6 NYCRR PART 373 and USEPA HSWA PERMIT
FACT SHEET
FOR NORLITE CORPORATION, COHOES, NEW YORK

This fact sheet has been developed for the New York State Department of Environmental Conservation's (NYSDEC) draft Part 373 permit (and associated Air permits) and the United States Environmental Protection Agency (USEPA) draft Hazardous and Solid Waste Amendments (HSWA) Permit which the NYSDEC and USEPA intend to issue to Norlite Corporation for its hazardous waste management facility located at 628 South Saratoga Street, Cohoes, NY 12047. This fact sheet was prepared in accordance with the requirements of 6NYCRR 373-1.4(f) and 40 CFR§124.8.

A. PURPOSE OF THE PERMITTING PROCESS

The purpose of the permitting process is to allow the NYSDEC and EPA, interested citizens and other governmental agencies the opportunity to evaluate the ability of the permittee to comply with the applicable requirements promulgated under New York State law and Federal law. NYSDEC and EPA are required to prepare a draft permit which sets forth in one concise document all the applicable requirements with which the agencies intend to require the Permittee to comply during the five year duration of the permit. The public is given forty-five (45) days to review the application and comment on the draft permit conditions prior to NYSDEC and EPA taking any final action on the application for a hazardous waste management permit.

B. PROCEDURE FOR REACHING A FINAL DECISION

Article 27 of the ECL, 6NYCRR Part 621 as well as Section 7004(b) of RCRA and 40 CFR 124.10 require that the public be given forty-five (45) days to comment on the permit application and draft permit. Specific instructions and the timeframes regarding the public review of this project can be found in the public notice document.

NYSDEC and USEPA will consider all written comments received during the public comment period, oral or written statements received during a legislative public hearing, the requirements of the hazardous waste regulations including 6NYCRR Subpart 373-1 (Hazardous Waste Treatment, Storage, and Disposal

Facility Permitting Requirements), and 6NYCRR Subpart 373-2 (Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities), NYSDEC's permitting policies and USEPA's HSWA requirements and the applicable regulations of 40 CFR 124, 260-264, 266, 268 and 270, in making a final permit decision.

When the NYSDEC and the USEPA make a final permit decision to either issue, deny or modify this permit, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final decision. If the decision is to issue a final permit, this notice will include a summary of responses to comments, identifying the permit conditions in the final permit which are different form those in the draft permit and the reasons for the changes. The final permit becomes effective immediately on the date of issuance, unless a later date is specified.

C. FACILITY DESCRIPTION

Norlite Corporation is a manufacturer of expanded shale lightweight aggregate by the rotary kiln process. The facility consists of a production operation and a quarry for shale. It is located on a 200 acre site on the southern boundary of the City of Cohoes, New York. The production operation involves feeding crushed shale into a rotary kiln where it is heated to about 2100°F during which gases are generated which expands the mineral to a porous material. The final product is a lightweight material with increased physical strength and is used in the building and construction products industry.

Norlite uses a mix of energy sources which include natural gas, coal, fuel oil, waste oil and hazardous wastes for its two kilns. The hazardous wastes consist of ignitable and/or toxic chemicals which include industrial spent solvents and other chemicals from a variety of generators. The wastes are hauled in tanker trucks to the facility by transporters and stored in on-site tanks prior to burning in the kilns.

Tank storage consists of six nominal 24,000 gallon horizontal earth covered tanks. The tanks are constructed of 3/8 inch-thick carbon-steel shells with corrosion resistant glass lining and are certified to ASME Section VIII, Division 1 code

for a working pressure of 25 psig and 100°F. The tanks are equipped with fire-safe valves, nitrogen blanketing system, and rupture disks. Overfill protection is provided by a level switch which shuts off all pumps and closes the tank outlet valve when the liquid level reaches 12 inches from the top. A cathodic protection system is installed for tank corrosion protection in addition to a corrosion resistant coating applied to the external shell. All tanks are grounded to prevent static electric charges. Four of the six tanks have a secondary containment system that consists of two 40 mil HDPE liners followed by 12 inches of compacted clay. Containment capacity is 100% of the volume of the tank plus a 25 year, 24 hour rainstorm, and is provided within the sand layer below the tanks. Leak detection is provided by means of porous pipes imbedded between the liners which ultimately drain to concrete holding tanks equipped with level alarms. The other two storage tanks which do not have secondary containment will be removed and placed above-ground in new concrete secondary containment vaults. They cannot be used in the interim.

Norlite stores filtered residues and tank bottom sludges from tank cleaning operations in two container storage areas. The drums used are 55 gallon carbon steel drums that meet the USDOT Specification 17C or 17H, and fiber drums that meet specification 21C. The filtered residues are stored in the drum storage pad east of the truck unloading pad. This area has a capacity to hold fifty four 55-gallon drums. Secondary containment is provided by a concrete slab with 3 1/2 inch high concrete curbs which provides a containment capacity of over 10% of the total volume of containers stored here. An additional container storage area is provided within the truck unloading area for storing sludge from tank cleaning operations. Drums are stored on pallets and stacked two high on either side of the unloading pad. A total of 160 fifty-five gallon drums are stored here. The unloading pad is an 8 inch thick reinforced concrete pad with curbs and provides a containment capacity of 7380 gallons which is greater than the volume of the largest tanker Norlite receives. The unloading pad and drum storage areas are covered by a roof for run-on protection. All concrete surfaces have been or will be provided with a compatible impervious coating.

Kilns 1 and 2 are manufactured by Trayler and Allis-Chalmers respectively, and are 180 feet long with an inside diameter of 11 feet. Heat is supplied by firing pulverized coal, No. 4 fuel oil, natural gas or low grade fuel (LGF/hazardous wastes). The LGF burner provides atomization with high pressure air or steam through a nozzle. The air stream exiting the kiln enters a mechanical collector (knockout box) and a multiple cyclone unit (multiclone) to remove large particulate matter. The emission control equipment consists of a heat exchanger, a lime injection port for controlling acidic gases (dry scrubber), a fabric filter with three modules (bag house), a 400 HP induced draft fan, a BECO Venturi scrubber for additional acid removal, a mist eliminator, a modified Ducon scrubber with mist elimination followed by a 60 inch diameter stack. Parameters that are continuously monitored include LGF feed rate, flame temperature, back end temperature, oxygen, carbon monoxide and fan current (surrogate for combustion gas velocity). Additional parameters that will be monitored continuously and interlocked with an automatic waste feed cut-off system are specified in the draft permit. Several operational paraméters will be monitored on a periodic basis (e.g., daily) and logs will be maintained on site to document compliance with the permit conditions. Currently, kiln No. 1 does not have the additional air pollution control equipment that is installed on kiln No. 2. The draft permit authorizes use of kiln No. 1 for LGF only after the new equipment is installed. The air pollution control system in place on kiln No. 2 is considered Best Available Control Technology (BACT) and is the result of an Order-on-Consent with the Department to upgrade the equipment. A trial burn was conducted in June, 1990 on kiln No. 2 to demonstrate compliance with the performance standards and to evaluate operating parameters for setting permit limits. The trial burn was successful and the draft permit conditions are based on the results of the trial burn. The draft permit requires that a trial burn be conducted on kiln No. 1 after the new equipment is installed. The permit conditions for the operating and input parameters may be modified based upon the operating and input parameters successfully demonstrated during the subsequent trial burn. Additional permit conditions have been incorporated, as needed, based upon recently promulgated federal regulations on Burning of Hazardous Wastes in Boilers and Industrial Furnaces.

- Evaluate SWMUs and other areas of concern for releases to all media (soil, surface water, groundwater, air, etc.) and regulated units for releases to media other than groundwater;

- Make preliminary determinations regarding releases of concern and the need for further actions and interim measures at the facility and

- Screen from further investigation those SWMUs which do not pose a threat to human health or environment.

The PR is a desk-top review of all of the available information on the individual SWMUs. During the PR and in subsequent phases of the RFA, all of the media that could potentially be affected by hazardous waste releases are examined. Based on this review, the SWMUs are characterized as to their release potentials.

Following this review, a VSI is conducted during which all of the SWMUs are examined to determine obvious spills or leakage, stained soil, stressed vegetation, unit deterioration, or any other conditions that may be indicative of a release. By means of these observations and the findings of the PR, sampling is recommended at those units where releases are suspected, but not verified. A sampling work plan is then prepared and a SV is conducted.

The last aspect of the RFA involves the regulatory agency preparing the RFA report which includes recommendations for further action at those units with demonstrated releases of hazardous waste or constituents. In some cases, interim corrective measures may be required at a unit where an immediate threat to human health or the environment exists.

If the RFA concludes that there is a need for further investigative work, the owner/operator is required to perform an RFI as a permit condition or as a condition of an Order on Consent. The purpose of the RFI is to determine the nature, extent and rate of migration of hazardous wastes or constituents in soils, groundwater, surface water, subsurface gas and/or air. Due to its very nature, the RFI usually involves a considerably greater level of effort than the RFA. Multi-media analyses should be used to determine the types of

D. CORRECTIVE ACTION PROGRAM

The 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA) added Section 3004(u) which requires corrective action for all releases of hazardous waste or constituents from any solid waste management unit (SWMU) at a treatment, storage, or disposal facility seeking a permit regardless of the time at which waste was placed in such unit. This corrective action requirement is also stipulated in New York State final status hazardous waste regulation 6NYCRR 373-2.6(l). The primary objective of the Corrective Action Program is the protection of human health and the environment from all releases of hazardous waste or constituents.

A SWMU is any discernible unit at which solid or hazardous wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous wastes. Such units include any area at a facility at which hazardous waste or constituents have been routinely and systematically released (e.g. a spill area contaminated by routine and systematic discharges from product or process units.)

The RCRA corrective action program consists of three phases:

1. The RCRA Facility Assessment (RFA) to identify releases or potential releases requiring further investigation.

2. The RCRA Facility Investigation (RFI) to fully characterize the extent of releases.

3. Corrective Measures (CM) to determine the need for and extent of remedial measures. This step includes the selection and implementation of appropriate remedies for all problems identified.

The RFA is a three stage process that includes the Preliminary Review (PR), the Visual Site Inspection (VSI) and the Sampling Visit (SV). The RFA is conducted to:

- Identify and gather information on releases at RCRA facilities;

- Evaluate SWMUs and other areas of concern for releases to all media (soil, surface water, groundwater, air, etc.) and regulated units for releases to media other than groundwater;

- Make preliminary determinations regarding releases of concern and the need for further actions and interim measures at the facility and

- Screen from further investigation those SWMUs which do not pose a threat to human health or environment.

The PR is a desk-top review of all of the available information on the individual SWMUs. During the PR and in subsequent phases of the RFA, all of the media that could potentially be affected by hazardous waste releases are examined. Based on this review, the SWMUs are characterized as to their release potentials.

Following this review, a VSI is conducted during which all of the SWMUs are examined to determine obvious spills or leakage, stained soil, stressed vegetation, unit deterioration, or any other conditions that may be indicative of a release. By means of these observations and the findings of the PR, sampling is recommended at those units where releases are suspected, but not verified. A sampling work plan is then prepared and a SV is conducted.

The last aspect of the RFA involves the regulatory agency preparing the RFA report which includes recommendations for further action at those units with demonstrated releases of hazardous waste or constituents. In some cases, interim corrective measures may be required at a unit where an immediate threat to human health or the environment exists.

If the RFA concludes that there is a need for further investigative work, the owner/operator is required to perform an RFI as a permit condition or as a condition of an Order on Consent. The purpose of the RFI is to determine the nature, extent and rate of migration of hazardous wastes or constituents in soils, groundwater, surface water, subsurface gas and/or air. Due to its very nature, the RFI usually involves a considerably greater level of effort than the RFA. Multi-media analyses should be used to determine the types of

contaminants present, the boundaries of the contaminants (e.g., plumes), and the rate of contaminant movement. Once the chemical data is reviewed, a RFI report is prepared that provides a summation of the data and recommendations for any needed remediation.

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). The CMS will address alternative remediation 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. An exposure assessment coupled with a public health/environmental assessment will be mechanisms used to develop cleanup target levels. Library search, scale models, or treatability studies are tools that may be utilized, if necessary, to assess the technical feasibility of remedial alternatives. The CMS report should provide a discussion of the alternative remediation strategies studied addressing technical, institutional, public health, and environmental issues, and the conceptual engineering on the alternative action selected by the facility.

Approval by the regulatory agency of the selected remedial alternative will initiate the final stage of corrective measures: Corrective Measures Implementation (CMI). CMI will address the final design, construction, and start-up of the selected corrective measures technology. Financial assurance under 6 NYCRR 373-2.6(1)(2) and Section 3004(a) of HSWA and Section 3004(a) of HSWA will be required of the owner or operator of the facility for corrective action.

Current Status of Corrective Action at Norlite Corporation

The Norlite Corporation facility has six (6) Solid Waste Management Units (SWMU's). Both federal HSWA and State 373 Modules describe these solid waste management units, their current status and recommendations for any Corrective Action.

Also the Norlite Corporation facility has undergone a RFA Preliminary Review and Visual Site Inspection of the facility's SWMUs, conducted jointly by EPA and NYSDEC. As a result of this, these permits will require Norlite Corporation

to conduct a soil investigation to determine whether or not there is any threat to human health or the environment and the need for further investigation or Corrective Action. A Sampling Visit will be performed at the following SWMU: Tank Storage Area (See HSWA Appendix - E and 373 Appendix III-E for more details).

E. PERMIT ORGANIZATION

1. The State permit is divided into parts as outlined below:

- Permit Pages
- Module I - Standard Conditions - Covers the conditions found in 6NYCRR Subpart 373-1 and required to be included in all permits.
- Module II - General Facility Conditions - Covers the conditions found in 6NYCRR 373-2.2, 2.3, 2.4, 2.5, 2.7, and 2.8 and required to be included in all permits.
- Module III - Corrective Action Requirements - Covers all applicable conditions for corrective action at permitted facilities found in 6NYCRR 373-2.6(1).
- Module IV - Waste Minimization Requirements - Covers the requirements found in 6NYCRR 373-2.5(c)(2)(ix).
- Module V - Storage in Containers - Covers the conditions required by 6NYCRR 373-2.9 for facilities that store hazardous wastes in containers.
- Module VI - Storage in Tanks - Covers the conditions required by 6NYCRR 373-2.10 for facilities that store hazardous wastes in tanks.
- Module VII - Incineration and Energy Recovery - covers the conditions required by 6NYCRR 373-2.15 for facilities that incinerate or burn hazardous wastes for energy recovery.
- Module VIII - Land Disposal Restrictions

2. The Federal HSWA permit is divided into parts as outlined below:

- Module I - Standard Conditions
- Module II - Facility Description
- Module III - Corrective Action Requirements
- Module IV - Waste Minimization
- Module V - Land Disposal Restrictions
- Module VI - Organic Air Emission Standards for Process Vents and Equipment Leaks
- Module VII - Storage of Toxicity Characteristic Wastes in Containers
- Module VIII - Storage/Treatment of Toxicity Characteristic Wastes in Tanks

F. BASIS FOR PERMIT CONDITIONS

The permit conditions are based on the requirements of 6NYCRR 373-1 (Hazardous Waste Treatment Storage and Disposal Facility Permitting Requirements) and 6NYCRR 373-2 (Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities), 6 NYCRR 376 (Land Disposal Restrictions) as well as HSWA and its regulations.

All the attachments to the permit were taken from the Part 373 permit application submitted by Norlite Corporation on April 4, 1986 and finalized as indicated below. It is the NYSDEC's tentative determination that these attachments are consistent with 6NYCRR Subparts 373-1 and 373-2. It is USEPA's tentative determination that these attachments are consistent with RCRA, HSWA and its regulations.

COMPLETE APPLICATION DOCUMENTS:

1. 6 NYCRR 373 Permit Application dated December, 1991
2. Trial Burn Report dated April, 1989
3. Trial Burn Report dated August, 1990

4. BACT Report submitted August 15, 1989
5. Allowable Metal Concentrations Report dated December, 1991
6. Human Health Risk Assessment Report dated December, 1991

G. LEGAL REFERENCES FOR THIS PROPOSAL

Permitting requirements for facilities that treat, store or dispose of hazardous waste are promulgated under the New York State Environmental Conservation Law (pursuant to Article 19, Title 3; Article 23, Title 23; Titles 7 and 9) and at the federal level, under the Solid Waste Disposal Act as amended by RCRA and HSWA and its regulations (42 U.S.C. § 6901 et seq. and 40 C.F.R. Parts 124, 260 through 264 and 270.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278

Statement for the Norlite Corporation
Public Availability Meeting
Cohoes, New Yorkn
April 8, 1992

Norlite Corporation has submitted a permit application for the storage, treatment and incineration of hazardous waste at its facility, located in Cohoes, Albany County. This application has been submitted pursuant to the Resource Conservation and Recovery Act, known as RCRA, and the Hazardous and Solid Waste Amendments of 1984, known as HSWA. The NYSDEC has been authorized by EPA to issue the non-HSWA portion of the RCRA permit which regulates the daily operation of storage, treatment and incineration at the facility, and EPA is responsible for the issuance of the HSWA portion of the permit, which among other requirements, sets forth corrective action requirements for releases due to past waste management practices at solid waste management units (SWMUs) and areas of concerns (AOCs). The HSWA permit, in conjunction with the NYSDEC Part 373 permit, constitutes the RCRA permit. In addition, NYSDEC's Part 373 will also regulate corrective action requirements at the facility in a manner similar to the EPA HSWA permit.

EPA has made a tentative determination that Norlite Corporation's application for the HSWA permit satisfies all the requirements of appropriate EPA laws and regulations. The EPA HSWA permit would require Norlite Corporation to:

1. Develop a corrective action program for the remediation of any releases, past or future, of hazardous waste at all solid waste management units (SWMUs) at the facility. The corrective action program includes sampling at the surface impoundment, the waste pile, the dewatering area and the tank storage area to identify releases or potential releases of hazardous constituents in the soil and groundwater from these SWMUs;
2. Certify that the on-site generation of hazardous waste is minimized to the extent practicable, and submit a Waste Reduction Impact Plan;
3. Comply with the Land Disposal Restrictions;
4. Comply with the Organic Air Emission Standards for process vents and equipment leaks;
5. Comply with federal regulations applicable to the management of toxicity characteristic wastes in tanks and containers;
6. Comply with all other applicable regulatory requirements pursuant to RCRA and HSWA.

Due to the impending authorization of NYSDEC to implement the HSWA Corrective Action and the Land Disposal Restrictions programs, EPA will delete these two HSWA requirements from the final HSWA permit.

Interested persons may submit written comments on the draft HSWA permit no later than May 8, 1992 to: Mr. Andrew Bellina, Chief, Hazardous Waste Facilities Branch, U.S. Environmental Protection Agency, 26 Federal Plaza, New York, New York 10278. Further information on the draft HSWA permit may be obtained by calling Ms. Maria Jon at (212) 264-9397.