ACTION

1. Work Plans. All work plans submitted pursuant to this Module shall include:

   (a) Quality Assurance/Quality Control protocols to ensure that data generated is valid and supported by documented procedures;

   (b) Other plans, specifications and protocols, as applicable;

   (c) A schedule for starting specific tasks, completing the work and submitting progress and final reports; and

   (d) Plans for the treatment, storage, discharge or disposal of wastes to be generated by activities described therein.

2. Quality Assurance/Quality Control

   (a) Any laboratory to be used pursuant to such work plans required by this Module must be approved by the Commissioner prior to work plan implementation. Certification by the New York State Department of Health Environmental Laboratory Approval Program in the relevant analytical services is required.

   (b) The minimum Quality Assurance/Quality Control data and information, that shall be delivered with all sample analyses required by this Module, are tabulated in Appendix III-A of this Permit Module.

3. Health/Safety Plans. The Permittee shall develop, according to applicable Federal, State and local requirements, and submit to the Commissioner, health and safety plans that will be implemented to ensure that the health and safety of project personnel, plant personnel and the general public are protected. These plans are not subject to approval by the Commissioner.

4. Guidance Documents. When preparing the submissions described in this Permit Module, the Permittee shall take account of applicable guidance documents issued by the U.S. Environmental protection Agency and the New York State Department of Environmental Conservation in a manner reflecting reasonable technical considerations.

5. Prior Submittals. The Permittee may have already submitted portions of information, plans, or reports required by this Permit Module and its Appendices to the Commissioner pursuant to the terms of previous

applications, consent orders, or plans. For those items the Permittee contends were submitted to the Commissioner, the Permittee may cite the specific document(s) and page(s) it believes adequately addresses each of the individual items requested by this Permit Module and its Appendices. The references, by document(s) and page(s), shall be placed in the appropriate sections of the submittals that require the referenced information and data. If the Commissioner, after a file search, determines that it does not possess any of the referenced information, plans, or reports that the Permittee claims were previously submitted, the Commissioner will notify the Permittee and the Permittee shall submit the referenced documents within the time frame specified within the notification.

6. Compliance Schedule For Interim Corrective Measures.

(a) If at any time it is determined by the Commissioner that a release or, based on site-specific circumstances, a threatened release of hazardous wastes, including hazardous constituents from a SWMU, a combination of SWMUs, or an AOC poses a threat to human health or the environment, or that such condition jeopardizes the Permittee's ability to comply with any governmental permit, a draft interim corrective measures study shall be submitted to the Commissioner for approval within thirty (30) calendar days of notice of such a determination. This study shall consider, among other relevant factors, the character, the extent, direction, the rate of release, the proximity to population, the exposure pathways, the effects of delayed action, and the evaluations of appropriate interim corrective measures. Upon approval of the study by the Commissioner, the Permittee shall implement the required interim corrective measures as specified by the Commissioner. Nothing herein shall preclude the Permittee from taking immediate action to address the conditions described herein and promptly notifying the Commissioner.

(b) In the event the Permittee discovers, a release or, based on site-specific circumstances, a threatened release of hazardous waste, including hazardous constituents, from a SWMU, or a combination of SWMUs, that poses a threat to human health or the environment, the Permittee shall identify interim corrective measures to mitigate this threat. The Permittee shall immediately summarize the nature and magnitude of the actual or potential threat and nature of the interim measures being considered and notify the Commissioner. Within thirty (30)

calendar days of notifying the Commissioner, the Permittee shall submit to the Commissioner, for approval, an interim corrective measures work plan for the interim measures. The Permittee shall implement the measures specified by the Commissioner. Nothing herein shall preclude the Permittee from taking immediate action to address the conditions described herein and promptly notifying the Commissioner.

(c) The following factors may be considered by the Commissioner or the Permittee in determining the need for interim corrective measures:

(i) Time required to develop and implement a final corrective measure;

(ii) Actual and potential exposure of human and environmental receptors;

(iii) Actual and potential contamination of drinking water supplies and sensitive ecosystems;

(iv) The potential for further degradation of any impacted medium;

(v) Presence of hazardous waste, including hazardous constituents, in containers that may pose a threat of release;

(vi) Presence and concentration of hazardous waste, including hazardous constituents, in soils that have the potential to migrate to groundwater or surface water;

(vii) Weather conditions that may affect the current levels of contamination;

(viii) Risks of fire, explosion, or potential for exposure to hazardous wastes, including hazardous constituents, as a result of an accident or failure of container or handling system; and

(ix) Other situations that may pose threats to human health and the environment.

7. Determination of No Further Action.

(a) Based on the results of an RFI for a particular SWMU, or combination of SWMUs, and/or AOC, and other relevant information, the Permittee may

submit an application to the Commissioner for a permit modification under 6NYCRR 373-1.7(b) and 621a13 to terminate the subsequent corrective action requirements of this Module. This permit modification application must contain information demonstrating no release(s) of hazardous wastes, including hazardous constituents, from the SWMU(s) and/or AOC(s) that pose a threat to human health or the environment, as well as information required in 6NYCRR 373-1 and 621.4(n)a which incorporates by reference 6NYCRR 373-1 and 373-2.

If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the forty-five (45) calendar day public comment period required for permit modifications, the Commissioner determines that the release(s) or the suspected release(s) investigated either are non-existent or do not pose a threat to human health or the environmenta the Commissioner may grant the requested modification.

(b) A determination of no further action shall not preclude the Commissioner from implementing the following actions:

(i) Modifying this Permit at a later date to require the Permittee to perform such investigations as necessary to comply with the requirements of this Permit Module and its Appendices if new information or subsequent analysis indicates that there are, or are likely to be, releases from SWMUs/AOCs that may pose a threat to human health or the environment; and

(ii) Requiring continual or periodic monitoring of air, soil, groundwater, or surface water/sediment or subsurface gas, if necessary, to protect human health and the environment, when site-specific circumstances indicate the release(s) of hazardous wastea including hazardous constituents, are likely to occur from any SWMU(s) and/or AOC(s)a

8. Compliance Schedule For Reporting.

(a) The Permittee shall submit, to the Commissioner, signed progress reports, as specified in approved work plans pursuant to this Permit, of all activities (i.e.a SWMU Assessment, Interim

Measures, RCRA Facility Investigation, Corrective Measures Study) conducted pursuant to the provisions of the Corrective Action Compliance Schedules of this Permit Module, beginning no later than thirty (30) calendar days after the Permittee is first required to begin implementation of any requirement herein. These reports shall contain:

(i) A description of the work completed during the reporting periods

(ii) Summaries of all findings made during the reporting period, including summaries of laboratory data,

(iii) Summaries of all changes made during the reporting period,

(iv)a Summaries of all contacts made with representatives of the local community and public interest groups during the reporting period,

(v) Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems,

(vi) Changes in personnel conducting or managing the corrective action activities during the reporting period,

(vii) Projected work for the next reporting period, and

(viii) Copies of daily reports, inspection reports, laboratory/monitoring data, etc., generated during the reporting period.

(b) Upon request, copies of other relevant reports and data not identified in Module Condition B.8.(a) shall be made available to the Commissioner.

(c) The Commissioner may require the Permittee to conduct new or more extensive assessments, investigations, or studies, based upon information provided in the progress reports referred to in Module Condition B.8(a) above, or upon other supporting information.

(d) All plans and schedules required by the conditions of this Permit Module and Appendix III-Daare upon

approval of the Commissioner, incorporated into this Permit by reference and become an enforceable part of this Permita Any noncompliance with such approved plans and schedules shall constitute noncompliance with this Permit. Extensions of the due dates for submittals may be granted by the Commissioner in accordance with the permit modification processes stipulated in Module Condition E.14. of this Permit Module.

9. Compliance with Governmental Requirements. During investigative activities, interim corrective measuresa and final corrective measuresa (including, but not limited to, equipment decommissioning, excavation and unit demolition) required under this Module, the Permittee shall ensure that the transportation, treatment, storage, discharge, and disposal of all contaminated materials generated as a result of such activities (including, but not limited toa soilsa sediments, liquids, tanks, pipes, pumps, rubble, debris, and structural materials) are performed in an environmentally sound manner pursuant to all applicable Federala State and local requirements and that is protective of public health and the environmenta Nothing in this Module shall be construed to require the Permittee to proceed in a manner which is in violation of any such requirements.

10. Notifications.

(a) Notification of groundwater contamination. If at any time the Permittee discovers that hazardous constituents in groundwater that may have been released from a solid waste management unit or area of concern at the facility have migrated beyond the facility boundary in concentrations that exceed action levelsa the Permittee shalla within fifteen (15) calendar days of discovery, provide written notice to the Commissioner and any person who owns or resides on the land which overlies the contaminated groundwater.

(b) Notification of air contamination. If at any time the Permittee discovers that hazardous constituents in air that may have been released from a solid waste management unit or area of concern at the facility have or are migrating to areas beyond the facility boundary in concentrations that exceed action levelsa and that residences or other places at which continuousa long-term exposure to such constituents might occur are located within such areas, the Permittee shall, within fifteen (15) calendar days of such discoverya

(i) Provide written notification to the Commissioner, and

(ii) Initiate any actions that may be necessary to provide notice to all individuals who have or may have been subject to such exposure.

(c) Notification of residual contamination. If hazardous wastes or hazardous constituents in solid waste management units or areas of concern, or which have been released from solid waste management units or areas of concern, will remain in or on the land, including groundwater, after the term of the permit has expired, the Commissioner may require the Permittee to record, in accordance with State law, a notation in the deed to the facility property or in some other instrument which is normally examined during title search that will, in perpetuity, notify any potential purchaser of the property of the types, concentrations, and locations of such hazardous wastes or hazardous constituents. The Commissioner may require such notice as part of the corrective measures selection process.

C. **COMPLIANCE SCHEDULE FOR ASSESSMENT OF NEWLY IDENTIFIED SWMUS AND AOCS.**

1. Notification of Assessment. The Permittee shall notify the Commissioner, in writing, of any additional SWMU(s) and/or AOC(s) not listed in this Module, which are identified during the course of groundwater monitoring, field investigations, environmental audits, or other means within fifteen (15) calendar days after discovery.

2. SWMU/AOC Assessment Report. Within thirty (30) calendar days after notifying the Commissioner, the Permittee shall submit a SWMU/AOC Assessment Report. This Report must provide, at a minimum, the following information for each newly identified SWMU/AOC:

(a) Type of unit/area;

(b) Location of each unit/area on a topographic map of appropriate scale;

(c) Dimensions, capacities, and structural descriptions of the unit/area (supply available engineering drawings);

(d) Function of unit/area;

(e) Dates that the unit/area was operated;

(f) Description of the wastes that were placed or spilled at the unit/area;

(g) Description of any known releases from the unit/area (to include groundwater data, soil analyses, air monitoring data, and/or surface water/sediment data);

(h) The results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes, including hazardous constituents, have occurred, are occurring, or are likely to occur from the unit/area; and

(i) Whether this unit/areas, individually or in combination with other units/areas described in Module Condition A.3. is a significant source of contaminant release.

3. SWMU/AOC Sampling and Analysis Plan. Within thirty (30) calendar days after submittal of the SWMU/AOC Assessment Report required in Module Condition C.2., the Permittee shall submit to the Commissioner for approval a Plan in accordance with the most recent version of the NYS RCRA Quality Assurance Project Plan Guidance, for any sampling and analysis of groundwater, land surface and subsurface strata, surface water/sediment or air, as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such unit(s) and/or area(s) has occurred, is likely to have occurred, or is likely to occur. The SWMU/AOC Sampling and Analysis Plan must demonstrate that the sampling and analyses program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste, including hazardous constituents, from the newly-discovered SWMU(s) and/or AOC(s) to the environment.

4. Subsequent Assessment Actions. Following submission of the SWMU/AOC Assessment Sampling and Analysis Plan set forth in Module Condition C.3.a subsequent activities for the Plan shall proceed in accordance with the following schedule:

(a) Meeting between the Permittee, the U.S. Environmental Protection Agency (Agency) and the New York State Department of Environmental Conservation (Department) to discuss Plan comments, as appropriate; and

(b) Submission of a revised Plan to the Commissioner

for approval within thirty (30) calendar days of the above-described meeting. (If the above referenced meeting is determined not to be necessary, the Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Plan comments from the Commissioner); and

(c) Begin implementation of the SWMU/AOC Sampling and Analysis Plan within thirty (30) calendar days following written approval from the Commissioner for the Plan.

5. SWMU/AOC Sampling and Analysis Reporta Within thirty (30) calendar days of receipt by the Permittee of validated analytical data generated under the approved SWMU/AOC Sampling and Analysis Plan, the Permittee shall follow reporting requirements in the approved Plan and submit a SWMU/AOC Sampling and Analysis Report to the Commissioner. The Report shall describe all results obtained from the implementation of the approved Plan.

6. Assessment Conclusions. Based on the results of the SWMU/AOC Sampling and Analysis Report, the Commissioner shall determine the need for further investigations at the specific unit(s) covered in the SWMU/AOC Assessment Report. If the Commissioner determines that such investigations are needed, the Commissioner shall, by written notification, require the Permittee to prepare and submit for approval a RCRA Facility Investigation Work Plan in accordance with Module Condition E.5. eta seq..

D. **COMPLIANCE SCHEDULE AND NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT SWMUS AND AOCSa**

The Permittee shall notify the Commissioner, in writing, of any release(s) of hazardous wastes, including hazardous constituents, discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities no later than fifteen (15) calendar days after discovery. Such newly-discovered release(s) may be from the newly-identified unit(s)/area(s)ą from the unit(s)/area(s) for which, based on the findings of the RFA, the Commissioner had previously determined that no further investigation was necessary, or from the unit(s)/area(s) investigated as part of an RFI. Based on the information provided in the notification, the Commissioner shall determine the need for further investigation of the release(s)a If the Commissioner determines that such investigations are needed, the Commissioner shall, by written notification, require the Permittee to prepare a

RCRA Facility Investigation Work Plan in accordance with Module Condition E.5. et. seq..

E. CORRECTIVE ACTION REQUIREMENTS.

1. No Action Requirements

(a) on the basis of the RCRA Facility AssessmentPreliminary Review dated May 1988, as revised) and the Sampling Visit Report dated June 1992 (and supplements dated November 1992 and June 1993), the Commissioner has determined that there is no evidence at this time of the release(s) of hazardous waste(s) and/or constituent(s) that threaten human health or the environment from the following SWMU(s) and/or AOC(s) identified in Module Condition A.3:

i. Tank Storage Area (Tanks Nos 3 thru Nos 6)
ii. Kiln Supply Pumphouse
iii. Incinerator/Energy Recovery Units
iv. Filter/Tank Sludge Storage Areas
v. Solid Waste Landfill
vi. Mid-pond
vii. Surface Impoundment
viii. Waste piles

(b) The Permittee need not undertake corrective action at any aforementioned SWMU(s) and/or AOC(s) identified in Module Condition E. 1. (a) as long as there is no evidence of the release(s) of hazardous waste(s) or constituents) from the SWMU(s) and/or AOC(s) threatening human health or the environment. This permit condition does not apply to any other stipulation specified in other Modules or Conditions of this Permit.

(c) A determination of no further action shall not preclude the Commissioner from modifying this Permit at a later date to require further investigations, studies, monitoring, or corrective measures, if new information or subsequent analysis indicates the release(s) or likelihood of release(s) from SWMU(s) and/or AOC(s) identified in Module Condition E.1.(a) that could pose a threat to human health or the environment.

2. Compliance Schedule For RCRA Facility Assessment ("RFA") Sampling Visit Work Plans.

(a) On the basis of the RCRA Facility AssessmentPreliminary Review dated May 1988, as revised, and the Sampling Visit Report dated June 1992 (and supplements dated November 1992 and June 1993), the Commissioner has determined that there is the potential for the release(s) of hazardous waste(s) and/or constituents to have occurred from the following SWMU(s) and/or AOC(s) identified in Module Condition A.3. that require implementation of a RFA Sampling Visit.

i. Tank Storage Area (Tanks No. 1 and 2)

(b) Within thirty (30) calendar days after the effective date of this Permit, the Permittee shall submit to the Commissioner for approval, a RCRA Facility Assessment-Sampling Visit ("RFA-SV") Work Plan for the SWMU(s) identified in Module Condition E.2.(a)a The Permittee shall develop the RFA-SV Work Plan in accordance with the RCRA Sampling Visit Work Plan Outline specified in Appendix III-E of this Permit Module and the most recent version of the RCRA Quality Assurance Project Plan Guidance.

(c) Following submission of the RFA-SV Work Plan set forth in Module Condition E.2.(b) for the SWMU(s) and/or AOC(s) identified in Module Condition E.2.(a), subsequent activities for the Plan shall proceed in accordance with the following schedulea

(i) Meeting between the Permittee and the Department to discuss Plan comments, as appropriatea and

(ii) Submission of a revised Plan to the Commissioner for approval within thirty (30) calendar days of the abovea described meetinga (If the above-referenced meeting is determined not to be necessary, the Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Plan comments from the Commissioner)a

3. Compliance Schedule For RFA-SV Work Plan Implementation. Begin implementation of the RFA-SV Work Plan for the SWMU(s) and/or AOC(s) identified in Module Condition E.2.(a) within thirty (30) calendar days following written approval from the Commissioner for the Plan.

4. Compliance Schedule For RFA-Sampling Visit Report.

(a) Within thirty (30) calendar days of receipt by the Permittee of validated analytical data generated under the approved RFA-SV Work Plan, Permittee shall submit a final report to the Commissioner on the SV for the SWMU(s) and/or AOC(s) identified in

Module Condition E.2.(a)n The report shall follow reporting requirements in the approved work plan and describe all results obtained from the implementation of the approved Plann

(b) Based on the results of the RCRA Facility Assessmentn Sampling Visit Report submitted pursuant to Module Condition E.4.(a)n the Commissioner shall determine the need for further investigations at specific unit(s) and/or area(s) covered in the RFA-SV Report. If the Commissioner determines that such investigations are needed, the Commissioner shall, by written notification, require the Permittee to prepare and submit for approval a RCRA Facility Investigation Work Plan in accordance with Module Condition E.5. etn seq.

5. Compliance Schedule For RCRA Facility Investigation ("RFI") Work Plan.

(a) On the basis of the RCRA Facility Assessment - Preliminary Review dated May 1988, as revised, and the Sampling Visit Report dated June 1992 (and supplements dated November 1992 and June 1993)a the Commissioner has determined that there has been a release of hazardous waste and/or constituents from the following SWMU(s)n or combination of SWMU(s)n and/or AOC(s) identified in Module Condition A.3. that require the implementation of an RFIn

See Condition E.4.(b).

(b) On the basis of the RCRA Facility Assessment - Preliminary Review dated May 1988, as revised, and the Sampling Visit Report dated June 1992 (and supplements dated November 1992 and June 1993) the Commissioner has determined that there has been a release of hazardous waste and/or constituents from the following inaccessible SWMU(s) and/or AOC(s) identified in Module Condition A.3.:

See Condition E.4.(b)n

(c) The Permittee shall submit to the Commissioner for approval a RCRA Facility Investigation Task I Report on Current Conditions, a Task II Report on Pre-Investigation Evaluation of Corrective Measures Technologies, and a Work Plan that meets the RFI Scope of Work included in Appendix III-B for the inaccessible SWMU(s) and/or AOC(s) identified in Module Condition E.5.(b) and/or identified pursuant to Module Condition C.6. no later than one-hundred and eighty (180) calendar days prior to the date when the SWMU(s) and/or AOC(s) become accessible for such

an investigation. The RFI Work Plan shall be prepared in accordance with the provisions of Module Conditions E.5.(f)(i) through (iv). Accessibility to the SWMU(s) and/or AOC(s) shall be considered achievable when the impediment to the RFI (e.g. building, utilities) is demolished, abandoned, or to be altered in a manner that would allow access to the SWMU(s) and/or AOC(s).

(d) The Permittee shall submit to the Commissioner for approval a RCRA Facility Investigation Task I Report on Current Conditions required by the RFI Scope of Work included in Appendix III-B of this Permit Module. A Task I Report shall be submitted for approval within sixty (60) calendar days after

the written notification by the Commissioner that an RFI is required pursuant to Module Conditions C.6., D. and/or E. 5.

(e) The Permittee shall submit to the Commissioner for approval a RCRA Facility Investigation Task II Report on the Pre-Investigation Evaluation of Corrective Measures Technologies required by the RFI Scope of Work included in Appendix III-B of this Permit Module. A Task II Report shall be submitted for approval within ninety (90) calendar days after the written notification by the Commissioner that an RFI is required pursuant to Module Conditions C.6, D. and/or E. 5.

(f) The Permittee shall submit for approval a Work Plan to the Commissioner to address those units, releases of hazardous waste, including hazardous constituents, and media of concern which require the further investigations. A RFI Work Plan shall be submitted within ninety (90) calendar days after written notification by the Commissioner that an RFI is required pursuant to Module Conditions C.6., D., and/or E. 5. a

(i) The Work Plan shall describe the objectives of the investigation and the overall technical and analytical approach to completing all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste, including hazardous constituents, from specific units or groups of units and areas, and their actual or potential receptors. The Work Plan shall detail all proposed activities and procedures to be conducted at the facility and/or off-site, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFIa

(ii) The Work Plan shall discuss sampling and data collection quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures.

(iii) The Work Plan must, at a minimum, address all necessary activities or include descriptions to meet the requirements specified in Tasks III through V of the Scope of Work for a RCRA Facility Investigation included in Appendix III-B and its attachments to this Permit Module.

(iv) The Permittee may determine that any of the items required by Tasks III through V of the Scope of Work in Appendix III-B of this Permit Module have already been submitted or completed, and therefore, the resubmittal of those items are not necessary for completing the RFI of this Permit. The Permittee shall request, within thirty (30) calendar days of the effective date of this Permit, and/or within thirty (30) calendar days of any notification by the Commissioner that an RFI is required that the Commissioner review for approval the Permitteeâs determination. At the time of the request, the Permittee must provide the following information: (1) description of the items and/or summary of findings; (2) description of investigations addressing the itemsą documents/reports of the investigations with dates, and summary of the findings; and (3) copies of the documents/reports.

Upon the Commissioner's approval of any previously performed items, the Permittee may delete these from the RFI Work Plana However, upon disapproval of items, all activities necessary for the items must be included in the RFI Work Plan.

(g) Following submission of the RFI Work Plan set forth in Module Condition E.5.(f)n subsequent activities for the Plan shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss Plan comments, as appropriate; and

(ii) Submission of a revised Plan to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above-referenced meeting is determined not to be necessary, the

Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permitteeós receipt of Plan comments from the Commissioner).

(h) The Commissioner shall review, for approval as part of the RFI Work Plan, any plans developed pursuant to Module Condition C.6, addressing further investigations of newly-identified SWMUs and/or AOCsø or Module Condition D, addressing newly discovered releases from units and/or areas. The Commissioner shall modify the Compliance Schedule of this Permit Module according to the permit modification procedures stipulated in Module Condition E.14. of this Permit Module to incorporate these units and areas and releases into the RFI Work Plan.

6. Compliance Schedule For RCRA Facility Investigation Work Plan Implementation No later than thirty (30) calendar days after written notification by the Commissioner approving the RFI Work Plan, the Permittee shall begin implementation of the RFI according to the schedules specified in the RFI Work Plan. The RFI shall be conducted in accordance with the approved RFI Work Plano

7. Compliance Schedule For RCRA Facility Investigation Final Report And Summary Report

(a) Within sixty (60) calendar days of receipt by the Permittee of validated analytical data generated under the approvedoRFI Work Plan, the Permittee shall submit to the Commissioner for approval the RFI Final and Summary Reports (Task VII of the Scope of Work for an RFI in Appendix III-B of this Permit Module)o The RFI Final Report must contain adequate information to support further corrective action decisions at the facility and/or off-siteø should such actions be necessaryo The RFI Final Report shall describe the proceduresø methodsø and results of all facility investigations of SWMUs and AOCs and their releases, including information on the type and extent of contamination at the facility and/or off-site, sources and migration pathwaysø and actual or potential receptorso It shall present all information gathered under the approved RFI Work Plan. The RFI final report will include a comparison of media specific hazardous constituents with their corresponding action levelso The Summary Report shall describe more briefly the procedures, methodsø and results of the

RFIa

(b) Following submission of the Reports set forth in Module Condition E.7.(a)a subsequent activities for the Report shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss Report comments, as appropriate; and

(ii) Submission of a revised Report to the Commissioner for approval within forty-five (45) calendar days of the above-described meeting. (If the above-referenced meeting is determined not to be necessary, the Permittee shall submit a revised Report to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permitteeas receipt of Report comments from the Commissioner)a

(c) After the Commissioner approves the RFI Final Report and Summary Reporta the Permittee shall mail the approved Summary Report to all individuals on the facility mailing list established by the Permittee, within thirty (30) calendar days of receipt of approval.

(d) A report summarizing the testing program required by Task VI of the Scope of Work for RFI in Appendix III-B of this Permit Module shall be submitted, as a separate documenta at the same time as the RFI Final Reporta

8. Compliance Schedule For Current Interim Corrective Measures

Not Applicable

9. Compliance Schedule For Corrective Measures Study ("CMS") Scope of Work.

(a) Should a CMS be required, the Commissioner shall notify the Permittee in writing. This notice shall identify the hazardous constituenta(s) which have exceeded the action levela(s) as well as those which have been determined to threaten human health and the environment given site-specific exposure conditions or due to additive exposure riska The notification shall specify target cleanup levels for hazardous constituents detected in each medium

of concern, and may also specify corrective measure alternatives to be evaluated by the Permittee during the CMS.

(b) The Commissioner may require a Corrective Measures Study ("CMS") under the following conditions:

(i) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air exceed their corresponding individual action levels; or

(ii) If the concentrations of hazardous constituents in groundwater, surface water/sediment, soil, or air do not exceed their corresponding individual action levels, but additive exposure risk due to the presence of multiple constituents is not protective of human health; or

(iii) If the concentrations of hazardous constituent in groundwater, surface water/sediment, soil, or air do not exceed corresponding individual action levels, but still pose a threat to human health or the environment, given site-specific exposure conditions.

(c) Not Applicable

(d) The CMS will be considered complete upon completion of Tasks I through IV required by the CMS Scope of Work included in Appendix III-C of this Permit Module. Within sixty (60) calendar days after the notification required by Module Condition E.9.(a) the Permittee shall complete Task I and submit to the Commissioner a Task I report and documents, if any, relevant to other Tasks.

(f) The Permittee shall submit for approval a CMS Plan to the Commissioner within sixty (60) calendar days after the notification required by Module Condition E.9.(a).

(i) The CMS Plan shall provide:

(1) A description of the general approach to investigating and evaluating potential corrective measures.

(2) A definition of the overall objectives of the study.

(3) The specific plans for evaluating corrective measure to ensure compliance with corrective measure standards;

(4) The schedules for conducting the study; and

(5) The proposed format for the presentation of information.

(ii) The CMS Plan must address, at a minimum, all necessary activities to complete Tasks II and III required by the CMS Scope of Work included in Appendix III-C of this Permit Module.

(e) Following submission of the CMS Plan set forth in Module Condition E.9.(d); subsequent activities for the Plan shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss Plan comments; as appropriate; and

(ii) Submission of a revised Plan to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above-referenced meeting is determined not to be necessary, the Permittee shall submit a revised Plan to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permittee's receipt of Plan comments from the Commissioner);

10. Compliance Schedule For Corrective Measures Study Implementation. No later than thirty (30) calendar days after the Permittee has received written approval from the Commissioner for the CMS Plan, the Permittee shall begin to implement the CMS according to the schedules specified in the CMS Plan. The CMS shall be conducted in accordance with the approved Plan submitted pursuant to Module Condition E.9..

11. Compliance Schedule For Corrective Measures Study Final Report;

(a) Within forty-five (45) calendar days after the completion of the CMS, the Permittee shall submit

for approval a CMS Final Report (Task IV) to the Commissioner. The CMS Final Report shall:

(i) Summarize the results of the investigations and, if applicable, of any bench-scale or pilot tests conducted;

(ii) Provide a detailed description of the corrective measures evaluated and include an evaluation of how each corrective measure alternative meets the standards set forth in Module Condition E.12(a)a

(iii) Present all information gathered under the approved CMS Plana and

(iv) Contain any additional information to support the Commissioner in the corrective measure selection decision-making processa described under Module Condition E.12.

(b) The CMS Final Report (Task IV) must address, at a minimuma all items necessary to demonstrate completion of Tasks II and III required by the CMS Scope of Work included in Appendix III-C of this Permit Module.

(c) Following submission of the CMS Report set forth in Module Condition E.11(a), subsequent activities for the Report shall proceed in accordance with the following schedule:

(i) Meeting between the Permittee and the Department to discuss the Report commentsa as appropriatea and

(ii) Submission of a revised Report to the Commissioner for approval within thirty (30) calendar days of the above-described meeting. (If the above referenced meeting is determined not to be necessary the Permittee shall submit a revised Report to the Commissioner, according to a schedule specified by the Department, not to exceed forty-five (45) calendar days after Permitteeas receipt of Report comments from the Commissioner.)

(d) As specified under Module Condition E.9.(a), based on preliminary results and the CMS Final Report, the Commissioner may require the Permittee to evaluate additional corrective measures or particular elements of one or more proposed

corrective measuresa

12a Corrective Measure(s) Selection.

(a) Based on the results of the documents submitted under Module Condition E.7. for the RFIa under Module Condition E.11. for the CMS, and any further evaluations of additional corrective measures under this study, the Commissioner shall select the corrective measure(s) that at a minimum will meet the following standards:

(i) Be protective of human health and the environmenta

(ii) Attain media cleanup standards selected by the Commissioner during the corrective measures selection processa

(iii) Control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases of hazardous waste, including hazardous constituentsa that might pose a threat to human health and the environment; and

(iv) Meet all applicable waste management requirementsa

(b) In selecting the corrective measure(s) which meets the standards for corrective measures established under Module Condition E.12.(a), the Commissioner shall consider the following evaluation factors, as appropriate:

(i) Long-term reliability and effectiveness. Any potential corrective measure(s) may be assessed for the long-term reliability and effectiveness it affords, along with the degree of certainty that the corrective measure(s) will prove successfula Factors that shall be considered in this evaluation includea

(1) Magnitude of residual risks in terms of amounts and concentrations of hazardous waste, including hazardous constituents, remaining following implementation of the corrective measure(s)a considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastesa including hazardous

constituents:

(2) The type and degree of long-term management required, including monitoring and operation and maintenance;

(3) Potential for exposure of humans and environmental receptors to remaining hazardous wastes, including hazardous constituents, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal or containment.

(4) Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated hazardous wastes, including hazardous constituents, and their residuals; and

(5) Potential need for replacement of the corrective measure(s).

(ii) Reduction of toxicity, mobility or volume. A potential corrective measure(s) may be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous wastes, including hazardous constituents. Factors that shall be considered in such assessments include:

(1) The treatment processes the corrective measure(s) employs and materials it would treat.

(2) The amount of hazardous wastes, including hazardous constituents, that would be destroyed or treated.

(3) The degree to which the treatment is irreversible.

(4) The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes, including hazardous constituents. and

(5) All concentration levels of hazardous waste, including hazardous constituents, in each medium that the corrective measure(s) must achieve to be protective of human health and the environment.

(iii) The short-term effectiveness of a potential corrective measure(s) may be assessed considering the following:

(1) Magnitude of reduction of existing risks;

(2) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a corrective measure(s), including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment; and

(3) Time until full protection is achieved.

(iv) Implementability. The ease or difficulty of implementing a potential corrective measure(s) may be assessed by considering the following types of factors:

(1) Degree of difficulty associated with constructing the technology;

(2) Expected operational reliability of the technologies;

(3) Need to coordinate with and obtain necessary approvals and permits from other agencies;

(4) Availability of necessary equipment and specialists;

(5) Available capacity and location of needed treatment, storage and disposal services; and

(6) Requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure(s).

(v) Cost. The types of costs that may be assessed include the following:

(1) Capital costs;

(2) Operation and maintenance costs;

(3) Net present value of capital and operation and maintenance costs; and

(4) Potential future corrective measure costs.

13. Permit Modification for Corrective Measure(s).

(a) Based on information the Permittee submits in the RFI and Summary Reports, under Module Condition E.7, the CMS Final Report under Module Condition E.11.a and other information, the Commissioner will select the corrective measure(s) and initiate a permit modification to this Permit, pursuant to 6NYCRR 373-1.7(b) and 6NYCRR 621.14. The modification will specify the selected corrective measure(s) and include, at a minimum the following:

(i) Description of all technical features of the corrective measure(s) that are necessary for achieving the standards for corrective measures established under Module Condition E.12.(a), including length of time for which compliance must be demonstrated at specified points of compliance.

(ii) All media cleanup standards for hazardous constituents, selected by the Commissioner, that the corrective measure(s) must achieve to be protective of human health and the environment.

(iii) All requirements for achieving compliance with these cleanup standards.

(iv) All requirements for complying with the standards for management of wastes.

(v) Requirements for removal, decontamination, closure or post-closure of units, equipment, devices or structures that will be used to implement the corrective measure(s).

(vi) A schedule for initiating and completing

all major technical features and milestones of the corrective measure(s)a and

(vii) Requirements for submission of reports and other information.

(b) Within thirty (30) calendar days after this Permit has been modified, the Permittee shall demonstrate in writing to the Commissioner that financial assurance for completing the approved corrective measure(s)a

14. Modification of the Compliance Schedules.

(a) If at any time the Permittee determines that modification of any Compliance Schedule of this Permit Module, including Appendix D, is necessary because such schedules cannot be meta the Permittee must:

(i) Notify the Commissioner in writing within fifteen (15) calendar days of such determination; and

(ii) Provide an explanation why the current schedule cannot be meta

(b) The Commissioner shall notify the Permittee in writing of the final decision regarding the Permittee's proposed modification to the Compliance Schedule.

(c) Modifications to the Compliance Schedule pursuant to their procedure does not constitute a reissuance of this Permit.

(d) All other modifications to this Permit Module must be made in accordance with Module I, Condition I, of this Permit.

15. Corrective Action Through Post-Closure.

Not Applicable

16. Corrective Action Through Closure

Not Applicable

373 Appendix III-A

COMPONENTS REQUIRED FOR RCRA ANALYTICAL DATA SUBMITTED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION*

NORLITE CORPORATION
Cohoes, New York
EPA I.D. No. NYD080469935

373 Appendix III-A

COMPONENTS REQUIRED FOR RCRA ANALYTICAL DATA SUBMITTED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION*

NORLITE CORPORATION

A Report Narrative should accompany each submission, summarizing the contents, data and QA/QC results and all relevant circumstances of the work.

A. Parameter requested.

Ba Sample Number or Numbersa Matrix, and:

1a Date and time collected;
2. Date extracted and/or digesteda
3. Date and time analyzed; and
4. Chain of custody report and/or form, including confirmation of unbroken chain of custodya intact sample packaging and container seals and adequate temperature and/or other preservation.

C. Results [b,e,f,]

1. Sample Results;
2a Duplicate;
3a Blanks[a];
4a Matrix Spikea matrix spike duplicatea blank spikea and
5. Surrogate recoveriesa if applicable.

D. Supporting QA/QC[b]

1a Methodology;
2. Method detection limitsa instrument detection limits[c];
3a Linear curvesa
4a Percent solids for soils, sludges, sedimentsa and where otherwise applicable;
5a Calculations[d];
6a Cleanup proceduresa
7a Data validation proceduresa resultsa and completed data validation checklistsa and
8a Documentation which illustrates how blank water is determined to be analyte-free.

In addition to submitting the above, all sample data and its QA/QC data as specified in SW-846, 3rd edition, Chapter 1, must be maintained accessible to NYSDEC either in hard copy or on magnetic tape or disk (computer data files). The data, if requested by NYSDEC, should be formatted as described in SW-846, 3rd edition, Chapter 1. This requirement may be changed in the future to mandate computer data files, accessible to NYSDEC on request.

This does not obviate the requirement to do the QA/QC specified in each individual EPA-approved method.

* Components for RCRA submissions for non-contract Lab Protocols.
If CLP, then CLP deliverables are required, unless otherwise stated in the approved plan.

[a] The data should include all blanks (trip, equipment rinse, method and instrument blanks) as specified in the sampling and analysis plan, guidance and regulation.

[b] Supporting QA/QC should be specific to the RCRA samples analyzed.

[c] Every effort practicable must be made to achieve detection limits below regulatory limits and comparable to or better than the Practical Quantification Limits specified in the EPA-approved methods. In no case, will reporting limits above the specified POL's be accepted without extensive and complete documentation to the Department.

[d] These may not need to be submitted if adequate QA/QC summaries validating the data, including calibration control charts, correlation coefficients, etc., are submitted. The Report Narrative should describe the data validation and explain discrepancies. The supporting data should be provided to NYSDEC upon request, without restriction. Calibration data must include date and time of analysis.

[e] Frequencies of blanks, duplicates, spikes, surrogates, calibrations, standard reference materials, etc., should be as stated in the approved sampling and analysis plan, the approved analytical methods and the SW-846 3rd edition, Chapter 1, requirements. If there are any perceived conflicts, these should be resolved with NYSDEC in advance of sampling.

[f] Spiking for metals, organics or other parameters must be done before sample preparation (ine. before digestions, extractions etc.), unless otherwise stated in the approved plan. Furnace analysis for metals will still require post-digestion spikes on all samples analyzed by this technique.

373 Appendix III-B

Scope of Work For A RCRA Facility Investigation

NORLITE CORPORATION
Cohoesq New York
EPA I.D. No. NYD080469935

373 Appendix III-B

Scope of Work For A
RCRA Facility Investigation

NORLITE CORPORATION

I. INTRODUCTION

The Permittee shall undertake a RCRA Facility Investigation ("RFI") that should include the development of several component plans and supporting reports relevant to the specific investigations to be undertaken pursuant to this Permit. Component plans and reports must be prepared and submitted in accordance with the Compliance Schedules in Module Condition III-Ea and Appendix III-D of this Permit Module.

The purpose of this RFI is to characterize the nature, extent, direction, rate, movement and concentration of releases of hazardous waste and/or constituents from Solid Waste Management Units and Areas of Concern at the facility including areas off-site impacted by the release(s) from the facility and to gather all necessary data to support the Corrective Measures Study. The Permittee shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RCRA Facility Investigation.

The RFI Scope of Work includes several tasks:

Task I: A report on the Description of Current Conditionsa

Task IIa A report on the Pre-Investigation Evaluation of Corrective Measuresa

Task III: RFI Management Plans including:

A. The Project Management Plana
B. The Data Management Plana
C. The Quality Assurance Project Plan;
D. The Health and Safety Plana and
E. The Community Relations Plan.

Task IV: The Facility Investigation.

Task V: Investigative Analysis.

Task VI: Laboratory, Bench Scale, and Pilot Studiesa

Task VIIa Reportsa

The report on Description of Current Conditions should

comprise all available and relevant information and data on the facility's background, SWMU(s) and AOC(s) characterization, nature and extent of contamination, potential receptors, and prevailing corrective action implementation. Data and information gathered during any previous investigations, remediations, or inspections and other relevant data should be included in the submittal. That information and data may then be used to focus subsequent field investigations and development of the respective work plans for the SWMU(s) and AOC(s) to be investigated as part of this Permit. If the Permittee maintains that relevant information and data has been submitted, the Permittee should cite such submittal(s). The Permittee shall refer to Module Condition III.B.5. on addressing prior submittals.

The report on Pre-Investigation Evaluation of Corrective Measures will identify potential technologies that may be considered by the Permittee for subsequent implementation. These alternative technologies will focus the RFI to collect the necessary data for their proper evaluation.

The RFI Management Plans shall provide the necessary information that will assure that the following objectives are met:

- Proper management of all aspects of the RFI project including tracking of project milestones. Schedules and tracking methods shall be established for RFI tasks and report submittals (Project Management Plan);

- Satisfactory presentation of data and results developed by the RFI. Data management procedures shall be established to effectively process data such that relevant data descriptions are readily accessible and accurately maintained (Data Management Plan);

- Generation of valid data during the RFI investigation. QA/QC procedures shall be established to describe and document data quality (Quality Assurance Project Plan);

- Implementation of appropriate health and safety measures during the RFI. Health and safety procedures shall be established to ensure the health and safety of the investigative team(s) and the general public during the RFI (Health and Safety Plan); and

- Provision for informing the community of the results of the RFI (Community Relations Plan).

The Facility Investigation shall focus on procedures and techniques that will be utilized during field investigations to characterize the environmental setting and the contaminant release(s) from the SWMU(s) and AOC(s).

Characterization of the environmental setting will be necessary to determine monitoring locations and to aid in defining the boundaries of the contaminated unit(s) and area(s). The Permittee shall characterize each environmental media, as deemed necessary by the Department, to provide information that can be used to determine the rate and extent of the contaminant release(s). Characterization of the contaminant release(s) from the SWMU(s) and AOC(s) will be necessary to determine the nature, extent, direction, rate, movement and concentration of the contaminant plume(s).

Since a potentially broad spectrum of situations involving information on a specific release(s) may exist at the beginning of the RFI, a flexible, phased approach for the release investigation may be necessary. The Permittee may begin with an evaluation of existing data and propose the collection of additional data as necessary to characterize the release. The Permittee may consider incorporating appropriate screening techniques, i.e., soil gas, geophysical methods, as the initial phase of field investigation for the RFI.

Based on existing data and/or data collected by appropriate screening techniques, the Permittee may develop a conceptual model of the release. This model may then be used to plan and develop subsequent investigations. The Permittee shall then develop work plans for the subsequent investigative program(s), as deemed necessary by the Department, utilizing conventional monitoring techniques capable of release(s) verification and/or characterization.

An Investigative Analysis shall be carried-out on the data generated by the Facility Investigation. The analysis shall focus on the quality of data generated and on establishing the nature, extent, direction, rate, movement and concentration of contamination.

Laboratory and/or Bench Scale Studies shall be performed to assess corrective measure technologies that may be applicable for remediating the SWMU(s), the AOC(s), and the environmental contamination investigated by the Permittee. The information gathered from such studies will assist the Permittee in selecting the alternative technologies for evaluation during the Corrective Measures Study.

Progress reports on the Facility Investigation and Laboratory Bench Scale Studies shall be submitted quarterly in addition to a final RFI Report and Summary Report.

IIa <u>TASK I: DESCRIPTION OF CURRENT CONDITIONS</u>

The Permittee shall submit a report for Task I containing available and relevant information and data on the:

facility's background, SWMU(s), AOC(s), contamination, receptors, and remediation undertaken pertinent to the specific SWMU(s) and AOC(s) to be investigated as part of this Permit.

A. Facility Background

The Permittee shall summarize the regional location, pertinent boundary features, general facility physiography, geology, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. The information shall include:

1. Map(s) depicting the following:

   (a) General geographic location;

   (b) Property lines, with the owners of all adjacent property clearly indicated;

   (c) Topography and surface drainage depicting all waterways, wetlands, floodplains, water features, drainage patterns, and surface-water containment areas;

   (d) All above and underground tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;

   (e) All known past and present solid or hazardous waste treatment, storage or disposal areas;

   (f) All process sewers;

   (g) Surrounding land uses (residential, commercial, agricultural, recreational), and

   (h) The locations of all production, withdrawal, and groundwater monitoring wells at the facility and within the vicinity of the facility. These wells shall be clearly labeled and ground and top of casing elevations and construction details included (these elevations and details may be included as an attachment).

All maps shall be consistent with the requirements set forth in 6NYCRR Subpart 373-1.5(a)(2)(xix) and be of sufficient detail and accuracy to locate and report all current and future work performed at the site.

2. A history and description of ownership and operation, solid and hazardous waste generation,

treatment, storage and disposal activities at the facility.

3. Approximate dates or periods and description of past product, raw materials and waste spills; identification of the materials spilled; the amount spilled; the location where spilled; and a description of the response actions conducted (local, state, or federal response units or private parties), including any inspection reports or technical reports generated as a result of the response.

B. SWMU and AOC Characterization

The Permittee shall submit available and relevant information that will characterize the wastes, the SWMU(s) and the AOC(s) where wastes have been placed, collected or removed including: type, quantity, physical state; disposition (containment or nature of deposits); and facility characteristics affecting the release(s) (e.g., facility security, and engineered barriers). The information should include:

1. SWMU and AOC Characteristics:

   (a) Location of unit/area (located on facility map);
   (b) Type of unit/area;
   (c) Design features;
   (d) Operating practices (past and present);
   (e) Period of operation;
   (f) Age of unit/area; and
   (g) General physical conditions.

2. Waste Characteristics.

   (a) Type of waste placed in the unit/area.

      (i) Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);

      (ii) Quantity; and

      (iii) Chemical composition (e.g., Appendix VIII hazardous constituents).

   (b) Physical and chemical characteristics of waste and its constituents.

      (i) Physical state (solid, liquid, gas);

      (ii) Physical description (e.g., powder,

oily sludge).

(iii) Temperature;

(iv) pH;

(v) General chemical class (e.g., acid, base, solvent).

(vi) Molecular weight;

(vii) Density;

(viii) Boiling point;

(ix) Viscosity;

(x) Solubility in water;

(xi) Cohesiveness of the waste;

(xii) Vapor pressure;

(xiii) Flash point; and

(xiv) Other relevant properties.

(c) Migration and dispersal characteristics of the waste constituents and procedures used in making the determination.

(i) Sorption;

(ii) Biodegradability, bioconcentration, biotransformation.

(iii) Photodegradation rates;

(iv) Hydrolysis rates;

(v) Chemical transformations; and

(vi) Volatilization rates.

C. Nature, Extent, Direction, Rate, Movement and Concentration of Contamination

The Permittee shall submit available and relevant information on the nature, extent, direction, rate, movement and concentration of the release(s) from the SWMU(s) and the AOC(s). This information and data should include:

1. Summary of available monitoring data and qualitative information on locations and levels of contamination at the facility and within the vicinity of the facility if contamination has migrated off-site.

2. Summary of all potential contaminant migration pathways including available information on geology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality.

D. Potential Receptors

The Permittee shall submit available and relevant information describing the human populations and environmental systems that are susceptible to exposure by the contaminant release(s) from the SWMU(s) and the AOC(s). Data on observable effects or bioassays for ecosystems should accompany this submittal if available. The information shall include:

1. Local uses and possible future uses of groundwater:

   (a) Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial);

   (b) Location of groundwater users including wells and discharge areas (identify on a map); and

   (c) The well(s) pump rate(s) and the well(s) depth(s).

2. Local uses and possible future uses of surface waters draining from the facility:

   (a) Domestic and municipal (e.g. potable and lawn/gardening watering);

   (b) Recreational (e.g. swimming, fishing);

   (c) Agricultural;

   (d) Industrial; and

   (e) Environmental (e.g. fish and wildlife propagation).

3. Human use of or access to the facility and adjacent lands, including, but not limited to:

   (a) Recreation;

   (b) Hunting;

(c) Residential;

(d) Commercial;

(e) Zoning; and

(f) Relationship between population locations and prevailing wind direction.

4. A description of the biota in surface water bodies on, adjacent to, or affected by the facility.

5. A description of the ecology overlying and adjacent to the facility.

6. A demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.

7. A description of any endangered or threatened species near the facility.

E. Corrective Action Implementation

The Permittee shall submit documentation on corrective measures (remedial measures) undertaken on-site or off-site at the facility. Remedial actions should include any interim corrective measures; RCRA closures; State or Federal Superfund activities. This documentation shall include:

1. Objectives of the remediation and how it is mitigating a potential threat to human health and the environment and/or is consistent with and integrated into any long term solution at the facility;

2. Design, construction, operation, and maintenance requirements;

3. Schedules for design, construction and monitoring; and

4. Schedule for progress reports.

III. TASK II: PRE-INVESTIGATION EVALUATION OF CORRECTIVE MEASURES

The Permittee shall submit a report for Task II that identifies the potential corrective measure technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination. This report shall also identify any field data that needs to be collected in the facility investigation to facilitate the

evaluation and selection of the final corrective measure or measures (e.g.a compatibility of waste and construction materials, informationato evaluate effectiveness, treatability of wastes, etc.a).

IVa TASK IIIa RFI MANAGEMENT PLANS

The Permittee shall submit RFI Management Plans as part of the RFI Work Plan. The Plans shall address the methods and procedures necessary to manage the RFIa to describe data developed by the RFI, to gather and ensure valid RFI dataa to protect the health and safety of investigators and the general public, and to keep the community informed about the RFIa

A. Project Management Plan

The Permittee shall prepare a Project Management Plan that shall include a discussion of the management approach, schedules, and personnel utilized during the RFI. That Plan shall include a description of qualifications of personnel performing or directing the RFIa including contractor personnela This Plan shall also document the overall management approach to the RCRA Facility Investigation that will assure adherence to tasks and reporting schedules. The schedule for completing the RFI should reflect the schedules set forth in Module Condition III-E. and Appendix III-D. The schedule shall reflect dates for submittal of various RFI Work Plan components, dates for starting and accomplishing specific tasks associated with the RFIa and dates for reporting information from specific tasks to the Departmenta

B. Data Management Plan

The Permittee shall prepare a Data Management Plan to document and track investigation data and results. This Plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The Plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

1. Data Record

The data record shall include, but not be limited to the following:

(a) Unique sample or field measurement code;

(b) Sampling or field measurement location and sample or measurement typea

(c) Sampling or field measurement raw data;

(d) Laboratory analysis ID number;

(e) Property or component measured; and

(f) Result of analysis (e.g., concentration).

2. Tabular Displays

The following data shall be presented in tabular displays:

(a) Unsorted (raw) data;

(b) Results for each medium, or for each constituent monitored;

(c) Data reduction for statistical analysis;

(d) Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and

(e) Summary data.

3. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

(a) Display sampling location and sampling grid;

(b) Indicated boundaries of sampling area, and areas where more data are required;

(c) Display levels of contamination at each sampling location;

(d) Display geographical extent of contamination;

(e) Display contamination levels, averages, and maxima;

(f) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and

(g) Indicate features affecting intramedia transport and show potential receptors.

C. Quality Assurance Project Plan (QAPjP)

The Permittee shall prepare a QAPjP to document each phase of investigative work and all sampling and monitoring procedures to be implemented during the RFI. The following activities shall be covered in the QAPjP: sampling, field measurements and sample analysis performed during the investigations. This Plan shall ensure that all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. The QAPjP(s) shall be developed in accordance with the following guidance documents, "RCRA Quality Assurance Project Plan Guidance," "SW-846," and "Technical Enforcement Guidance Document." The Plan shall address all of the sixteen (16) essential QA/QC elements stipulated in the "RCRA Quality Assurance Project Plan Guidance." A summary of the QA/QC elements that shall be in the Plan is found in the subsequent paragraphs.

1. Data Quality Objectives

   The QAPjP shall include, but not be limited to the following:

   (a) Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses.

   (b) Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data.

   (c) Description of the rational used to assure that the data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition or an environmental condition; and

   (d) Description of the measures to be taken to assure that data sets can be compared to each other.

2. Sampling and Field Measurements

   The QAPjP shall include, but not be limited to the following:

   (a) Sampling and field measurement locations, depths, etc.;

   (b) Collecting all necessary ancillary data;

   (c) Conditions under which sampling and field measurements should be conducted;

(d) Media to be sampled and addressed by field measurements (e.g., groundwater, air, soil, sediment, etc.);

(e) Parameters to be measured and where;

(f) The frequency of sampling and field measurements and length of sampling period;

(g) The types of sample (e.g., composites vs. grabs) and number of samples to be collected;

(h) Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;

(i) Documenting field sampling and measurement operations and procedures, including;

(i) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, and adsorbing reagents);

(ii) Procedures and forms for recording raw data and the exact location, time, and specific considerations associated with sample and data acquisition;

(iii) Documentation of specific sample preservation method;

(iv) Calibration of field devices;

(v) Collection of replicate samples and measurements;

(vi) Submission of field-biased blanks, where appropriate;

(vii) Potential interferences present at the facility;

(viii) Construction materials and techniques, associated with monitoring wells and piezometers;

(ix) Field equipment listing and sample containers;

(x) Sampling and field measurement order; and

(xi) Decontamination procedures.

(j) Selecting appropriate sample containers;

(k) Sample preservation; and

(l) Chain-of-Custody, including:

(i) Standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment; and

(ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

3. Sample Analysis

The QAPjP shall include, but not be limited to the following:

(a) Chain-of-custody procedures, including:

(i) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;

(ii) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and

(iii) Specification of laboratory sample custody procedures for sample handling, storage, and disbursement for analysis.

(b) Sample storage procedures and storage times;

(c) Sample preparation methods;

(d) Analytical procedures, including:

(i) Scope and application of the procedure;

(ii) Sample matrix;

(iii) Potential interferences;

(iv) Precision and accuracy of the methodology; and

(v) Method detection limits.

(e) Calibration procedures and frequency;

(f) Data reduction, validation and reporting;

(g) Internal quality control checks, laboratory performance and systems audits and frequency, including:

(i) Method blank(s);

(ii) Laboratory control sample(s);

(iii) Calibration check sample(s);

(iv) Replicate sample(s);

(v) Matrix-spikes sample(s);

(vi) "Blind" quality control sample(s);

(vii) Control charts;

(viii) Surrogate samples;

(ix) Zero and span gases; and

(x) Reagent quality control checks.

(h) Preventive maintenance procedures and schedules;

(i) Corrective action (for laboratory problems); and

(j) Turnaround time.

D. Health and Safety Plan

The Permittee shall prepare a Health and Safety Plan for the protection of the investigative team(s), workers, and general public which may be exposed to hazards.

1. The Health and Safety Plan shall include, but not be limited to the following:

(a) Facility description including availability of resources such as roads, water supply, electricity and telephone service;

(b) Describe the known hazards and evaluate the risks associated with the incident and with each activity conducted;

(c) List key personnel and alternates responsible for site safety, response operations, and for protection of public health;

(d) Delineate work areas;

(e) Describe levels of protection to be worn by personnel in work areas;

(f) Establish procedures to control site access;

(g) Describe decontamination procedures for personnel and equipment;

(h) Establish site emergency procedures;

(i) Address emergency medical care for injuries and toxicological problems;

(j) Describe requirements for an environmental surveillance program;

(k) Specify any routine and special training required for responders; and

(l) Establish procedures for protecting workers from weather-related problems.

2. The Facility Health and Safety Plan shall be consistent with:

(a) NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);

(b) EPA Order 1440.1 - Respiratory Protection;

(c) EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;

(d) Facility Contingency Plan;

(e) EPA Standard Operating Safety Guide (1984);

(f) OSHA regulations particularly in 29 CFR §§ 1910 and 1926;

(g) State, local, and other federal agency (e.g.,

DOD, DOE) regulations; and

(h) Other EPA guidance as provided.

E. Community Relations Plan

The Permittee shall prepare a plan on disseminating information to the public regarding investigation activities and results. The plan should identify who will be notified and will receive summary RFI reports.

V. TASK IV: THE FACILITY INVESTIGATION

The Permittee shall submit a workplan that shall address the techniques and procedures necessary to characterize the environmental setting at and within the vicinity of the facility and the media-specific contamination resulting from the release(s) by the SWMU(s) and the AOC(s). The part of the workplan that addresses field sampling and measurement activities shall meet the sampling plan requirements stipulated in the "RCRA Quality Assurance Project Plan Guidance."

A. Environmental Setting

The Permittee shall submit an appropriate plan on collecting information to supplement existing information on the environmental setting at the facility and in the vicinity of the facility. Sufficient information shall be collected by the Permittee to characterize only those environmental media impacted by the release(s) from the SWMU(s) and the AOC(s).

1. Hydrogeology

The Permittee shall conduct a program to characterize the hydrogeologic conditions at the facility and the off-site areas where contamination has migrated. The program shall provide relevant information on geology and hydrogeology that should include, but not be limited to the following facts:

(a) A description of the regional and facility specific geologic and hydrogeologic characteristics which affect groundwater flow both beneath and within the vicinity of the facility, including:

(i) Regional and facility specific geomorphology and stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts.

(ii) Structural geology: description of local and regional structural features (e.g., folds, faults, joints, and fractures);

(iii) Identification and characterization of areas and amounts of recharge and discharge;

(iv) Regional and facility specific groundwater flow patterns; and

(v) Characterize seasonal variations in the groundwater flow regime.

(b) An analysis of any topographic features that might influence the groundwater flow system.

(c) Based on field data, tests, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways (i.e., the aquifers and any intervening saturated and unsaturated units), including:

(i) Hydraulic conductivity and porosity (total and effective);

(ii) Lithology, grain size, sorting, degree of cementation;

(iii) An interpretation of hydraulic interconnections between saturated zones; and

(iv) The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content etc.).

(d) Based on field studies and cores, structural geology and hydrogeologic cross sections, a description of the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways, including:

(i) Sand and gravel deposits in unconsolidated deposits;

(ii) Zones of fracturing or channeling in consolidated or unconsolidated deposits;

(iii) Zones of higher permeability or low permeability that might direct and restrict the flow of contaminants;

(iv) The uppermost aquifer: geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs; and

(v) Water-bearing zones above the first confining layer that may serve as a pathway for contaminant migration including perched zones of saturation;

(e) Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:

(i) Water-level contour and/or potentiometric maps;

(ii) Hydrologic cross sections showing vertical gradients;

(iii) The flow system, including the vertical and horizontal components of flow; and

(iv) Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences;

(f) A description of man-made influences that may affect the hydrogeology, identifying:

(i) Active and inactive local water-supply and production wells with an approximate schedule of pumping; and

(ii) Man-made hydraulic structures (sewers, pipelines; French drains; ditches; unlined ponds, septic tanks, outfalls, retention areas; etc.).

2. Soils

The Permittee shall conduct a program to characterize the soil and rock units above the water table in the vicinity of the contaminant release(s). The program shall provide relevant information on

soil characterization that should include, but not be limited to the following facts:

(a) SCS soil classification;
(b) Surface soil distribution;
(c) Soil profile, including ASTM classification of soils;
(d) Transects of soil stratigraphy;
(e) Hydraulic conductivity (saturated and unsaturated);
(f) Relative permeability;
(g) Bulk density;
(h) Porosity;
(i) Soil sorptive capacity;
(j) Cation exchange capacity (CEC);
(k) Soil organic content;
(l) Soil pH;
(m) Particle size distribution;
(n) Depth of water table;
(o) Moisture content;
(p) Effect of stratification on unsaturated flow;
(q) Infiltration;
(r) Evapotranspiration;
(s) Storage capacity; and
(t) Mineral content.

3. Surface Water and Sediment

The Permittee shall conduct a program to characterize the surface-water bodies in the vicinity of the contaminant release(s). The program shall provide relevant information on surface water and sediment characterization that should include, but not be limited to the following facts:

(a) Description of the temporal and permanent surface-water bodies including:

(i) For lakes and estuaries: location, elevation, surface area, inflow-outflow characteristics, depth, temperature stratification, and volume;

(ii) For impoundments: location, elevation, surface area, depth, volume, inflow-outflow characteristics, freeboard, and purpose of impoundment;

(iii) For rivers, streams, ditches, drains, swamps and channels: location, elevation, flow, velocity, depth, width, inflow-outflow characteristics, seasonal fluctuations, and flooding

tendencies (i.e., 100 year event);

(iv) Drainage patterns; and

(v) Evapotranspiration.

(b) Description of the chemistry of the surface water. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients (NH_3, NO_3^-/NO_2, PO_4^{-3}), chemical oxygen demand, total organic carbon, and specific contaminant concentrations.

(c) Description of sediment characteristics including:

(i) Deposition area;

(ii) Thickness profile; and

(iii) Physical and chemical parameters (e.g., grain size, density, organic carbon content, ion exchange capacity, and pH).

4. Air

The Permittee shall conduct a program to characterize the climate at the facility and in the vicinity of the facility when contamination migrates off-site. The program shall provide relevant information on climatic conditions that should include, but not be limited to the following facts:

(a) A description of the following parameters:

(i) Annual and monthly rainfall averages;

(ii) Monthly temperature averages and extremes;

(iii) Wind speed and direction;

(iv) Relative humidity/dew point;

(v) Atmospheric pressure;

(vi) Evaporation data;

(vii) Development of inversions; and

(viii) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence.

(b) A description of topographic and man-made features which affect air flow and emission patterns, including:

(i) Ridges, hills or mountain areas;

(ii) Canyons or valleys;

(iii) Surface-water bodies (e.g., rivers, lakes, bays, etc.);

(iv) Wind breaks and forests;

(v) Buildings; and

(vi) Existing man-made air emission sources (e.g., industrial processes, residences, etc.).

B. Contamination Characterization Plan

The Permittee shall submit a workplan on collecting analytical data to supplement existing data on groundwater, soils, surface water, sediment, air and subsurface gas contamination. This data shall be sufficient to define the nature, extent, origin, direction, and rate of movement of contaminant plume(s) in the environmental medium impacted by the release(s) from the SWMU(s) and AOC(s).

1. Groundwater Contamination

The Permittee shall conduct a program to characterize any plume(s) of contamination at the facility and any plume(s) that have migrated off-site. The program shall provide relevant information on groundwater contamination that should include, but not be limited to the following facts:

(a) A description of the horizontal and vertical extent of any immiscible or dissolved plume(s).

(b) The horizontal and vertical direction of contamination movement;

(c) The velocity of contaminant movement;

(d) The horizontal and vertical concentration

profiles of contaminant constituents in the plume(s).

(e) An evaluation of factors influencing the plume movement, specific contaminant movement, and specific contaminant transformation (e.g., physical, chemical, biological, etc.); and

(f) An extrapolation of future contaminant movement.

2. Soil Contamination

The Permittee shall conduct a program to characterize the contamination of the soil and rock units above the water table in the vicinity of the contaminant release(s). The program shall provide relevant information on soil contamination that should include, but not be limited to the following facts.

(a) A description of the vertical and horizontal extent of contamination.

(b) A description of relevant contaminant chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation.

(c) Specific contaminant concentrations.

(d) The velocity and direction of contaminant movement.

(e) An extrapolation of future contaminant movement.

3. Surface-Water and Sediment Contamination

The Permittee shall conduct a program to characterize the contamination in surface-water bodies resulting from the contaminant release(s) at the facility. The program shall provide relevant information on surface water and sediment contamination that shall include, but not be limited to the following facts:

(a) A description of the horizontal and vertical extent of any immiscible or dissolved

plume(s) originating from the facility, and the extent of contamination in underlying sediments.

(b) The horizontal and vertical direction of contaminant movement.

(c) The contaminant velocity;

(d) An evaluation of the physical, biological and chemical factors influencing contaminant movement;

(e) An extrapolation of future contaminant movement. and

(f) The toxicity of the sediment and adjacent water column to aquatic life.

4. Air Contamination

The Permittee shall conduct a program to characterize the particulate and gaseous contaminants released into the atmosphere. The program shall provide relevant information on air emissions that should include, but not be limited to the following facts:

(a) A description of the horizontal and vertical direction and velocity of contaminant movement.

(b) The rate and amount of the release; and

(c) The chemical and physical composition of the contaminant(s) released, including horizontal and vertical concentration profiles.

5. Subsurface Gas Contamination

The Permittee shall conduct a program to characterize subsurfacengas contamination in the soil. The program shall provide relevant information on subsurface gas contamination that should include, but not be limited to the following facts.

(a) A description of the horizontal and vertical extent of subsurface gas migration;

(b) The chemical composition of the gases being emitted;

(c) The rate, amount, and density of the gases being emitted; and

(d) Horizontal and vertical concentration profiles of the subsurface gases emitted.

VI. TASK V: INVESTIGATION ANALYSIS

The Permittee shall prepare an analysis and summary of all facility investigations and their results. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e.g., quality assurance procedures have been followed) and quantity to describe the nature, rate, and extent of contamination, potential threat to human health and/or the environment, and to support the Corrective Measures Study.

A. Data Analysis

The Permittee shall analyze all facility investigation data outlined in Task IV and prepare a report on the nature, rate, and extent of contamination at the facility including sources and migration pathways. The report shall describe the nature and extent of contamination (qualitative/ quantitative) in relation to background levels indicative for the area.

B. Protection Standards

The Permittee shall identify all relevant and applicable standards and action levels (e.g., health based guidance values) for the protection of human health and the environment.

VII. TASK VI: LABORATORY AND BENCH SCALE STUDIES

The Permittee shall conduct laboratory and/or bench scale studies to determine the applicability of a corrective measure technology or technologies to facility conditions. The Permittee shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.

The Permittee shall develop a testing plan identifying the type(s) and goal(s) of the study(s), the level of effort needed, and the procedures to be used for data management and interpretation.

Upon completion of the testing, the Permittee shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.

The Permittee shall prepare a report summarizing the testing program and its results, both positive and negative.

VIII. TASK VII: REPORTS

A. Progress Reports

The Permittee shall provide signed progress reports as required by Condition B.8.(a) of Module III of this Permit.

B. Draft and Final Reports

The Permittee shall prepare a RCRA Facility Investigation ("RFI") Report as required by Condition E.7 of Module III of this Permit. The RFI Report shall present all information gathered under the approved RFI Workplan.

373 Appendix III-C

SCOPE OF WORK FOR A CORRECTIVE MEASURE STUDY

NORLITE CORPORATION
Cohoes, New York
EPA I.D. No. NYD080469935

373 Appendix III-C

SCOPE OF WORK FOR A CORRECTIVE MEASURE STUDY

NORLITE CORPORATION

I. PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate the corrective action alternative or alternatives and to recommend the corrective measure or measures to be takena The Permittee will furnish the personnel, materials, and services necessary to prepare the corrective measure study, except as otherwise specified.

IIa SCOPE

The Corrective Measure Study consists of four tasksa

Task I: Identification and Development of the Corrective Measure Alternative or Alternatives

- A. Description of Current Situation
- B. Establishment of Corrective Action Objectives
- C. Screening of Corrective Measures Technologies
- D. Identification of the Corrective Measure Alternative or Alternatives

Task II: Evaluation of the Corrective Measure Alternative or Alternatives

- A. Technical/Environmental/Human Health/Institutional
- B. Cost Estimate

Task III: Justification and Recommendation of the Corrective Measure or Measures

- A. Technical
- B. Human Health
- C. Environmental

Task IV: Reports

- A. Progress
- B. Final

III. TASK I: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVE OR ALTERNATIVES

Based on the results of the RCRA Facility Investigation and consideration of the identified Preliminary Corrective Measure Technologies (Task II of Appendix III-B), the Permittee shall identify, screen, and develop the alternative or alternatives for removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

A. Description of Current Situation

The Permittee shall submit an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation Report. The Permittee shall provide an update to information presented in Task I of the RFI to the Commissioner regarding previous response activities and any interim measures which have or are being implemented at the facility. The Permittee shall also make a facility-specific statement of the purpose for the response, based on the results of the RCRA Facility Investigation ("RFI"). The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

B. Establishment of Corrective Action Objectives

The Permittee, in conjunction with the Department, shall establish site specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA and New York State guidance, and the requirements of any applicable federal and state statutes. At a minimum, all corrective actions concerning groundwater releases from regulated units must be consistent with, and as stringent as, those required under 6NYCRR 373-2.6.

C. Screening of Corrective Measure Technologies

The Permittee shall review the results of the RFI and reassess the technologies specified in Task II and identify additional technologies which are applicable at the facility. The Permittee shall screen the preliminary corrective measure technologies identified in Task II of the RFI and any supplemental technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating

those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations. Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

1. Site Characteristics

   Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

2. Waste Characteristics

   Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

3. Technology Limitations

   During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

D. Identification of the Corrective Measure Alternative or Alternatives

The Permittee shall develop the corrective measure alternative or alternatives based on the corrective action objectives and analysis of the Preliminary Corrective Measure Technologies, as presented in Task II of the RFI and as supplemented following the preparation of the RFI Final Report. The Permittee shall rely on engineering practice to determine which of the

previously identified technologies appear most suitable. Technologies can be combined to form the overall corrective action alternative or alternatives. The alternative or alternatives developed should represent a workable number of option(s) that each appear to adequately address all problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Permittee shall document the reasons for excluding technologies, identified in Task II, as supplemented in the development of the alternative or alternatives.

IV. TASK II: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVE OR ALTERNATIVES

The Permittee shall describe each corrective measure alternative that passes through the Initial Screening in Task I of Appendix III-C and evaluate each corrective measure alternative and it's components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Permittee shall also develop cost estimates of each corrective measure.

A. Technical/Environmental/Human Health/Institutional

The Permittee shall provide a description of each corrective measure alternative which includes, but is not limited to the following: preliminary process flow sheets, preliminary sizing and type of construction for buildings and structures; and rough quantities of utilities required. The Permittee shall evaluate each alternative in the four following areas.

1. Technical

The Permittee shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

(a) The Permittee shall evaluate performance based on the effectiveness and useful life of the corrective measure.

(i) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which

could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

(ii) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance; but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies; must be considered in estimating the useful life of the project.

(b) The Permittee shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability.

(i) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straight forward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and

(ii) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Permittee should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective

measure has the flexibility to deal with uncontrollable changes.

(c) The Permittee shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:

(i) Constructability is determined by conditions both internal and external to the facility conditions and include such items as location of underground utilities, depth of water table, heterogeneity of subsurface materials, and location of the facility (i.e., remote location vs. a congested urban area). The Permittee shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and

(ii) Time has two components that shall be addressed: (1) the time it takes to implement a corrective measure; and (2) the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

(d) The Permittee shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Among the factors to consider are fire, explosion, and exposure to hazardous substances.

2. Environmental

The Permittee shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for

each alternative will include, at a minimum, an evaluation of: the short and long term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.

3. Human Health

The Permittee shall assess each alternative in terms of the extent to which it mitigates short and long term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizationsoof contaminants on-site, potential exposure routes, and potentially affected populations. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines.

4. Institutional

The Permittee shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, State, and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

B. Cost Estimate

The Permittee shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital, operation and maintenance costs.

1. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.

(a) Direct capital costs include:

(i) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure.

(ii) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;

(iii) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and

(iv) Buildings and services costs: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.

(b) Indirect capital costs include:

(i) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives.

(ii) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;

(iii) Startup and shakedown costs: Costs incurred during corrective measure startup; and

(iv) Contingency allowances. Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

2. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Permittee shall consider the following operation and maintenance cost components;

(a) Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations.

(b) Maintenance materials and labor costs: Costs for labor, parts, and other resources required

for routine maintenance of facilities and equipment;

(c) Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;

(d) Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;

(e) Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues generated during operations;

(f) Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;

(g) Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;

(h) Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and

(i) Other costs: Items that do not fit any of the above categories.

V. TASK III: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES

The Permittee shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Tradeoffs among health risks, environmental effects, and other pertinent factors shall be highlighted. The Commissioner will select the corrective measure alternative or alternatives to be implemented based on the results of Tasks II and III of Appendix III-C. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

A. Technical

1. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;

2. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated will be given preference;

3. Implementability - corrective measure or measures which can be constructed and operated to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and

4. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

B. Human Health

The corrective measure or measures must comply with existing EPA and/or State criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

C. Environmental

The corrective measure or measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be favored.

VI. TASK IV: REPORTS

A. Progress Reports

The Permittee shall provide the Commissioner with signed progress reports as required by Condition B.8.(a) of Module III of this Permit.

B. Corrective Measures Study ("CMS") Final Report

The Permittee shall prepare a CMS Final Report as required by Condition E.11. of Module III of this Permit. The CMS Final Report shall include all information gathered under the approved CMS Workplan. The CMS Final Report shall at a minimum include:

1. A description of the facility;

   (a) Site topographic map and preliminary layouts.

2. A summary of the corrective measure or measures;

   (a) Description of the corrective measure or measures and rationale for selection;

   (b) Performance expectations;

   (c) Preliminary design criteria and rationale;

   (d) General operation and maintenance requirements; and

   (e) Long-term monitoring requirements.

3. A summary of the RCRA Facility Investigation and impact on the selected corrective measure or measures;

   (a) Field studies (groundwater, surface-water, soil, air); and

   (b) Laboratory studies (bench scale, pilot scale);

4. Design and Implementation Precautions;

   (a) Special technical problems;

   (b) Additional engineering data required;

   (c) Permits and regulatory requirements;

   (d) Access, easements, right-of-way;

   (e) Health and safety requirements; and

   (f) Community relations activities.

5. Cost Estimates and Schedules;

   (a) Capital cost estimate;

   (b) Operation and maintenance cost estimate; and

(c) Project schedule (design, construction, operation).

373 Appendix III-D

Compliance Schedule

NORLITE CORPORATION
Cohoesq New York
EPA I.D. No. NYD080469935

373 Appendix III-D
Compliance Schedule

NORLITE CORPORATION

I. Compliance Schedule For Interim Corrective Measures.

A. Pursuant to Module Condition B.6.(a)a Permittee shall submit for approval an interim corrective measures study within thirty (30) calendar days following the date of the notification by the Commissioner requiring implementation of interim corrective measures.

B. Pursuant to Module Condition B.6.(b)a Permittee shall submit for approval an interim corrective measures work plan within thirty (30) calendar days after notifying the Commissioner of the actual or potential threat to human health or the environment.

IIa Compliance Schedule For Reporting.

A. Pursuant to Module Condition B.8.(a)a Permittee shall submit signed progress reports as specified in approved work plans of all activities conducted in accordance with the provisions of this Permit Module, beginning no later than thirty (30) calendar days after the Permittee is first required to begin implementation of any such requirement.

III. Compliance Schedule for Notification

A. Pursuant to Module III Condition B.10.(a), Permittee within fifteen (15) calendar days; after discovering facility releases of hazardous constituents in groundwater have migrated off-site, shall notify the Commissioner and off-site owners or residents on land overlying such contaminationa

B. Pursuant to Module III Condition B.10.(b),a Permittee within fifteen (15) calendar days; after discovering facility releases of hazardous constituents in air have or are migrated off-site, exceeding action levels, shall notify the Commissioner and off-site individuals subject to such long-term exposure.

IV. Compliance Schedule For Assessment of Newly Identified SWMUs and AOCs.

A. Pursuant to Module Condition C.1.a Permittee shall notify the Commissioner, in writing, of any additional

SWMU(s) and/or AOC(s) within fifteen (15) calendar days after discovery.

B. Pursuant to Module Condition C.2., Permittee shall submit a SWMU/AOC Assessment Report within thirty (30) calendar days after notifying the Commissioner of any additional SWMU(s) and/or AOC(s)a

C. Pursuant to Module Condition C.3., Permittee shall submit for approval a SWMU/AOC Sampling and Analysis Plan within thirty (30) calendar days after submittal of the SWMU/AOC Assessment Report.

D. Pursuant to Module Condition C.4.(b)a Permittee shall submit for approval revisions of the SWMU/AOC Sampling and Analysis Plan within thirty (30) calendar days after meeting with the Department to discuss Plan comments or within forty-five (45) calendar days after Permittee's receipt of Plan comments when no meeting is scheduled.

E. Pursuant to Module Condition C.4.(c)a Permittee shall begin to implement the SWMU/AOC Sampling and Analysis Plan within thirty (30) calendar days following written approval of the Plan.

F. Pursuant to Module Condition C.5.a Permittee shall submit a SWMU/AOC Sampling and Analysis Report within thirty (30) calendar days of receipt by the Permittee of validated analytical data generated under in the approved SWMU/AOC Sampling and Analysis Plan.

V. Compliance Schedule And Notification Requirements For Newly-Discovered Releases At SWMUs and AOCs.

A. Pursuant to Module Condition D., Permittee shall notify the Commissioner, in writing, of any newly-discovered releases at SWMUs and/or AOCs, no later than fifteen (15) calendar days after such discovery.

VI. Compliance Schedule For RFA-Sampling Visit (SV) Work Plan.

A. Pursuant to Module Condition E.2.(b), Permittee shall submit for approval a RFA-Sampling Visit Work Plan for the SWMU(s) and/or AOCs identified in Module Condition E.2.(a) within thirty (30) calendar days after the effective date of this Permit.

B. Pursuant to Module Condition E.2.(c)(ii), Permittee shall submit for approval revisions to the RFA-SV Work Plan within thirty (30) calendar days after meeting with the Department to discuss Plan commentsa or within forty-five (45) calendar days after Permittee's receipt

of Plan comments when no meeting is scheduled.

VII. Compliance Schedule For RFA-SV Work Plan Implementation.

A. Pursuant to Module Condition E.3., Permittee shall begin to implement the RFA-SV Work Plan within thirty (30) calendar days following written approval of the Plan.

VIII. Compliance Schedule For RFA-SV Report.

A. Pursuant to Module Condition E.4.(a)., Permittee shall submit a report on the SV within thirty (30) calendar days of receipt by the Permittee of validated analytical data generated under the approved RFA-SV Work Plan.

IX. Compliance Schedule For RCRA Facility Investigation ("RFI") Work Plan.

A. Pursuant to Module Condition E.5.(c)., Permittee shall submit for approval a RFI Task I and II reports and a Work Plan for the inaccessible SWMU(s) identified in Module Condition E.5.(b) and/or Module Condition C.6. no later than one-hundred and eighty (180) calendar days prior to the date when the SWMU(s) become accessible for such an investigation.

B. Pursuant to Module Condition E.5.(d)., Permittee shall submit for approval a RFI Task I Report for the SWMU(s) identified in Module Condition E.5.(a) within sixty (60) calendar days after the effective date of this Permit, if applicable, and within sixty (60) calendar days after written notification by the Commissioner than an RFI is required pursuant to Module Condition C.6, D., and/or E.4(b).

C. Pursuant to Module Condition E.5.(e)., Permittee shall submit for approval a RFI Task II Report for the SWMU(s) identified in Module Condition E.5.(a) within ninety (90) calendar days after the effective date of this Permit, if applicable, and within ninety (90) days after written notification by the Commissioner than an RFI is required pursuant to Module Condition C.6., D., and/or E.4(b).

D. Pursuant to Module Condition E.5.(f)., Permittee shall submit for approval a RFI Work Plan for the SWMU(s) identified in Module Condition E.5.(a) within one-hundred and twenty (120) calendar days after the effective date of this Permit, if applicable, and within ninety (90) days after written notification by the Commissioner than an RFI is required pursuant to

Module Condition C.6., D., and/or E.4(b)a

E. Pursuant to Module Condition E.5(f)(iv), if the Permittee determines any items of Tasks III through V of the RFI Scope of Work have been submitted, the Permittee shall request within thirty (30) calendar days of the effective date of the Permit, and/or within thirty (30) calendar days of notification by the Commissioner, that the Commissioner review for approval the Permittee's determination.

F. Pursuant to Module Condition E.5.(g)., Permittee shall submit for approval revisions to the RFI Work Plan within thirty (30) calendar days after meeting with the Department to discuss Plan comments, or within forty-five (45) calendar days after Permittee's receipt of Plan comments when no meeting is scheduled.

X. Compliance Schedule For RFI Work Plan Implementationa

A. Pursuant to Module Condition E.6.a Permittee shall begin to implement the RFI Work Plan within thirty (30) calendaradays following written approval of the Plan.

XIa Compliance Schedule For RFI Final Report And Summary Reporta

A. Pursuant to Module Condition E.7.(a)., Permittee shall submit for approval the RFI Final and Summary Reports within sixty (60) calendar days after receipt by the Permittee of validated analytical data generated under the approved work plan.

B. Pursuant to Module Condition E.7.(b)(ii), Permittee shall submit for approval revisions to the RFI Final and Summary Reports within forty-five (45) calendar days after meeting with the Department to discuss Report comments, or within forty-five (45) calendar days when no meeting is scheduled.

C. Pursuant to Module Condition E.7.(c)a Permittee shall mail the approved Summary Report to all individuals on the facility mailing list within thirty (30) calendar days of receipt of Report approvala

XIIa Compliance Schedule For Current Interim Corrective Measures.

Not Applicable

XIII. Compliance Schedule For Corrective Measures Study ("CMS") Scope of Work.

A. Pursuant to Module Condition E.9.(c), Permittee shall submit a Task I Report and documents within sixty (60) calendar days after the written notification by the Commissioner for a CMSo

B. Pursuant to Module Condition E.9.(d)o Permittee shall submit for approval a CMS Plan within sixty (60) calendar days after the written notification by the Commissioner for a CMSo

C. Pursuant to Module Condition E.9.(e)(ii), Permittee shall submit for approval revisions to the CMS Plan within thirty (30) calendar days after meeting with the Department to discuss Plan comments, or within forty-five (45) calendar days when no meeting is scheduled.

XIV. Compliance Schedule For CMS Implementation.

A. Pursuant to Module Condition E.10.o Permittee shall begin to implement the CMS Plan within thirty (30) calendar days following written approval of the Plan.

XV. Compliance ScheduleoFor CMS Final Report.

A. Pursuant to Module Condition E.11.(a), Permittee shall submit for approval a CMS Final Report within forty-five (45) calendar days after completion of the CMS.

B. Pursuant to Module Condition E.11o(c)(ii), Permittee shall submit for approval revisions to the CMS Final Report within thirty (30) calendar days after meeting with the Department to discuss Report comments or within forty-five (45) calendar days when no meeting is scheduled.

XVIo Compliance Schedule For Financial Assurance for Corrective Measure(s)

A. Pursuant to Module Condition E.13.(b)o Permittee shall demonstrate financial assurance for completing the approved corrective measure(s) within thirty (30) calendar days after this Permit has been modified.

XVII. Modification of the Compliance Schedules

A. Pursuant to Module Condition E.14.(a)(i)o Permittee shall submit proposed modification of any Compliance Schedule within fifteen (15) calendar days of determining that a schedule cannot be meto

373 Appendix III-E

RFA - SAMPLING VISIT WORK PLAN OUTLINE

Norlite Corporation
Cohoesa New York
EPA I.D. No. NYD080469935

373 Appendix III-E

RFA - SAMPLING VISIT
WORK PLAN OUTLINE

Norlite Corporation
Cohoesa New York

Based on the revised Preliminary Review report dated July 19, 1991 and Visual Site Inspection of June 1987, and as required by Module III Condition E.2.(a), the Permittee will conduct sampling at the following SWMUs: the surface impoundment, the waste pile, the dewatering area, and tanks 1 and 2. Table E-1 outlines the number and type of samples, parameter and analytical methods to be employed.

Sampling Rationale

A. Soil Sampling

Samples from soil borings shall be collected at the SWMUs/AOCs listed above in order to detect suspected and potential soil contamination.

B. Groundwater Sampling

Groundwater sampling shall be performed at the SWMUs/AOCs listed above to identify releases or potential releases of hazardous constituents in the groundwater from these SWMUs/AOCsa

C. Sediments

Sampling of sediments in the surface impoundment and the dewatering area is recommended in an effort to detect any contamination due to the presence of waste in those SWMUs/AOCsa

All soil, sediment and groundwater sampling and analysis will follow the protocols established in SW-846, Test Methods for Evaluating Solid Waste (3rd edition or most current)a The Permittee may propose another analytical methoda subject to NYSDEC and EPA approval. Also sampling and analysis will be performed in accordance with the most current version of the NYSDEC Quality Assurance Project Plan Guidance. The sampling equipment will be appropriately cleaned and decontaminated after each sample is collected.

The Permittee must provide in the workplan justification or rationale for all proposed sampling locationsa This justification must be based on a detailed presentation of

available hydrologic, soil/statigraphic information and other previous waste management and clean-up activitieso

Required Detection Level

A. The expected detection level for each parameter shall be specified by the Permittee in the Work Plan.

B. For the parameters which are included in Table E-1, the detection levels must be no greater than 1/5 of the corresponding health-based criteria or action level. For those parameters which are both carcinogens and systemic toxicants, the detection level shall be based upon the lower of the two.

C. The detection levels for the soil samples collected around each SWMU/AOC shall be the same as those for the background samples, if background samples are collected.

Table E-1

SWMUs	Sample matrix	Number of Sample Location	Sample Parameter	Analytical Method SW846[1]
Tanks 1 & 2 Area	Soil[2]	2	VOC's	8020, 8010

1. Most current version SW846

2. Soil borings will be drilled through the fill shale and samples collected from the first 12 inches and from the 2nd and 3rd foot of the underlaying clay. These borings will field located in the area between the circulating pumps and the bank where the solvent leak was observedaand subject to EPA and NYSDEC approval.

5. 6010 cannot be used as a substituted method in the groundwater for lead

6. Soil borings will be drilled through the fill shale and samples collected from the first 12 inches and from the 2nd and 3rd foot of the underlaying clay. These borings will field located in the area between the circulating pumps and the bank where the solvent leak was observed and subject to EPA and NYSDEC approvaln

* The sample locations will be proposed by the Permittee and subject to EPA and NYSDEC approval.

MODULE IV - WASTE REDUCTION REQUIREMENTS

The Permittee shall comply with the requirements of Article 27, Title 9, Section 27-0908 of the New York State Environmental Conservation Law.

MODULE V - STORAGE IN CONTAINERSa MANAGEMENT OF TANKER/DRUM TRANSPORT TRUCK UNLOADING and STAGING AREAS

A. AUTHORIZED STORAGE AREA, WASTE TYPES AND STORAGE VOLUMEE

The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit:

Area[1]	Waste Type	Container Volume[2]	Maximum Volume[3]
LGF and Solids Processing Building[4]	LGF filter solids/sludges, ancillary waste materials and LGF sludge generated from onsite tank cleaning and tanker truck heel removal operationsa Liquid LGF from offsite generatorsa Offsite generated "drop and hook" sealed drummed solid or hazardous wastea	55 gallon drum	11,770 gallons 214 drums
Tanker truck & rolloff staging area	On site generated non liquid solid waste (baghouse dust, personal protective equipment) stored in rolloffs. Offsite generated solid or hazardous waste "drop and hook" tanker and drum transport trucks.	20 cubic yard rolloffs, 8,000 gallon tanker trucks, single trailer drum transport trucks	13 parking spaces (60ft x 200 ft)

[1] Refer to drawing no. NY003-D3202 (Norlite... Permitted Units dated 6/12/92, most recent update 11/1/95)

[2] Up to 85 gallon over packs can be used to secure leaking/damaged drumsa

[3] The total volume stored on site at any time shall not exceed 11,770 gallons or 214, 55 gallon drumsa This figure will increase

to 14,700 gallons or 267, 55 gallon drums when the following facility upgrades are completed and operating as per approved plans and permit limits to the satisfaction of the Department and written authorization pursuant to this permit is issued: adding two bays to the truck unloading area (drawing no. 2475-50DWG, Rev. 1 dated 11/95) ,upgrading the tanker truck vapor recovery system (McMasters-Carr catalogue cutout, page 150, submitted 11/95, implementation to be completed no later than 2/1/96)n completion and operation of the permanent WWTP (to be completed no later than 1/18/96).

[4] When the permanent WWTP is completed as per 3 the solid LGF staging area after upgrading to the satisfaction of the Department as per submitted plans will be authorized for use with a maximum limit of 50, 55 gallon drums which shall be part of the 214 (267 as per [3]) LGF drum storage capacity total for the entire facility. LGF shall mean hazardous waste fuel brought onto the Norlite facility for the purpose of firing the lightweight aggregate kilnsn

[5] See Attachment A, Waste Analysis Plan, for specific waste codesn Except for "heels" from tanker trucks delivering LGF to this facility, which if removed and drummed in solid form must be managed the same as onsite generated tank sludges, offsite solid LGF may only be accepted for use as fuel when the permanent WWTP is completed as per [3])

B. CONTAINMENT

The Permittee shall construct and maintain the containment systems in accordance with the requirements of 6NYCRR 373-2.9(f) and as specified in the attached plans and specifications, Attachment I.

C. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g.n severe rusting, apparent structural defects, deterioration of liner) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permitn Each such occurrence shall be recorded in the inspection log and maintained as part of the operating record as described in Module I, Condition H.(6)n If any leaking container threatens

human health or the environment, it must be reported as specified in Module I, Condition D.(8), (i.e., 24-hour reporting).

D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain or store the waste is not impaired as required by 6NYCRR 373-2.9(c) and in accordance with Attachment E including SOP #3.

E. MANAGEMENT OF CONTAINERS

(1) The Permittee shall manage containers as required by 6NYCRR 373-2.9(d).

(2) Drum storage in the LGF solids building and truck unloading area shall be as per drawing no. NY-d-c-3008 dated 11/14/91 and last revised 11/2/95 subject to the restrictions in A.

F. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE

Except for transport along the designated internal transportation routes, the Permittee shall not locate containers including tanker and drum transport trucks outside the areas designated aboveo

G. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTE

(1) The Permittee shall not place incompatible wastes or incompatible wastes and materials in the same container.

(2) The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or materialo

H. TANKER/DRUM TRANSPORT TRUCK MANAGEMENT

(1) Tanker truck heels may be removed either by: 1) rinsing

the tanker truck out using the same LGF carried by the truck or other compatible LGF as per SOP #3 or 2) manual removal following the procedures used for the cleaning of the on site LGF storage tanks (Attachment F)n

(2) If drums are stored in the drum storage area for unloading area 1 as shown on DWG. No. 2475-50.DWG, then no truck can use the truck bay immediately adjacent to these drums.

(3) All drum and waste transfer (between tanker trucks and LGF storage tanks is confined to the truck unloading area and once authorized as per VI.A drums of solid LGF may be moved between the drum storage area in the solids processing building, the SLGF container staging area the solid LGF feed room located beneath the LGF pipe tunnel terminus at the kilns in accordance with Attachment E. This restriction is waived in the case of an emergency in which there is a risk from spills, fire or explosion if material is not transferred immediately from its tanker/container. Such an emergency must be reported to the Departmentn Additionally, for drop and hook trucks no opening of tankers or drums and no transfer of waste materials is permitted except truck to truck transfer of sealed drums in the truck unloading area or transfer of the same to and from the approved drum storage area. Drop and hook drums placed in the authorized drum storage area must be clearly marked and segregated from drummed LGF wastenn

(4) When off loading or on loading LGF tanker trucks the permittee shall use at all times the carbon filter vapor recovery system shown on DWG. No. 2475-50DWG dated 11/95 (Air Pollution Control emission point 18) and planned upgrade (McMasters-Carr catalogue cut submitted 11/95 with installation due by 2/1/96) and whenever the tanker hatch is open (brief periods to take samples excepted)n Under no circumstances is any other vapor recovery system to be used unless authorized in writing by the Departmentn

(5) The permittee shall adhere to SOP #TKFM-006n

(6) Direct kiln feed from tanker trucks/tank wagons cannot commence until the completion of unloading area #2 to the satisfaction of the Department #2 as per approved plans (drawingn# 2475-50DWG. Additionally, the use of this form

of LGF feed is confined to the truck unloading area and can occur only under the following conditions.

- All required safety and environmental control measures are in place and operating properly. This includes secondary containment, nitrogen blanketing, waste feed cutoffs, flame and detonation arresters, fire detection and fire suppression systems and the tanker truck vapor recovery controls. The permittee shall adhere to SOP TKFM-004.

(7) Drop and hook trucks are limited to a 48 hour stay at the facility not including holidays, Saturdays or Sundays.

MODULE VI - STORAGE/TREATMENT IN TANKS

A. (1) Authorized Tanks and Wastes. The Permittee is authorized to use the following tanks to store and treat the following hazardous wastes in tanks subject to the terms of this permitn

TANK	NOMINAL CAPACITY (Gallons)	WASTE DESCRIPTION & EPA HAZARDOUS WASTE CODES
300	24000	Low Grade Fuel (LGF) consisting of organic wastes (See Attachment A - Waste Analysis Plan - for specific wastes)
400	24000	
500	24000	
600	24000	
100A	7300	
100B	7300	
100C	7300	
200A	7300	
200B	7300	
200C	7300	
101A	1000	
101B	1000	
101C	1000	
101D	1000	
Dispersion / Mixer Tank (Solids Reprocessing Building)	300	

(2) The Permittee is prohibited from adding additional hazardous waste tanks or from storing or treating hazardous wastes that are not identified in Permit Condition VI.A(1) without permit modifications.

B. (1) DESIGN AND INSTALLATION OF NEW TANK SYSTEMS OR COMPONENTS

[a] Not Applicable

[b] For new, modified or replacement hazardous waste tank systems or components [such as the secondary containment system] not authorized by VI.A.(1) which the Permittee proposes to construct in the future, the Permittee must, prior to construction, submit to the Commissioner an application to modify this permit including design plans, specifications and a written assessment of the tank systems structural integrity as required by 6NYCRR 373-2.10[c] and obtain a permit modification.

[c] For tank systems used to store or treat materials that are defined as hazardous waste in the future, the Permittee must obtain a written assessment of the existing tank system integrity within 12 months from the date the waste is defined as hazardous [6NYCRR 373-2.10(b)(3)]. The assessment shall be certified by an independent, qualified, professional engineer registered in the State of New York [6NYCRR 373-2.10(b)].

(2) Secondary Containment and Leak Detection.

[a] Tanks With Secondary Containment System:

The Permittee shall construct and maintain the secondary containment and leak detection systems

in accordance with the requirements of 6NYCRR 373-2.10(d) and as specified in the attached plans and specifications, Attachment I.

[b] Tank without Secondary Containment Systems

I. Not Applicable

ii. For tank systems that store or treat materials that are defined as hazardous waste in the future, the permittee shall design and construct the secondary containment system within the time specified in 6 NYCRR 373-2.10(d)(1)(vi).

(3) Responses to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems. The Permittee must immediately remove from service any tank system or secondary containment system from which there has been a leak or spill or which is found to be leaking or unfit for use as a result of the leak test or assessment, and must satisfy the requirements of 6NYCRR 373-2.10(g) including the 24-hour notification and 30-day report to the Commissioner, containment of releases, repair of the system, and certification of major repairs by an independent, qualified, professional engineer registered in New York State. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank or repair or replacement of a secondary containment vault.

C. GENERAL OPERATING REQUIREMENTS

(1) The Permittee shall operate the tank systems authorized in Condition VI A(1) as specified in Attachment F and SOP 3.

(2) The Permittee shall not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode or otherwise fail. [6NYCRR 373-2.10(e)(1)].

(3) The Permittee shall prevent spills and overflows from the tank or containment systems, as required by 6NYCRR 373-2.10(e)(2), and by the methods specified in Attachment F.

D. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES

(1) The Permittee shall not place ignitable or reactive waste in tanksa

(2) The Permittee shall document compliance with Module VIE Condition D.(1) as required by 6NYCRR 373-2.2(i) and place this documentation in the operating record (Module II, Condition L.(1)).

(3) The Permittee shall maintain buffer zones around tanks as specified in Attachment F & I and as required by 6NYCRR 373-2.10(I)(2)a

E. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

(1) The Permittee shall not place incompatible wastes in the same tank or place hazardous waste in a tank that previously held an incompatible waste or materiala

(2) The Permittee shall document compliance with Module VI, Condition E.(1) as required by 6NYCRR 373-2.2(I) and place this documentation in the operating record (Module II, Condition L.(1)).

F. INSPECTION SCHEDULES

The Permittee shall perform inspections of the tank systems including the secondary containment systems, leak detection systems, and if applicable, cathodic protection systems, used to manage hazardous waste as described in 6NYCRR 373-2.10(f) and as specified in Attachment B. Documentation of all inspections must be placed in the operating record of the facility.

G. ADDITIONAL INSPECTION REQUIREMENTS FOR TANK SYSTEMS WITHOUT SECONDARY CONTAINMENT

Not Applicable

H. SPECIAL CONDITIONS FOR ON-GROUND TANKS WITH SECONDARY CONTAINMENT SYSTEMS

Not Applicable

I. CLOSURE AND POST CLOSURE CARE

(1) The permittee shall close the underground LGF piping system in accordance with the procedures and schedule described in the approved closure plan, attachment h. For the purpose of certifying clean closure, the confirmatory soil samples identified at page 5 of the Closure Plan shall not be composited.

(2) At closure of the tank system, the permittee shall follow the procedures in the Closure Plan, Attachment H [6 NYCRR 373-2.10(h)]a

(3) If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, in accordance with the Closure Plan, then the Permittee shall close the tank system and perform post-closure care following the procedures in the Closure Plan and in the Contingent Post-Closure Plan, Attachment H and [6NYCRR 373-2.10(h)(2)].

J. SPECIAL CONDITION FOR EXEMPT TANK SYSTEMS

The permittee shall submit an annual certification by a Professional Engineer registered in the State of New York, certifying to the integrity of the secondary containment system for the scrubber water recirculation tanksn

MODULE VII - INCINERATION AND ENERGY RECOVERY
KILNS 1 (EP2) AND 2 (EP1)

A. CONSTRUCTION AND MAINTENANCE

(1) The Permittee shall maintain the facility in accordance with the attached design plans and specifications, Attachment G, or equivalent.

(2) No modification to the incinerator and its flue gas cleaning system shall be made which would affect the achievement of the performance standards in Condition VII.B., or any other permit conditions specified in this permit, without first obtaining written approval from the Commissioner.

(3) The Permittee must submit an engineering report on the installation of Maximum Achievable Control Technology (MACT) controls within 10 days of the effective date of this permit modification for review by the Department.

(4) The Permittee shall.

(a) install MACT controls in Kiln 1 on or before 3/31/02 as per the engineering report mentioned in paragraph VII.A.3; and
(b) install MACT controls in Kiln 2 on or before 5/30/02 as per the engineering report mentioned in paragraph VII.A.3; and
(c) submit a testing protocol for Department review and approval no less than 180 days in advance of the Trial Burn; and
(d) conduct a stack gas emissions testing (Trial Burn) on the upgraded Kiln 1 in accordance with the Department-approved testing protocol; and
(e) complete the Trial Burn on or before 4/30/02; and
(f) submit the final report and data package to the Department no later than 7/1/02.

If:

(a) the Permittee misses any of these deadlines; or
(b) the Department determines that the Permittee has not been successfully upgraded Kiln 1 and tested it in accordance with the Department approved Trial Burn protocol; or
(c) the Department determines that the Permittee has not been successfully upgraded Kiln 2,

then the Permittee shall cease the burning of all hazardous waste fuel (a/k/a LGF) in the noncomplying kiln(s) within 15 days of written notification by the Department. Resumption of the burning of LGF in one or both of the kilns shall be allowed only after the kilns have been upgraded to the satisfaction of the Department.

(5) The MACT upgrade requirement covered by paragraph VII.A. 4 above shall not take effect only if the Department determines that the Permittee has successfully performed and passed a new stack gas emissions test (risk burn) in accordance with a Department approved testing protocol. The Permittee shall

(a) perform this new risk burn within 30 days of Department approval of the testing protocol; and
(b) submit preliminary results to the Department within 21 days of the risk burn completion; and
(c) submit the final report and data package submitted within 45 days of the risk burn completion.

(6) If the Department determines that the Permittee:

(a) has failed to submit an approvable testing protocol by June 30, 2001; or
(b) has not successfully passed the risk burn; or
(c) has failed to perform the risk burn in accordance with the approved protocol; or
(d) has failed to perform the risk burn within 30 days of the risk burn protocol approval,

then the Permittee shall cease the burning of LGF in Kiln 1 within 30 days of written notification by the Department. The resumption of LGF burning in Kiln 1 shall be contingent upon successful completion of the upgrade schedule described in paragraph VII.A. 4 above. Additionally, Norlite shall implement any revised permit limits arising out of the risk burn within 15 days of written notification by the Department. In no case shall any revised permit limits exceed those in effect from 1/8/97 which is the date of the permit modification immediately preceding this modification.

B. PERFORMANCE STANDARD

The Permittee shall maintain the incinerator so that, when operated in accordance with the operating requirements specified in this permit, it will meet the following performance standards:

(1) The incinerator must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated in this permit for each waste feed. DRE shall be determined using the method specified in 6NYCRR 374-1.8(e)

(2) The incinerator must not emit particulate matter in excess of 0.08 grains per dry standard cubic feet, when corrected for 7% oxygen in the stack gas in accordance with the formula specified in 6NYCRR 374-1.8(f).

(3) The Permittee must control hydrogen chloride (HCl) and chlorine (Cl_2) emissions from the incinerator stack such that the rates of emission of HCl and Cl_2 do not exceed 2.9 lbs/hr (uncorrected for ammonium chloride) and 0.044 lb/hr respectively. These emission limits will be met by limiting the total feed rate of chlorine to the incinerator as provided in Condition VII.C.

(4) The Permittee must control emission of products of incomplete combustion (PICs) from the incinerator such that the carbon monoxide (CO) level in the stack gas shall not exceed the limits specified in Condition VII.D.

(5) The Permittee must control emission of toxic metals from the incinerator by limiting the total feed rate of each metal into the incinerator, as specified in Condition VII.C.

(6) SO_2 stack emissions shall not exceed 30 lbs/hr/kiln.

(7) Stack emissions of nitrogen oxides measured as NO_2 shall not exceed 61 lbs/hr/kiln.

(8) Compliance with the operating conditions specified in this permit will be regarded as compliance with the above performance standards. However, evidence that compliance with such permit conditions is insufficient to ensure compliance with the above performance standards may be "information" justifying modification, revocation, or reissuance of the permit pursuant to 6NYCRR 621.14.

C. LIMITATION ON WASTES

The Permittee shall incinerate the following hazardous wastes only as allowed by the terms of this permit.

(1) The Permittee shall not incinerate any hazardous waste that contains any 6NYCRR Part 371 Appendix 23 organic hazardous constituents not found in Class 1 through Class 7 of the Thermal Stability Index.

(2) No waste or combination of wastes and fuel, as fed to the incinerator, shall exceed the design thermal capacity of 62M BTU/hr.

(3) The total chlorine fed to the incinerator (including the contribution by shale) shall not exceed 73 lb/hr

(4) The emission rates and mass feed rates of toxic metals to the incinerator shall not exceed the limits specified in the following table:

Metals	Metals Emissions Limit per Kiln (lb/hr)	Total (Shale+ LLGF+ Used oil/ Waste Fuel A) Metals Feed Rate per kiln (lb/hr)	Metals through Shale (22T/hr/kiln)		Metals through LLGF& + Used oil/Waste Fuel A	
			Metal Concentration per kiln[D & E] (mg/kg)	Metal Feed Rate per kiln[D & E] (lb/hr)	Metal Feed Rate [A&B] per kiln (lb./hr)	Metal[B] Concentration per kiln (mg/kg)
Antimony	2.06E-05	0.243	2.96	0.13	0.113	23.8
Arsenic	3.11E-05	0.54	11.45	0.5	0.04	9.1
Barium	8.64E-05	12.17	260	11.45	0.72	147
Beryllium	5.06E-06	0.048	1.0	0.044	0.004	0.86
Cadmium	3.44E-04	0.415	7.35	0.32	0.095	20
Chromium(T)	1.39E-04	3.48	30	1.32	2.16	441
Chromium(VI)	1.95E-05	-	-	-	-	-
Copper	5.43E-04	4.58	61	2.7	1.88	400
Lead	7.00E-05	3.32	45	1.98	1.34	282.8
Mercury	1.75E-03	0.0105	0.16	0.007	0.0035	0.75
Nickel	1.79E-03	2.1	37	1.62	0.48	100
Selenium	1.99E-04	0.164	1.0	0.044	0.12	24
Silver	2.14E-04	0.114	1.0	0.044	0.07	14.6
Thallium	2.53E-05	0.254	1.0	0.044	0.21	43.3
Zinc	3.57E-03	10.24	165	7.24	3	600

A Total contribution from LLGF, and other fuels

B Sampling, analysis and feed planning prior to feeding wastes shall be performed in accordance with the approved Waste Analysis Plan, Attachment A of the permit.

C Permittee shall only feed LLGF to the kiln from the tanks which are mechanically agitated. Specifically this limits such kiln feed to Tanks 100 C and 200 C. Permittee may feed LLGF from tanks 100B & 200B also upon reconfiguring piping and upon notification to the Department. Permittee may feed LLGF from tank 300, 400, 500 & 600 after installing mechanical agitators according to department's approved plans and upon notification to the Department.

D The permittee may seek the approval from the Department prior to process the raw shale exceeding these limits. The written request must be made least 15 days in advance of its scheduled processing. Such request must contain relevant information such as metals concentrations in the shale and details on how the maximum permitted total metals feed rate of the third column will be complied with until the entire batch of shale is processed.

E The permittee shall use test methods approved in February 1999 Trial Burn Plan.

(5) The physical form of the waste shall be a pumpable liquid with a viscosity not exceeding 3000 SUS at 80°F.

(6) The Permittee shall not accept the following wastes:

(a) Wastes containing pesticide constituents as specified in the Waste Analysis Plan, Attachment A, which cannot be blended to a concentration below 1.7%.

(b) Wastes with PCB concentration greater than 25 ppm or any regulated PCBs wastes as defined in 6NYCRR 371 and 40 CFR Part 761.

(c) Wastes containing polychlorodibenzo-p-dioxins (PCDD), polychlorodibenzofurans (PCDF) or hazardous wastes with the following waste codes: F020, F021, F022, F023, F026, F027 and F028.

(d) Any wastes not specifically identified as acceptable in the Waste Analysis Plan, Attachment A.

(e) Waste Fuel B-2 as defined in NYSDEC Air Guide 17.

(7) The revised procedure for sampling shale found in Section C of Norlite's 373 HW/APC application, Waste .Analysis Plan, Appendix C-2, Section 1.3 pages C-2(5),2(5)a, 2(5)b, 2(5)[c] (Revision: March 96) and page 2(6) shall be implemented no later than 11/15/96 with results provided beginning with the 11/96 monthly report. Split samples will be given to NYSDEC upon request with no restrictions.

(8) No used oil/Waste Fuel A, fuel oil or mixture of these can be accepted for use as fuel unless analyzed prior to acceptance and off-loading in accordance with 374-2 and the permittee's Waste Analysis Plan (Attachment A). If used oil is intended to be accepted, stored, conveyed and burned as waste fuel A, then this material must meet the definition and criteria found in 6NYCRR 225-2 for Waste Fuel A as well as the following additional criteria prior to acceptance and off loading:

A) Is not a hazardous waste as defined by 6NYCRR 371 and the criteria found in this permit and attachments.

B) Has a PCB concentration of 25 ppm or less. Except for the consolidation of used oil loads no PCBs can be present as a result of mixing with used oil except for those exempted under 371.4(e).

C) No admixture of listed hazardous waste with used oil/Waste Fuel A.

Mixtures of used oil and characteristic hazardous waste, which no longer exhibit a characteristic, are allowed to be burned as waste fuel A but such mixing is allowed by the used oil generator only. The permittee is not considered a used oil generator. The permittee is prohibited from blending used oil with any hazardous waste for any purpose.

No storage in tanks previously used for the storage of hazardous wastes is allowed unless such tanks have been cleaned and decontaminated as per 6NYCRR 373, this permit and its attachments prior to their use for used oil/Waste Fuel A storage.

D) Used oil containing more than or equal to 1000 ppm of total halogens is presumed to be hazardous waste and such used oil must be burned as hazardous waste complying with all the operating requirements in Module VII.D of this permit unless the presumption of mixing with hazardous waste can be rebutted by demonstrating that the used oil does not contain hazardous waste (for example by using an analytical method from SW-846, Edition III to show that the concentrations of individual halogenated solvents listed in waste codes F001 and F002 are less than 100 ppm) and meets the definition and criteria for Waste Fuel A found in 6NYCRR 225-2 and this permit. Records of analysis conducted to rebut the presumption of mixing with hazardous wastes, must be retained at the facility for at least three years. Rebuttable presumption must be applied at the time of acceptance from the permitted transporter.

E) Analytical information must be included in the Monthly Report's Tank Certification submitted to the Department pursuant to Module VII.D.(7) of this permit.

F) The storage of Waste Fuel A/Used Oil must be in compliance with 6 NYCRR Part 360-14.3(e).

D. OPERATING CONDITIONS

(1) Hazardous wastes must not be fed into the incinerator unless the incinerator and waste feeds are operating within the conditions specified in Condition VII.D. This applies during any operation of the kilns, start-up, shut down and after a waste feed cut off (WFCO) of the incinerator. The permittee may burn in the absence of hazardous wastes (LLGF) natural gas, no. 2, 4 or 6 fuel oil (virgin or rerefined) or used oil/Waste Fuel A (definition and criteria found in 6NYCRR 225-2 and this permit, Section C above) during startup, shutdown and after WFCOs as well as normal operation subject to the applicable operating parameters in this permit, the provisions of 6NYCRR 225 and 6NYCRR Part 374-2 and the requirements and emission limits found in the fossil fuel/non hazardous waste fuel section of the Air Pollution Control Permit. The burning of Waste Fuel A in the absence of hazardous waste shall cease immediately any time the carbon monoxide levels in the stack are at or above 500 parts per million at 7% Oxygen, dry as measured under VII.D(3). The permittee shall install and maintain an interlock system that will prevent burning liquid hazardous waste when the Carbon Monoxide levels register >100 ppm while burning Waste Fuel A.

(2) The Permittee shall control fugitive emissions from the combustion zone and the back end of the incinerator by continuously maintaining a negative kiln pressure and maintaining the baghouse pressure drop below the maximum operating limit as specified in Condition VII.D.3 and 4, and by implementing the operating procedures

specified in Attachment G of the permit for operation with one baghouse module removed for maintenance.

(3) The Permittee shall feed the wastes described in Condition VII.C to the incinerator only under the operating conditions specified in Condition VII.D. The Permittee shall operate, monitor, maintain and calibrate the systems specified below to automatically activate the alarm and cut off the hazardous waste feed to the incinerator at the levels specified below when the operating conditions deviate from the limits established below. Testing of the automatic waste feed cutoff systems and alarms shall be in accordance with Condition VII.E.3.

System	Basis	Alarm Set-point	Automatic Cutoff Limit	Monitoring/Recording Frequency	Calibration Frequency[8]
LLGF flow, gpm[9]	HRA[1]	9 gpm	>10.1 gpm (HRA)	Continuous/ OMA[2],HRA	Monthly
Back-end Temp. (°F) LLGF Minimum LLGF Minimum Maximum	 HRA OMA HRA OMA	 885°F 876°F 1010°F 1090°F	 <875°F <866°F >1025°F >1100°F	Continuous/ OMA,HRA	Monthly
Carbon Monoxide, ppm @ 7% O_2, dry	HRA	75	>100 >500 (non haz.waste oil feed cutoff)	Continuous/ OMA,HRA	Daily calib. Quarterly CE Test. Annual Performance Specification Test
I.D. fan current, amps	HRA	400	>404	Continuous/ HRA	Quarterly
Kiln pressure, "wg	INST[3]	-0.05	>-0.05(for 15 secs.)	Continuous/ OPM[4]	Monthly
Baghouse pressure drop, "wg -3 modules -2 modules[5]	OMA	 5.3 10.0	 <4.8 >9.4[6] <9.2 >10.0	Continuous/ OMA	Monthly
Scrubber Water Recirculation rate, gpm	OMA	194	<184	Continuous/ OMA	Monthly
Inlet Temperature to Baghouse	OMA	390°F	>400°F	Continuous /OMA	Monthly

System	Basis	Alarm Set-point	Automatic Cutoff Limit	Monitoring/Recording Frequency	Calibration Frequency[8]
Shale feed rate, tph	HRA	21.5	>22[9] 0(>30 min.)	Continuous/ OMA,dHRA	Monthly
Lime feed rate, lb/hr per lb/hr Cl	NA	Upon detection of feed failure	<2.7 lb/hr per lb/hr chlorine feed (unless corrected WFCO 30 min. after going beyond the cutoff limit.)	Continuous (Feeder motor current)/ Record feed setting twice/shift	Monthly
Recirc. tank pH	HRA	8.0	<7.9	Continuous/ OMA,dHRA	Daily
Ventruri Pressure, drop, "wg	OMA	2.5"	<2.0"(Unless corrected, WFCOd3 minutes after going beyond the cutoff limit)	Continuous	Monthly
Ducon scrubber pressure drop "wg	OMA	2.0"	<1.5"(Unless corrected, WFCOd3 minutes after going beyond the cutoff limit)	Continuous	Monthly
Static Pressure at kiln exit[7]	INST	To be determined	NA	Continuous/ OPM	Monthly

1. Hourly Rolling Average

2. One-minute Average of readings taken at least once every 15 seconds

3. Instantaneous reading taken at least once every 15 seconds

4. Instantaneous reading recorded once per minute

5. Operation with only two baghouse modules is permitted only with natural gas fuel. Use of other fuels is not permitted until such time as a kiln exit pressure gauge is installed with the approval of the Department.

6. Within 10 minutes of alarm and thereafter, every 30 minutes, an operator shall inspect the kiln seals and APC ducting for fugitive emissions until the differential pressure drops to below 9.4e' wg. An inspection log shall be maintained. If fugitive emissions are observed, hazardous waste feed shall be cut off as soon as practicable but within 5 minutes.

7. Norlite shall submit results of evaluation of pressure testing and obtain Department approval prior to installing pressure gauge.

8. In addition to the frequency specified, one randomly selected WFCO parameter shall be tested at least once

every 7 days to verify the system accuracy and operation of the LLGF control valves. An authorized DEC representative may, at random, request additional parameters to be tested in his or her presence.

9. Or whatever lower WFCO limits are required to comply with the metals and halogen feed rate limits. If lower WFCO limits are required, the corresponding alarm set points shall be set at a level of 0.4 gpm below the LLGF, and used oil cutoff limits.

(4) The Permittee shall operate the incinerator as well as monitor, maintain and calibrate the monitoring system as specified below:

System	Operating Limit	Monitoring/ Recording Frequency	Calibration Frequency
Oxygen	NA	Continuous*/ OMA	Daily calib. Quarterly CE tests. Annual Performance Specification Test
Opacity, Max.	20%		
Minimum scrubber water blowdown rate, gpm/kiln	>15 gpm	Daily	Quarterly
LLGF Feed Line Pressure (psi)	>45	Daily	Monthly
LLGF atomization pressure,"wg	>40"	Daily	Monthly

1. Continuous shall mean monitoring at least every 15 seconds and recording the averaged value every minute.

(5) The Permittee shall suspend feeding hazardous wastes to the incinerator if and when the automatic waste feed cutoff system has been activated more than 30 times in a calendar month operating period. (Automatic cutoffs due to power outages will not be counted toward this total). Within three days from suspending operations, the Permittee shall notify EPA Region II and the Department of the involuntary suspension. Such notification may also include a request for resumption of operation. This request shall describe the corrections made to the operation of the unit to prevent such frequent shutdowns. A decision concerning the resumption of operation shall be ordered by the Regional Administrator or Commissioner of the Department within five working days of the request being delivered by the source. The source shall not resume operations if the Regional Administrator or Commissioner denies the request.

(6) The Permittee shall report all process deviations from allowed operating limits listed in the permit and a summary of operations in a monthly report. This must be filed by the third week of the following month with the appropriate office of NYSDEC and EPA Region II Hazardous Waste Compliance Branch. At a minimum, the report must address the following items:

a. Process Operating Summary

- hours the unit was operated with hazardous waste (LLGF)

- brief explanation of the reasons for downtime

b. Continuous Monitor Operating Summary

-for each parameter exceeding the operating limit and/or waste feed cutoff limit during the month, list the following:

*parameter
*operating and interlock limit
*number of exceedances
*number of interlock shutdowns
*interlock shutdowns for the year to date
*cause of each exceedance and/or shutdown
*corrective action taken
*duration of exceedance
*duration of interlock shutdowns
*alarm activations and steps taken to prevent shutdown

-for the CO and O_2 monitors found to exceed the acceptable drift range during an audit or a daily span check, list the following:

*parameter
*date
*indicated drift
*corrective action performed

c. Metals Feed Summary

Concentrations and mass feed rates of each of the metals specified in Condition VII.C.4 in raw material and pumpable hazardous waste (LLGF ~~and SLGF~~) and Waste Fuel A.

d. Used oil/Waste Fuel A (burnt in the absence of hazardous waste)

- Grade of Waste Fuel A (used oil)
- Hazardous or nonhazardous
- Date, starting and ending time used oil was burnt
- Metal concentration
- Metal feed rate
- Feed rate and specific gravity

(7) The kilns may be operated on LLGF for a maximum period of 30 minutes prior to introducing shale to the kilns, provided that all operating conditions specified in Condition VII.D are met prior to feeding LLGF. If a cessation of shale feed results during operation, the Permittee shall, within 30 minutes, stop the feed of LLGF to the

kilns.

(8) The permittee shall submit within 30 days of the effective date of this permit to the Department for review and approval a revised control system package to implement any revised operating limits and monitoring parameters contained in Module VII, Section D, paragraphs (3) and (4). The control system package incorporating these changes shall be implemented within 5 days of Department approval. If any revisions to this package are necessary, they shall be submitted within 15 days of receiving notice from the Department that changes are required. Until approved, the permittee shall operate according to the operating parameters in VII.D (3) and (4) prior to the permit modification.

E. MONITORING AND INSPECTION

(1) The Permittee shall install, maintain, calibrate, and operate monitoring equipment which continuously records operating parameters specified in VII.D.3 and D.4 and required by 6NYCRR 373-2.15(g)(1)(I) and (ii).

(2) The incinerator and associated equipment shall be inspected, at least daily, for leaks, spills, emissions, and signs of a malfunction as required by 6NYCRR 373-2.15(g)(2).

(3) The Permittee shall perform testing of the automatic waste feed cut off systems and all associated alarms specified in Conditions VII.D.3 by simulating upset conditions for each parameter, as required by 6NYCRR 373-2.15(g)(3). The automatic waste feed cutoff system and alarm levels shall be tested at least monthly for all system parameters providing there is continuing testing performed on at least one system parameter on a random basis once at least every 7 days to verify proper operation of the control valves. If the Permittee experiences an automatic WFCO (or OPCO), the Permittee may document this event as a test. If the testing data shows significant deviations, the Department reserves the right to require more frequent testing.

(4) The monitoring and inspection data required by Conditions VII.E.1, VII.E.2 and VII.E.3 must be recorded and the records must be placed in the operating log as required by 6NYCRR 373-2.5(c).

(5) Upon request of the Commissioner, the Permittee shall conduct the tests required by 6NYCRR 373-2.15(g)(1)(iii). These performance tests shall follow the procedure and the protocol to be approved by the Commissioner. By 2/1/96 the Permittee will submit a trial burn plan to the NYSDEC. This trial burn plan will be designed so that the performance of the incinerator may be reevaluated before the renewal of this Permit.

The NYSDEC will review and approve, comment upon, or deny the trial burn plan. The Permittee shall conduct the trial burn only after obtaining written authorization from the NYSDEC. Trial burn results including all back up data must be submitted to the NYSDEC six months before the expiration of this Permit (This date may be modified based upon the date upon which the Trial Burn Plan is approved by the Department.). The Permittee may conduct additional trial burns or tests subject to prior

written approval by the NYSDEC (and the terms of this Permit).

(6) The Permittee shall operate the air pollution control equipment in compliance with the Operation and Maintenance (O&M) Plan, Attachment K.

(7) The permittee shall conduct training for all kiln burner operators according to the document titled "Kiln Burner Operator Training Program," dated 4/25/95.

(8) The Air Pollution Control dust must meet the requirements listed under 6 NYCRR. Part 374-1.8(m) for availing the hazardous waste exemption allowed under 373.1(e)(2)(vi). The waste derived residues must be characterized by composite samples with composite period not to exceed 24 hours to ensure that the residues are managed properly.

F. CLOSURE

The Permittee shall close the incinerator and all associated equipment as required by 6NYCRR 373-2.15(h) and as described within the applicable portions of Attachment I, Facility Closure Plan.

MODULE VIII - LAND DISPOSAL RESTRICTIONS *

A. BACKGROUND: 6 NYCRR Part 376 (Land Disposal Restrictions) prohibits the continued land disposal of untreated hazardous wastes beyond specified dates, unless the Commissioner authorizes an exemption from or extension to an effective date of an applicable restriction established under section 376.3 of this part, under the provisions of 6 NYCRR Parts 376.1(a)(4), 376.1(a)(5), 376.1(e) or 376.1(f).

Pursuant to 6 NYCRR Part 373-2.2(e) before an operator treats, stores or dispose of any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum this analysis must contain all the information which must be known to treat store or dispose of the waste in accordance with the requirements of 6NYCRR Part 373-2 and 376 or the conditions of a permit issued under 6 NYCRR Part 373-1 and 621.

The Permittee shall comply with the waste analysis, notification, certification and record keeping requirements of 6 NYCRR Part 376.1(g) whenever generating, treating or managing a restricted waste.

B. STORAGE OF RESTRICTED WASTES. The Permittee may store such wastes to which the land disposal prohibition applies for up to one year unless the Department can demonstrate that such storage was not solely for the purpose of a accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal [6NYCRR Part 376.5(a)(2)].

The Permittee may store wastes to which the land disposal prohibition applies beyond one year; however, the Permittee bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal [6NYCRR Part 376.5(b)(3)].

C. LAND DISPOSAL OF RESTRICTED WASTES. The land disposal of restricted waste is prohibited unless the applicable treatment standard is met, or the waste is exempt under 6 NYCRR Part 376.1(a)(3).

D. THE RESTRICTION DATES: The above restrictions become effective only from as specified under 6 NYCRR Part 376.3.

The Permittee is required to comply with the restrictions and applicable dates which are specified in 6 NYCRR Part 376 for all hazardous waste regulated under 6 NYCRR Part 373-2 Permit.

* 6 NYCRR Part 376 (Land Disposal Restrictions) is effective only from January 31, 1992; however these land disposal restrictions are currently effective in New York State under the Federal Hazardous and Solid Waste Amendment Act (HSWA) of 1984.

MODULE IX - AIR EMISSION STANDARDS FOR ORGANIC AIR EMISSION STANDARDS FOR PROCESS VENTS (6NYCRR SECTION 373-2.27) AND EQUIPMENT LEAKS (6NYCRR SECTION 373-2.28)

A. APPLICABLE TO:

1. Hazardous waste TSDs with process vents associated with distillation, fractionation, thin- film evaporation, solvent extraction, or air stream stripping operations that manage hazardous wastes with organic concentrations of atleast 10 ppmw in units subject to 373-1 or in recycling units located at a TSD otherwise subject to 373-1 permitting requirements (373-2.27(a)(2)).

2. Applies to equipment that contains or contacts hazardous wastes with organic concentrations of atleast 10 percent by weight that are managed in units that are subject to the requirements of Subpart 373-1 or hazardous waste recycling units that are located on hazardous waste management facilities otherwise subject to the 373-1 permitting requirements (373-2.28(a)(2)).

B. COMPLIANCE: The permittee shall submit supporting documents to the Department demonstrating compliance with 6NYCRR Subdivision 373-2.27(f) and (g) and 373-2.28 (o) and (p) as applicable within thirty (30) calendar days of the date these requirements become applicable to the permittee, or within 30 days of the effective date of this Permit, whichever is latter.

C. NOTIFICATION OF REGULATED ACTIVITY: The permittee shall notify the Department of any waste management units which will become subject to the requirements of 6 NYCRR Section 373-2.27 and 373-2.28, no less than (60) days prior to the commencement of the regulated activity. If such regulated activity is not authorized by this permit, the permittee must comply with the permit modification procedures as set forth in 6 NYCRR Section 373-1.7. Emission requirements for units located at facilities with existing Part 373 permits, should be incorporated into the existing permits when they are being reopened for renewal, modification, or transfer [373-2.27(a)(3) and 373-2.28(a)(3)].

D. AIR EMISSION STANDARDS:

1. FOR PROCESS VENTS:

a. The permittee must comply with air emission standards as specified in 6 NYCRR Section 373-2.27(c)(1) for process vents.

b. Facilities that cannot meet the process vent emission standards must install closed vents and control devices. Closed vents and control devices must comply with the emission standards of 6 NYCRR 373-2.27(d) and 373-2.28(k).

b. If the permittee claims that a process vent is exempt from these requirements, the permittee must include the waste analysis information used in making this determination in accordance with 6 NYCRR Section 373-2.27(e)(4). This information must be submitted by the effective date that the facility becomes subject to these emission standards and , for continuously generated, every year.

2. FOR EQUIPMENT LEAKS:

a. For each piece of equipment at the facility, the Permittee must determine whether the equipment contains or contacts a hazardous waste with organic concentrations that equals or exceeds 10 percent by weight using the procedures in 6 NYCRR 373-2.28(n)(4) and (7).

b. Each piece of equipment to which emission standards for process equipment apply shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.

c.. The test methods and procedures for monitoring leaks from process equipment must comply with the requirements of Section 373-2.28(n).

d. Each pump in light liquid service must be monitored periodically for leaks as specified in 373-2.28(c).

e. Each compressor that comes in contact with hazardous wastes with at least 10 percent organic concentration by weight shall be equipped with a seal system that includes a barrier fluid system that prevents leakage of organic emissions to the atmosphere and maintained as provided in Section 373-2.28(d).

f. Pressure relief devices in gas/vapor service shall be operated with no detectable emissions in accordance with the standards in Section 373-2.28(e).

g. Sampling connecting systems shall comply with the standards in Section 373-2.28(f)

h. Open ended valves or lines shall comply with the standards in Section 373-2.28(g)

i. Valves in gas/vapor service or in light liquid service shall be monitored periodically for leaks in accordance with the requirements of Sections 373-2.28(h), 373-2.28(l) and 373-2.28(m).

j. Repair of any leaks detected from any process equipment must be initiated within 5 calendar days and completed within 15 calendar days of leak detection. Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown in accordance with Section 373-2.28(j).

E. TEST METHODS AND PROCEDURES FOR COMPLIANCE WITH EMISSION STANDARDS FOR PROCESS VENTS, CLOSED-VENTS AND CONTROL DEVICES

Test methods and procedures for ensuring compliance with standards for process vents, closed-vents and control devices must be in accordance with 6 NYCRR Section 373-2.27(e).

F. MONITORING AND INSPECTION OF CONTROL DEVICES AND INSTRUMENTS:

The Permittee must maintain the control devices and instruments in accordance with 6 NYCRR Subsection 373-2.27(d)(6).

G. RECORD KEEPING AND REPORTING REQUIREMENTS:

The permittee must comply with the record keeping requirements of 6 NYCRR Subsection 373-2.27(f) and and 373-2.28(o). The permittee must also submit a semi-annual report describing any exceedances of emissions from process vents, closed-vents, control devices and equipment in accordance with the requirements of Sections 373-2.27(g) and 373-2.28(p).

NORLITE CORPORATION
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EPA ID# NYD080469935

6 NYCRR PART 373 PERMIT

ATTACHMENTS

LIST OF ATTACHMENTS

The following attachments refer to sections of Norlite Corporation's application pursuant to 6NYCRR 373s, Volumes I - III, dated May, 1992. Page numbers refer to those shown on the bottom right corner of the page.

Attachment	Description	Volume	Section	Pages
A	Waste Analysis Plan	I	C	Pages from 1 to 243
B	Security, Inspection and Preparedness/Prevention Procedures	II	F	Pages from 1 to 62
C	Personnel Training	II	H	Pages from 1 to 23
D	Contingency Plan	II	G	Pages from 1 to 102
E	Container Management	I	D	Pages 1, 4 to 17, 57 to 64 and 174 to 209.
F	Tank Management	I	D	Pages 1 to 3, 17 to 56, 65 to 173 and 210 to 444
G	Incineration/Energy Recovery Operation	II	K	Pages 17 to 29 and 78 to 143.
H	Closure Plan	II	I	Pages 1 to 55
I	Engineering Drawings	III	Tabs 5-6	
J	Best Management Practice Plan Dated May 1992	-	-	Separate Submission
K	Fugitive Dust Control Plan (8/30/90) Addendum (10/27/95)			Separate submission
L	Noise Impact Analysis Technical Report (AA-1790 dt.9/24/90)			Separate submission
M	Major/Minor Modification	After Module VII	-	Pages 1 to 8

9-15-99

ATTACHMENT M

MAJOR/MINOR PERMIT MODIFICATIONS

The permit may be modified for causes as allowed under 6 NYCRR 373-1.7 and 621.14. Modification shall be requested in writing as required by 621.13 and 621.14. Requests for modifications shall be submitted to the Regional Permit Administrator for approval and modification of the permit.

An application for permit modification is processed pursuant to 6 NYCRR Part 621 and 373-1.7. Application for minor modification listed under 373-1.7[c] may be processed without being treated as a new application. For modification listed under 373.1.7(d) as a major modification will be treated as a new application and processed as under Part 621 - Uniform Procedures Act.

For any other modification not listed explicitly as minor or major modification, the permittee may submit a request for permit modification and request that it be classified and administered as a minor modification under 373-1.7. This request must include information supporting the requested classification. The Department shall determine whether the request qualifies to be administered as minor modification or an application for a new permit for major modification in accordance with Part 621. In making this determination, the Department shall consider the degree to which the proposed changes are similar to those listed as minor modification under 373-1.7[c] and the following criteria:

Minor modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment.

SUMMARY OF THE PERMIT MODIFICATION AUTHORIZED ON JUNE 7, 95 AND JULY 20, 95:

Norlite 373 HW/APC Permit Modification -5/95

Permit Pages: Deletion of obsolete special conditions covering completed items such as the application of impervious coatings, updating financial assurance and permissible metals feed rate concentrations.

Module I: No changes

Module II: Deletion of prior notice to DEC for receiving foreign country generated hazardous waste and the addition of a requirement to follow the waste analysis requirements specified in the Schedule of Compliance in Order on Consent No.R4-1445-93-01.

Module III: Adding the Solid Waste Landfill and Mid-pond as solid waste management units

and signing off on these two units and the surface impoundment and waste piles as causing releases to the environment of hazardous wastes or constituents which threaten human health or the environment.

Module IV: No changes.

Module V: Confinement of all drum storage to the LLGF and solids processing building and changing the maximum permissible container volume to 85 gallons to allow the use of larger containers without changing the maximum total permitted LLGF drum storage capacity. Deletion of completed storage facility construction requirements. The addition of revised waste compatibility and inspection requirements.

Module VI: Deletion of completed tank construction requirements. Addition of requirements regarding closure of the out of service underground LLGF piping and certification of exempt tank systems.

Module VII: Deletion of obsolete permit conditions regarding completed consent order, trial burn and kiln/LLGF operating requirements. Minor revisions to the air emissions performance standards to reflect the numbers achieved in the 1992 Trial Burn and more commonly used measurement parameters. Removal of the use of concentration limits for tanks 100-200(A, B, and C) and enlarging the list of acceptable hazardous wastes which can be burned as LLGF in the kiln. Revisions to the kiln operating conditions to incorporate certain conditions into tabular form and updating parameters to reflect the latest data for optimum operating conditions obtained from the 1992 Trial Burn. Add new requirements to assure compliant operation and allow for operation on two baghouses instead of three during conditions where it is necessary to perform maintenance upon one of the baghouse modules thus eliminating the need to shut down the kiln completely. Other minor change include clarifying non LLGF operating conditions and changes in LLGF waste feed cutoff testing. Finally, a requirement for ambient air monitoring was dropped as necessary.

Norlite 373 HW/APC Permit Minor Modifications - 7/20/95 (4-0103-16/16-0

Module VII: Set compliance date of 8/7/95 for the submission of a revised control system package and 5 day deadline to implement upon DEC approval and 15 day turnaround if revisions are needed. Revise operating limit for scrubber water recirculation rate and monitoring parameters for minimum venturi and Ducon scrubber pressure drops to previous permit levels which are judged to be within regulatorily and environmentally acceptable operating ranges for this facility. Correct a typographical error changing the I.D fan current amperage operating limit from one minute average to hourly rolling average. Set 10/24/95 as the compliance date for implementation of the new shale sampling procedures and delete testing for metals not required under the regulations governing the burning of hazardous waste in boilers and industrial furnaces (Osmium, Vanadium, Manganese and Cobalt).

PERMIT MODIFICATION AUTHORIZED ON OCTOBER 26,1995

In response to the application submitted by the permittee on 10/26/95, Condition VII.A(4) listed in Page VII-1 of 11 in Module VII has been revised to extend the installation of the permanent replacement continuous emission monitoring system (CEM) to 1/9/96.

SUMMARY OF THE PERMIT MODIFICATION AUTHORIZED ON NOVEMBER 30, 1995:

The permittee applied for permit modification on October 9, 1995 and provided additional information by subsequent submissions dated November 6, 1995 and November 20, 1995. The application for permit modification submitted by the permittee (Norlite Corporation) was reviewed by the Department and the following modifications were determined to be minor modification which will be administered without being treated as a new application.

I. Receipts of containerized wastes from off site generators and to store them in existing permitted storage areas within the permitted storage capacity.

II. Authorization to pump the containerized wastes directly to blend tanks, or solid LGF as extrudable feed to the kilns.

III. Increase in container storage capacity from 214 drums to 267 drums which is an increase less than 25% of the current storage capacity. These additional drums shall be stored in

IV. SLGF (Solid Low Grade Fuel) staging area:

Authorization to store 50 fifty five gallon containers in the temporary wastewater treatment plant building after the completion of the permanent waste water treatment plant. The temporary waste water treatment plant will be closed and converted into a drum storage area for SLFG feed staging. This is included in the total 267 drum storage to be permitted for the facility. Feeding of extrudable solids directly to the kiln can be done only after the construction and operation of the waste water treatment plant.

V. Laboratory Audits:

Norlite requests that the requirements to audit outside laboratories twice a year be eliminated from the permit, along with analysis of blind samples. This is acceptable to the Department since:

Auditing of laboratories and proficiency testing is a function already performed by the New York State Department of Health as part of the requirements for an environmental laboratory to maintain certification. The permittee is required to use only New York

State Health Department certified laboratories.

VI. Transfer Station Activities:

Norlite requested authorization to conduct certain transfer station activities. The Department permits such activities as described in Tank Farm SOP #TKFM-006

VII. Authorization to facilitate flushing and removal of residues and "heels" from tanks or containers during off loading or prior to drum disposal.

VIII. Direct kiln feed from tank wagons at unloading station. The Department authorizes such operations under the following conditions:

A. This operation can commence only after completing the construction and operation of Unloading Area# 2 (Drawing 2475-50DWG)

B. All required safety measures are in place including secondary containment and nitrogen blanketing. All safety features including waste feed cutoffs, flame and detonation arresters, fire detection and fire suppression systems, emission control are operable. Under no circumstances shall direct feed from tank wagons occur outside of the secondary containment provided by the unloading station and the LLGF building.

IX. The permittee also requested for changes in sampling procedures for shale metal analysis. The Department is in the process of reviewing this request and a final determination has not been made at this time. The revised pages C- Page 37, 37(a) and 38 of 243 are not incorporated in to the permit at this time.

X. The following new module is included to the permit:

Module IX

The January 14, 1995 revisions to the 6 NYCRR Part 373-2 regulations incorporated Sections 373-2.27 and 373-2.28 for Air Emissions Standards for process vents and Standards for Equipment Leaks. These regulations applies to facilities that treat, store or dispose of hazardous wastes. In accordance with paragraph 373-2.28(a)(3) these requirements must be incorporated when the permit is reissued under section 621.13.

II. **The following pages in the permit are replaced to reflect the permit modification:**

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Permit Page 1 of 6	The text of the description of authorized activity is revised to reflect the following: Increase in container storage capacity, authorization to accept off site waste in containers and reference the new Module IX.	page 1 of 6	
Permit Page 3 of 6 and 7	Item 1 revised to reference the November 95 permit modification. Page 7 included to reference Module IX and Attachment M. Page 6 condition 7 & 9 were incorporated into the permit from Consent Order R4-144-93-0ϕ dated 12/28/94	Page 3 of 6	Page 7 of 7
Module I Page I-9 of 12	Item I of Module I revised to reference Module IX	Page I-9 of 12	
Module II	Module II Item K was incorporated from consent order R4-1445-93-0ϕ and R4-1712-94-07.		
Module V Page V-1 of 2	Item A of Module V revised to increase the container storage capacity from 11, 770 gallons to 14685 gallons, authorization to accept offsite generated wastes in containers, blending the wastes in tanks and storage of containers in unloading area# 1. Use of staging areas for SLFG. Item V.H(4) was incorporated into the Module from consent order R4-1445-93-01 and R4-1712-94-07	Page V-1 of 2	

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Module VI Page VI-5 of 5	Item K is included to describe the authorization to directly feed the kilns from tanker trucks and construction of new unloading areas. Item VI.C(1) and VI-C(2) were incorporated into the module from consent order R4-1712-94-07 dated 1/7/94.		Page VI-5 of 5
Module VII page 3 of 11 Page VII-1d of 11	In the table maximum feed rate of Antimony was revised to 0.13 as provided in the consent order R4-1445-93-01 The LLGF flow Automatic Cutoff has been revised to 10.3 gpm from 10.1 A CO limit of>500 ppm has been included in the Automatic feed cutoff for non hazardous waste oils. Item G is included to describe the authorization to directly feed the kilns from tanker trucks and from containers. Item VII-C(4), VII-C(7), VII-C(8), VII-D(3), VII-E(7) were incorporated into the Module from consent order R4-1445-93-01 dated 12/28/94.	The entire pages in the module were replaced to maintain the continuity of the text.	
	Module VII D.7 has been revised to provide that if a cessation of shale feed results during operation, Norlite with in 30 minutes , stop the feed of LLGF to the Kiln (consent order R4-1445-93-01).	Shale Feed Rate under Automatic cut off limit - >22 0(>30 min.)	

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Attachment A	Waste Analysis Plan - Volume I Section C Receipts of containerized wastes from off site generators and to store them in existing permitted storage areas within the permitted storage capacity. Authorization to pump the containerized wastes directly to blend tanks, or as extrudable feed to the kilns.	page 1, 6, 17, 22 and 23 of 243, page 25 and 26 of 243, page 33, 36, 50, 53, 56, 65, 66, 80, 81, 82, 82a, 83 and 83a, of 243,	
Attachment A	SOP 010 - Waste Approval Procedure SOP 016 - Containerized Waste Management Plan		pages 244 to 246 pages 247 to 255

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Attachment E and Attachment F	Container and Tank Management - Section D I. Receipts of containerized wastes from off site generators and to store them in existing permitted storage areas within the permitted storage capacity. II. Authorization to pump the containerized wastes directly to blend tanks, or as extrudable feed to the kilns. III. Increase in container storage capacity from 214 drums to 267 drums which is an increase less than 25% of the current storage capacity. These additional drums shall be stored in IV. SLGF (Solid Low Grade Fuel) staging area: Authorization to store 50 fifty five gallon containers in the temporary wastewater treatment plant building after the completion of the permanent waste water treatment plant. The temporary waste water treatment plant will be closed and converted into a drum storage area for SLFG feed staging. This is included in the total 267 drum storage to be permitted for the facility. V. Direct kiln feed from tank wagons at unloading station.	D-1, D-2a, D-3, D-4, D-5, D-6a, D-6b, D-7, D-8a, D-8b, D-9,, D-10, D-11b, D-22 and D-23. TAB SECTION: page 2 of 24 (00214), page 11 of 24 (00223), page 22 of 24 (00234), page 24 of 24, (00236),	D-9a, D-9b D-9c, D-9d Additions to Tab Section H: Insert new SOP# TKM 004 - Truck Tanker Hookup for direct feed to kilns, TKFM # 005 - SLFG Material Handling, TKFM# 006 - Transfer Station Scenarios practiced at Norlite
Attachment B	Preparedness and Prevention: Section F - Revised in accordance with the increase in drum storage capacity and changes to operation of the facility	page 22 and 23 of 62	

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Attachment D	Contingency Plan - Section G Revised in accordance with the increase in drum storage capacity and changes to operation of the facility	Page 2 of 102	
Attachment H	Closure Plan - Section I Revised in accordance with the increase in drum storage capacity and changes to operation of the facility	pages 24, 27, 29, 36, 38 of 55	
Attachment I	Engineering Drawings - Volume III, Table 5-6. Drawings 2475-52 (November 1995), NY-D-C-3008 (11/2/95), 2475-50.DWG (November 1995), NY003-D3202 (Checked 7/18/95)		Include the referred drawings

SUMMARY OF THE PERMIT MODIFICATION AUTHORIZED ONJANUARY 8, 1997

The current permit places limitations on the feed rates and emission rates of 14 metals. These limits were established on the basis of an engineering study, "Allowable Metal Concentrations Report" dated December 1991 submitted with the permit application in conjunction with a Human Health Risk Assessment Report dated December 1991. Norlite was required to conduct a trial burn to verify that the metal feed rates results in metal emissions below the permitted levels. The trial burn was conducted in 1992 and the report was approved in June 1995. As a result of actual measurements during the trial burn, the shale feed rate, the hazardous waste fuel rate, the allowable metal feed rate in the feed and resulting emission rates are proposed to be adjusted. The metal feed rate adjustments are for hazardous wastes as well as the shale raw material feed stock. The facility proposed based on trial burn results to incinerate onsite and offsite generated hazardous waste sludges in the kilns. Norlite application for permit modification to increase the metal feed rates based on the 1992 trial burn resultsand health risk assessment report was reviewed.

Based on the trial burn report the the hazardous waste fuel feed rates are adjusted as follows:

FEED	EXISTING	PROPOSED

Liquid Low Grade Fuel (LLGF) - hazardous waste Fuel	10.1 gallons/minute (Interim limit)	10.3 gallons/minute
Solid Low Grade Fuel (SLGF) - hazardous waste sludge	Nil	114 gallons/hour*

Based on the trial burn report the metal feed and emission rates are revised as follows:

The permittee proposed the following emission rates and the mass feed rates of toxic metals while operating the kilns at a shale feed rate of 22 tons/hour, a LLGF feed rate of 10.3 gpm and SLGF feed rate of 114 gallons/hour along with non hazardous waste oil:

Metal	Emission Limit	SHALE (22T/hr)		LLGF +SLGF+Used oil/Waste Fuel A (lbs/hr)	
		Metal Concentration (mg/kg)	Metal Feed Rate (lb./hr)	Metal Feed Rate[A&B] Lb./hr	Metal[A,B & C] Concentration/kiln mg/kg
Antimony	8.14E-04[D]	2.96	0.13[E]	0.24	49
Arsenic	4.89E-04	53	2.35	0.12	24
Barium	7.63E-04[D]	260	11.45	0.72	147
Beryllium	6.31E-05[D]	3.0	0.132	0.0058	1.18
Cadmium	8.358E-04[D]	7.73	0.34[D]	0.144	29.4
Chromium(T)	1.52E-03[D]	127.7	5.62[D]	2.16	441
Chromium(VI)	4.78E-05[D]	-	-	-	-
Copper	6.65E-04[D]	190.5	8.38[D]	4.8	980
Lead	4.37E-04[D]	87.3	3.84[D]	2.69	549
Mercury	5.31E-02[D]	0.8	0.0352	0.124	25
Nickel	9.75E-03[D]	95.0	4.18	2.88	588
Selenium	5.82E-04[D]	1.2	0.0528	0.12	24
Silver	6.025E-04[D]	39.1	1.72[D]	0.096	19.6
Thallium	7.15E-05[D]	7.5	0.33[D]	0.24	49
Zinc	2.63E-02[D]	493.6	21.72[D]	0.12	24

A Total contribution from LLGF, and other fuels

B Sampling, analysis and feed planning prior to feeding wastes shall be performed in accordance with the approved Waste Analysis Plan, Attachment A of the permit.

C Concentration limits applicable only to LGF fed directly from tanks 300, 400, 500 and 600 and LGF tanker trucks to the incinerators.

D Temporary Authorization to implement, at the currently authorized shale feedrate of 22 tons per hour, the results of the 1992 Trial Burn from which it was determined that 1) all metals emissions limits are within acceptable health risk assessment limits based upon Emission Rates in Table 1 of the January 1994 Health Risk Assessment (HRA document # 9508-102), 2) of the 15 individual metals subject to emission limits 11 went down, 2 stayed the same and 2 went up but total metals emissions limits are less than the prior permit limits which were based upon the 1990 Trial Burn and HRA, 3) metals feedrates and concentrations in the LGF either are reduced or remain at the permit levels prior to this modification and 4) based upon additional sampling data some feedrates and concentrations of metals in the shale are higher than previously determined under the 1990 Trial Burn but that even with these higher levels this still results in a reduction in total metals emissions limits that are within acceptable health risk assessment limits.

E Temporary Authorization to incorporate into the permit a provision of Order on consent R4-1445-93.

As a result of these proposed changes, the impact on human health will be within the current emission limits results presented in the Human Health Risk Assessment Addendum, dated June 21, 1993 and approved by the Department.

The Department has made a tentative determination that this permit modification is consistent with the trial burn results and the human health risk assessment report and approvable, subject to the conditions contained in the draft modification. This permit modification would continue the operation of a hazardous waste storage, treatment and incineration facility pursuant to the regulations in 6NYCRR Part 373-2 (Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities) as well as with all other applicable hazardous waste management/air pollution control laws and regulations. The application includes the results of the successful hazardous waste incineration trial burn which was conducted on Kiln No. 1 in 1992, a revised Air Modeling Analysis of Proposed Revisions to Part 373 Permit Emission Rate Limits, and a Human Health Risk Assessment Addendum.

The Department granted a temporary authorization to Norlite under the provisions of 6 NYCRR Part 373-1.7(f) to implement the proposed modifications on January 8, 1997. This will be public noticed along with the Norlite's Part 373 permit renewal being processed by the Department.

The following pages in the permit are replaced to reflect the permit modification:

LOCATION	Description	Replace	Include
Module VII	Module VII C(4) has been revised to include revisions to, metal emission rates, and metal feed rates. Module VII.D(3) revised to include scrubber pressure drop limits, revision to liquid and solid low grade fuel feed rate. Module VII.D(4) revised to incorporate revisions to scrubber blowdown rate and to include SLGF atomization pressure.	all pages in Module VII (Page 1 to 11)	page 12
	Module VII.C(8) The module is revised to include the following revisions to used oil management procedures No used oil, fuel oil or mixture of these can be accepted for use as fuel unless analyzed prior to acceptance and off-loading in accordance with 374-2 and the permittee's Waste Analysis Plan (Attachment A). If used oil is intended to be accepted, stored, conveyed and burned as waste fuel A, then this material must meet the definition and criteria found in 6NYCRR225-2 for Waste Fuel A as well as the following additional criteria prior to acceptance and off loading: A) Is not a hazardous waste as defined by 6NYCRR371 and the criteria found in this permit and attachments.		

LOCATION	Description	Replace	Include
Module VII	B) Has a PCB concentration of 25 ppm or less. Except for the consolidation of used oil loads no PCBs can be present as a result of mixing with used oil except for those exempted under 371.4(e). C) No admixture of listed hazardous waste with used oil/Waste Fuel A. Mixtures of used oil and characteristic hazardous waste, which no longer exhibit a characteristic, are allowed to be burned as waste fuel A but such mixing is allowed by the used oil generator only. The permittee is prohibited from blending used oil with any hazardous waste for any purpose. No storage in tanks previously used for the storage of hazardous wastes is allowed unless such tanks have been cleaned and decontaminated as per 6NYCRR373 this permit and its attachments prior to their use for used oil/Waste Fuel A storage. D) Used oil containing more than or equal to 1000 ppm of total halogens is presumed to be hazardous waste and such used oil must be burned as hazardous waste complying with all the operating requirements in Module VII. D of this permit unless the presumption of mixing with hazardous waste can be rebutted by demonstrating that the used oil does not contain hazardous waste (for example by using an analytical method from SW-846, Edition III to show that the concentrations of individual halogenated solvents listed in waste codes F001 and F002 are less than 100 ppm) and meets the definition and criteria for Waste Fuel A found in 6NYCRR225-2 and this permit.		

LOCATION	Description	Replace	Include
Module VII	Records of analysis conducted to rebut the presumption of mixing with hazardous wastes, must be retained at the facility for at least three years. Rebuttable presumption must be applied at the time of acceptance from the permitted transporter. Module VII D(6) revised to include (item d) used oil operating summary in the monthly reporting requirement.		
	Module VII -C(7) - The revised procedure for sampling shale found in Section C of Norlite's 373 HW/APC application, Waste Analysis Plan, Appendix C-2, Section 1.3 pages C-2(5),2(5)a, 2(5)b, 2(5)[c] (Revision: March 96) and page 2(6) shall be implemented no later than 11/15/96 with results provided beginning with the 11/96 monthly report. Split samples will be given to NYSDEC upon request with no restrictions.	Pages C-2(5) and C-2(5)a, revisions to metal feed rates	C-(5)b, C-(5)(c)

SUMMARY OF PERMIT MODIFICATION AUTHORIZED ON MAY 26, 1998:

Tank 200A imploded under vacuum, while unloading and had to be closed. The closure certificate for tank 200A was accepted. The modification was considered to be minor.

SUMMARY OF PERMIT MODIFICATION AUTHORIZED ON JULY 30, 1998:

The minor permit modification was granted to remove raised pump foundation in drum storage area.

SUMMARY OF PERMIT MODIFICATION AUTHORIZED ON AUGUST 25, 1998:

The minor permit modification was granted to install a sump in a drum storage area. Drawing NYD-D-L-7006 was replaced with HMK-D-L-7006 and inserted Hazardous waste management site plan & HMK-D-C-3008 drawings in Section 6 of Volume III of III of current permit.

SUMMARY OF PERMIT MODIFICATION AUTHORIZED ON OCTOBER 20, 1998:

The minor permit modification was granted to install a tank which is functionally equivalent to imploded tank 200A. Following changes were made to permit:

1. Drawing NYD-D-D-5004 was replace with HMK-E-D-5004 and Tank Vessel Figure-2 drawings were inserted in Tab 6 of Volume III of III of the current permit.

2. Page D-7 and D-22a of the Addendum to Section D of Volume I of III were replaced with the modified pages submitted along with the permit modification request dated September 30, 1998 (last modified) and June 29, 1998.

3. Complete permit modification application dated June 29, 1998 and subsequently revised on September 4, 1998, September 30, 1998 and October 8, 1998 was inserted at the end of Section D in Volume I of III of the current permit. Also, in the same section Valve specification for Kunkle Model 912 received via fax on October 14, 1998 was inserted.

SUMMARY OF PERMIT MODIFICATION AUTHORIZED ON DECEMBER 10, 1998:

The minor permit modification was granted to install two retractable door on the north side of the drum storage area. The complete permit modification application dated November 12, 1998 at the end of Section D in Volume I of III in the current permit.

SUMMARY OF PERMIT MODIFICATION AUTHORIZED ON [insert date]:

The minor permit modification is granted to enable design changes to already approved unloading area #2 installation. Drawing 2475-50 is replaced with HMK-2475-99.

ATTACHMENT M

MAJOR/MINOR PERMIT MODIFICATIONS

The permit may be modified for causes as allowed under 6 NYCRR 373-1.7 and 621.14. Modification shall be requested in writing as required by 621.13 and 621.14. Requests for modifications shall be submitted to the Regional Permit Administrator for approval and modification of the permito

An application for permit modification is processed pursuant to 6 NYCRR Part 621 and 373-1.7. Application for minor modification listed under 373-1.7[c] may be processed without being treated as a new application. For modification listed under 373.1.7(d) as a major modification will be treated as a new application and processed as under Part 621 - Uniform Procedures Acto

For any other modification not listed explicitly as minor or major modification, the permittee may submit a request for permit modification and request that it be classified and administered as a minor modification under 373-1.7. This request must include information supporting the requested classification. The Department shall determine whether the request qualifies to be administered as minor modification or an application for a new permit for major modification in accordance with Part 621. In making this determination, the Department shall consider the degree to which the proposed changes are similar to those listed as minor modification under 373-1.7[c] and the following criteria:

Minor modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment.

SUMMARY OF THE PERMIT MODIFICATION AUTHORIZED ON JUNE 7, 95 AND JULY 20, 95:

Norlite 373 HW/APC Permit Modification -5/95

Permit Pagesa Deletion of obsolete special conditions covering

completed items such as the application of impervious coatings, updating financial assurance and permissible metals feed rate concentrations.

Module I: No changes

Module IIa Deletion of prior notice to DEC for receiving foreign country generated hazardous waste and the addition of a requirement to follow the waste analysis requirements specified in the Schedule of Compliance in Order on Consent No.R4-1445-93-01.

Module III: Adding the Solid Waste Landfill and Mid-pond as solid waste management units and signing off on these two units and the surface impoundment and waste piles as causing releases to the environment of hazardous wastes or constituents which threaten human health or the environment.

Module IVa No changes.

Module V: Confinement of all drum storage to the LGF and solids processing building and changing the maximum permissible container volume to 85 gallons to allow the use of larger containers without changing the maximum total permitted LGF drum storage capacity. Deletion of completed storage facility construction requirements. The addition of revised waste compatibility and inspection requirements.

Module VI: Deletion of completed tank construction requirements. Addition of requirements regarding closure of the out of service underground LGF piping and certification of exempt tank systems.

Module VII: Deletion of obsolete permit conditions regarding completed consent order, trial burn and kiln/LGF operating requirements. Minor revisions to the air emissions performance standards to reflect the numbers achieved in the 1992 Trial Burn and more commonly used measurement parameters. Removal of the use of concentration limits for tanks 100-200 (A, B, and C) and enlarging the list of acceptable hazardous wastes which can be burned as LGF in the kiln. Revisions to the kiln operating conditions to incorporate certain conditions into tabular form and updating parameters to reflect the latest data for optimum operating conditions obtained from the 1992 Trial Burn. Add new requirements to assure compliant operation and allow for operation

on two baghouses instead of three during conditions where it is necessary to perform maintenance upon one of the baghouse modules thus eliminating the need to shut down the kiln completely. Other minor change include clarifying non LGF operating conditions and changes in LGF waste feed cutoff testing. Finally, a requirement for ambient air monitoring was dropped as necessary.

Norlite 373 HW/APC Permit Minor Modifications - 7/20/95 (4-0103-16/16-0

Module VII: Set compliance date of 8/7/95 for the submission of a revised control system package and 5 day deadline to implement upon DEC approval and 15 day turnaround if revisions are needed. Revise operating limit for scrubber water recirculation rate and monitoring parameters for minimum venturi and Ducon scrubber pressure drops to previous permit levels which are judged to be within regulatorily and environmentally acceptable operating ranges for this facility. Correct a typographical error changing the I.D fan current amperage operating limit from one minute average to hourly rolling average. Set 10/24/95 as the compliance date for implementation of the new shale sampling procedures and delete testing for metals not required under the regulations governing the burning of hazardous waste in boilers and industrial furnaces (Osmium, Vanadium, Manganese and Cobalt).

PERMIT MODIFICATION AUTHORIZED ON OCTOBER 26,1995

In response to the application submitted by the permittee on 10/26/95, Condition VII.A(4) listed in Page VII-1 of 11 in Module VII has been revised to extend the installation of the permanent replacement continuous emission monitoring system (CEM) to 1/9/96.

SUMMARY OF THE PERMIT MODIFICATION AUTHORIZED ON NOVEMBER 30, 1995:

The permittee applied for permit modification on October 9, 1995 and provided additional information by subsequent submissions dated November 6, 1995, November 20,1995 and November 21, 1995. The application for permit modification submitted by the permittee (Norlite Corporation) was reviewed by the Department and the following approved modifications were determined to be minor modification which are administered without being treated as a new

application.

I. Receipts of containerized wastes from off site generators and to store them in existing permitted storage areas within the permitted storage capacitya

II. Authorization to pump the containerized wastes directly to blend tanks, or solid LGF as extrudable feed to the kilnsa

III. Increase in container storage capacity from 214 drums to 267 drums which is an increase less than 25% of the current storage capacity.

IV. SLGF (Solid Low Grade Fuel) staging area:

Authorization to store 50 fifty five gallon containers in the temporary wastewater treatment plant building after the completion of the permanent waste water treatment plant. The temporary waste water treatment plant will be closed and converted into a drum storage area for SLFG feed staging. This is included in the total 267 drum storage to be permitted for the facility. Feeding of extrudable solids directly to the kiln can be done only after the construction and operation of the waste water treatment plant.

V. Laboratory Auditsa

Norlite requests that the requirements to audit outside laboratories twice a year be eliminated from the permit, along with analysis of blind samples. This is acceptable to the Department since:

Auditing of laboratories and proficiency testing is a function already performed by the New York State Department of Health as part of the requirements for an environmental laboratory to maintain certification. The permittee is required to use only New York State Health Department certified laboratories.

VI. Drop and Hook Solid/Hazardous Waste Transfer Activitiesa

Norlite requested authorization to conduct certain waste transfer activities. The Department is authorizing those activities as described in Tank Farm SOP #TKFM-006. This

limits these transfer activities to accepting tankers and containers for temporary storage in the same areas currently used to manage and handle LGF accepted for burning in the kilns. No transfer of wastes out of the containers or tankers is peritted and several facilites are required to be upgradeda Any transfers of sealed drums is restricted to the roofed, secondary contained truck unloading area.

VIIa Authorization to facilitate flushing and removal of residues and "heels" from tanks or containers during off loading or prior to drum disposal.

VIIIo Direct kiln feed from tank wagons at unloading stationa The Department authorizes such operations under the following conditionsa

A. This operation can commence only after completing the construction and operation of Unloading Areaa# 2 (Drawing 2475-50DWG)

B. All required safety measures are in place including secondary containment and nitrogen blanketinga All safety features including waste feed cuttoffs, flame and detonation arrestersa fire detection and fire suppression systemsa emission control are operable. Under no circumstances shall direct feed from tank wagons occur outside of the secondary containment provided by the unloading station and the LGF buildinga

IX. The permittee also requested for changes in sampling procedures for shale metal analysis. The Department is in the process of reviewing this request and a final determination has not been made at this time. The revised pages C- Page 37, 37áa) and 38 of 243 are not incorporated in to the permit at this timea

X. The following new module is included to the permita

Module IX

The January 14, 1995 revisions to the 6 NYCRR Part 373-2 regulations incorporated Sections 373-2.27 and 373-2.28 for Air Emissions Standards for process vents and

Standards for Equipment Leaks. These regulations applies to facilities that treat, store or dispose of hazardous wastes. In accordance with paragraph 373-2.28(a)(3) these requirements must be incorporated when the permit is reissued under section 621.13.

XI. Several of these approved activities are conditional, i.e. they will not occur until several facility improvements are made. The improvements include completion of the permanent wastewater treatment system, implementation of the revised fugitive dust plan, upgrading of the truck unloading area including the vapor recovery system.

II. **The following pages in the permit are replaced to reflect the permit modification:**

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Permit Page 1 of 6	The text of the description of authorized activity is revised to reflect the following: Increase in container storage capacity, authorization to accept offsite waste in containers and reference the new Module IX.	page 1 of 6	
Permit Page 3 of 6 and 7	Item 1 revised to reference the November 95 permit modification. Page 7 included to reference Module IX and Attachment M. Page 6 condition 7 & 9 were incorporated into the permit from Consent Order R4-1445a93-01 dated 12/28/94	Page 3 of 6	Page 7 of 7
Module I Page I-9 of 12	Item I of Module I revised to reference Module IX	Page I-9 of 12	
Module II	Module II Item K was incorporated from consent order R4-1445a93-01 and R4-1712a94-07.		

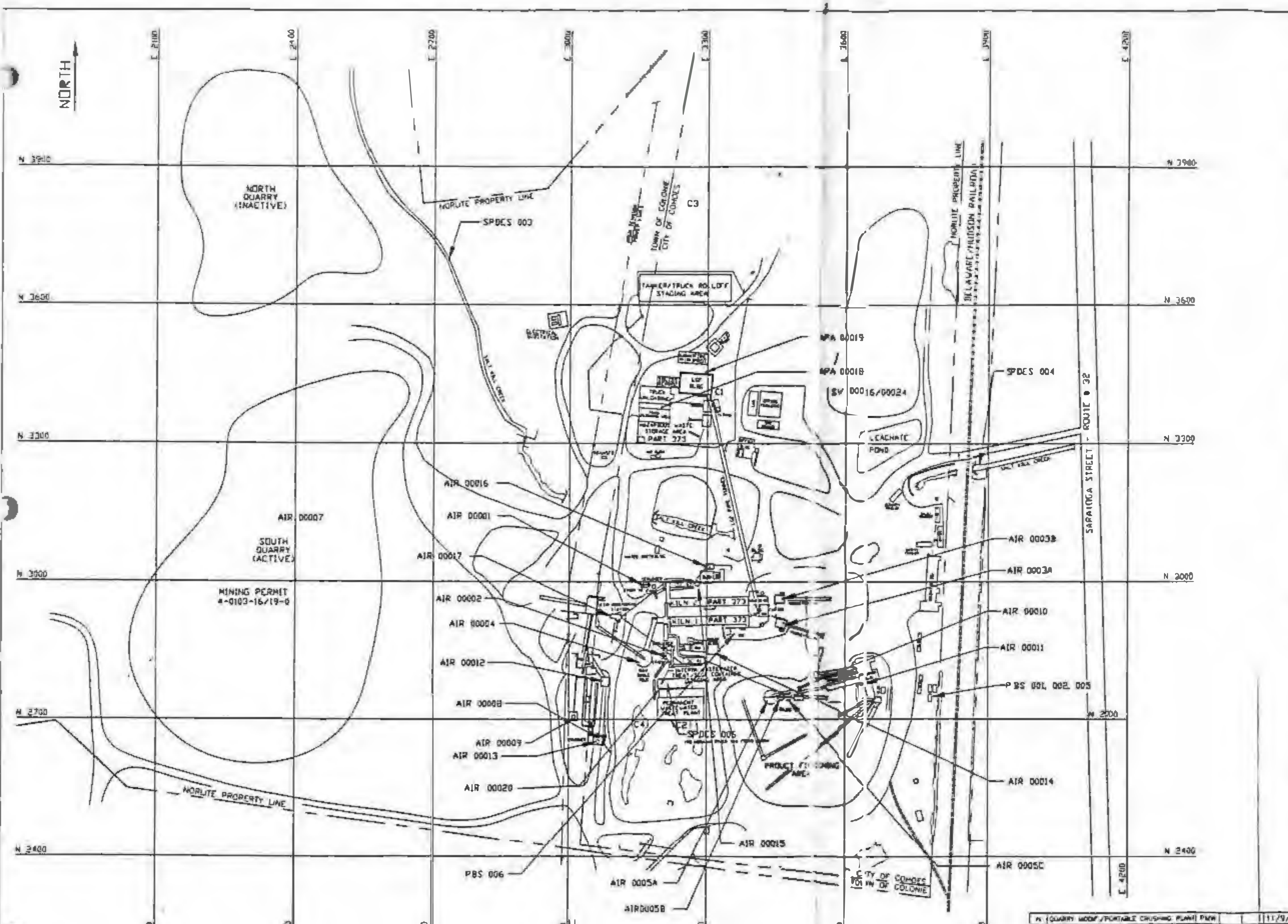
LOCATION	DESCRIPTION	REPLACE	INCLUDE
Module V Page V-1 of 2	Item A of Module V revised to increase the container storage capacity from 11, 770 gallons to 14685 gallons, authorization to accept offsite generated wastes in containers, blending the wastes in tanks and storage of containers in unloading areao# 1. Use of staging areas for SLFG. Item V.H(4) was incorporated into the Module from consent order R4-1445-93-01 and R4-1712-94-07	Page V-1 of 2	
Module VI Page VI-5 of 5	Item K is included to describe the authorization to directly feed the kilns from tanker trucks and construction of new unloading areaso Item VI.C(1) and VI-C(2) were incorporated into the module from consent order R4-1712-94-07 dated 1/7/94.		Page VI-5 of 5

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Module VII page 3 of 11 Page VII-11 of 11	In the table maximum feed rate of Antimony was revised to 0.13 as provided in the consent order R4-1445a93-01 The LLGF flow Automatic Cut off has been revised to 10.3 gpm from 10a1 A CO limit of >500 ppm has been included in the Automatic feed cut off for non hazardous waste oils. Item G is included to describe the authorization to directly feed the kilns from tanker trucks and from containers. Item VII-C(4), VII-C(7)a, VII-C(8), VII-D(3)a, VII-E(7) were incorporated into the Module from consent order R4-1445-93-01 dated 12/28/94a	The entire pages in the module were replaced to maintain the continuity of the text.	

LOCATION	DESCRIPTION	REPLACE	INCLUDE
	Module VII D.7 has been revised to provide that if a cessation of shale feed results during operation, Norlite with in 30 minutes , stop the feed of LGF to the Kiln (consent order R4-1445-93-01)n	Shale Feed Rate under Automatic cut off limit - >22 0(>30 min.)	
Attachment A	Waste Analysis Plan - Volume I Section C Receipts of containerized wastes from off site generators and to store them in existing permitted storage areas within the permitted storage capacity. Authorization to pump the containerized wastes directly to blend tanks, or as extrudable feed to the kilnsn	page 1, 6, 17 , 22 and 23 of 243, page 25 and 26 of 243, page 33n 36, 50, 53, 56, 65, 66, 80, 81, 82, 82a, 83 and 83a, of 243n	
Attachment A	SOP 010 - Waste Approval Procedure SOP 011 - Containerized Waste Management Plan		pages 244 to 246 pages 247 to 255

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Attachment E and Attachment F	Container and Tank Management - Section D I. Receipts of containerized wastes from off site generators and to store them in existing permitted storage areas within the permitted storage capacitya II. Authorization to pump the containerized wastes directly to blend tanksa or as extrudable feed to the kilns. III. Increase in container storage capacity from 214 drums to 267 drums which is an increase less than 25% of the current storage capacitya These additional drums shall be stored in IV. SLGF (Solid Low Grade Fuel) staging area: Authorization to store 50 fifty five gallon containers in the temporary wastewater treatment plant building after the completion of the permanent waste water treatment planta The temporary waste water treatment plant will be closed and converted into a drum storage area for SLFG feed staginga This is included in the total 267 drum storage to be permitted for the facility. V. Direct kiln feed from tank wagons at unloading stationa	D-1, D-2a, D-3, D-4, D-5, D-6a, D-6b, D-7a D-8a, D-8b, D-9,, D-10, D-11b, D-22 and D-23a TAB SECTIONa page 2 of 24 (00214)a page 11 of 24 (00223)a page 22 of 24 (00234)a page 24 of 24a (00236)a	D-9a, D-9b D-9c, D-9d Additions to Tab Section H: Insert new SOPa# TKM 004 - Truck Tanker Hookup for direct feed to kilnsa TKFM # 005 - SLFG Material Handling, TKFM # 006 - Transfer Station Scenarios practiced at Norlite

LOCATION	DESCRIPTION	REPLACE	INCLUDE
Attachment B	Preparedness and Prevention Section F - Revised in accordance with the increase in drum storage capacity and changes to operation of the facility	page 22 and 23 of 62	
Attachment D	Contingency Plan - Section G Revised in accordance with the increase in drum storage capacity and changes to operation of the facility	Page 2 of 102	
Attachment H	Closure Plan - Section I Revised in accordance with the increase in drum storage capacity and changes to operation of the facility	pages 24, 27, 29, 36, 38 of 55	
Attachment I	Engineering Drawings - Volume III, Table 5-6. Drawings 2475-52 (November 1995), NY-D-C-3008 (11/2/95), 2475-50.DWG (November 1995), NY003-D3202 (Checked 7/18/95)		Include the referred drawings



SPDES OUTFALLS

PERMIT NO. 4-0103-16/01

003 QUARRY WATER
004 SHALE FINES LEACHATE POND
006 KILN 1 AND 2 SCRUBBER BLOWDOWN, NON-CONTACT COOLING WATER AND BOILER BLOWDOWN WWT DISCHARGES

BULK STORAGE TANKS

PBS ID NO. 4-052574

TANK NO	TANK TYPE	CONTENTS	CAPACITY
PBS 001	BARE STEEL	DIESEL FUEL	5,000
PBS 002	BARE STEEL	DIESEL FUEL	5,000
PBS 005	BARE STEEL	UNLEADED GAS	3,000
PBS 006	BARE STEEL	#4 OIL	14,000
PBS 009	DOUBLE WALL STEEL	FUEL OIL	25,000

AIR PERMITS

NUMBER	DESCRIPTION/LOCATION
010300 0296 00001	SCRUBBER EXHAUST, KILN #1
010300 0296 00002	SCRUBBER EXHAUST, KILN #2
010300 0296 0003A	CLINKER COOLER VENT, KILN #1
010300 0296 0003B	CLINKER COOLER VENT, KILN #2
010300 0296 00004	VENT, RAW STORAGE SILO
010300 0296 0005A	VENT, FINISHED PRODUCT SILO
010300 0296 0005B	VENT, FINISHED PRODUCT SILO
010300 0296 0005C	VENT, FINISHED PRODUCT SILO
010300 0296 00007	QUARRY DRILL
010300 0296 00008	PORTABLE JAW CRUSHER
010300 0296 00009	FEED HOPPER, PRIMARY CRUSHER
010300 0296 00010	HYDROCONE CRUSHER, FINISH PLANT
010300 0296 00011	EL-JAY CRUSHER, FINISH PLANT
010300 0296 00012	TRAYLOR CRUSHER, PRIMARY
010300 0296 00013	ALLIS-CHALMERS CRUSHER, PRIMARY
010300 0296 00014	STACK, STEAM ATOMIZATION BOILER
010300 0296 00015	BIN VENT, LIME SILO
010300 0296 00016	BIN VENT, MATERIAL COLLECTION SILO
010300 0296 00017	BIN VENT, SODA ASH SILO

AIR PERMIT (CONST.) APPLICATION

NUMBER	DESCRIPTION/LOCATION
00018	TRUCKS UNLOADING VENT, TRUCK UNLOADING AREA
00019	FANS VENT, LGF STORAGE BLDG
00020	TANK VENT SCRUBBER EXHAUST HCL STORAGE TANK

SWMUs/AOCs

C1	TANK 100 & 200 (CLEAN CLOSURE)
C2/C4	SURFACE IMPOUNDMENT/ DEWATERING AREA (CLEAN CLOSURE)
C3	WASTE PILES (CLEAN CLOSURE)

SOLID WASTE PERMIT

4-0103-16/24-0 NON-HAZARDOUS INDUSTRIAL WASTE DISPOSAL FOR SHALE FINES, APC RESIDUE AND DEBRIS

MINING PERMIT

4-103-16/19-0

HAZARDOUS WASTE

PART 373 PERMIT NUMBER 4-0103-10/10-0 FOR INCINERATION AND STORAGE OF WASTE

M	GENERAL REVISION	JF	DR		11/1/95
L	GENERAL REVISION	JF	DR		9/10/95
K	HCL TANK SCRUBBER AT PLANT	AF	REC	ECB	7/18/95
J	DELETED NOTES	PMW			12/8/94
H	QUARRY MODIF./PORTABLE CRUSHING PLANT	PMW			11/9/94
G	ADDED PORTABLE CRUSHER	JF			5/19/94
F	ROLL OFF AREA RELOCATION	SE	JR		06/21/93
E	GENERAL UPDATE	SE	JR		05/13/93
D	EXTRUDER ROOM PERMIT APPLICATION	MP	AL		2-3-93
C	TANK SYSTEM PERMIT APPLICATION	RJS	AL		12-18-92
B	TRUCK UNLOADING PERMIT APPLICATION	RJS	JR		10-28-92
A	INITIAL ISSUE	RJS	JR		7-21-92

CLIENT APPROVAL ________ DATE ______

ENSR ENVIRONMENTAL SYSTEMS DIVISION

NORLITE CORPORATION COHOES, NY
PLANT PERMIT IMPLEMENTATION
SITE PLAN OPERATING AREA
INDICATING PERMITTED UNITS

SCACHAK	6-12-87	1" = 100'-0"	4511-0C
RCL	7-18-85	[illegible]	[illegible]

NY003-03202

1A