

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Original
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MAY 24 1991
ISLIP RESOURCE RECOVERY AGENCY

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In the Matter of the Alleged Violation
of Articles 27 and 71 of the New York
State Environmental Conservation Law & Part
360 of Title 6 of the Official Compilation
of Codes, Rules and Regulations of the State
of New York (6 NYCRR), by

ORDER ON CONSENT

FILE NO.1-4421-90-12

TOWN OF ISLIP AND THE ISLIP
RESOURCE RECOVERY AGENCY

(Suffolk County) Respondents
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FINDINGS

WHEREAS, Respondents agreed with the New York State Department of Environmental Conservation (called in this Order, the "Department") to the terms and condition of an Order on Consent effective December 18, 1990 (called in this Order, "the Order").

WHEREAS, pursuant to the terms and conditions of the Order, Respondents are authorized to implement a demonstration and beneficial use project that contemplates treatment of visibly on-specification ash (defined in Appendix B of this Order) generated by Respondents' waste-to-energy facility by a process known as Rolite and the use of visibly on-specification ash at Respondents' Blydenburgh Landfill as part of the closure plan for that landfill (called in this Order, the "Project").

WHEREAS, the Order established conditions of the Project, including requirements concerning the nature of any ash that was to be incorporated into the Project.

WHEREAS, Respondents have submitted to the Department and the Department has agreed to consider a conceptual proposal to modify the Project which may require modification of certain conditions in the Order regarding the Project.

WHEREAS, both parties recognize that successful demonstration of the efficacy of using Rolite-treated ash residue generated from a solid waste incinerator in compliance with applicable Department regulations as a gas migration layer that could be incorporated into closures of municipal landfills would advance the public interest by providing an environmentally sound alternative to landfill disposal of untreated ash.

WHEREAS, due to severe technical and legal difficulties resulting from litigation between Respondents and the company which initiated construction of Respondents' waste-to-energy facility, Respondents were unable, until March 1991, to implement all measures necessary and desirable to improve the operation and design of the waste-to-energy facility. As such, problems exhibited with excessive levels of carbon matter in the ash generated by the waste-to-energy facility could not be effectively addressed.

WHEREAS, Respondents are implementing a Department-approved protocol which establishes a strict regime to reduce the level of carbon in the ash generated from the waste-to-energy facility.

WHEREAS, Respondents have continued to implement a solid waste management program consistent with Environmental Conservation Law section 27-0106. Respondents have also committed that their overdue compliance obligations set forth in the Order will be satisfied by submissions made by Respondents of a Comprehensive Recycling Analysis, an Environmental Benefit Project Plan and a plan for repair of all leachate collection wells at the landfill, all by May 20, 1991, and submission of a Solid Waste Management Plan by June 30, 1991.

WHEREAS, the Project is consistent with the closure process required to be implemented at the landfill pursuant to the Order on Consent of September 1, 1987 and the Order.

WHEREAS, Respondents have affirmatively waived their rights to a public hearing or judicial review in this matter in the manner provided by law, and having consented to the entering and issuing of this Order, agree to be bound by the terms and conditions contained herein.

NOW, having considered this matter and being duly advised, it is hereby Ordered that:

1. All terms and condition of the Order shall remain in full force and effect except to the extent expressly modified herein.
2. Within sixty (60) calendar days after the effective date of this Order, Respondents shall submit a detailed proposal, including engineering designs, specifications, and proposed final contours, for treatment of ash utilizing the Rolite process and using the ash treated by that process at the Blydenburgh Landfill in accordance with the terms, conditions, and schedule set forth in Appendix B of this Order. This proposal shall, to the extent possible, be consistent with the projected closure plan and remedial action required pursuant to the Order on Consent of September 1, 1987 and the Order. The Department shall review the proposal to determine whether it was prepared in accordance with the requirements of this Order and generally accepted scientific and engineering principles and to determine the extent of its consistency with the Order on Consent of September 1, 1987 and the Order. The Department shall

notify the Respondents of its approval or disapproval of the proposal, and if it disapproves the proposal, it shall state the reasons for its disapproval. Within twenty (20) calendar days after receipt of Department comments on the proposal, Respondents shall modify the proposal to address the Department's comments and submit the modified proposal. The Department shall review the proposal as modified, to determine whether it was prepared in accordance with the requirements of this Order and generally accepted scientific and engineering principles and whether it addressed to the Department's satisfaction the Department's comments on the original proposal. If the Department disapproves the proposal as modified, the Respondents shall not proceed with the Project. Respondents shall implement the Department-approved proposal or proposal as modified, as applicable, in accordance with the approved schedule and any conditions of Departmental approval.

3. Respondents shall continue to implement the protocol to reduce the carbon content in the ash generated by Respondents' waste-to-energy facility in accordance with the terms and conditions of approval set forth in the Department's letter of March 15, 1991 (a copy of which is attached hereto and incorporated herein as Appendix A), as modified by Appendix C of this Order (collectively called in this Order, the "burnout improvement protocol").

4. If, as a result of failure of the operator to fully implement appropriate operational modifications to reduce the percent of carbon in the ash, Respondents are unable to show that the level of carbon (as determined pursuant to the Protocol set forth in Appendix C of this Order) in the ash generated from their waste-to-energy facility has been reduced to less than ten (10) percent on or before July 5, 1991, Respondents shall diligently exercise all appropriate remedies, including but not limited to the procedures set forth in Respondents' Operations Agreement with Montenay Islip, Inc. (the operator of Respondents' waste-to-energy facility) for violation of the Process Residues Burnout Warranty, in order to compel full implementation of operational modifications and compliance with operational warranties, provided however, that nothing in this paragraph shall be construed as an assignment of contract rights by Respondents to enforce compliance with its Operations Agreement on the issue of burnout or any other violation of the warranties set forth in said Operations Agreement.

5. Within thirty (30) calendar days after the effective date of this Order, Respondents shall submit to the Department the Action Plan for making a clean fill determination regarding Rolite-treated ash, as required pursuant to Appendix A, Paragraph A of the Order on Consent dated December 18, 1990.

6. Within thirty (30) calendar days after the effective date of this Order and monthly thereafter, Respondents shall submit to the Department a status report describing the exact status of Respondents' performance of all obligations created by the terms of this Order and the Order on Consent dated December 18, 1990.

7. Respondents shall be liable for a stipulated penalty in the amount of One Thousand Dollars (\$1,000) per day, which shall become payable in the event that Respondents fail to comply with any provision of this Order.

8. Any penalty assessed under subparagraph 7 above shall become due and owing on the 15th calendar day after receipt of written notice from the Department that Respondents were or are in violation of this Order. If payment is not received by the Department within fifteen (15) calendar days after such notice, Respondents shall pay interest on the penalty at the annual rate of nine percent on the overdue amount from the day on which it was due through, and including, the date of payment.

9. Any penalties shall be paid by certified check or money order, made payable to the "New York State Department of Environmental Conservation" and delivered personally or by certified mail, return receipt requested: c/o Lori Riley, Esq., Regional Attorney, Department of Environmental Protection, Building #40, S.U.N.Y. Campus, Stony Brook, New York 11790-2356.

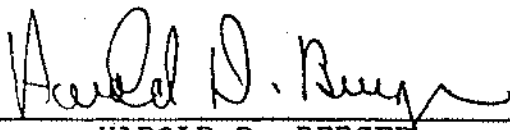
10. Respondents shall not suffer any penalty under any of the provisions, terms and conditions hereof, or be subject to any proceedings or actions for any remedy or relief if they cannot comply with any requirements of the provisions hereof because of an Act of God, war, riot or other catastrophe as to which negligence or willful misconduct on the part of Respondents was not a proximate cause, provided however, that Respondents shall immediately notify the Department in writing when they obtain knowledge of any such condition and request an appropriate extension or modification of the provisions hereof; and it is further

Dated: Stony Brook, New York

May 21

1991

THOMAS C. JORLING
Commissioner of Environmental Conservation

BY 
HAROLD D. BERGER
Regional Director

APPENDIX A

Conditions of Approval of
Protocol to Verify/Reduce LOI Content
in Ash Stream - MacArthur Waste-to-Energy Facility

1. On or before April 1, 1991, submit the revised sampling and analysis plan.

The Plan must be revised to address the following:

- Identify an independent laboratory which will perform all testing pursuant to this protocol.
- Provide a sketch showing the sampling location. Clarify whether the sample collected will include fly ash and whether ferrous metals have been removed.
- All samples collected for LOI must be analyzed in triplicate. The loss on ignition (LOI) testing must be conducted at 550°C and reported as a percentage of the residue ignited in the muffle furnace. The use of a correction factor is inappropriate.

2. On or before April 1, 1991, submit the revised Facility Modification Plan.

The Plan must include a program of physical and operational modifications to maximize burnout, and must address the following comments:

- Indicate the Maximum Continuous Rating (MCR) conditions, both in terms of throughput and steam load.
- Indicate the operating parameters and residue test results at the time of acceptance testing. Indicate the facility guarantees, attaching accurate documents.
- Identify level of burnout is expected to occur in the rotary combustor and how does this compare with what is currently observed.
- Describe, in detail, the operating experiences at other O'Conner combustor facilities, and what remedial efforts have been undertaken at those facilities to maximize burnout.

- If the greatest degree of burnout is expected to occur in the RC, then remedial efforts should commence there, i.e., optimizing throughput, combustor speed, and air flow.
- 3. On or before April 15, 1991, commence operational modifications identified in the Revised Facility Modification Plan.
 - Stages A, B, and C of the February 14, 1991 draft Protocol involve modification of various operational parameters and only a minimal degree of physical modifications to the plant (i.e., installation of pressure gauges and thermocouples). These operational modifications should be completed, and optimal performance levels determined within three weeks, total.
- 4. On or before May 15, 1991, complete operational modifications identified in the approved Revised Facility Modification Plan.
- 5. On or before June 3, 1991, submit report which identifies the results of the Operations Modifications. The Report must include all pertinent data and must include recommendations for further modification, if necessary, and a continuing performance monitoring program.

APPENDIX B

1. For purposes of this Appendix, the following terms have the following meanings:

(a) "Visibly on-specification ash" means ash not containing visibly un-combusted material and generated from Respondents' waste-to-energy facility but not during a two hour period following combustor shut-down or start-up.

(b) "Rolite gas venting material" is a product, five percent (5%) or less of which passes the number 200 sieve, resulting from subjecting visibly on-specification ash containing five percent (5%) or less carbon to the Rolite process. The Department may allow an increase in the percentage of carbon content in Rolite gas venting material based upon the final results of the burnout improvement protocol.

(c) "Contour grading material" means visibly on-specification ash that has been subjected to the Rolite process but does not satisfy the requirements of Rolite gas venting material.

2. Within sixty (60) days after the effective date of this Order, Respondents shall submit to the Department a detailed proposal, including engineering designs and specifications, to implement the Project, in accordance with the following terms and conditions:

(a) Rolite gas venting material may be used at the Blydenburgh Landfill only for the construction of a gas venting system meeting the requirements of 6 NYCRR 360-2.13 on the over-lined area described in the Order.

(b) Contour grading material may be used:

(1) to adjust grades and contours at the Blydenburgh Landfill on the over-lined area described in the Order in amounts and at locations within that area as approved by the Department; and,

(2) with prior Department approval, in place of Rolite gas venting material in limited amounts over a portion of the over-lined area not to exceed five (5) acres provided the average carbon content of the visibly on-specification ash used to generate the contour grading material is less than ten percent (10%) and provided that no more than five percent (5%) of the material passes the number 200 sieve. Such area must be monitored independently to determine the effectiveness of its gas venting capacity.

(3) Respondents shall submit to the Department for its review and approval a plan for the used of contour grading material, including drawings of existing and proposed contours as necessary to fully describe all contemplated contour grading activities.

3. Respondents shall include in the Project's design:

(a) provisions for in-place testing of Rolite gas venting material to determine its gas venting properties during the post-closure maintenance period for the landfill; and

(b) a redundant gas venting layer satisfying the requirements of 6 NYCRR 360-2.13 and constructed of material approved by the Department that shall be constructed beneath the entirety of the Rolite gas venting material layer [including the five-acre area authorized under subparagraph 2(b)(2) above], the intent of which design requirement is to protect against possible performance failure of the Rolite gas venting material layer. This redundant gas venting layer shall, at a minimum:

(i) be designed to function independently of the Rolite gas venting material layer and in such a manner that the operator may shut off one gas venting layer system and turn on the other system at will;

(ii) in no way interfere with the ability of the Rolite gas venting material layer to function as the primary gas venting layer of the final cap.

4. All ash generated from Respondents' waste-to-energy facility that is not visibly on-specification ash, and all ash that is not visibly on-specification ash that is stockpiled at the Blydenburgh Landfill on the effective date of this Order, must be segregated and disposed at an authorized disposal facility.

APPENDIX C

Protocol for Ash Testing Islip Rolite Demonstration Project

The following substitutes for paragraph 1 of attachment to letter dated March 15, 1991 entitled "Conditions of approval of protocol to verify/reduce LOI content in ash stream - MacArthur Waste-to-Energy Facility; submitted on February 14, 1991" contained in Appendix A:

Percent volatile matter in MSW ash

1. Scope and application

This method is used to determine total, fixed, and volatile residue in solid and/or semisolid samples. Ignition time and temperatures specified in this method must be adhered to in order to control losses of volatile, inorganic salts.

All weighings must be performed quickly. After drying or ignition, the residues are often hygroscopic, and rapidly absorb moisture from the air.

A percent volatile matter (carbon content) analysis pertaining to a particular sample must be performed a minimum of three times on aliquots of that sample (in order to offset material variations within that sample). The sample's volatile matter must be reported as an average of the results of the analyses performed on each aliquot.

2. Apparatus

- (a) Evaporating dishes;
- (b) Oven, for use at 103 degrees Celsius;
- (c) Muffle furnace, for use at 550 degrees Celsius;
- (d) Desiccators; and
- (e) Balance, accurate to 0.01 gram.

3. Procedure

(a) Total residue and moisture removal

(1) Preparation of evaporating dish: heat clean evaporating dish at 550 degrees Celsius for one hour in a muffle furnace. Cool in a desiccator, weigh to the nearest 10 mg., and keep in the desiccator until ready for use.

(2) Preparation of ash sample: thoroughly mix composite sample. Place 20 grams of ash in a prepared evaporating dish (visible glass and metals objects must be removed) and weigh to the

nearest 10 mg. Place in an oven at 103 to 105 degrees Celsius for six hours. Cool in a desiccator to balance temperature and weigh. Repeat cycle of drying at 103 to 105 degrees Celsius, cooling, desiccating, and weighing until constant weight is attained, or until weight loss is less than four percent of the immediately previous weight.

(b) Volatile residue

Determine volatile residue on the total desiccated residue obtained in subparagraph 3(a) by heating the desiccated residue in an electric muffle furnace at 550 degrees Celsius (plus or minus 5 degrees Celsius) for one hour. Avoid loss of solids by decrepitation by placing dish in a cool muffle furnace, heating furnace to 550 degrees Celsius (plus or minus 5 degrees Celsius) and then heating for one hour. Cool in desiccator and reweigh. Report results as fixed residue (percent ash) and volatile residue.

4. Calculations

$$\% \text{ total residue equals } \frac{A \times 100}{B}$$

$$\% \text{ volatile residue equals } \frac{(A-C) \times 100}{A}$$

$$\% \text{ fixed residue equals } \frac{C \times 100}{A}$$

Where:

A equals weight of dried solids, in mg., determined from subparagraph 3(a)(2)

B equals weight of wet sample, in mg.

C equals weight of ash, in mg., determined under subparagraph 3(b)

5. Repeat this procedure a minimum of three times on aliquots of each sample.

To: The Honorable Frank R. Jones
Supervisor
Town of Islip
655 Main Street
Islip, New York 11751

Michael Cahill
President
Islip Resource Recovery Agency
40 Nassau Avenue
Islip, New York 11751

cc. Robert J. Cimino, Esq.
Town of Islip Attorney
655 Main Street
Islip, New York 11751

CONSENT BY RESPONDENTS

Respondents acknowledge the authority and jurisdiction of the Commissioner of Environmental Conservation of the State of New York to issue the foregoing Order, including all Appendices attached and to be attached thereto, waive public hearing or other proceedings in this matter, accept the terms and conditions set forth in the Order and consent to the issuance thereof.

TOWN OF ISLIP

ISLIP RESOURCE RECOVERY AGENCY

BY *Frank R. Jones*

BY *Michael J. Cahill*

STATE OF NEW YORK)

s.s.:

COUNTY OF SUFFOLK)

On the 17 day of May 1991, before me personally came FRANK R. JONES to me known, who being duly sworn, deposed and said that he/she resides at EDWARDS AVE., SAYVILLE, N. Y. that he/she is the SUPERVISOR of Respondent Town, and that he/she signed his/her name for and on behalf of said Town with full authority so to do.

Marilyn Feller
NOTARY PUBLIC

MARILYN FELLER
Notary Public, State of New York
No. 52-4652512
Qualified in Suffolk County
Commission Expires March 30, 1992

STATE OF NEW YORK)

s.s.:

COUNTY OF SUFFOLK)

On the 17 day of May 1991, before me personally came MICHAEL J. CAHILL to me known, who being duly sworn, deposed and said that he/she resides at BRIGHTWATERS, NEW YORK that he/she is the PRESIDENT of Respondent Agency, and that he/she signed his/her name for and on behalf of said Agency with full authority so to do.

Marilyn Feller
NOTARY PUBLIC

MARILYN FELLER
Notary Public, State of New York
No. 52-4652512
Qualified in Suffolk County
Commission Expires March 30, 1992