

STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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In the Matter of the Petition of  
  
NORLITE CORPORATION and  
NORTHEAST SOLITE CORPORATION

DECLARATORY  
RULING

DEC 27-16

For Declaratory Rulings

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NORLITE PETITION

Norlite Corporation ("Norlite"), by its attorneys, Whiteman, Osterman & Hanna, has petitioned the Department of Environmental Conservation ("Department") for a Declaratory Ruling, pursuant to Section 204 of the State Administrative Procedure Act and this Department's regulations at Part 619 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR"), on the issue of whether the kiln dust, or shale fines, from its aggregate kilns is a hazardous waste, or is excluded from classification as a hazardous waste, under 6 NYCRR §371.1(e)(2)(vi), as derived "from the extraction, beneficiation and processing of ores and minerals."

NORTHEAST SOLITE PETITION

Northeast Solite Corporation ("Solite"), by its attorney, Thomas S. West, Esq., has separately petitioned for two Declaratory Rulings concerning the applicability to Solite's processing facility of certain statutes and regulations which this Department enforces.

Particularly, Solite has separately petitioned for Declaratory Rulings with respect to the following two issues. First, does 6 NYCRR Part 360<sup>1</sup> apply to the Solite scrubber water storage lagoons (Lagoon Petition). Second, does that Part apply to the Solite storage area for the fines which are dredged from the lagoons (Storage Petition). Solite has requested that these two Petitions, although made at different times, be considered jointly because of the interrelationship of the two issues.

#### INTRODUCTION

The Petitions raise novel questions concerning the exclusion of mining wastes from the definition of hazardous waste, and the scope of the exemption from the permit requirement for beneficial use, reuse, legitimate recycling or reclaiming of solid waste.

It is in the public interest to grant the instant Petitions and to issue a Declaratory Ruling to inform petitioners, and the general public, whether the fines from an aggregate kiln are a hazardous waste subject to permitting, regulatory standards and the regulatory fee program, or are only a solid waste subject to less restrictive regulations.

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1. Since Solite submitted its Petitions, the Department has amended 6 NYCRR Part 360 by, inter alia, dividing the regulation into two parts. Part 360 originally covered both solid waste and hazardous waste. It now covers only solid waste, and hazardous waste is regulated by the new 370 series (Parts 370, 371, 372, 373-1, 373-2, 373-3).

Initially, it must be clarified that it is only the status of the residue that is in dispute in this Ruling. Although not an issue in the Petitions, the activity of burning listed hazardous waste fuel for energy recovery at commercial hazardous waste facilities, such as Norlite or Solite, is subject to separate regulation and requires a permit.<sup>2</sup> Such a permit requirement for the rotary kiln as a commercial hazardous waste management facility enables the Department to regulate the operation and performance of the facility and, through permit conditions, to require the facility to monitor the characteristics of the fines.

For the sole purpose of issuing this Declaratory Ruling, the Department will assume the facts set forth in the Petitions to be correct, without any formal determination as to their accuracy.

Neither the State Administrative Procedure Act nor Department

2. Permits are required for storage, treatment, or disposal of hazardous waste. ECL §27-0913. In the regulations permits are required, 6 NYCRR §373-1.2, for a hazardous waste management facility which is defined in 6 NYCRR §370.2(b)(69) as a facility used for treating, storing or disposing of hazardous wastes. Under the law, ECL §27-0901.2, and regulations, 6 NYCRR §370.2(b)(36), disposal not only encompasses the traditional destruction or landfilling of hazardous wastes but also means the burning of such wastes as fuel for the purpose of recovering usable energy. This concept, that disposal includes energy recovery, was specifically added to the statute in 1984 (L.1984, c.440) although prior to that time, and currently, energy recovery was administratively considered to be "treatment", 6 NYCRR §370.2(b)(143). In addition, while some facilities using or treating listed hazardous wastes are exempt from regulation, 6 NYCRR §§373-1.1(d)(1)(viii) and (x), neither Norlite nor Solite is exempt because they are commercial hazardous waste facilities, 6 NYCRR §370.2(b)(21), in that they receive their listed hazardous wastes from other entities located off-site.

regulations concerning Declaratory Rulings, 6 NYCRR Part 619, provides authorization or procedures for the determination by the Department of the accuracy of facts alleged in a petition for a Declaratory Ruling. The binding effect of the Ruling will accordingly be limited by its assumed factual predicates. Power Authority of the State of New York v. NYSDEC, 58 N.Y.2d 427, 461 N.Y.S.2d 769 (1983). Of course the Department can take official notice of facts. And, particularly with Solite, adjudicatory hearings on the pending renewal applications will result in fact finding as one step in the Department's decision-making process.

#### NORLITE FACTS

Norlite operates a lightweight aggregate production facility in the City of Cohoes, New York. The production is a mineral beneficiation process whereby crushed shale is continuously fed through a rotary kiln where it is heated to temperatures ranging from 2,050 degrees to 2,150 degrees Fahrenheit. At that elevated temperature, the mineral generates a gas that expands the mineral to a porous substance that will retain its physical strength when cooled despite its lighter unit weight. The final product is sized using crushers and screens, and it is then used in the production of lightweight building materials for bridges and other construction products.

Norlite, like other lightweight aggregate producers, uses a fuel mixture of industrial spent solvent fuel, No. 6 fuel oil,

natural gas and coal for its two kilns. The low-grade solvent fuels are used to reduce energy cost. Under State law the burning of hazardous waste for energy recovery purposes requires a hazardous waste management facility permit, and Norlite currently has such a permit (#0868) which will expire October 1, 1986.

The primary waste from the beneficiation process is shale fines. In the kilns' air emission control system, particulates (i.e., shale fines) are removed from the kiln exhaust gas by passing the gases through a scrubber system consisting of a venturi wet scrubber and Western Precipitator Model 64 D wet polishing scrubber. Exhaust gases are vented to a stack and the scrubber water effluent is discharged into the settling pond. A smaller amount of kiln dust is collected dry from the kiln before it reaches the venturi scrubber. The dry kiln dust is sluiced into the settling pond. After settling, the water is discharged under authority of SPDES permit (#NY-000 4880) to the Salt Kill.<sup>3</sup>

The shale fines are periodically dredged from the settling pond by a clamshell and crane, then stored temporarily in a dewatering area adjacent to the pond and eventually hauled to a waste pile storage area. Norlite estimates that the shale fines are generated at a rate of four tons per hour per kiln. Assuming

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3. This fact was not stated in the Petition. The permit provides for a maximum flow of 900,000 gallons per day and requires periodic sampling of the wastewater discharge, primarily for heavy metals.

that each kiln is operating 60 percent of the time, the annual shale fine generation rate is 42,048 tons per year.

Norlite claims that the shale fines have value as a cover material for municipal solid waste landfills because of their low permeability (less than  $10^{-5}$  cm/sec).<sup>4</sup> In recent years, however, the shale fines have been stored in waste piles at Norlite's plant. Norlite anticipates seeking authority to transport some of the shale fines to the Colonie Municipal Landfill for use as a cover material. Norlite has submitted an application to the Department for the construction of a solid waste landfill for the remainder of the fines and has thereby conceded that the shale fines are a solid waste.

#### SOLITE FACTS

Solite is a corporation, organized and existing under the laws of the State of New York, with its principal place of business located at Mt. Marion, New York. Until the fall of 1982 Solite used mixed industrial solvents and spent lubricating oils as its primary fuel source. Solite used these waste fuels because they are substantially less expensive than traditional fossil fuels such as coal and oil. The lightweight aggregate

4. Without commenting on the validity of this statement, I note that 6 NYCRR §360.8(b)(1)(viii) states that cover material at a sanitary landfill shall reduce to a minimum infiltration of water into a solid waste cell. Also 6 NYCRR §360.8(b)(1)(xvii) requires a liner that restricts infiltration to the equivalent of five feet of soil at hydraulic conductivity of  $10^{-5}$  cm/sec or less.

manufacturing process is fuel intensive, and many lightweight aggregate manufacturing facilities throughout the United States have ceased operating in the past fifteen years because of the increasing cost of coal and oil. Solite receives its fuels from Industrial Environmental Systems, Inc. which operates a facility adjacent to Solite's facility solely for the purpose of receiving, blending, storing and supplying those fuels to Solite.

The Solite facility includes three high-temperature rotary kilns which are used for processing shale rock into lightweight aggregate. Solite uses only shale rock mined at its property adjacent to the rotary kilns. After being mined, the shale is transported by truck to the kiln area where it is crushed, stockpiled and then fed into the kilns. Inside the kilns, the shale is converted into lightweight aggregate through the application of intense heat.

The combustion exhaust gases created in the rotary kilns contain shale-derived particulates which are commonly referred to as "fines". Particulate emission from the kilns are controlled by three separate wet scrubbers -- one for each kiln -- and a waste water recycling system. The function of the waste water recycling system is to recycle the water utilized in the wet scrubbers.

After the water passes through a wet scrubber, it is routed to a rubber-lined concrete trough, where a slurry consisting of soda ash and water is added to neutralize the pH of the water. The resulting mixture then flows further down the rubber-lined concrete trough to one of two primary settling lagoons. The

lagoons are used for the purpose of settling out the shale-derived fines and soda ash from the water. Solite alternates the use of the settling lagoons so that the fines in each of the settling lagoons can be periodically dredged and placed in the fines storage area adjacent to the settling lagoons.

Each of the two primary settling lagoons is connected to a third lagoon by an overflow pipe. The third lagoon acts as an area where additional settling takes place and from which water is pumped back to the scrubbers for reuse. Following reuse in the scrubber, the process repeats itself. Unlike Norlite which has a SPDES permit to discharge the water, Solite continuously circulates the water. However, approximately 30 percent of the water is lost, allegedly due to evaporation from the scrubbers, and Solite must continually add water to this system. The lagoons are constructed of clay to prevent leakage and allegedly meet the hydraulic conductivity requirements of the Department.

Solite began accumulating fines in the fines storage area in 1971 shortly after it installed wet scrubbers on its rotary kilns and constructed the settling lagoons to treat and recycle the scrubber water. The fines storage area is located to the east of and adjacent to the settling lagoons and presently occupies an area of approximately 2.8 acres. The stored fines vary in depth from approximately five feet to a maximum of 25 feet.

As mentioned previously, the fines consist of shale-derived particles generated during the shale expansion process in the rotary kilns and removed from the kiln exhaust gases during



scrubbing. The fines also contain cement kiln dust which, until August 1984, Solite added to maintain the pH of the scrubber water at approximately 5.5 to 6.0. In the future, the fines dredged from the lagoons will contain some small amount of undissolved soda ash from the neutralizing process implemented in August 1984.

The fines are dredged from the settling lagoons by a clamshell every six to eight months, depending upon the rate of production. Approximately 23,000 cubic yards of fines are stored at the fines storage area as of September 1, 1984. Each cubic yard of fines weighs approximately 2,700 pounds. Therefore, as of September 1, 1984, the fines storage area contained 31,077 tons of fines. However, considerably less soda ash than cement dust is required to neutralize the pH of the scrubber water. Also, approximately 95 percent of the soda ash dissolves in the scrubber waste and, therefore, does not settle out as fines. Accordingly, Solite estimates that in the future approximately 1,248 cubic yards (1,685 tons) of fines will be generated each year for each of the three kilns operating at normal production levels.

Solite has explored a number of markets for the fines and alleges that in recent years it has successfully marketed the fines as impermeable berm material for septic tank drain fields and, in combination with crushed shale, as pipe bedding and fill. Between August 1981 and July 1984, Solite sold approximately 5,228 cubic yards (or 7,057 tons) of fines. The average price for both categories of fines was approximately \$1.75 per ton.

It has been difficult for Solite to sell the fines during the past several years although Solite claims to have developed an additional market for the fines as landfill cover. In 1984 Solite stopped all fines marketing activities pending the outcome of this petition.

In a supplemental filing Solite submitted additional information concerning groundwater contamination in the vicinity of the lagoons. That information indicates that violations of the groundwater standards (6 NYCRR §703.5) were found for chlorides, sulfate, arsenic, iron, lead, manganese, selenium and phenols.

#### ISSUES

The primary issue raised by the Petitions is whether the fines are excluded from being a hazardous waste pursuant to the mining waste exclusion, 6 NYCRR §371.1(e)(2),<sup>5</sup> or whether the fines are a hazardous waste because they are derived from a listed hazardous waste (the hazardous waste fuel), §371.1(d)(3)(ii)(a),

5. The mining waste exclusion is found in 6 NYCRR §371.1(e)(2) which states, in relevant part, that

The following solid wastes are not hazardous wastes:

\* \* \* \*

(vi) Solid waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore.

\* \* \* \*

and remain a listed hazardous waste until officially removed from that category through a petition process, 6 NYCRR §§371.1(d)(4)(ii) and 370.3(c). A second issue raised by the Solite Petition is whether the fines are exempt from regulation as a solid waste because of the beneficial reuse/recycle exemption of 6 NYCRR §360.1(f)(1)(ix).

#### DISCUSSION

Various studies and chemical analyses have been done on the shale fines sludge by Norlite and Solite. Copies of those reports were submitted in the Appendix to the Norlite Petition at tabs A through E, and in the Appendix to the Solite Petition at tabs D through H, and in a supplemental submittal. The Petitioners claim that these studies, although not definitive, indicate that the shale fines are not a characteristic hazardous waste under 6 NYCRR §371.3.<sup>6</sup>

If the fines were a hazardous waste Norlite and Solite would not only be subject to stricter standards for hazardous waste management facilities (that treat, store or dispose of hazardous waste) under 6 NYCRR Parts 370-373, but also to the greater

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6. As noted above, DEC must assume the accuracy of the facts presented in the petition. No opinion is expressed on whether these samples were representative of fines created when the facility was burning hazardous waste fuel or on the quality assurance or quality control in the analysis of those samples. Also, DEC believes that additional analyses and investigations are needed.

regulatory fees under 6 NYCRR Part 483 applicable to a hazardous waste management facility for a surface impoundment or landfill. Classification of the fines as hazardous waste would also subject Norlite and Solite to the special assessment on hazardous waste, ECL §27-0923.

#### Relationship of Federal and State Program

The language of the State mining waste exclusion regulation is identical to the language of the federal mining waste exclusion regulation. Because the State mining waste exclusion is based on the federal mining waste exclusion, it is necessary to explain the relationship between the State and federal programs before the federal and State mining waste exclusion can be discussed.

The federal statute, the Resource Conservation and Recovery Act of 1976 ("RCRA"), sets forth a comprehensive program of regulating hazardous waste from "cradle to grave". RCRA does not preempt the field of regulation; rather it specifically provides that a state can receive authorization from the United States Environmental Protection Agency ("EPA") to implement an equivalent or stricter state program in lieu of the federal program, and can receive grants for the equivalent state program. In order to qualify for authorization (interim or final) the state program, including regulations, must be "substantially equivalent" (interim) or the "equivalent" (final) of the federal program. 42 U.S.C. §6926. The State program may also be more stringent

than the federal program and still receive or retain authorization.

Statutory time frames allow a state program to temporarily lag behind the continuously evolving federal statutory and regulatory hazardous waste program, but require the state to eventually implement, at a minimum, the new federal program or otherwise jeopardize its authorization to act in lieu of the federal program. New York received, in December 1983, Phase I "interim" authorization to act in lieu of the federal program, generally in the areas of identifying hazardous waste standards, transporter standards and standards for interim status facilities. An application for final authorization is pending and a decision is expected in April 1986. Consequently, the New York State program is either constantly tracking the federal program or is implementing stricter standards or criteria.<sup>7</sup>

#### The EPA Position

The federal mining waste exclusion is expressly statutory, whereas in New York State it is only regulatory. The federal mining waste exclusion was added to RCRA in 1980, and it excluded from the definition of a hazardous waste any "solid waste from the extraction, beneficiation and processing of ores and minerals,

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7. A discussion of the status of the New York State program can be found in the EPA Notice of its tentative determination to approve the program. 50 Fed. Reg. 631-33 (1986).

including phosphate rock and overburden from the mining of uranium ore." 42 U.S.C. §6921(b)(3)(A)(ii).<sup>8</sup> The EPA regulation implementing this provision only added the parenthetical phrase "including coal". 40 C.F.R. §261.4(b)(7), as added by 45 Fed. Reg. 76,618 (1980).

However, this mining waste exclusion is temporary; it exists only until the studies required by RCRA are done by EPA. Under the statute, 42 U.S.C. §6921(b)(3)(A), mining wastes, if hazardous, can then be regulated as hazardous wastes but only six months after the issuance of the mining studies and only after regulations are promulgated to control such wastes. These studies were required by Congress to be completed by October 1983. Part of the studies were completed and issued in January 1986, and although they encompass extraction and beneficiation (not

8. 42 U.S.C. §6921(b)(3)(A) states that:

Notwithstanding the provisions of paragraph (1) of this subsection, each waste listed below shall, except as provided in subparagraph (B) of this paragraph, be subject only to regulation under other applicable provisions of Federal or State law in lieu of this subchapter until at least six months after the date of submission of the applicable study required to be conducted under subsection (f), (n), (o), or (p) of section 6982 of this title and after promulgation of regulations in accordance with subparagraph (C) of this paragraph:

(i) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

(ii) Solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore.

(iii) Cement kiln dust waste.

processing) they do not cover the burning of hazardous waste in aggregate kilns. According to EPA, studies on process wastes will not be done for many years.

There is very little legislative history on the intent and scope of this statutory mining waste exclusion. It was based upon an earlier (1978) regulatory proposal (never adopted) by EPA to delay regulation of special categories of waste (primarily high volume, low toxicity) because it was more urgent to regulate extremely hazardous waste first and also because insufficient data was available to determine appropriate management techniques. 43 Fed. Reg. 58,946 (1978). Nor is any reference made in the legislative history of the mining waste exclusion as to whether it applies to the situation where hazardous waste is used as a fuel in the mining operation. However, in promulgating the regulations to implement the 1980 statutory mining waste exclusion EPA stated it did not intend the exclusion to apply "to solid waste, such as spent solvents, pesticide wastes, and discarded commercial products that are not uniquely associated with these mining and allied processing operations...." 45 Fed. Reg. 76,619 (1980). Nevertheless EPA has twice interpreted the fines from an aggregate kiln to be excluded from being a hazardous waste based on the mining exclusion of 40 C.F.R. §261.4(b)(7).

On August 15, 1984, John H. Skinner, Director, Office of Solid Waste, EPA, Washington D.C. wrote to EPA Region II and expressed the opinion, in a regulatory interpretation, that the Norlite fines are exempt from regulation under Subtitle C of RCRA

by virtue of the mining waste exclusion of 40 C.F.R. §261.4(b)(7).

He stated, in part, that

Section 261.4(b)(7) provides an exemption from Subtitle C control for "Solid wastes from the extraction, beneficiation, and processing of ores and minerals...". In the preamble to the rule providing this exemption, the Agency said we would interpret the exclusion to include solid waste from the exploration, mining, milling, smelting, and refining of ores and minerals. (See 45 Federal Register 76618-76619, November 19, 1980.) This interpretation includes residuals from mineral processing, including air emission control wastes.

The process that Norlite uses involves heating shale to produce a lightweight aggregate, thus enhancing its value. This approach is analogous to many other thermal processes used to dry, smelt, or otherwise upgrade an ore or mineral. Therefore, the Norlite process would be considered beneficiation or processing, and the wastes from that process fall within EPA's current interpretation of the §261.4(b)(7) exclusion. The use of hazardous waste fuels as the total or partial energy source does not, in our opinion, change the status of the waste as beneficiation or processing waste.

Similarly on March 13, 1985, Walter E. Mugdan of the Office of Regional Counsel, EPA Region II, in responding to a similar inquiry from the Department concerning the status, under EPA regulations, of the fines from the aggregate kiln at Solite, stated that:

Based upon the current regulations, the Region would have to agree with the opinion in the Skinner memorandum that the use of hazardous waste fuels as the total or partial energy source does not change the status of the waste as beneficiation or processing waste.

In addition, the recently promulgated EPA final regulation on waste oil included a discussion of the mining waste exclusion (and cement kiln exclusion) that implicitly reaffirms that the mining



waste exclusion applies even when hazardous wastes are used for energy recovery:

We note that the exclusions (from regulations as hazardous waste) for certain large volume wastes produced by facilities under the "mining waste" exclusion of §261.4(b)(7) may apply to certain industrial furnaces burning hazardous waste or used oil. Any such exclusions apply (pending development of the boiler and industrial furnace permit standards) irrespective of whether the devices burn hazardous waste or used oil for energy recovery given the likely effect of dilution of any contaminants attributable to the hazardous waste or used oil. Similarly, the exclusion for cement kiln dust provided by §261.4(b)(8) applies irrespective of whether the kiln burns hazardous waste or used oil for energy recovery.

50 Fed. Reg. 49,190, fn.89 (1985). Thus EPA will address the status of residuals from an industrial furnace, which specifically includes an aggregate kiln, when it proposes permit standards for boilers and industrial furnaces.

In addition EPA is proposing to narrow the mining waste exclusion to eliminate certain processing wastes from the exclusion in accordance with its revised interpretation of the Congressional intent behind the 1980 amendment. See 50 Fed. Reg. 40,291 (1985). In connection with the original promulgation of the regulations to implement the 1980 amendments, EPA expressed its uncertainty about how broad this exemption was meant to be and consequently issued the regulation as interim final, intending to

review the matter quickly.<sup>9</sup> Nonetheless, the current proposal to clarify the exclusion would keep the exclusion intact for extraction and beneficiation; thus keeping the exclusion for Norlite and Solite. 45 Fed. Reg. 76,618 (1980).

Finally, in the Hazardous and Solid Waste Amendments of 1984, Congress, which largely tightened control over the disposal of hazardous waste, nevertheless moved in the opposite direction for hazardous wastes that are special wastes, including mining wastes. The Administrator of EPA was granted authority to relax the general standards for the disposal of hazardous waste when the special characteristics of mining wastes, practical difficulties with such requirements or site-specific characteristics dictate

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9. EPA stated in the rulemaking that

The Agency, for the time being, is interpreting the scope of these exclusions broadly but is unsure that this interpretation is consistent with the intent of Congress. Therefore, over the next 90 days, it intends to carefully examine the legislative history of the statutory amendment and consider the public comments being solicited by this action. Based on this review, the Agency, in subsequent rulemaking action, may further narrow the exclusion being promulgated today.

45 Fed. Reg. 76,618 (1980). It has taken five years rather than 90 days to perform this review.

otherwise.<sup>10</sup> Congress thus reinforced the concept that special wastes may qualify for relaxed requirements and specifically authorized different standards for these wastes. Consequently, both Congress and the hazardous waste management program in EPA are moving toward regulation of mining waste in a manner different from other hazardous wastes.

#### Department Regulations

In New York State the mining waste exclusion is not statutory and exists only in regulations, as added to 6 NYCRR Part 360 in 1981. The Environmental Conservation Law (ECL) provision on identification and listing of hazardous waste, ECL §27-0903, is

10. The 1984 amendments added 42 U.S.C. §6924(x) which reads as follows:

(x) Mining and other special wastes

If (1) solid waste from the extraction, beneficiation or processing of ores and minerals, including phosphate rock and overburden from the mining of uranium, (2) fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, or (3) cement kiln dust waste, is subject to regulation under this subchapter, the Administrator is authorized to modify the requirements of subsections (c), (d), (e), (f), (g), (o) and (u) of this section and section 6925(j) of this title, in the case of landfills or surface impoundments receiving such solid waste, to take into account the special characteristics of such wastes, the practical difficulties associated with implementation of such requirements, and site-specific characteristics, including but not limited to the climate, geology, hydrology and soil chemistry at the site, so long as such modified requirements assure protection of human health and the environment.

The cited requirements are basically those relating to liquids in landfills, prohibitions on land disposal, minimum technological requirements, deep well injection, corrective action and interim status surface impoundments.

general in its charge to the agency.<sup>11</sup> In contrast, as previously discussed, the federal mining exclusion has a statutory origin -- it was added to the statute and regulations in 1980 and was given a broad interpretation by EPA in its original rulemaking.

The Department's hazardous waste program was still developing at the time that EPA promulgated the federal list of hazardous wastes. The federal list was promulgated by EPA in May 1980 to be effective in November 1980.<sup>12</sup> The ECL initially stated that the Department should adopt the State version of such a list no later

11. In addition it should be noted that the regulation of hazardous waste by New York State is to be consistent with RCRA. ECL §27-0900 states:

It is the purpose of this title to regulate management of hazardous waste (from its generation, storage, transportation, treatment and disposal) in this state and to do so in a manner consistent with public law 94-580, the Federal Resource Conservation and Recovery Act of 1976 hereinafter referred to as "RCRA". Nothing in this title shall authorize the department to adopt or amend any rule or regulation in a manner less stringent than provided in RCRA.

It is noteworthy that the last sentence clarifying that the State can be more stringent was added four years (C.858, L.1982) after the original enactment (C.639, L.1978).

12. 40 C.F.R. §261, as added by 45 Fed. Reg. 33,084 (1980).

than six months after the federal list. ECL §27-0903.1.<sup>13</sup> The Department proposed such a list in April 1981, but the Legislature, in passing a law creating a new criminal enforcement statutory scheme within the ECL to increase significantly the criminal sanctions for illegal possession, transportation or disposal of and unlawful dealing in hazardous wastes, mandated that the Department immediately promulgate and implement as regulations the federal list in effect. C.719, L.1981, adding ECL §27-0903.4.<sup>14</sup>

To comply with this directive, the Department first promulgated the list of hazardous wastes, 6 NYCRR Part 366, by

13. At that time ECL §27-0903.1 stated:

Not later than six months after the promulgation of the regulations for the identification and listing of hazardous wastes by the administrator as provided in RCRA, section 3001, the commissioner shall promulgate regulations in a manner consistent with the state administrative procedure act, setting forth the criteria for identification or listing, and a list of, hazardous wastes which shall be as promulgated by the administrator. These criteria and the accompanying list shall identify the particular hazardous wastes which shall be subject to this title.

14. ECL §27-0903.4 stated:

The commissioner shall immediately promulgate and implement, as regulations, those hazardous wastes and acute hazardous wastes listed, or identified by characteristics in regulations promulgated by the administrator as provided in section 3001 of RCRA, which regulations are in effect on the effective date of this subdivision, in order to provide reasonable and adequate protection to the lives, safety and health of the people of the state.

This subdivision was to expire on the date that the list of hazardous substances was promulgated.

emergency adoption in September 1981. In so doing, the Department adopted wholesale most of Part 261 of the federal regulations by citing the applicable sections of the federal regulation. In this emergency adoption the Department specifically cited 40 C.F.R. §261.4 which contained the federal mining exclusion from the definition of hazardous waste. This emergency rulemaking was followed, in January 1982, by normal rulemaking by the Department of hazardous waste regulations, based on Part 261 of the federal regulations. The Department adopted the EPA mining exclusion by adopting the same language without any changes.

In September 1984, the Department proposed to separate the hazardous waste regulations from the solid waste regulations (Part 360 series) and proposed a new Part 370 series. The new series was final effective July 14, 1985. Again the mining exclusion was carried forward unchanged, 6 NYCRR §371.1(e)(2), and there was no indication that the mining exclusion should be interpreted differently.

In January 1986, the Department again proposed amendments to the Part 370 series that would incorporate the changes which were made to the federal RCRA statute and to the EPA regulations that occurred since the State's original application for final authorization was filed. The purpose of the proposal was to impose State requirements at least as stringent as the new federal requirements so that final RCRA authorization, which is expected by April 1986, could be retained in the future. Again no

distinction was made between the federal and State language or interpretation of the mining waste exclusion.

The Derived-From Rule

The argument in favor of declaring the fines to be a hazardous waste is commonly referred to as the "derived-from rule". Both the federal<sup>15</sup> and State<sup>16</sup> regulations state that a waste generated from the treatment of a hazardous waste remains a

15. The federal provision is 40 C.F.R. §261.3(c), especially (c)(2)(i), which states:

(c) Unless and until it meets the criteria of paragraph (d):

(1) A hazardous waste will remain a hazardous waste.

(2) (i) Except as otherwise provided in paragraph (c)(2)(ii) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

The reference to paragraph (d) is a reference to the delisting procedures. For our purposes (d)(2) is the specific provision:

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in Subpart C.

(2) In the case of a waste which is a listed waste under Subpart D, contains a waste listed under Subpart D or is derived from a waste listed in Subpart D, it also has been excluded from paragraph (c) under §§260.20 and 260.22 of this Chapter.

16. Footnote 16 is on the following page.

hazardous waste. For wastes that are listed hazardous wastes the only way to remove them from the category of listed hazardous waste is to formally petition for their removal, a procedure commonly referred to as delisting.<sup>17</sup> The hazardous waste fuels

16. The "derived-from" rule is found in 6 NYCRR §371.1(d)(3)(ii)(a). To place it in context, all of paragraphs (3) and (4) are provided:

(3) Unless and until it meets the criteria of paragraph (4) of this subdivision:

(i) A hazardous waste will remain a hazardous waste.

(ii) (a) Except as otherwise provided in clause (b) of this subparagraph, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate is a hazardous waste.

(b) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(1) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC codes 331 and 332).

(4) Any solid waste described in paragraph (3) of this subdivision is not a hazardous waste if it meets the following criteria:

(i) In the case of any solid waste, it does not exhibit any of the characteristics of a hazardous waste identified in section 371.3.

(ii) In the case of a waste which is a waste listed under section 371.4, contains a waste listed under section 371.4 or is derived from a waste listed under section 371.4, it also has been excluded from paragraph (3) of this subdivision under 6 NYCRR subdivisions 370.3(a) and (c). 6 NYCRR 370.3(c) provides for the petitioning for exclusion of a listed waste produced at a particular facility.

17. As noted in footnote 14, the federal delisting procedures are found at 40 C.F.R. §§260.20 and 260.22. The State provisions are found at 6 NYCRR §370.3(c).



burned at Norlite and Solite are listed hazardous wastes and consequently they would remain listed hazardous wastes until formally delisted. Under this interpretation the fines, which result from the burning of listed hazardous waste fuels, are derived from such listed hazardous wastes and must be treated as hazardous until formally delisted, regardless of their characteristics.

However, under the regulatory analysis in both the federal and State regulations, the derived-from rule is not reached if a waste has been excluded from being hazardous waste. Once it has been established that a waste is a solid waste (conceded by Norlite and Solite in the Petitions), it must be ascertained whether the solid waste is a hazardous waste under

18. In relevant part, the definition of a hazardous waste states, in 6 NYCRR §371.1(d)(1) that

A solid waste is a hazardous waste if:

- (i) It is not excluded from regulation as a hazardous waste under paragraph 371.1(e)(2); and
- (ii) It meets any of the following criteria:
  - (a) It exhibits any of the characteristics of hazardous waste identified in section 371.3.
  - (b) It is listed in section 371.4 and has not been excluded from the lists in section 371.4 under the provisions of subdivisions 370.3(a) and (c) of this Title.
  - (c) It is a mixture of solid waste and a hazardous waste that is listed in section 371.4 solely because it exhibits one or more of the characteristics of hazardous waste identified in section 371.3, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in section 371.3.

(Note: Mixing may be a form of treatment and require a Part 373 permit.)

- (d) It is a mixture of solid waste and one or more hazardous wastes listed in section 371.4 and has not been excluded from this paragraph by petition under 6 NYCRR 370.3(a) and (c)....

6 NYCRR §371.1(d)<sup>18</sup> or, in the case of the fines, whether the waste is excluded under 6 NYCRR §371.1(e)(2), i.e., the exclusion for wastes from the "extraction, beneficiation and processing of ores and minerals". As concluded above, there is no basis in State law or regulation on which to interpret the State exclusion differently from the federal exclusion which has been found to encompass the fines.

Both the federal and State regulations explicitly provide that the mining exclusion, if applicable, applies regardless of whether the solid waste is a listed hazardous waste, a mixture of a listed hazardous waste and a solid waste, or possesses the characteristics of a hazardous waste.<sup>19</sup> Accordingly, the mining exclusion is total with respect to the fines; and the regulatory analysis does not reach the derived-from rule.

#### The Recycling Exemption

Even though the fines are not a hazardous waste, the issue still remains whether they should be regulated as a solid waste.

19. 6 NYCRR §371.1(d)(2) states:

A solid waste which is not excluded from regulation under subparagraph (1)(i) of this subdivision becomes a hazardous waste when any of the following events occur:

(i) In the case of a waste listed in section 371.4, when the waste first meets the listing description therein.

(ii) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in section 371.4 is first added to the solid waste.

(iii) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in section 371.3.

(Emphasis added). The federal counterpart is 40 C.F.R. §261.3(b).

Norlite concedes that the fines are a solid waste and, in addition, has pending before the Department an application to construct a solid waste landfill on-site to contain the fines. Consequently, there is no further issue to be resolved with Norlite.

Solite, however, asserts that although the fines are a solid waste, they are not subject to regulation as a solid waste because they are being recycled and thus are exempt from regulation as a solid waste pursuant to 6 NYCRR §360.1(f)(1)(ix).<sup>20</sup> In essence, Solite claims it is storing nonputrescible solid waste prior to its beneficial use. It may be that the relative quantities of fines generated at Solite and Norlite accounts for the difference in the companies' approach to regulation of this material --

20. 6 NYCRR §360.1(f)(1)(ix) is the regulation which exempts facilities that beneficially use non-putrescible solid waste:

Any operation or facility which receives or collects only non-putrescible solid waste, and beneficially uses or reuses or legitimately recycles or reclaims such waste, or stores or treats such waste prior to its beneficial use or reuse or legitimate recycling or reclamation is exempt. Said operations or facilities include, but are not limited to, automobile junkyards, citizen programs, metal recovery from non-hazardous sludges, municipal operations, secondary materials dealers and private and commercial salvage activities which collect, separate, clean or assemble materials including, but not limited to paper, corrugated board, metals, containers, glass, white goods, textiles and rubber.

(Note: By exempting the beneficial use or reuse or legitimate recycling or reclamation of non-putrescible solid waste and the treatment of such waste prior thereto, this subparagraph retains its prior exemption of any facility receiving or collecting such waste that 'prepares recyclable or recovered materials for sale, reuse, or transport to purchasers'.)

Norlite generates approximately 40,000 tons per year; Solite generates approximately 5,000 tons per year.

Solite's Petition reveals that Solite began accumulating fines in 1971 and, as of September 1, 1984, has stored 31,077 tons of fines. Solite estimates that approximately 5,055 tons of fines will be produced each year (1,685 tons per kiln multiplied by three kilns). However in the three-year period of August 1981 to July 1984, a total of 7,057 tons of fines were sold -- an average of 2,352 tons per year. Thus Solite is accumulating fines at the rate of 2,703 tons per year (5,055 tons generated less 2,352 tons sold). Consequently Solite is adding 2,703 tons per year to the 31,077 tons already on-site.

Nevertheless, Solite contends that, because the fines consist in large part of the same material as the Solite finished product, Solite considers the fines as product rather than as waste material, and their placement adjacent to the lagoons is storage rather than disposal. However, Solite concedes that the fines are a solid waste because they are a sludge (Lagoon Petition, p.15, footnote 11). Even in the absence of such concession the fines would be a solid waste because they are a mining by-product that sometimes is discarded. 6 NYCRR §§360.1(c)(2)(iii), 360.1(c)(5).

That the fines are being discarded is evident from the above facts indicating a large backlog of fines (31,077 tons) and an annual accumulation of an additional 2,703 tons. Furthermore, the facts of Norlite indicate that similar fines are discarded in the usual course of commercial business by an aggregate plant.

To overcome this mounting accumulation, Solite argues that a higher amount of sales is a potential, and that the rate of sales should not be the only factor in determining whether there is beneficial use of the fines. However, Solite has accumulated fines over 15 years and continues to accumulate fines. Solite is disposing of the fines and cannot be said to be merely storing them.

#### The Disposal Areas

The above analysis concludes that, although the fines are not a hazardous waste because of the mining exclusion, the fines do remain a solid waste and are subject to the solid waste regulations.

Norlite concedes, and the facts of Solite reveal, that disposal of the fines is occurring at the facilities. As such the Solite and Norlite disposal sites are solid waste management facilities, 6 NYCRR §360.1(d)(67), which need a permit, 6 NYCRR §360.2, because disposal (whether on-site or off-site) is not exempted from a permit, 6 NYCRR §360.1(f). The permitted facility must meet the general requirements for all solid waste management facilities, 6 NYCRR §360.8(a), and the specific requirements for a sanitary landfill, 6 NYCRR §360.8(b)(1), unless a variance has been granted from any of these substantive provisions, 6 NYCRR §360.1(g).

Because the Department hereby rejects Solite's contention that the fines are being stored by Solite for beneficial reuse,

Solite, like Norlite, must apply for and obtain a solid waste management permit for the disposal area.

#### The Solite Settling Lagoon

Since the fines are currently only a solid waste at Solite (due to the mining exclusion), the settling lagoon at Solite is not a hazardous waste management facility and thus requires no hazardous waste management facility permit.

However, since the fines are a solid waste, the settling lagoons are part of a solid waste treatment system (scrubber plus settling lagoons). Because the treatment system treats solid waste originating off-site, and entering Solite initially as hazardous waste fuel<sup>21</sup> it does not fall under the exemption for an on-site treatment system, 6 NYCRR §360.1(f)(1)(iii).

In addition, based on available information, although the lagoon is part of an off-site solid waste treatment facility, it could also be a disposal facility if solid waste is being discharged into groundwaters of the State, and this activity requires a solid waste permit for the following reasons. Permits are required for solid waste management facilities, 6 NYCRR §360.2, and a surface impoundment is specifically mentioned in the definition of a solid waste management facility, 6 NYCRR

21. See footnote 2 for a discussion of why Norlite and Solite are commercial hazardous waste facilities, and consequently also off-site solid waste management facilities since the listed hazardous waste fuel originates off-site.

§360.1(d)(67). Under the general requirements for all solid waste management facilities, groundwater is to be protected, 6 NYCRR §360.8(a)(1) and (3). A surface impoundment, defined in 6 NYCRR §360.1(d)(70), that allows leaching into the soil and groundwater is essentially a disposal facility, 6 NYCRR §360.1(d)(20), since disposal is defined at 6 NYCRR §360.1(d)(19) to mean

the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water, so that such waste or any constituent thereof may enter the environment, or be emitted to the air, or discharged to any waters, including groundwaters, of the state.

As noted by Solite<sup>22</sup> there are concentrations of inorganic materials violating groundwater standards immediately down gradient of the lagoons. One possible source of this contamination is leaching from the lagoons. The lagoons, however, are allegedly constructed of clay to prevent leakage and to meet the hydraulic conductivity requirements of the Department, and the scrubber water treatment system is allegedly designed to be a closed system to avoid intentional or accidental discharges to the environment. Yet 30 percent of the water is lost, allegedly due to evaporation from the scrubbers, and Solite must continually add water to the system.

However, it cannot be ascertained from the information now before the Department whether the lagoons are a source of this

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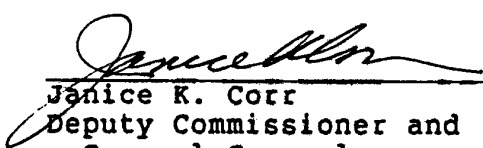
22. Letter from Thomas S. West, Esq. to Nicholas A. Robinson (December 12, 1983).

contamination. That information should be obtained through other Department proceedings, primarily the pending permit hearings. Suffice it to say that groundwater contamination must be abated and, if this contamination results from leaching from the lagoons, the solid waste management facility permit must control acceptable leaching, or the leaching must be abated in keeping with the intent to have a closed system for the scrubber water.

#### CONCLUSION

For the above reasons, I determine that the fines are currently not a hazardous waste because of the mining exclusion, but are a solid waste and subject to regulation as such. Consequently, Norlite and Solite need a solid waste management facility permit for the disposal sites, and Solite also needs a solid waste management facility permit for the lagoons.

DATED: Albany, New York  
April 11, 1986

  
Janice K. Corr  
Deputy Commissioner and  
General Counsel