

**From:** Dan Verrillo  
**To:** O'Neill, Christopher  
**Date:** 11/25/2008 10:07 AM  
**Subject:** Re: SIG - 10th and Congress St  
**Attachments:** SIG CS CO.R-0888-90-12.pdf

I took care of the Order and sent a copy to Michael.

Thanks

>>> Christopher O'Neill 11/20/2008 12:21 PM >>>  
a PDF of ROD is attached  
no PDF of Order as yet

STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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In the Matter of the Alleged Violations of  
the Environmental Conservation Law and  
Title 6 of the Official Compilation of  
Codes, Rules and Regulations of the  
State of New York,

-by-

SCHENECTADY INTERNATIONAL, INC.

Respondent. :

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:  
:  
: MODIFIED  
ORDER  
ON  
CONSENT

:  
: DEC Index No.  
R-0888-90-12

**WHEREAS,**

1. The New York State Department of Environmental Conservation (the "Department") is responsible for the enforcement of the Environmental Conservation Law ("ECL") of the State of New York, and Title 6 of the Official Compilation of the Codes, Rules and Regulations of the State of New York ("6 NYCRR") and any Orders issued thereunder.

2. Schenectady International, Inc. ("SII") is a corporation organized under the laws of the State of New York which owns and operates four facilities in Schenectady County known as the Rotterdam Junction, Congress Street, Broadway and Niskayuna facilities. Prior to January 1, 1993, SII's name was Schenectady Chemicals, Inc. ("SCI").

3. On or about December 14, 1990, the Department served a Notice of Hearing and Complaint, DEC Case No. R4-0888-90-12, (the "Complaint") upon SII alleging violations of Articles 17, 19 and 27 of the ECL, Article 12 of the Navigation Law and 6 NYCRR Parts 200, et seq., 360, 373, 595 and 705, et seq.

4. On or about January 11, 1991, SII served an Answer (the "Answer") upon the Department in response to the above Notice of Hearing and Complaint.

5. SII discharged acetone, phenol and xylene into the Mohawk River, released wastewater containing phenol into the groundwater at its Rotterdam Junction facility, released meta-, para-cresol and cresylic acid into the Cowhorn Creek, and failed to timely notify the Department of the xylene discharge, all in violation of SII's State Pollutant Discharge Elimination ("SPDES") Permit, ECL §17-0501, ECL §17-0511, ECL §17-0803, ECL §17-0807 and/or ECL §17-0815.

6. SII delivered, on approximately 15 occasions, shipments of hazardous wastes to a transporter not authorized by the transporter's permit to transport these wastes to the treatment, storage or disposal facility designated on the manifest, in violation of 6 NYCRR Part 372.

7. The Department alleges that SII operated an incinerator known as the "Shirco Unit," and handled, stored, transported, and burned in said Shirco Unit, the sludge from its Waste Water Treatment Plant ("WWTP") without a valid permit and, further, that

SCI handled and transported the resulting ash without a valid permit, all in violation of ECL 27-0913 and 6 NYCRR Parts 372 and 373-1.

8. The Department alleges that SII stored hazardous wastes in tanks T1, and T2, and in containers including drums and roll-offs, at its Rotterdam Junction and Congress Street facilities and also transported hazardous wastes in such a manner as to violate 6 NYCRR Parts 372, 373-1, 373-3. The Department also alleges that SII failed to maintain proper inspection reports for hazardous waste tank V-10 in violation of 6 NYCRR 373-2.

9. The Department alleges that SII operated at least 12 air emission points at its Rotterdam Junction facility without valid certificates to operate and, further, the Department alleges that SII operated emission points at its Rotterdam Junction and Congress Street facilities in a manner which interfered with the comfortable use and enjoyment of persons in the surrounding community, all in violation of 6 NYCRR Parts 201 and 211.

10. In March 1987, SII entered into an Order on Consent, DEC File No. 04-0366-86-02, regarding the operation of SII's WWTP which required several compliance measures related thereto, which the Department alleges SII failed to timely undertake in violation of such Consent Order.

11. In November 1989, SII entered into an Order on Consent, DEC File No. R4-0707-89-10, relating to hazardous waste handling and incineration and requiring several compliance measures, including an interim corrective measures study, a RCRA trial burn, and design and construction, as well as stack testing and BACT/LAER analysis, at the Rotterdam Junction facility, which the Department alleges SII failed to timely undertake in violation of such Consent Order.

12. In May 1986, SII entered into an Order on Consent, DEC File No. R4-0264, requiring SII to conduct a hydrogeological field investigation at the Congress Street facility and submit an acceptable report outlining the results of this investigation, which the Department alleges SII failed to timely submit in violation of such Consent Order.

13. In December 1991, an Order on Consent (the "1991 Order") was issued in the instant proceeding. That Order was subsequently modified by a Modified Order on Consent issued in 1993 (the "1993 Order") and three Modifications to the Order on Consent issued in 1994 (the "1994 Orders"). In this Modification (the "1997 Order"), it is the intent of the parties that any provisions of the 1991, 1993 or 1994 Orders that are inconsistent with the 1997 Order shall be superseded by the provisions of the 1997 Order.

14. SII, without admitting or denying the allegations contained in paragraphs 7-12 of this Order, hereby waives its right to a hearing with respect to this matter in a manner provided for by law and consents to the issuance of this Order and agrees to be bound by the terms, provisions and conditions contained herein.

**NOW, THEREFORE**, having considered this matter and being duly advised,

**IT IS ORDERED THAT:**

**ARTICLE I. PENALTY.**

SII is hereby assessed a civil penalty in the amount of ONE MILLION, THREE HUNDRED THOUSAND DOLLARS (\$1,300,000). SII shall pay this penalty pursuant to the schedule set forth below:

A. Within thirty (30) days after the effective date of the 1991 Order, SII shall pay \$450,000 by certified check or money order made payable to the Department and delivered to the Department's offices, 50 Wolf Road, Albany, New York 12233-5500, Attn: Carl G. Dworkin, Esq.

B. On or before January 10, 1992, SII shall pay \$450,000 by certified check or money order made payable to the Department and delivered to the Department's offices, 50 Wolf Road, Albany, New York 12233-5500, Attn: Carl G. Dworkin, Esq.

C. Within twelve (12) months of the effective date of the 1991 Order, SII shall pay \$200,000 by certified check or money order made payable to the Department and delivered to the Department's offices, 50 Wolf Road, Albany, New York 12233-5500, Attn: Carl G. Dworkin, Esq.

D. Within twenty-four (24) months of the effective date of the 1991 Order, SII shall pay \$200,000 by certified check or money order made payable to the Department and delivered to the Department's offices, 50 Wolf Road, Albany, New York 12233-5500, Attn: Carl G. Dworkin, Esq.

## **ARTICLE II. PAYMENT FOR EMERGENCY RESPONSE.**

SII hereby agrees to pay TWO HUNDRED THOUSAND DOLLARS (\$200,000), pursuant to the payment schedule set forth below, to the Schenectady County Manager (the "Manager") for the purchase of equipment or other operating resources in order to more adequately prepare for and/or manage potential emergency response conditions which could arise within Schenectady County.

A. Within thirty (30) days after the effective date of the 1991 Order, SII shall contribute \$100,000 to the Manager to distribute accordingly and shall send a copy of the payment transmittal to the Department's offices, 50 Wolf Road, Albany, New York 12233-5500, Attn: Carl G. Dworkin, Esq.;

B. On or before thirty-six (36) months after the effective date of the 1991 Order, SII shall contribute an additional \$100,000 to the Manager to distribute accordingly and shall send a copy of the payment transmittal to the Department's offices, 50 Wolf Road, Albany, New York 12233-5500, Attn: Carl G. Dworkin, Esq.

C. Upon receipt of the monies described in subparagraph II.a. above, the Manager shall promptly disburse these funds to the appropriate local emergency, hazardous materials and fire responders and appropriate LEPCs, consistent with the list set forth in Appendix G, and shall promptly report such disbursement to the Department.

D. No later than ninety (90) days before the date for payment of the monies described in Paragraph B of this Article, SII shall submit to the Department and the Manager a proposed list for use of such monies in accordance with this paragraph. The Department and the Manager shall promptly confer and, within forty-five (45) days after the Department's receipt of the list, from SII, the Department shall provide SII with a copy of the list as agreed upon by the Manager. Upon receipt of the monies described in Paragraph B of this Article, the Manager shall promptly disburse these funds to the appropriate local emergency, hazardous materials and fire responders and appropriate LEPCs, consistent with the agreed-upon list.

E. If SII believes that emergency response needs would be best served by a modification to the allocations set forth in the list developed pursuant to Paragraph D of this Article, SII may request such a modification, in writing, to the Department.

F. The failure of the Manager to perform any duty set forth in the 1991, 1993 and 1994 Orders shall not be deemed non-compliance by SII with the terms of any of those Orders.



### **ARTICLE III. ENVIRONMENTAL COMPLIANCE AUDIT.**

A. Within thirty (30) days after the effective date of the 1991 Order, SII shall propose to the Department an independent third party auditor (the "Environmental Audit Consultant" or "EAC"), to make an assessment of SII's compliance at its Rotterdam Junction, Congress Street, Broadway and Niskayuna facilities, at which there are or have been activities subject to state or federal environmental laws, rules or regulations promulgated pursuant thereto or permits issued thereunder, as of the date of such audit, with all applicable provisions of such laws, rules, regulations or permits, including but not limited to: waste water discharge/treatment; solid and hazardous waste generation, treatment, storage and disposal; solid and hazardous waste transportation; air emissions, hazardous materials and substance use and handling; and spill notification and response. The Department shall approve or disapprove the proposed EAC based upon the ability of the proposed EAC to carry out the activities set forth in the 1991 Order.

B. If the Department disapproves the EAC, SII shall submit within ten (10) business days of receipt of notice of such disapproval, a newly proposed EAC for Department approval. The Department shall approve or disapprove the newly proposed EAC based upon the ability of the newly proposed EAC to carry out the activities set forth in the 1991 Order. If the Department disapproves the newly proposed EAC, SII shall be considered in violation of the 1991 Order. Upon approval by the Department of the EAC, SII shall promptly retain such EAC.

C. The EAC shall review all facility systems and operations for compliance with such laws, rules, regulations or permits. SII shall give the EAC its full cooperation in conducting the compliance audit and hereby agrees that the EAC is authorized to examine any and all of SII's records and other materials in conduct of its audit with respect to compliance with such laws, rules, regulations or permits. SII further agrees to provide access to any of its employees requested by the EAC if the EAC determines that such access is necessary to determine SII's compliance with such laws, rules, regulations or permits.

1. SII shall submit a proposal for the scope of work for performance of the compliance audit to the Department for review and approval within sixty (60) days after Department approval of the EAC. This scope of work shall set forth a time schedule for each of the activities to be performed by the EAC. The audit activities described therein shall be completed pursuant to the time schedule contained therein. The schedule set forth in the scope of work shall provide for the completion of the audit activities at SII's Rotterdam Junction and Congress Street facilities within one hundred eighty (180) days from the Department's approval of the scope of work. The schedule shall provide for the completion of the audit activities at SII's Broadway and Niskayuna facilities within two hundred twenty-five (225) days of the date of completion of audit activities at SII's Rotterdam Junction and Congress Street facilities.

2. Within forty-five (45) days after the completion of audit activities at each facility, SII shall submit to the Department a written report based upon the

compliance audit (the "Audit Report"). The Audit Report shall identify all instances of known or suspected non-compliance with state and federal environmental laws, rules, regulations or permits. Appended to the Audit Report shall be all materials prepared by the EAC with respect to the audit activities at the facility described in the Audit Report. SII may include in the Audit Report a written response setting forth with particularity any disagreements which SII may have with respect to the EAC's findings. Failure by SII to take issue with any observations or conclusions of the EAC shall not be deemed to be an admission by SII.

3. As part of the Audit Report, SII shall certify either that the audited areas are in compliance with all statutory and regulatory requirements that were within the scope of the audit or that SII will develop and adhere to a schedule for achieving or demonstrating compliance with any such requirement where non-compliance was discovered or suspected. This compliance schedule, which shall include a detailed time schedule for achieving compliance in each identified area, shall be submitted to the Department for review and approval. Upon the Department's approval of the compliance schedule, SII shall comply with the requirements of the approved compliance schedule, pursuant to the time schedule contained therein.

4. The Department shall not seek any civil or administrative penalties for any instance of non-compliance disclosed in the Audit Report, provided that SII has corrected or will correct such non complying conditions in accordance with the approved compliance schedule identified in subparagraph c. above. This provision shall not apply

in those circumstances where SII has a legal obligation, independent of the 1991, 1993 or 1994 Orders, to report such non-compliance to the Department under any statute, regulation, Order or permit, or where the Department, independent of the audit, discovers such non-compliance after the effective date of the 1991 Order.

5. The Audit Report shall not be disclosed to third parties except in accordance with the provisions of Article 6 of the Public Officers Law and 6 NYCRR Part 616.

#### **ARTICLE IV. ROTTERDAM JUNCTION COMPLIANCE SCHEDULES.**

SII shall implement all of the remedial, corrective action or compliance measures set forth in the "Compliance Schedule - Rotterdam Junction" attached hereto and incorporated herein as Appendix A, pursuant to the time schedules contained therein, and SII shall operate and maintain the liquid hazardous waste incinerator at its Rotterdam Junction facility ("Boiler No. 4") as set forth in Appendix I, attached hereto and incorporated herein, until such time as a Part 373 permit is issued for SII's Rotterdam Junction facility, at which time the provisions of such permit relating to Boiler No. 4 shall control.

## **ARTICLE V. CONGRESS STREET COMPLIANCE SCHEDULES.**

### **A. Air and RCRA Requirements.**

SII shall implement all of the remedial, corrective action or compliance measures set forth in the "Compliance Schedule - Congress Street" attached hereto and incorporated herein as Appendix B, pursuant to the time schedules contained therein. Notwithstanding the foregoing, SII's obligation to carry out the activities set forth in Paragraph 7 of Appendix B may be modified as set forth below. SII is pursuing plans to modify other SII facilities that may result in the elimination, or reduction, of production of its Congress Street facility. Within 60 days of the effective date of the 1997 Order, SII will submit to the Department for review and approval a schedule for the phase-out of production utilizing its batch reactors at the Congress Street facility by December 31, 1997. This schedule shall become a part of this Order. SII has completed the source inventory permitting required by Paragraph 7(a) of Appendix B of the 1991 and 1993 Orders. So long as SII follows the schedule for phase-out of such production, the compliance dates for other programs set forth in Appendix B shall be held in abeyance and, upon completion of such phase-out by December 31, 1997, shall be deemed satisfied.

### **B. Corrective Action.**

SII shall implement all of the remedial, corrective action or compliance measures set forth in the "Compliance Schedule - Congress Street Hydrogeological

Investigation," attached hereto and incorporated herein as Appendix H, pursuant to the time schedules contained therein.

**C. Best Management Practices Plan.**

By December 31, 1997, SII shall submit to the Department for review and approval a revised Best Management Practices Plan for the Congress Street Facility. Such revised Plan shall amend the BMP Plan prepared in accordance with Article VI of this Order to reflect the phase-out of production utilizing its batch reactors at the Congress Street Facility.

**ARTICLE VI. BEST MANAGEMENT PRACTICES PLAN.**

SII shall develop and implement a Best Management Practices Plan (hereinafter the "BMP Plan"), acceptable to the Department, at all of its facilities at which there are activities subject to law or regulation, the goal of which will be the prevention or minimization of the release of hazardous or toxic substances into the waters of the State, provision for timely notification to the Department of any such releases, assessment of the need for sufficient emergency equipment and other procedures necessary to respond to such releases, and, additionally at the Rotterdam Junction facility, development of a storm water management and spill prevention plan. The requirements for the BMP Plan and schedule regarding its development and implementation are attached hereto and

incorporated herein as Appendix C. Once the BMP Plan is approved by the Department, SII shall implement the plan pursuant to the time schedules contained therein.

#### **ARTICLE VII. SHIRCO UNIT.**

Within thirty days of the effective date of the 1993 Order, SII shall submit for the Department's review and approval a work plan that will establish the scope and schedule for closure, dismantling and removal of the Shirco Unit in accordance with applicable 6 NYCRR Part 373 regulatory requirements and the provisions of Paragraph B of Appendix E of the 1993 Order, on a schedule that allows modifications to the building in which the Shirco is located to be completed in time for it to be used as a drum storage facility commencing May 1, 1994. This Article shall not be construed as an admission by SII that it believes that the Shirco Unit treats or generates hazardous wastes nor that said unit has operated in the past without an appropriate permit.

#### **ARTICLE VIII. ENVIRONMENTAL MONITOR.**

SII shall make payment to the Department for the funding of certain on-site environmental monitor(s) (collectively, the "Monitor"), whose primary duties shall be to monitor SII's on-going activities to determine SII's compliance with the ECL and any rules or regulations promulgated pursuant thereto and to monitor the implementation of the activities set forth in Appendices A-F and H annexed hereto.

A. Payments to be Made.

Additional funds shall be deposited in the existing SII Environmental Monitoring Account to fund the previously established monitor position and additional monitors as follows:

1. On or before September 1, 1993, SII shall pay to the Department the sum of \$75,000. The total fund balance at any and all points in time shall be based on an estimate of annual costs for the Monitor. The maximum amounts of such costs, subject to revision pursuant to Subparagraph 3 of this Paragraph, shall be as follows:

April 1, 1994 to the date of completion of the tasks set forth in the 1997 Order	\$150,000
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If the tasks set forth in the 1997 Order are completed prior to December 31, 2003, from the date of completion of the tasks set forth in the 1997 Order to December 31, 2003.	\$ 90,000
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Quarterly payments shall be made, for the duration of the 1997 Order or until the circumstances described in Subparagraph 7 of this Paragraph occur, to maintain an account balance sufficient to meet the next nine months' anticipated expenses. Such quarterly payments shall be made in accordance with the following provisions:

2. Costs covered by the fund established for the Monitor shall include:



- a. direct personal service costs and fringe benefits, including the cost of replacement personnel for the regularly assigned monitor.
- b. direct non-personal service costs, including costs associated with one vehicle (already purchased pursuant to the 1991 Order), equipment and appropriate laboratory costs and fees, with an annual maximum of \$30,000 for such laboratory costs and fees.
- c. statutory salary increases; and
- d. overhead or support costs at the Federal Indirect Cost Rate;

3. The Department may revise the required payment on a quarterly basis to include the costs of monitoring to the Department, as set forth in Subparagraph 2. of this Paragraph. This quarterly revision may take into account factors such as inflation, salary increases, accrued interest to be applied to the available balance and changes in operating hours and procedures. The Department shall provide SII with a written explanation of the basis for any modification.

4. Within thirty (30) days after receipt of a quarterly statement/invoice from the Department that a payment is due, SII shall forward payment to the Department, 50 Wolf Road, Albany, New York 12233 Attn: Environmental Monitors.

5. Upon a determination by the Department that the Monitor is no longer required, the unexpended balance of the fund will be returned to SII.

6. Failure to make the required payments shall be a violation of the 1997 Order and the Department reserves all rights to take appropriate action to enforce the above payment provisions.

7. If at some time in the future a Monitor is required to be funded by SII as a condition of a permit issued to SII by the Department, then, upon the happening of such an event, such permit requirements, including methods and amounts of payments, shall supersede the provisions of this Article.

8. The Department shall report to SII quarterly the number of hours worked by each person fulfilling the role of Monitor in the previous quarter. Upon written request by SII, the Department shall make available to SII any records (e.g., vouchers, time records) relating to such monitor costs, consistent with the Public Officers Law and 6 NYCRR Part 616.

9. The payments set forth in Subparagraph 1 of this Paragraph include any costs that would otherwise be sought pursuant to the Department's Air Guide 19.

B. The Monitor shall, when present at any SII facility, abide by all of SII's health and safety and operational requirements and policies; provided, however, that this Paragraph shall not be construed as limiting the Monitor's powers as otherwise provided for by law and shall not result in the Monitor's being less protected than the Monitor would be if the Monitor were to abide by the Department's health and safety requirements. The

Monitor shall be bound by SII's trade secret confidentiality requirements and policies with respect to persons other than the Department or SII, consistent with the principles in 6 NYCRR Part 616.

C. The Monitor shall have access to SII's facilities in accordance with written procedures agreed upon by the Department and SII, and as such procedures may be modified, by mutual written agreement, in the future.

D. SII is absolutely prohibited from imposing upon a monitor a requirement regarding apparel or safety equipment that is not vigorously enforced by SII with respect to all others under similar circumstances.

E. When the Monitor conducts inspections or reviews at SII's facilities, the Monitor shall inform SII of the results of such inspections and reviews, including any deficiencies that were noted.

F. The procedures set forth in Paragraph G of this Article shall apply to reviews by the Monitor, except in the following circumstances:

1. Formal compliance inspections by the Monitor. In such cases, the Monitor shall notify SII at the initiation of the inspection that the inspection is a compliance inspection.

2. Instances where SII has a legal obligation, independent of the 1991, 1993, 1994 or 1997 Order, to report non-compliance to the Department under any statute, regulation, order or permit.

3. Releases the reporting of which to the Department is required by any statute, regulation, order or permit.

G. As limited by Paragraph F of this Article, the following procedures shall apply to deficiencies found by or disclosed by SII to the Monitor during the course of reviews:

1. With respect to any such deficiencies, SII shall, if possible, correct the deficiencies at the earliest possible time, which the parties agree to be as soon after discovery as work schedules and equipment availability allow. In the event that such correction cannot be made within thirty (30) days of notification, SII shall notify the Department within five (5) days after such notification of the reason for and extent of the expected delay. SII shall submit to the Department for review and approval a schedule for correction of the deficiency as soon as possible and in no event later than the thirtieth (30th) day following such notification. Upon the Department's approval of the compliance schedule, SII shall comply with the requirements of the approved schedule, pursuant to the time schedule contained therein; and

2. The Department shall not seek any civil or administrative penalties for any such deficiencies, provided that SII has corrected, or will correct, such non-complying conditions in accordance with the approved compliance schedule identified in Subparagraph 1 of this Paragraph. This provision shall not apply if SII fails to carry out the activities in accordance with the approved compliance schedule.

**ARTICLE IX. PREVIOUS CONSENT ORDERS - REVISED COMPLIANCE SCHEDULES.**

The requirements of the Orders on Consent referenced in Paragraphs 10 through 12 of the introductory sections of the 1991, 1993 and 1994 Orders are superseded by the requirements of this 1997 Order and are no longer applicable and SII shall implement the compliance schedules related thereto, i.e., the interim corrective measures and BACT Analysis/Trial Burn activities at SII's Rotterdam Junction facility and the hydrogeological investigation, at SII's Congress Street facility, as set forth in Appendices D and H, of the 1997 Order, pursuant to the time schedules contained or referenced therein.

**ARTICLE X. ENVIRONMENTAL IMPROVEMENT PROGRAM.**

SII shall implement the Environmental Improvement Programs set forth in Appendix E, pursuant to the time schedules contained therein.

## **ARTICLE XI. SOILS MANAGEMENT PROTOCOL.**

With respect to activities conducted pursuant to the 1997 Order, SII shall manage any soils related thereto pursuant to an approved soils management protocol developed in accordance with the requirements set forth in Appendix F, attached hereto.

Any such soils management activities shall be considered as interim remedial measures and nothing herein shall be construed as limiting the Department's right to require SII to undertake any further investigatory, remedial, or corrective action with respect to said soils, consistent with applicable legal requirements.

## **ARTICLE XII. SUBMITTAL REVIEW AND APPROVAL.**

A. Whenever the Department's review and approval is required under the terms of the 1997 Order, including the appendices attached hereto, with respect to any document, plan or other required submission (hereinafter, "Submittal"), the following provisions shall apply:

1. Within forty-five (45) days after receipt of a Submittal, the Department shall determine if it fulfills the terms of the 1997 Order and shall provide written notification to SII of its approval or disapproval of the Submittal.

2. In the event that the Department disapproves any Submittal, it shall state the reasons for such disapproval with sufficient particularity so as to allow SII to remedy any alleged deficiency.

3. When any Submittal is disapproved by the Department, SII shall submit a revision to such document, plan or other submission ("Revised Submittal") within forty-five (45) days of its receipt of the Department's notice of disapproval. Such Revised Submittal shall address each deficiency noted in the Department's notice.

4. Within thirty (30) days of receipt of any Revised Submittal, the Department shall review the Revised Submittal and determine if it fulfills the terms of this Order and shall provide written notification to SII of its approval or disapproval of the Revised Submittal. In the event the Department disapproves any Revised Submittal, SII shall be considered in violation of the terms of the 1997 Order, without prejudice to SII's right to contest such determination.

5. When the Department approves any Submittal or Revised Submittal, SII shall undertake any actions or activities required under or set forth in the approved Submittal or Revised Submittal, pursuant to the time schedule(s) contained therein.

B. Whenever the Department's review or review and comment (but not approval) is provided for under the terms of the 1997 Order, including attached appendices, with respect to any Submittal, the following provisions shall apply:

1. Within forty-five (45) days after receipt of a Submittal, the Department shall provide SII with comments, if any, on the Submittal.

2. SII may, in its discretion, modify the Submittal in accordance with the Department's comments, but shall not be deemed to be in non-compliance with the 1997 Order if it does not do so.

C. Either the Department or SII may request that the other party agree to an extension to the time to submit or comment upon a Submittal or Revised Submittal. If the other party agrees to the requested extension, such extension shall be memorialized in writing by the respective project managers for the Department and SII, without the need for a formal modification of the 1997 Order pursuant to Paragraph XX of the 1997 Order [MODIFICATION], unless the requested extension, together with any prior extensions to the same time frame, would: (a) postpone a Major Milestone Event by more than thirty (30) days; (b) or postpone an Interim Milestone Event by more than sixty (60) days.

D. With respect to any action required by the 1997 Order the completion of which requires approval by a governmental entity other than the Department (the "Other Approval");



1. Each time that SII makes a submission or otherwise notifies the Department with respect to such action, SII will advise the Department of the Other Approval, and shall provide therewith:

a. its best estimate at that time of how long the process of obtaining the Other Approval may take;

b. a description of the steps SII has taken and proposes to take in order to achieve the Other Approval at the earliest possible time; and

c. its best estimate at that time of the effect, if any, of any anticipated delay in obtaining the Other Approval upon SII's commencement or completion of other actions governed by the 1997 Order.

2. Any timetable in the 1997 Order shall be deemed amended to allow sufficient time to secure such Other Approval and to require commencement of the otherwise required action within thirty (30) days of such Other Approval or within the established schedule, whichever is later, and to allow corresponding additional time periods for commencement and completion of other required actions affected by the Other Approval.

3. No formally promulgated Modified Order on Consent will be necessary for an extension due solely to approval processes of other governmental entities.

4. Whenever an extension to any schedule is warranted pursuant to this Article, the respective project managers for the Department and SII shall both sign a simple instrument that reflects the extent of the extension.

5. For purposes of this Article, with respect to SII's conduct relative to obtaining the Other Approval, SII shall be held to the same standard as the standard to which it is held relative to the Department, as established by Article XIII, [STIPULATED PENALTIES] of the 1997 Order, and a failure to satisfy the other governmental entity's requirements in a timely and good faith manner shall constitute grounds for the Department's refusing to recognize delays occasioned by such governmental entity's approval process as justification for extension of any schedules established hereby.

#### **ARTICLE XIII. STIPULATED PENALTIES.**

Where appropriate, the appendices annexed to the 1997 Order delineate certain Major Milestone Events and/or certain Interim Milestone Events. In addition, each work plan, schedule or, if appropriate, protocol to be submitted by SII shall propose one (1) Major Milestone Event per work plan, schedule or protocol and at least one (1) Interim Milestone Event per six-month time period set forth in such work plan, schedule or protocol. Such proposed classifications shall be subject to Department approval. As part of its approval of each work plan, schedule or protocol, the Department may in its discretion modify SII's proposed classification of Major and Interim Milestone Events and shall notify SII of such modification at the same time that it transmits its notice of approval

of such work plan, schedule or protocol. Once the Department approves such work plan, schedule or protocol, the classification of Milestone Events as approved or modified by the Department shall become part of the approved work plan, schedule or protocol.

In the event that SII fails to comply with a Major or Interim Milestone Event, the following stipulated penalties shall be paid by SII:

<u>Event</u>	<u>Period of NonCompliance</u>	<u>Penalty Per Day</u>
Major Milestone Event	Day 1-30	\$ 2,500.00
	Day 31-60	\$ 5,000.00
	Day 61 and	
	thereafter	\$10,000.00
Interim Milestone Event	Day 1-15	\$ 750.00
	Day 16-30	\$ 1,000.00
	Day 31-60	\$ 1,500.00
	Day 61 and	
	thereafter	\$ 3,000.00

For purposes of this paragraph, with respect to activities other than submittals or revised submittals, "fail to comply" or "failure to comply" shall include but not be limited to the failure to perform the specified act in the manner required by this Order or by the date

required by the 1997 Order or any approved work plan, schedule or protocol. With respect to Submittals and Revised Submittals, the term "fail to comply" or "failure to comply" shall include but not be limited to the failure by SII to submit an original or revised document within the time limits set forth in or established pursuant to the 1997 Order and submission of a document that is of such poor quality as not to qualify as a good faith submission.

Penalties begin to accrue on the day that failure to comply with any Major or Interim Milestone Event occurs, and shall continue to accrue until SII either performs the required action or completes corrective action satisfactory to the Department. In the event that the Department determines that SII has failed to comply with any term of the 1997 Order or any approved work plan, schedule or protocol, the Department shall serve upon SII a Notice of Failure to Comply which shall set forth the nature of the failure to comply and the calculation of the stipulated penalties due. Within twenty-one (21) days after receipt of a Notice of Failure to Comply, SII shall deliver the full stipulated penalty amount due to the Department, unless SII pursues its rights to contest the penalty assessment as described below. In the event that SII does not pay the stipulated penalty within the 21-day period and does not contest the penalty assessment, then the 1997 Order together with the Notice of Failure to Comply may be filed and enforced as a civil judgment for the total penalty amount set forth in the Notice of Failure to Comply.

In the event that SII wishes to contest any penalty that is or could be assessed pursuant to this provision, or the facts on which such penalty is based, it shall submit, before or after receipt of the Notice of Failure to Comply but in any event within twenty-one

(21) days of receipt of the Notice of Failure to Comply, in writing, a motion to the Chief Administrative Law Judge, Office of Hearings, 50 Wolf Road, Albany, New York 12233, which shall include a copy of the Notice of Failure to Comply and an affidavit setting forth with specificity the basis of SII's challenge to the Notice of Failure to Comply. A copy of such motion shall also be delivered to the Department. The Department may submit papers in response to such motion within twenty-one (21) days of receipt of SII's motion papers. Such motion, until finally determined, shall toll the accrual of stipulated penalties for the alleged failure to comply after the date of such motion, unless the determination of such motion shall find that there was not a good faith basis for such motion to have been made, in which case the tolling shall be deemed never to have occurred and stipulated penalties shall be due and payable for the period between the date of failure to comply and the date of compliance. For purposes of this paragraph, "good faith basis" shall mean that SII had a reasonable prospect of success on the substantive merits.

Any Order issued by the Commissioner determining any such motion shall be deemed the equivalent of a civil judgment after trial for the amount determined to be due, and may be filed and enforced as a judgment for said amount without the need for any further proceedings whatsoever, unless SII has timely pursued a right to appeal such determination by the Commissioner.

#### **ARTICLE XIV. ACCESS.**

A. SII shall permit any duly designated officer, employee, consultant, contractor or agent of the Department to enter upon any of SII's facilities or areas in the vicinity of any of SII's facilities which may be under the control of SII, and any areas necessary to gain access thereto, for inspection purposes and for the purpose of making or causing to be made such sampling and tests as the Department deems necessary, and for ascertaining SII's compliance with the provisions of this Order. The Department shall endeavor to provide SII with reasonable notice of its intent to enter upon the such facilities or such areas in the vicinity thereto and to conduct itself in accordance with Article VIII [ENVIRONMENTAL MONITOR] ¶¶B, C and D of the 1997 Order.

B. SII shall use best efforts to obtain all permits, easements, rights-of-way, rights-of-entry, approvals, its obligations under the 1997 Order. If any access required to perform the 1997 Order is not obtained despite best efforts, SII shall promptly so notify the Department in writing, and shall include in that notification a summary of the steps that SII has taken to attempt to obtain access. Thereafter, the Department shall, as it deems appropriate, assist SII in obtaining access.

#### **ARTICLE XV. FORCE MAJEURE.**

SII shall not suffer any penalty under the 1991, 1993, 1994 or 1997 Order, or be deemed to be in violation hereof or be subject to any proceeding or action, if SII cannot

comply with any requirements hereof because of an act of God, war, strike, work stoppage, riot or other condition as to which negligence or willful misconduct on the part of SII was not the proximate cause; provided, however, that SII shall immediately notify the Department in writing when it obtains knowledge of any such condition and request an appropriate extension or modification of the 1997 Order.

#### **ARTICLE XVI. FAILURE, DEFAULT AND VIOLATION OF ORDER.**

The failure of SII to comply with any provision of the 1997 Order shall constitute a default and a failure to perform an obligation under the 1997 Order and under the ECL.

#### **ARTICLE XVII. SUMMARY ABATEMENT.**

The terms of the 1997 Order shall not be construed to prohibit the Commissioner or the Commissioner's duly authorized representative from exercising any summary abatement powers pursuant to Section 71-0301 of the ECL.

#### **ARTICLE XVIII. INDEMNIFICATION.**

SII shall indemnify and hold the Department, the State of New York, and their representatives and employees harmless for all claims, suits, actions, damages and costs of every name and description arising out of or resulting from the fulfillment or attempted

fulfillment of the 1997 Order by SII, its directors, officers, employees, servants, agents, successors or assigns.

#### **ARTICLE XIX. EFFECTIVE DATE.**

The effective dates of the 1997 Order and the prior Orders shall be the dates upon which they are or were X signed by the Commissioner or the Commissioner's duly authorized representative.

#### **ARTICLE XX. MODIFICATION.**

If SII desires that any provision of the 1997 Order be changed, SII shall make timely written application therefor to the Commissioner, setting forth reasonable grounds for the relief sought. Timely written application shall be as soon as reasonably possible after SII identifies the grounds for such relief. The Commissioner shall not arbitrarily withhold consent to the requested change and shall promptly respond to the request. A formally promulgated Modified Order will not be required for a modification to any schedule under the 1997 Order that is covered by the provisions of Article XII [SUBMITTAL REVIEW AND APPROVAL] of the 1997 Order or that otherwise modifies any schedule under the 1997 Order and does not: (a) postpone a Major Milestone Event or (b) postpone an Interim Milestone Event by more than sixty (60) days.



**ARTICLE XXI. COMMUNICATIONS.**

A. All communications required hereby to be made between the Department and SII shall be made in writing and transmitted by United States Postal Service, Return Receipt Requested, or hand-delivered to the addressees in Paragraphs B and C of this Article. Alternatively, Federal Express or a comparable courier service may be utilized.

B. Communication to be made from SII to the Department pursuant to this Order shall be made as follows:

1. One copy to the Department of Environmental Conservation, 1150 N. Westcott Road, Schenectady, New York 12306, Attention: Howard S. Brezner, P.E.

2. One copy to the Department of Environmental Conservation, 1150 N. Westcott Road, Schenectady, New York 12306. Attention: David H. Keehn, Esq.;

C. Communication to be made from the Department to SII pursuant to this Order shall be made as follows:

1. One copy to Dr. Robert P. Yunick, Vice President Corporate Technology, Schenectady International, Inc., 2750 Balltown Road, Niskayuna, New York 12150.

2. One copy to James W. Witte, Manager – Plant Services and Environmental Compliance, Polymer Division, Schenectady International, Inc., 1000 Main Street, Rotterdam Junction, New York 12150.

3. One copy to Philip H. Dixon, Esq., Whiteman Osterman & Hanna, One Commerce Plaza, Albany, New York 12260.

D. The Department and SII respectively reserve the right to designate other or different addressees on written notice to the other.

## **ARTICLE XXII. RESERVATION OF RIGHTS.**

Except as specifically provided herein, nothing contained herein shall be construed as barring, diminishing, adjudicating or in any way affecting:

A. Any legal or equitable rights or claims, actions, proceedings, suits, causes of action or demands whatsoever that the Department may have against SII for any alleged violations of the ECL, rules or regulations promulgated thereunder or permits issued thereunder or with respect to investigatory, remedial or corrective action or with

respect to claims for natural resources damages as a result of the release or threatened release of hazardous substances, petroleum, or constituents of either at or from SII's facilities or areas in the vicinity of said facilities;

B. Any legal or equitable rights or claims, actions, proceedings, suits, causes of action or demands whatsoever that the Department may have against anyone other than SII, its officers, directors, agents, servants, employees, successors and assigns; and

C. The Department's right, to the extent provided for by law, to enforce the 1997 Order against SII, its officers, directors, agents, servants, employees, successors or assigns in the event that SII shall fail to fulfill any of the terms or provisions hereof.

#### **ARTICLE XXIII. RELEASE.**

The 1991, 1993, 1994 and 1997 Orders shall be in full settlement of all civil and administrative claims and liabilities that might have been asserted by the Department against SII, its directors, officers, employees, servants, agents, successors and assigns for any violation of the Environmental Conservation Law, the Navigation Law, and any rules and regulations promulgated pursuant thereto or any violation of the three Orders on Consent described in Paragraphs 10 - 12 of the introductory section of the 1991, 1993 and 1997 Orders, at the Rotterdam Junction or Congress Street facilities prior to July 1, 1991. Compliance with the terms and conditions of the 1997 Order and of any surviving

provisions of the 1991, 1993 and 1994 Orders shall also be in full settlement of the violations alleged in these Orders. Provided, however, that this paragraph shall not limit any legal or equitable rights or claims, actions, proceedings, suits, causes of action or demands whatsoever that the Department may have against SII with respect to investigatory, remedial or corrective action or with respect to claims for natural resources damages as a result of the release or threatened release of hazardous substances, petroleum, or constituents of either at or from SII's facilities or areas in the vicinity of said facilities.

#### **ARTICLE XXIV. BINDING EFFECT OF ORDER.**

The provisions hereof shall inure to the benefit of and be binding upon the Department and SII, its agents, employees, successors and assigns and all persons, firms, and corporations acting subordinate thereto.

#### **ARTICLE XXV. FORMAL TERMS.**

The provisions hereof shall constitute the complete and entire Order between SII and the Department. No terms, conditions, understandings or agreements purporting to modify or vary the terms hereof shall be binding unless made in writing and subscribed by the party to be bound. No informal oral or written advice, guidance, suggestions or comments by the Department regarding reports, proposals, plans, specifications,

schedules or any other writing submitted by SII shall be construed as relieving SII of its obligations to obtain such formal approvals as may be required by hereby.

*August 22, 1997*

DATED: Schenectady, New York

JOHN P. CAHILL  
COMMISSIONER  
NEW YORK STATE DEPARTMENT  
OF ENVIRONMENTAL CONSERVATION

By:

  
\_\_\_\_\_  
CARL JOHNSON  
REGIONAL DIRECTOR -- REGION 4

CONSENT BY RESPONDENT

Respondent hereby consents to the issuing and entering of this Order, waives its right to a hearing herein as provided by law, and agrees to be bound by this Order.

By: Kenneth C. Petersen  
Title: President  
Date: 8/20/97 B

STATE OF NEW YORK           )  
  ) ss:  
COUNTY OF SCHENECTADY   )

On this 20<sup>th</sup> day of August, 1997, before me personally came

KENNETH C. PETERSEN,

to me known, who being duly sworn, did depose and say that he is the President of Schenectady International, Inc., described in and which executed the foregoing instrument.

Linda M. Cary  
Notary Public

LINDA M. CARY  
Notary Public, State of New York  
Qualified in Schenectady County  
No. 4912374  
Commission Expires 11/9/97

## **APPENDIX A**

### **"COMPLIANCE SCHEDULE - ROTTERDAM JUNCTION"**

1. SII shall promptly place all drums and containers referred to in paragraph 8 of the 1991 Order which contain liquid hazardous waste and are exempt, pursuant to 6 NYCRR §373-1.1(d)(1)(iv), from 6 NYCRR Part 373 requirements, within secondary containment systems designed and operated in accordance with 6 NYCRR §373-2.9(f). **[IME]** SII has satisfied this requirement.
2. SII shall maintain daily (on operating days) and weekly inspection reports for hazardous waste tank V-10 per 6 NYCRR §§373-2.2(g) and 373-2.10(f) until such tank is closed; **[IME]** SII has satisfied this requirement.
3. SII shall, within 20 days of the effective date of the 1991 Order, modify its pending 373 application for the Rotterdam Junction facility to include storage, decanting and consolidation of drums, and treatment and disposal of hazardous wastes from its Broadway, Niskayuna and Congress Street facilities. **[IME]** SII has satisfied this requirement.
4. SII shall label and date containers in the Hot Storage Building referred to in paragraph 8 of the 1991 Order as hazardous waste in accordance with the requirements of 6 NYCRR §§373-1.1(d)(1)(iv)(d) and 372.2(a)(8)(ii). **[IME]** SII has satisfied this requirement.

#### **5. AIR POLLUTION REDUCTION MEASURES**

##### **a. SOURCE INVENTORY AND PERMITTING**

SII shall, on or before July 15, 1993, conduct an inventory and identify all air emission sources and apply for permits to construct or certificates to operate for all air emission sources subject to regulation under 6 NYCRR Part 200, et seq., including but not limited to all air permit applications for the steam condensate vents, unless SII presents the Department with credible evidence that water vapor is being exclusively emitted from said vents. **[MME]** The contaminants to be evaluated and for which emission limits will be established in permits shall be those contained in Air Guide I, and raw materials, finished products and by-products used or manufactured at the facility. Applications will be submitted for permittable sources and, for those sources for which controls will be needed, the sources will be identified and relevant emissions data will be provided.

b. EMISSION EVALUATION

- i. **Sampling-** Within 3 months, of the effective date of the 1991 Order, an ambient air sampling work plan will be submitted for Department review and approval that will provide a protocol for sampling in a two-stage effort. [IME] This ambient air sampling work plan shall include a schedule by which each task will be implemented. The first stage would be an initial survey to determine if there are any detectable concentrations of target air contaminants, as identified in the approved work plan. This will be followed by ambient sampling of selected compounds to be determined on a quantitative and/or toxicological basis as per the approved protocol. Sampling shall be conducted on a schedule of every sixth (6th) day for twenty-four (24) hours and shall include meteorological monitoring at this facility. SII may apply to be relieved of this sampling obligation, which shall not be granted unless and until there has been no detection, for a period acceptable to the Department, but in no event less than three months, of concentrations of target air contaminants in excess of levels established therefor by the Department for this purpose.
- ii. **Testing-** Within 270 days of the effective date of the 1991 Order, a work plan will be submitted for Department review and approval that will include a stack test protocol to verify emission rates of selected sources in order to determine how closely they compare to estimates listed in SII's Part 201 permits to construct or certificates to operate. [IME] The protocol will identify the sources selected for sampling and state how each was selected. The sources will be selected on a one-per-process category basis (e.g., reactor vessel, mixing tank, storage vessel, transfer point or loading rack). The information would be used to verify the source emissions inventory.
- iii. **Fugitive Emissions -** Within 90 days of the effective date of the 1991 Order, SII shall submit a work plan for Department review and approval that is designed to identify and quantify all air emissions not regulated under 6 NYCRR Part 201. [IME] The emissions to be identified and quantified shall be those listed in Air Guide I, and raw materials, finished products and by-products used or manufactured at the facility. Within 180 days of Department approval of such work plan, SII shall submit a report for Department review and approval setting forth the results of the activities conducted pursuant to the work plan.



c. MODELING

The work plans for the programs described in Section 5.d. below shall be accompanied by an air quality dispersion analysis characterizing the current estimated air quality impacts of all contaminants identified pursuant to paragraphs 5.a and 5.b, above and the projected results of the permitted and fugitive emission control programs. The protocol by which this modeling will be conducted shall be submitted for Department review and approval within 45 days of the effective date of the 1991 Order. [IME]

d. CONTROLS

Within 255 days of the effective date of the 1991 Order, SII shall submit to the Department for review and approval work plans for programs to minimize air emissions, both fugitive and permitted, according to a specified timetable in the work plan. [IME] This emission control work plan shall contain a schedule of all tasks, including a schedule by which Part 201 permit or certificate applications will be submitted.

The goal of the permitted emissions minimization program set forth in the work plan is to ensure that emissions from the facility satisfy all currently effective provisions contained in the federal Clean Air Act, the ECL, and the regulations promulgated thereunder. If any regulation is promulgated that requires modification to the work plan, SII shall submit appropriate revisions to the Department within 60 days of promulgation of such regulation.

The fugitive air emissions minimization work plan shall include a formal Best Management Practices ("BMP") program whose objective will be the identification, control, reduction or elimination, and continuing monitoring and maintenance of sources of fugitive chemical emissions identified pursuant to paragraph 5.b.iii above and any new sources that are identified subsequent to the submission of the report described in paragraph 5.b.iii above. All delivery, raw materials and intermediate storage, handling, process, product storage, and waste handling and disposal areas, and wastewater treatment plant shall be included. The BMP program shall also address, but not be limited to, emissions from the following sources:

- i. Mixing tanks.
- ii. Raw material, product and waste storage tanks. This could involve either installing emission controls on individual tanks or on a series of tanks with interconnected vents.
- iii. Heads, manholes and agitator shafts.

- iv. Production areas.
- v. Emergency relief systems for production kettles.
- vi. Loading and emptying of production vessels.
- vii. Product and raw material transfer points, specifically the railcar and truck loading racks.

The fugitive air emission minimization work plan shall be implemented as set forth in the schedule in the approved work plan. **[MME]**

## **APPENDIX B**

### **"COMPLIANCE SCHEDULE - CONGRESS STREET"**

1. SII shall, within sixty (60) days of the effective date of the 1991 Order, conduct a review of current waste streams generated at its Congress Street Facility and the hazardous/non-hazardous waste classifications assigned to those streams, and modify its Part 373 application, as appropriate, and consistent with 6 NYCRR §372.2(a)(2), based upon that review. [IME] SII has satisfied this requirement.

2. SII shall within sixty (60) days of the effective date of the 1991 Order, include tanks T1, T2 and T3, or any tanks to be used to replace tanks, T1, T2, or T3 and any other tanks used to store hazardous wastes at the facility in the facility's Part 373 permit application as hazardous waste storage tanks. [IME] SII has satisfied this requirement.

3. SII shall within sixty (60) days of the effective date of the 1991 Order, meet secondary containment requirements of 6 NYCRR Part 373 in those areas referred to in paragraph 8 of the 1991 Order. [MME] SII has satisfied this requirement.

4. SII shall, within sixty (60) days of the effective date of the 1991 Order, label and date all containers of hazardous waste referred to in paragraph 8 of the 1991 Order in accordance with the requirements of 6 NYCRR §§373-1.1(d)(1)(iv)(d) and 372.2(a)(8)(ii). [IME] SII has satisfied this requirement.

5. SII shall, within sixty (60) days of the effective date of the 1991 Order, manifest all shipments of hazardous waste, referred to in paragraph 8 of the 1991 Order, off-site in accordance with the requirements of 6 NYCRR §372.2(b). [IME] SII has satisfied this requirement.

6. SII shall, within sixty (60) days of the effective date of the 1991 Order, store all hazardous waste referred to in paragraph 8 of the 1991 Order in an area with either 24 hour surveillance or a barrier and a means to control entry in accordance with the requirements of 6 NYCRR §373-3.2(e)(2). [MME] SII has satisfied this requirement.

#### **7. AIR POLLUTION REDUCTION MEASURES**

##### **a. SOURCE INVENTORY AND PERMITTING**

SII shall, on or before July 15, 1993, conduct an inventory and identify all air emission sources and apply for permits to construct or certificates to operate for all air emission sources subject to regulation under 6 NYCRR Part 200, et seq., including but not limited to all air permit applications for the steam

condensate vents, unless SII presents the Department with credible evidence that water vapor is being exclusively emitted from said vents. **[MME]** The contaminants to be evaluated and for which emission limits will be established in permits shall be those contained in Air Guide I, and raw materials, finished products and by-products used or manufactured at the facility. Applications will be submitted for permittable sources and, for those sources for which controls will be needed, the sources will be identified and relevant emissions data will be provided.

b. **EMISSION EVALUATION**

- i. **Sampling-** Within 3 months, of the effective date of the 1991 Order, an ambient air sampling work plan will be submitted for Department review and approval that will provide a protocol for sampling in a two-stage effort. **[IME]** This ambient air sampling work plan shall include a schedule by which each task will be implemented. The first stage would be an initial survey to determine if there are any detectable concentrations of target air contaminants, as identified in the approved work plan. This will be followed by ambient sampling of selected compounds to be determined on a quantitative and/or toxicological basis as per the approved protocol. Sampling shall be conducted on a schedule of every sixth (6th) day for twenty-four (24) hours and shall include meteorological monitoring at this facility. SII may apply to be relieved of this long-term sampling obligation, which shall not be granted unless and until there has been no detection, for a period acceptable to the Department, but in no event less than three months, of concentrations of target air contaminants in excess of levels established therefor by the Department for this purpose.
- ii. **Testing-** Within 270 days of the effective date of the 1991 Order, a work plan will be submitted for Department review and approval that will include a stack test protocol to verify emission rates of selected sources in order to determine how closely they compare to estimates listed in SII's Part 201 permits to construct or certificates to operate. **[IME]** The protocol will identify the sources selected for sampling and state how each was selected. The sources will be selected on a one-per-process category basis (e.g., reactor vessel, mixing tank, storage vessel, transfer point or loading rack). The information would be used to verify the source emissions inventory.
- iii. **Fugitive Emissions -** Within 90 days of the effective date of the 1991 Order, SII shall submit a work plan for Department review and approval that is designed to identify and quantify all air emissions not

regulated under 6 NYCRR Part 201. [IME] The emissions to be identified and quantified shall be those listed in Air Guide I, and raw materials, finished products and by-products used or manufactured at the facility. Within 180 days of Department approval of such work plan, SII shall submit a report for Department review and approval setting forth the results of the activities conducted pursuant to the work plan.

c. MODELING

The work plans for the programs described in Section 7.d. below shall be accompanied by an air quality dispersion analysis characterizing the current estimated air quality impacts of all contaminants identified pursuant to paragraphs 7.a. and 7.b. above and the projected results of the permitted and fugitive emission control programs. The protocol by which this modeling will be conducted shall be submitted for Department review and approval within 45 days of the effective date of the 1991 Order. [IME]

d. CONTROLS

Within 255 days of the effective date of the 1991 Order, SII shall submit to the Department for review and approval work plans for programs to minimize air emissions, both fugitive and permitted, according to a specified timetable in the work plan. [IME] This emission control work plan shall contain a schedule of all tasks, including a schedule by which Part 201 permit or certificate applications will be submitted.

The goal of the permitted emissions minimization program set forth in the work plan is to ensure that emissions from the facility satisfy all currently effective provisions contained in the federal Clean Air Act, the ECL, and the regulations promulgated thereunder. If any regulation is promulgated that requires modification to the work plan, SII shall submit appropriate revisions to the Department within 60 days of promulgation of such regulation.

The fugitive air emissions minimization work plan shall include a formal Best Management Practices ("BMP") program whose objective will be the identification, control, reduction or elimination, and continuing monitoring and maintenance of sources of fugitive chemical emissions identified pursuant to paragraph 7.b. iii above and any new sources that are identified subsequent to the submission of the report described in paragraph 7.b.iii. above. All delivery, raw materials and intermediate storage, handling, process, product storage, and waste handling and disposal areas, and wastewater treatment plant shall be included. The BMP program shall also address, but not be limited to, emissions from the following sources:

- i. Mixing tanks.
- ii. Raw material, product and waste storage tanks. This could involve either installing emission controls on individual tanks or on a series of tanks with interconnected vents.
- iii. Heads, manholes and agitator shafts.
- iv. Production areas.
- v. Emergency relief systems for production kettles.
- vi. Loading and emptying of production vessels.
- vii. Product and raw material transfer points, specifically the railcar and truck loading racks.

The fugitive air emission minimization work plan shall be implemented as set forth in the schedule in the approved work plan. **[MME]**

## **APPENDIX C**

### **"REQUIREMENTS FOR BEST MANAGEMENT PRACTICES, STORM WATER MANAGEMENT AND SPILL PREVENTION PLANS"**

1. SII shall develop and implement a Best Management Practices Plan ("BMP Plan") for each of its Rotterdam Junction, Congress Street, Broadway and Niskayuna Facilities to prevent or minimize the potential for release of significant amounts of toxic or hazardous pollutants to the waters of the State. The BMP Plan shall also address the substantive requirements of the new federal stormwater regulations as contained in 40 C.F.R. Parts 122, 123, and 124 (November 16, 1990). The BMP Plan shall be deemed incorporated into and become a part of any SPDES Permit(s) that may be issued; *provided*, that nothing in this Appendix shall be interpreted or construed as preventing the Department from expressly imposing additional or different conditions in such SPDES Permit(s). The compliance schedule set forth in paragraph 6 below shall apply.
2. SII shall review all facility components or systems where nuisance compounds or toxic or hazardous pollutants are used, manufactured, stored or handled to evaluate the potential for the release of significant amounts of pollutants to the waters of the State. In performing such an evaluation, SII shall consider such factors as the probability of equipment failure or improper operation, the effects of natural phenomena such as freezing temperatures and precipitation, and the facility's history of spills and leaks. For hazardous pollutants, the list of reportable quantities as defined in 40 C.F.R. Part 117 may be used as a guide in determining significant amounts of releases. For toxic pollutants, the relative toxicity of the pollutant shall be considered in determining the significance of potential releases. For nuisance compounds, such as dye, potential visual or aesthetic impacts detrimental to the usage of waters of the State shall be considered. The review shall address all substances present at the facility that are listed as toxic pollutants under Section 307(a)(1) of the Clean Water Act or as hazardous pollutants under Section 311 of the Act or that are identified as Chemicals of Concern by the Industrial Chemical Survey.
3. Whenever the potential for a significant release of nuisance compounds or toxic or hazardous pollutants to State waters is determined to be present, SII shall identify Best Management Practices ("BMPs") that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, SII shall consider typical industry practices such as spill reporting procedures, risk identification and assessment, employee training, inspections and records,

preventive maintenance, good housekeeping, materials compatibility and security. In addition, SII may consider structural measures (such as secondary containment devices) where appropriate.

4. The BMP Plan shall be documented in narrative form and shall include any necessary plot plans, drawings or maps. Other documents already prepared for the facility such as the Spill Prevention, Control and Countermeasure ("SPCC Plan") Plan may be used as part of the updated plan and may be incorporated by reference. A copy of the BMP Plan shall be maintained at the facility and shall be made available to the Department upon request. As a minimum, the plan should consider including the following BMP's:
  - a. BMP Committee
  - b. Reporting of BMP
  - c. Risk Identification
  - d. Employee Training
  - e. Inspection and Records
  - f. Preventive Maintenance
  - g. Good Housekeeping
  - h. Material Capability
  - i. Security
5. The BMP Plan shall be modified whenever changes at the facility materially increase the potential for significant releases of toxic or hazardous pollutants or where actual releases indicate the plan is inadequate. Any substantive modification of the BMP Plan shall be submitted to the Department for review and approval.
6. The BMP Plan shall be developed and implemented in accordance with the following compliance schedule:
  - a. Within one (1) month of the effective date of the 1991 Order, SII shall retain a consultant to develop the BMP Plan, to review the adequacy of any existing BMP, and to develop the storm water management and spill prevention plan set forth in paragraph 8 below. [IME]
  - b. Within three (3) months of the effective date of the 1991 Order, SII shall submit the work plan set forth in paragraph 8 to the Department for review and approval. This work plan shall contain a schedule for development of a BMP Plan for the Rotterdam Junction facility. [IME]
  - c. Within six (6) months of the effective date of the 1991 Order, SII shall submit the proposed BMP Plan for the Congress Street facility to the Department for review and approval. [IME]



- d. Within fourteen (14) months of the effective date of the 1991 Order, SII shall submit the proposed BMP Plans for Broadway and Niskayuna, or documentation establishing why BMP Plans are not required for such facilities, to the Department for review and approval. **[IME]**
  - e. Upon approval by the Department, SII shall commence the implementation of the each BMP or Work Plan in accordance with the time schedule set forth therein. This time schedule shall include a completion date for implementation of all portions of the BMP Plan, except for those involving physical construction, that is no later than twelve (12) months from the date the BMP Plan is approved by the Department. **[MME]**
7. The term "significant release" as used herein means any release which may:
- a. Cause or contribute to a violation of an effluent limitation in its SPDES permit, or water quality standards; or
  - b. Exceed a Reportable Quantity, as listed in 40 C.F.R. 302.4; or
  - c. Contain substances which SII is not authorized to discharge by its SPDES permit.

**8. STORM WATER MANAGEMENT PLAN AND SPILL PREVENTION --  
ROTTERDAM JUNCTION**

SII shall, as provided in paragraph 6.b. above, submit a Work Plan to the Department for review and approval setting forth a time frame for developing a BMP Plan, addressing those matters set forth in paragraphs 1 through 4 above, for the Rotterdam Junction facility and addressing the following issues relating to stormwater management and spill prevention at the Rotterdam Junction facility. This Work Plan shall contain a schedule with appropriate objectives and completion dates. The completion date for implementing the initial phase (i.e., activities other than those relating to physical construction) of the BMP portions of this Work Plan shall be no later than twelve (12) months after Department approval of the Work Plan. Upon Department approval of the Work Plan, all measures shall be implemented pursuant to the time schedule contained therein.

The Work Plan shall address:

- a. Performance of a system analysis of the continuous outfall monitoring device and alarm system on outfall 001 to determine if the device is effective and its precision is sufficiently adequate to trigger the alarm in the case of a reportable release.

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- b. Investigation of the feasibility of construction of a holding lagoon into which SII would temporarily divert flows should a problem be detected in the facility's Waste Water Treatment Plant ("WWTP") effluent. Sufficient storage should be provided in the lagoon to give enough time to react to and correct the problem.
- c. Consideration of separating stormwater from the process sewers where possible to minimize possible hydraulic overloads to the facility's WWTP. This analysis of stormwater arrangements shall consider all applicable requirements under the federal stormwater regulations, 40 C.F.R. Parts 122, 123 and 124, and any applicable New York State statutes and regulations.
- d. Institution of a pressure vessel testing program for those portions of the non-contact cooling water system that have the potential for discharge to the non-process cooling water sewer. Such a program could prevent system failures which could result in the release of process wastes to the river via the non-contact cooling water system.
- e. Identification and elimination of all possible cross-connections between the chemical and non-process cooling water sewers and all crossovers where releases could occur.
- f. Performance of a complete assessment of recent release/spill incident history at the facility for the purpose of facilitating spill prevention activities.
- g. Investigation of how, if at all, completion of the flood control dike around this facility may result in adverse impacts on facility operations during a significant storm event.

## **9. SPDES PERMIT FOR CONGRESS STREET**

By July 1, 1996, SII shall submit a completed SPDES permit application for the non-contact cooling water discharge and all point source discharges of stormwater from the site to Cowhorn Creek. As part of the application, both the non-contact cooling water discharge and all other SII point source discharges to Cowhorn Creek must be sampled and analyzed during a storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch) rainfall storm event, for:

- Oil & Grease
- BOD5
- Chemical Oxygen Demand - COD (mg/l)
- Total Suspended Solids - TSS (mg/l)
- Total Kjeldahl Nitrogen - TKN (mg/l)

## **SCHENECTADY INTERNATIONAL MODIFIED ORDER ON CONSENT**

- Total Phosphorus (mg/l)
- pH
- The application must provide analytical results for any Title 3 Section 313 water priority chemical for which the facility is subject to reporting requirements under the Emergency Planning and Community Right to Know Act of 1986.
- The non-contact cooling water discharge should be analyzed for volatile organic compounds using EPA Method 624.

The following information must also be included in the application package:

- date and duration (in hours) of the storm event sampled.
- rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff.
- the duration between the storm event sampled and previous measurable (greater than 0.1 inches rainfall) storm event.
- an estimate of the total volume (in gallons) of the discharge samples.

An additional sampling event for each point source discharge, if any, shall be conducted during a non-storm event (dry weather). Each discharge shall be analyzed for the parameters listed above, conventional pollutants, any chemical used on-site and any constituent of water treatment chemicals used to condition the water. All water treatment chemicals must be listed on the Industrial Chemical Survey (ICS) form along with the rate of use (dosage rate and frequency of use).

On July 1, 1996, SII submitted the SPDES permit application, and the Department subsequently determined that the application was complete and that the requirements of this Paragraph 9 had been satisfied.

## **APPENDIX D**

### **"ROTTERDAM JUNCTION"**

#### **"INTERIM CORRECTIVE MEASURES AND BOILER NO. 4 BACT ANALYSIS AND TRIAL BURN"**

##### **A. INTERIM CORRECTIVE MEASURES**

**GENERAL PROVISIONS.** SII and the Department acknowledge the following as part of this section:

- The requirements of this Paragraph A of Appendix D relating to interim corrective measures at the Rotterdam Junction Facility (the "Facility") shall govern until a Part 373 permit is issued to SII for the Facility, at which time any applicable provisions of this Paragraph A shall no longer be in effect.
- The Interim Corrective Measure in this section is intended to minimize the migration of contaminants off-site.
- Performance monitoring for the western side as described in section A.2 may be different from the performance monitoring for the Eastern side as described in section A.1.
- Final corrective action for the Facility will be addressed upon site closure. However, SII will implement Interim Corrective Measures for all known Solid Waste Management Units ("SWMUs") and Areas of Concern ("AOCs") at this site in accordance with the Part 373 permit or the approved closure plan. To insure that the final corrective action will occur, SII will modify the Part 373 permit application to include a Post-Closure Plan for the site and provide funding to cover the cost of implementing the approved plan.
- SII and the Department agree to use the ICM, once constructed, to supplement other monitoring information in the interim corrective measure program for the SWMUs on-site.
- SII must address all SWMUs and AOCs that SII discovers at this site in accordance with the Part 373 permit or an approved closure plan.
- If the ICM fails to meet the performance specified standards, SII will investigate and take the necessary corrective measures.

**1. EAST SIDE**

<u>SUBMISSION DATE</u>	<u>REQUIREMENT</u>
December 20, 1991	Submit revised Interim Corrective Measure Study for the Facility's eastern side (the "ICMS") to the Department for review and approval. [IME]  The revised ICMS shall, at a minimum, stipulate the remedial objective(s) to be met by the ICM, contain sufficient information on the ICM design, criteria and engineering data to support the ICM design, and include preliminary design plans for the ICM.
By June 1, 1993	Submit Interim Corrective Measure Design (the "ICMD") for the ICM for the Facility's eastern side for Department review and approval. [IME]
60 days after ICMD approval	Submit a report on the status of ICM construction and documentation of financial assurance, as described above. [IME]
12 months after ICMD approval	Complete construction of the ICM. [IME] Construction will be considered complete with the startup of the groundwater removal system.
60 days after completion of ICM construction	Submit as-built drawings for reference purposes only and a certification that construction was completed in accordance with the approved ICMD. [IME]
180 days after startup of the groundwater removal system.	Submit performance assessment

365 days after startup of the groundwater removal system.

3 months after completion of ICM construction, or as soon thereafter as climatological conditions permit.

## **2. WEST SIDE**

### **SUBMISSION DATE**

By August 9, 1993

concerning the effectiveness of the ICM. [IME]

Submit performance assessment concerning the effectiveness of the ICM. [IME]

Complete construction of flood protection system. [MME]

### **REQUIREMENT**

Submit an Interim Corrective Measure Study (the "ICMS") for the Facility's western side to the Department for review and approval. [IME]

The ICMS shall, at a minimum, stipulate the remedial objective(s) to be met by the ICMS, contain sufficient information on the ICMS design, criteria and engineering data to support the ICM design, and include preliminary design plans for the ICM. The study and design for the West Side will include, as appropriate, the following considerations:

(a) Soil borings for the West Side shall be installed at intervals of no less than 50 feet; The Department may expand the intervals upon petition by SII and subsequent Department approval.

(b) Soil gas survey(s) will be used to estimate the extent of potential soil and groundwater contamination for the West Side along with other available data.

(c) SII may petition the Department to reduce or eliminate the need for soil sampling every 10 cubic yards as specified in Appendix F based on the soil gas survey and any additional information generated.

90 days after ICMS approval

Submit Interim Corrective Measure Design (the "ICMD") for the ICM for the Facility's western side for Department review and approval. [IME]

The ICMD shall consist, where appropriate, of the following elements:

- I. A detailed description of the means of effectuating the ICM.
- II. "Contract-ready" documents for the construction of the elements of the ICM, including final plans and specifications prepared and certified by a licensed professional engineer registered in the State of New York, which shall satisfy all applicable State and federal laws and rules and regulations;
- III. A time schedule for implementation of the elements of the ICM;
- IV. A final Health and Safety Plan that shall be in effect during the construction of the ICM;
- V. A final Operation and Maintenance Plan for the ICM that shall be implemented upon completion. That Plan shall include at a minimum:

a. A Quality Assurance Project Plan ("QAPP"), prepared in accordance with the Department's RCRA guidance, that will address QA/QC matters relating to all environmental monitoring that will be carried out during the operation of the ICM.

b. A schedule for monitoring and maintaining the completed ICM, including the provision for submission to the Department of periodic monitoring and maintenance reports.

c. A detailed description on how the ICM will be maintained, including the elements of the ICM requiring maintenance.

VI. A work plan for the detailed hydrogeologic evaluation and an outline of the groundwater response plan.

VII. A Plan for financial assurance under 6 NYCRR 373-2.8 will be required of the owner or operator of the facility for corrective action, such assurance to extend to construction, operation and maintenance until such time as a financial assurance plan has been put into effect in accordance with the provisions of an applicable Part 373 permit.



2 months after ICMD approval	Submit a report on the status of ICM construction and documentation of financial assurance, as described above. [IME]
12 months after ICMD approval	Submit interim status report. [IME]
18 months after ICMD approval	Complete implementation of the ICM and submit final status report, including detailed hydrogeological evaluation and groundwater response plan. [MME]
12 months after completion of implementation of the ICM.	Submit results of the first nine months of data and an evaluation of the monitoring program. [IME]

**B. BOILER NO. 4 BACT ANALYSIS/TRIAL BURN.**

1. SII submitted a trial burn plan in March 1992 for Boiler No. 4, which was approved by the Department on June 17, 1992.
2. SII submitted a health risk assessment protocol for metals and organic emissions from Boiler No. 4,<sup>1</sup> which was approved by the Department on October 22, 1992.
3. Within 60 days of the effective date of the 1993 Order, SII shall submit an addendum to the approved health risk assessment protocol referenced in Subparagraph 2 of this Paragraph to assess the health effects due to particulate emissions from Boiler No. 4 for review and approval by the Department and the New York State Department of Health ("NYSDOH"). This protocol shall be prepared under the requirements of the Department's 6 NYCRR Part 212 and the NYSDOH. Once reviewed and approved, this approved addendum will be called as the "Supplemental Health Risk Assessment Protocol."
4. SII completed a trial burn on Boiler No. 4 as per the protocol referenced in Subparagraph 1 of this Paragraph on June 29, 1992 and submitted a trial burn report to the Department in September 1992. SII has also submitted a response to the Department on February 8, 1993 addressing the

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<sup>1</sup> Also submitted for the Shirco Unit, not relevant to the requirements established by this Appendix.

Department's November 19 and 20, 1992 comments on this trial burn report. The Department sent comments on the revised trial burn report to SII on March 22, 1993. SII must respond by June 7, 1993. [IME] The Department will approve or disapprove this submittal per Paragraph XII [SUBMITTAL REVIEW AND APPROVAL] of the 1993 Order.

5. By September 30, 1994, SII shall submit to the Department for review and approval, the results of the health risk assessment of metal emissions (and organic emissions if CO and THC exceed USEPA's de minimis values) from Boiler No. 4 following the approved protocol referenced in Subparagraph 2 of this Paragraph and a revised approvable analysis of alternatives and a recommendation of Best Available Control Technology ("BACT") [as defined in 6 NYCRR 200.1.(i)] to be used to reduce the toxic emissions of metals and organics from Boiler No. 4 as identified in the trial burn report referenced in Subparagraph 4 of this Paragraph. The revised BACT report shall be prepared in accordance with the Department's May 11, 1994 comments on SII's BACT Report submitted to the Department on February 23, 1994. The revised Health Risk Assessment shall be prepared in accordance with the Department's May 10, 1994 comments on SII's Health Risk Assessment submitted to the Department on February 23, 1994. [IME]
6. Within 120 days of the Department's approval of the BACT report referenced in Subparagraph 5 of this Paragraph, SII shall submit preliminary design plans including locations of sampling ports together with permit applications to the Department of review and approval for the selected BACT technology. [IME]

By January 31, 1996, SII shall submit to the Department a revised Trial Burn Plan which will contain a list of principal organic hazardous constituents (POHCs) in the waste streams to determine the destruction and removal efficiencies in Boiler No. 4 and will address the comments contained in the letter from the United States Environmental Protection Agency dated April 20, 1994 [IME], and, by November 21, 1995, SII shall submit a revised Health Risk Assessment Protocol that addresses the comments contained in the letters from the United States Environmental Protection Agency dated April 20, 1994, and November 22, 1994, and in the letter from the New York State Health Department dated December 20, 1994, or as approved by the Department. [IME]

Once the Department approves the revised Trial Burn Plan, the trial burn plan referenced in Subparagraph 1 of this Paragraph after incorporation of this protocol will be known as the "Modified Trial Burn

Plan." [IME] The Department and SII agree that THC shall be deemed removed from the Modified Trial Burn Plan.

7. By December 31, 1996, SII shall install and commence operation of the selected control equipment. **[MME]**
8. Within 60 days after completion of the BACT Control Technology installation or process modification referenced in Subparagraph 7 of this Paragraph, SII shall complete shake-down activities.
9. Within 45 days after the completion of the shake-down period referenced in Subparagraph 8 of this Paragraph, SII shall conduct the trial burn on Boiler No. 4 as per the Modified Trial Burn Plan referenced in Subparagraph 6 of this Paragraph. **[MME]**
10. Within 90 days after the completion of the trial burn referenced in Subparagraph 9 of this Paragraph, the trial burn report documenting the results of the trial burn shall be submitted to the Department for review and approval. **[MME]**

If the Department disapproves the trial burn report per Article XII [SUBMITTAL REVIEW AND APPROVAL] ¶A(4) of the 1997 Order, SII shall cease burning hazardous waste in Boiler No. 4 on the date that SII receives the disapproval letter and initiate its closure within thirty (30) days, unless the Department has approved a schedule for corrective action. Absent Department approval of a schedule for corrective action, or unless the failure is due to circumstances constituting a force majeure under Article XV of the 1993 Order, SII may resume burning hazardous waste in Boiler No. 4 only after the Department approves the trial burn report.

11. Within thirty (30) days of the approval of the trial burn report, SII shall submit to the Department for review and approval by the Department and the NYSDOH the health risk assessment report, as per the Department and the NYSDOH approved protocol referenced in Subparagraph 6 of this Paragraph, due to emissions from the Boiler No. 4. **[MME]**
12. If the trial burn data show that Boiler No. 4 fails to meet the performance standards of 6 NYCRR Part 373 and any applicable 40 CFR Parts 264, 265, or 266 performance standards for hazardous waste incinerators and the Boiler and Industrial Furnaces requirements of the United States Environmental Protection Agency ("USEPA"), SII shall cease burning hazardous waste in Boiler No. 4 and initiate its closure within thirty (30) days after receiving such notification from the Department; also, if Boiler

No. 4 meets the above-referenced performance standards but the submitted risk assessment report referenced in Subparagraph 11 of this Paragraph shows health risks unacceptable to USEPA, the NYSDOH and/or the Department, SII shall cease burning hazardous waste in Boiler No. 4 within thirty (30) days after receiving notification of such determination from the Department. Within such thirty (30) day period, however, SII may submit, for review and approval pursuant to Article XII of the 1997 Order, a proposal to the Department (together with all necessary permit applications) for the operation of the incinerator, such as reducing the hazardous waste feed rates and/or equipment, to remain within acceptable health risks. Upon the Department's approval of the proposal, SII may resume burning hazardous waste in Boiler No. 4 in accordance with the approved proposal. If the Department disapproves the proposal, SII shall cease burning hazardous waste in Boiler No. 4 and initiate its closure within thirty (30) days after receiving such disapproval from the Department.

13. If the health risk assessment report referenced in Subparagraph 11 of this Paragraph shows that Boiler No. 4 passes the Department's, USEPA's and the NYSDOH's health risk requirements for metals and organics, but shows that Boiler No. 4 fails to meet 6 NYCRR Part 212 standards for particulates, SII will perform the supplemental health risk due to particulate emissions from Boiler No. 4. If the total health risk due to emissions of metals, organics and particulates from Boiler No. 4 fails the Department's, USEPA's or the NYSDOH's health risk requirements, SII will cease operation of Boiler No. 4 as required to achieve acceptable health risks or effects and initiate its closure within thirty (30) days of such a notification from the Department. **[MME]**

## APPENDIX E

### "ENVIRONMENTAL IMPROVEMENT PROGRAM"

#### **A. LIQUID HAZARDOUS WASTE INCINERATOR TANKS**

<u>SUBMISSION DATE</u>	<u>REQUIREMENT</u>
Within 30 days of effective date of the 1991 Order	Submit preliminary project design plans together with permit applications and environmental assessment form to the Department for review and approval for the Liquid Hazardous Waste Incinerator ("LHWI") storage tanks at the Rotterdam Junction Facility. [IME]
120 days after Department issues permit(s) for LHWI storage tanks	Submit detailed design drawings and specifications to the Department for review. [IME]
Within 30 days of Department approval of preexcavation soil sampling report or as soon thereafter as climatological conditions permit.	Commence construction of the storage tanks unless SII submits and the Department approves a plan for facility operation pursuant to which the tanks are not necessary.
270 days after construction start, or as soon thereafter as climatological conditions permit	Finish construction of the storage tanks. Construction may be completed within 365 days after construction start if SII provides documentation to the Department before construction start establishing that such additional time is needed due to time frames for delivery of tanks or other long lead-time equipment. [MME]
60 days after completion of construction	Submit as-built drawings for the storage tanks to the Department for reference purposes only. [IME]

**B. HAZARDOUS WASTE STORAGE BUILDING - ROTTERDAM JUNCTION**

<u>SUBMISSION DATE</u>	<u>REQUIREMENT</u>
Within 60 days of effective date of the 1993 Order	Submit detailed design plans and specifications for modifications to the building presently housing the Shirco Unit necessary for its use as a hazardous waste storage building. [IME]
30 days after receipt of Department approval or 15 days after completion of Shirco closure, whichever is later	Commence construction of storage building. [IME]
90 days after construction start	Complete construction of modifications of Shirco building. [MME]
60 days after construction completion	Submit as-built drawings of storage building to the Department, for reference purposes only. [IME]

**C. INDUSTRIAL SEWERS - ROTTERDAM JUNCTION**

<u>SUBMISSION DATE</u>	<u>REQUIREMENT</u>
Within 30 days of effective date of the 1997 Order.	Submit, for Department review and approval, the most current and complete documents in its possession containing information concerning the industrial sewer lines at its Rotterdam Junction facility, together with a description of the material carried by each section of industrial sewer line, to the extent that such is currently known. This submittal shall also include a proposed method for creating a hierarchical listing of the relative health, environmental, physical and other hazards posed by the various sewer lines, on a scale, with the lowest rating representing the least hazardous, and the highest rating representing the most hazardous. [IME]

Within 45 days after Department approval of the proposed hierarchical listing above.

Submit, for Department review and approval, a plan for an initial pilot project that will include all of the following: [IME]

1. A demonstration of, or a satisfactory justification for not demonstrating, all potential technologies for the renovation, including aboveground, double liner with leak detection capability, double liner without leak detection capability, single liner, single liner with secondary containment, and any other technologies SII may consider using at the Facility.
2. The locations at which each component of the pilot project is conducted shall include, to the extent possible, sections of industrial sewer lines that are representative of all conditions, and combinations of conditions, in the industrial sewer lines at the Facility.
3. A hierarchical listing of all the industrial sewer lines based on the approved methodology for preparing such a listing, including a justification of the ratings given.
4. A schedule that details the length of time and criteria for evaluation of each demonstrated technology and provides for the submission to the Department for its review and approval of a report summarizing the results of pilot project.

Within 60 days of approval by the Department of the pilot project summary report.

Submit, for Department review and approval, a final schedule for the renovation of the industrial sewer lines at the Facility that calls for the upgrade to be implemented in phases, based upon the approved hierarchy. The schedule shall also include dates for submitting detailed design drawings and specifications to the Department for its review. [MME]

Within 30 days of approval by the Department of the schedule or as soon thereafter as weather conditions permit.

Commence renovation activities in accordance with the approved work schedule. [MME]

The requirements of this Paragraph C of Appendix E relating to industrial sewers shall govern until a Part 373 permit is issued for the Facility, at which time any applicable provisions of the Part 373 permit shall govern and the provisions of this Paragraph C shall no longer be in effect.

**D. HAZARDOUS MATERIALS AND CHEMICAL BULK STORAGE TANKS - ROTTERDAM JUNCTION**

**SUBMISSION DATE**

**REQUIREMENT**

Within 240 days of the effective date of the 1991 Order

Submit conceptual plans for hazardous materials and chemical bulk storage tanks. [IME] The conceptual plans will identify specific phases of the project, the last phase of which shall be completed by December 31, 2003. Each phase description shall include a completion date.

By no later than January 3, 1994

Resubmit conceptual plans for hazardous materials and chemical bulk storage tanks in accordance with the concepts embodied in the Department's proposed 6 NYCRR Part 590 series regulations.

By no later than March 30, 1995

Submit preliminary project design plans and applications for permits to construct air emission sources to the Department for review and approval for the hazardous materials and chemical bulk storage tanks, Phase I. [IME] Preliminary design plans and applications for subsequent phases to be submitted as set forth in approved conceptual plans.

120 days after Department approval of preliminary design plans for each phase

Submit detailed design drawings and specifications for each phase to the Department for review and approval. [IME]

At least 3 days prior to commencement of each phase

Register all new stationary chemical bulk storage tanks. [IME]

60 days after Department approval of detailed plans

Commence construction of phase in accordance with approved plans. [MME]



10 days after completion of construction of each phase

Submit applications for certificates to operate to the Department. [IME] SII will be permitted to operate the air emission sources in compliance with the applications pending issuance of the permits.

60 days after completion of construction of each phase

Submit as-built drawings of completed phase of the tanks to the Department, for reference purposes only. [IME]

**E. GENERIC ENVIRONMENTAL IMPACT STATEMENT - ROTTERDAM JUNCTION**

<u>SUBMISSION DATE</u>	<u>REQUIREMENT</u>
By no later than June 30, 1995 Within 120 days of the effective date of the 1997 Order.	Submit a revised draft generic environmental impact statement ("DGEIS"), based on the Scoping Document circulated to potentially involved/interested parties by the Department in 1992, to the Department covering current and planned activities at SII's Schenectady County facilities. Once the DGEIS is submitted, further submissions, Department review and time frames for both shall be governed by the State Environmental Quality Review Act (ECL Article 8 and 6 NYCRR Part 617) rather than by the provisions of this Order.

## **APPENDIX F**

### **"SOILS MANAGEMENT PROTOCOL REQUIREMENTS"**

Appendix F applies to all projects undertaken under the 1991, 1993, 1994 or 1997 Order, or work plans submitted pursuant thereto (hereinafter referred to as "Order Projects"). This Appendix outlines two methods for determining how to deal with excavated soil, storage of this soil and backfill of soils. These two methods are a rapid characterization method outlined in Section D and a TCLP method with additional criteria described in Section E. These methods differentiate between soils that may be returned to the area of the original excavation to await further evaluation, and excavated soils that must be removed from the excavation area and managed appropriately. The Department reserves the right to impose more restrictive cleanup levels on a case-by-case basis.

SII shall submit a Soil Management Plan for each Order Project that involves management of soils. Each plan must include protocols for Department review and approval which clearly describe the sampling and analysis procedures for each step of the rapid characterization method and the TCLP method. This protocol must be consistent with Appendix F and include all normal QA/QC procedures (i.e., duplicates, matrix spikes, matrix spike duplicates, and blanks).

For all parts of this protocol, SII may petition the Department to reduce the number of the pre-excavation and excavation assessment samples required in a proposed area of an Order Project where adequate groundwater monitoring information, or soil analysis results are available near that area.

The following area special conditions that SII must follow:

- When SII is taking samples, the Department may take split samples or request SII take split samples for the Department.
- In no way are the concentration levels contained herein to be considered final cleanup levels.
- **THE COMPOSITING OF SAMPLES FOR THIS PROCEDURE IS NEVER ALLOWED.**
- The date, time, location, sample identification, results of any rapid assessment real time testing and disposition of materials will be noted for all pre-excavation and excavation samples in a field logbook.

- The field logbook shall be available for review by Department personnel on an unrestricted basis.
- All submissions of data must include reporting limits for each parameter. Each submission must also define the term, "reporting limits." SII must ensure that the reporting limits are lower than the levels in Tables 1 or 2.
- If SII or their consultants do not use SII's on-site laboratory, then the laboratory used must be DOH/ELAP approved.

#### **A. Definitions**

For the purposes of Appendix F only, the following definitions must be used:

"Point of origin" or "immediate area" is defined as the project site for all projects other than the Interim Corrective Measures described in Appendix D (hereinafter referred to as the "barrier wall"). For the barrier wall, "point of origin" or "immediate area" is defined as the area of the barrier wall excavated within 7 days of the staged material in question.

"Rapid assessment real time testing" is defined as the combination of evaluating the soils for visual contamination, and screening the soil with a real time organic vapor analyzer (OVA).

"Rapid characterization method" is defined as a test method which consists of two parts. The first part is rapid assessment real time testing, which combines an evaluation of the soils for visual contamination, and also screens the soil with a real time organic vapor analyzer (OVA). The second part is the rapid field characterization method, which involves sampling the soils for analysis by a rapid gas chromatographic technique.

"Rapid field characterization method" is defined as test method which involves sampling the soils for analysis by a rapid gas chromatographic technique.

"Reporting limits" are defined as quantification within an achievable precision range (i.e., a reporting limit of 30% relative standard deviation).

"Residual materials" are defined as construction debris, liquid man-made material, semi-liquid man-made material or any man-made solid material with a diameter of greater than 3 inches.

"Substantial contamination" is defined for the purposes of this protocol as the presence of free organic liquids and/or residual material, or a reading equal to or

greater than 1000 ppmv on a flame ionization type of organic vapor analyzer (OVA) which is passed over the surface of the excavated material.

## **B. Soil Assessment for All Projects except the Barrier Wall**

All soils that SII will excavate as part of an Order Project must be tested in accordance with the procedures in this Appendix. SII may either use the rapid characterization method described in Section D and or the TCLP analysis with the additional conditions described in Section E.

If SII decides to employ the rapid characterization method, then SII must follow the procedure in Section D. SII, at any point of this procedure, may elect instead to perform a TCLP analysis with the additional conditions described in Section E. If the assessment samples fail the conditions of either the rapid assessment real time testing or the rapid field characterization method, SII must follow the procedure in Section I to determine the disposition of the soils represented by these assessment samples.

If SII elects to perform the TCLP procedure described in Section E, then SII must comply with the provisions of this paragraph. If a sample has already failed the rapid assessment real time test and if the sample passes the testing requirements in Section E, then SII must manage the soil represented by the sample in accordance with Section I. If any sample of the excavated material from an individual sample area is found to contain in its TCLP extract any listed organic chemical greater than regulatory levels in Table 2, or if the sample's TCLP extract exceeds the additional criteria described in Section E, the material represented by the sample is considered unsuitable for return to the excavation and must be managed as a hazardous waste.

As required by the rapid characterization method, SII must conduct a rapid assessment real-time test to determine if the soil being excavated is substantially contaminated. SII must over excavate the area on which a project<sup>2</sup> will be placed by five (5) feet (e.g., if the area to be excavated is 50 feet in diameter, then SII must excavate an area that is 60 feet in diameter. If SII determines that the soil is substantially contaminated, then SII must manage the soil in accordance with Section I. In addition, if SII determines that the soil is substantially contaminated at the edge of the excavation, then SII must report this information to the Department. If the Department decides that SII has discovered a new solid waste management unit

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<sup>2</sup> The projects which SII agrees to "over excavate" are the hazardous waste storage building, liquid hazardous waste incinerator tank farm, chemical bulk storage tanks and any other large structures which may restrict remediation of the area. For other Order projects, SII may request the Department in a Soil Management Plan to reduce or eliminate the requirement to over excavate the soil around such projects.

(SWMU), then the Department may direct SII to begin preparation for cleaning up the SWMU.

The projects which SII agrees to "over-excavate" for the purpose of determining if substantial contamination exists next to a project are the hazardous waste drum storage building, liquid hazardous waste incinerator tank farm, chemical bulk storage tankage and any other large structures which may restrict remediation of the area. Projects such as the installation of underground piping which would require trenching, pilings and concrete, pads would not require over-excavation beyond the immediate project areas unless substantial manmade material or containers of the same are found which could not be easily remediated after completion of the projects.

Gravel, soil, subsoil and unconsolidated material that are not substantially contaminated and pass the rapid characterization method will be considered suitable for return to an area at SII's Rotterdam Junction facility. This area can only be the immediate area of excavation from which it originated or another area approved by the Department on the eastern side of this site between the groundwater divide and the barrier wall.

### **C. Soil Assessment for the Barrier Wall**

For the purposes of Appendix F, assessment of contamination in areas of barrier wall construction must be performed in a two-step process. For clarity, this procedure is outlined in Figure 1. The first step of this procedure will involve pre-excavation assessment of the soils over the entire planned length of the barrier wall. After this pre-excavation sampling assessment is completed, SII must submit this data for review and approval by the Department. The Department must approve this data before SII can begin excavation activities related to construction of the barrier wall.

Pre-excavation sampling assessment of the soils will be done at a spacing of no less than 50 lineal feet over the entire planned length of the wall. Excavated materials shall be characterized as excavated using the rapid assessment real-time test, with a minimum sampling frequency at one sample per every 10 cubic yards of excavated material.

SII, at any point of this procedure, may elect instead to perform a TCLP analysis with the additional conditions described in Section E. If SII elects to perform the TCLP analysis described in Section E, then the soil represented by that sample may not be used in the construction of the barrier wall without also conducting the Rapid Characterization Method on that soil.

If the assessment samples fail the conditions of either the rapid assessment real time testing or the rapid field characterization method, SII must follow the procedure in

Section I to determine the deposition of the soils represented by these assessment samples.

If SII elects to perform the TCLP procedure described in Section E, then SII must comply with the provisions of this paragraph. If a sample has already failed the rapid assessment real time test and if the sample passes the criteria in Section E, then SII must manage the soil represented by the sample in accordance with Section I. If any sample of the excavated material from an individual sample area is found to contain in its TCLP extract any listed organic chemical greater than regulatory levels in Table 2, or if the sample's TCLP extract exceeds the additional criteria described in Section E, the material represented by the sample is considered unsuitable for return to the excavation and must be managed as a hazardous waste.

As required by the rapid characterization method, SII must conduct a rapid assessment real-time test to determine if the soil being excavated is substantially contaminated. If SII determines that the soil is substantially contaminated, then SII must manage the soil in accordance with Section I. If the soil immediately surrounding the barrier wall excavation is substantially contaminated, then SII must follow the appropriate provisions in the ICMD.

Gravel, soil, and subsoil that are not substantially contaminated and pass the rapid characterization method and all applicable technical design standards will be considered suitable for use in constructing the barrier wall. Gravel, soil, subsoil and unconsolidated material that are not substantially contaminated and pass the rapid characterization method may be situated in another area approved by the Department on the eastern side of SII's Rotterdam Junction facility between the groundwater divide and the barrier wall.

#### **D. Rapid Characterization Method for All Projects**

The rapid characterization method is a process of soil characterization to determine the management requirements for material excavated at an Order Project site. For clarity, this procedure is outlined in Figure 2. The steps of the method are as follows:

1. The field characterization will begin with pre-excavation or excavation sampling under Department oversight at an interval of at least one sample for each 10 cubic yards for projects other than the barrier wall project. Sample frequency requirements for the barrier wall project are presented in Section C. The depth of sampling will include levels near the soil surface and at a depth at least equal to the depth of excavation activities. SII shall provide specific details on sampling depth in the site-specific work plans. These work plans are subject to review and approval by the Department. They must be approved by the Department before project activities (e.g., sampling, excavation) may begin. The date, time, sample identification, location of

sampled material, and subsequent disposition of samples and excavated material shall be noted daily in the field logbook. SII shall make this logbook available for review by Department personnel on an unrestricted basis.

2. Samples will be examined for the presence of free organic liquids and/or residual material, or a reading equal to or greater than 1000 ppmv on a flame ionization type of organic vapor analyzer (OVA) which is passed over the surface of the sample. If the sample meets this criteria, then it and the soil that the sample represents are considered to have failed the rapid assessment real time test.

3. For materials which pass the rapid assessment real time test, SII must take samples for the rapid field characterization test as follows: The sample is placed directly into a tared (to 0.1 gram) 40 ml "volatile" type vial containing 10 mls of methanol. If desired, a suitable internal/surrogate standard may be added to the methanol. The vial is then sealed and extraction is effected by shaking the vial to ensure intimate contact between the sample and the methanol. The vial is then stored at 4°C for transport and analysis at the field laboratory. The maximum holding time between sampling and receipt at the laboratory is eight hours.

4. Upon receipt at the laboratory, sample vials will be weighed to the nearest 0.1 gram. The weight of soil taken for analysis will be determined by difference. The suggested sample size is 10 grams. If desired, the vials may be "calibrated" by placing a fill line around the vial to assist in obtaining samples of relatively constant weight. The samples must be then stored at 4°C until analysis. If necessary, the methanolic extract may be filtered or centrifuged prior to analysis to eliminate insoluble particulate material. The maximum holding time between the time of sampling and analysis of the sample is 24 hours.

The rapid characterization test must be designed to avoid failure to analyze the samples in the required timeframe. All reported concentration of constituents used to demonstrate compliance with this protocol must be obtained from valid analyses. A valid analysis is that which satisfies the QA/QC requirement of the approved Quality Assurance Program Plan for the Order Project Program.

To avoid failure to analyze the samples in the required timeframe due to instrumental problems, the following dilution/analysis scheme is suggested. A portion of the methanolic extract is then diluted 1:100 with methanol and taken for analysis. A separate, undiluted portion of the methanolic extract is also retained for analysis. If desired, a suitable internal/surrogate standard may then be added to the methanolic extracts. All reported concentrations of constituents used to demonstrate compliance with this protocol must be obtained from valid analysis. A valid analysis is that which satisfies the QA/QC requirements of the approved Quality Assurance Program Plan for the Order Project Program.

5. The laboratory will, then, analyze the samples for the chemicals listed in Table 1. The purpose of this analysis is to ensure that high levels of volatile and semivolatile organic chemicals are not returned to the environment. If SII determines<sup>3</sup> that any of the listed constituents in Table 1 are present at or above the action level for any samples tested using this protocol, the material represented by that sample is considered to have failed the rapid field characterization.

6. In the event that none of the chemicals listed in Table 1 are detected at concentrations greater than those contained in Table 1, the last step of the rapid characterization method proceeds as follows: As material is excavated, it is evaluated for the presence of substantial contamination, as defined in Section A. The frequency of the OVA type of screening of excavated material will be every 10 cubic yards. SII must sample directly from the backhoe bucket or equipment used for excavation, adjusted as required by the Department.

#### **E. TCLP Procedure and Additional Criteria for All Projects**

This Section deals with the TCLP procedure that SII may elect to perform on soils which have failed the rapid field characterization method. If any sample of the excavated material is found to contain in its TCLP extract, any listed organic chemical greater than regulatory levels in Table 2, or if the additional criteria for evaluating the TCLP extracts as described below are not met, all of the material represented by the sample must be managed as hazardous waste in accordance with Section I. The procedure is as follows:

First, SII must take a sample in accordance with the procedure outlined in Section F.

Second, SII must take a TCLP zero headspace extract of the sample.

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<sup>3</sup> To take full advantage of this protocol, the chromatographic system should be capable of analyzing the chemicals listed in Table 1 in under 15 minutes per sample (including sample preparation). While it is beyond the scope of this document to specify particular conditions of analysis, capillary gas chromatography is recommended. A number of analytical methods, including the EPA 8000 series, have been published that cover analysis of the chemicals in Table 1. The method chosen is expected to be shown capable of the analysis. It is not necessary for the system to fully resolve all of the compounds of interest, so long as a conservative approach is used in interpreting the data. Any detector may be used providing it is shown capable of achieving minimum quantification limits adequate to quantify the chemicals at the levels listed in Table 1.



Third, SII must analyze the TCLP zero headspace extract for volatile and semivolatile organics. The analytical method performed on the TCLP extract for the characterization of volatile organics shall be SW-846 (Third Edition) Method 8240, with library search and quantification of the 10 highest unidentified peaks. The analytical method performed on the TCLP extract for the characterization of semivolatile organics shall be SW-846 (Third Edition) Method 8270, with library search and quantification for the 10 highest unidentified peaks.

Finally, SII must comply with the following additional criteria. SII must determine the level of any halogenated organic and any non-halogenated organic present in the extract. SII shall then compare these levels with the following criteria:

- Any halogenated organic found which is not on the TCLP list (Table 2) cannot exceed 100 mg/l in the extract.
- Any non-halogenated organic found which is not on the TCLP list (Table 2) cannot exceed 1,000 mg/l in the extract.

If the amount of either any halogenated organic or any non-halogenated organic exceed those criteria, then the material represented by the sample shall be considered unsuitable for return to the excavated site.

In the event that SII wishes to petition the Department to waive these additional requirements due to non-toxic and/or non-hazardous characteristics of any of these identified constituents, SII must provide the Department with unambiguous proof of the identity and concentration for such constituents. Such unambiguous proof shall include reference material and methodology necessary for the independent confirmation of such findings by the Department, if the Department so desires.

#### **F. Sampling for TCLP Testing for All Projects (Pre-excavation and Excavation)**

If SII elects to perform TCLP testing of the excavated material or pre-excavation assessment samples, SII must comply with following sampling procedure:

Excavated materials shall be sampled directly from the backhoe bucket or equipment used for excavation and are to be placed directly into the TCLP sample jars, completely filling each sample jar to the top to ensure minimal headspace, prior to the staging of the excavated materials (i.e., samples for TCLP testing shall be taken concurrently with samples for rapid field characterization method). Pre-excavation assessment samples are to be placed directly into the TCLP sample jars immediately upon removal from the sampling equipment. The frequency of sampling will be 10 cubic yards for projects other than the barrier wall project. Sample frequency requirements for the barrier wall

project are presented in Section C, adjusted as field conditions allow, with the consent of the Department.

The sample container for the TCLP testing shall be a glass 32 ounce wide mouth container with a Teflon-lined screw top cap.<sup>4</sup> Samples for TCLP analysis shall be obtained in duplicate for each sample location. SII must note the date, time, location, and identification of samples taken for the TCLP analysis in the field logbook.

The jar samples may be held in a freezer (less than -20°C) for up to seven days from the time of sample collection for analytical purposes. If the TCLP extractions for volatile and semivolatile organics are not completed within seven days of the collection date, the sample is considered invalid. If any sample is invalid, the soil represented by that sample is unsuitable for return to the excavation site.

The holding time for the TCLP zero headspace extract shall be not more than 14 days from the extraction date if preserved with HCl, or seven days from the extraction date if not preserved with HCl. The holding time for TCLP extract of semi-volatile organics is not to exceed 7 days from the date of TCLP extraction to the date of completion of the 8270 extraction. The holding time for the 8270 extract shall be not more than 30 days from the day of extraction to the satisfactory completion of a valid analysis of the extract. A valid analysis is that which satisfies the QA/QC requirements of the approved Quality Assurance Program Plan for the Order Project Program. If any of these holding times are exceeded, the material represented by the sample (the volume of material between two valid samples) are unsuitable for fill and must be managed as hazardous waste.

The frozen samples are not to be disposed of until: (1) soil backfill or disposition is complete or (2) holding times specified above are exceeded, whichever comes first. If the sample is discarded because the holding times have been exceeded, then the soil represented by that sample must be managed as hazardous waste until a valid analysis is obtained.

#### **G. Test Levels for All Projects**

In the event that technical requirements (e.g., maximum allowable organic levels in the soil which will ensure the proper installation of a barrier wall) are more

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<sup>4</sup> For pre-excavation samples collected from soil borings, SII shall use wide mouth glass containers the size of which shall be no smaller than 8 ounces. Each sample shall completely fill each sample container to ensure minimal headspace.

conservative than the requirements contained in this protocol, these more conservative levels will be used to determine compliance with this protocol.

#### **H. Staging of Excavated Materials**

Excavated materials must be staged either in piles in the immediate vicinity of the excavation site or in containers at a location acceptable to the Department. The maximum volume in an individual pile for staged excavated materials, awaiting test results, will be 200 cubic yards. The staged materials which form a pile will be covered in a manner so that runoff will be directed back into the excavation. Materials are to be staged at a maximum 1:1.5 slope no greater than 10 feet in height with the lengthwise dimension dependent on available space at an Order Project site. The anticipated location for the staged material and the approximate drainage pathway for each pile shall be specified in the work plan. All materials represented by a pre-excavation assessment sample must be treated as the worst case (e.g., if one sample fails a characterization test, all material represented by that sample are considered to have failed that test), and managed accordingly.

If SII decides to store excavated material in containers, then they must prevent liquid from entering or leaving the container.

#### **I. Storage and Management of Soils for All Projects**

In the event that excavated materials must be stored pending treatment and disposal, the conditions of storage must satisfy requirements for staging as contained in Section H and those contained in any sitewide SII Soils Management Plan approved by the Department.

SII must ship off-site or treat on-site soils which meet any of the following criteria:

- contain a listed hazardous waste
- is a characteristic hazardous waste
- contains liquid man-made material
- contains semi-liquid man-made material
- does not meet the additional criteria in Section E if the TCLP

method is used

This paragraph applies to all projects except the barrier wall. If the soils do not meet any of the above criteria, then they may be placed on the eastern side of the site. Prior to placing excavated soils on the eastern part of the site, SII must obtain the Department's approval. Each area receiving this soil must be classified and dealt with as a Solid Waste Management Unit.

This paragraph applies only to the barrier wall project. If the soils do not meet any of the above criteria, pass the rapid field characterization method as defined in Section A, meet all applicable technical design standards and are not substantially contaminated as defined in Section A, then they may be used in the construction of the barrier wall. If the soils do not meet the above criteria, they may be placed on the eastern side of the site except in or adjacent to the barrier wall. Prior to placing these excavated soils in the ground, SII must obtain the Department's approval. Each area receiving this soil must be classified and dealt with as a Solid Waste Management Unit.

For Order Project areas, other than the barrier wall area, placement of the soils must be completed within 7 days of completion of the part of the project which required excavation to enable the project to proceed. For the barrier wall area, placement must be completed in the area within 7 days after completion of its excavation, on a daily basis. For all Order Projects, when excavated soils are put back in the ground, they must be covered with some material such as concrete, asphalt or 6" clean soil to prevent any releases.

#### **J. Soil Management For All Non-Order Projects**

For all construction projects at the Rotterdam Junction and Congress Street facilities that are not Order Projects and are not excluded in the Generic Soil Management Plan, the excavation of soils and the sampling, storage and placement of excavated soils shall be governed by the sitewide Soil Management Plan approved by the Department on August 17, 1993, or any subsequent modification(s) thereto, but shall not require prior submittal to and approval by the Department for such Non-Order projects. A revised Generic Soil Management Plan will be submitted to the Department for review and approval within 30 days of the effective date of the 1997 Order. The revision is to include a section for projects excluded from the soil management plan.

**APPENDIX G**  
**"PAYMENT FOR EMERGENCY RESPONSE"**

<b><u>Project</u></b>	<b><u>Estimated Cost</u></b>
1. Fire fighting foam - City of Sch'dy and Sch'dy County	\$ 4,500.00
2. Emergency Response Equipment (Sch'dy County)	\$ 65,500.00 - \$ 75,500.00
a. Responder radios	
b. Portable computer/printer/ software (EIS/C program)	
c. Field command vehicle	
d. HAZMAT response van	
e. Expendable response equipment	
f. Response team training	
g. Field FAX	
h. Incident command training	
3. Fire fighting clothing/equipment for use by Lower Rotterdam Junction Volunteer Fire Dep't.	\$ 20,000.00
4. Hazardous materials awareness and disposal training - Sch'dy County	Up to \$ 10,000.00

**Total \$ 100,000.00**

**SCHENECTADY INTERNATIONAL MODIFIED ORDER ON CONSENT**

## **APPENDIX H**

### **"COMPLIANCE SCHEDULE - CONGRESS STREET HYDROGEOLOGIC INVESTIGATION"**

A hydrogeologic investigation work plan (the "Work Plan"), printed on September 27, 1991, and submitted to the Department on September 30, 1991, was approved by the 1991 Order, Appendix B. Subsequently, SII implemented the approved Work Plan. In accordance with the schedule set forth in that Work Plan, SII shall submit to the Department on or before August 31, 1993, for review and approval, a report summarizing the results of the hydrogeologic investigation. [MME] The report shall provide all data obtained through implementation of the approved Work Plan and shall identify, to the extent possible, the areal and vertical extent of any groundwater contamination relating to the Congress Street facility.

Based upon the findings as made and reported, on or before October 31, 1993, SII shall submit to the Department for its review and approval a work plan for developing a remedial investigation/ feasibility study containing those data elements of Attachment 1 (attached hereto and made a part hereof), excluding such data previously reported to the Department pursuant to the terms of the 1991 Order. [IME] Within forty-five (45) days of being notified of the Department's approval, SII shall commence implementation of the tasks contemplated by the approved Work Plan [MME] and shall complete all tasks pursuant to the time schedule contained therein. [MME]

Nothing in the 1991 or 1993 Order shall be construed as preventing the Department from requiring modification or amplification and expansion of the remedial investigation if, as a result of reviewing data generated by the investigation or other data or facts, the Department determines that further work is necessary.

Within one-hundred-twenty (120) days after being notified of the Department's approval of the Remedial Investigation Report, SII shall submit a Feasibility Study which evaluates on- and off-site remedial actions that eliminate, to the maximum extent practicable, all health and environmental hazards and potential hazards attributable to the site and to contamination or sources of contamination identified by the Remedial Investigation which are located at the site and to hazardous wastes which have migrated from the contamination and sources of contamination attributable to the site, together with a timeframe for completion of each. [MME] The Feasibility Study shall be prepared and certified by an engineer who is both licensed to practice by the State of New York and approved by the Department, who may be either an employee of SII or an individual or member of a firm which is authorized to offer engineering services in accordance with Article 145 of the New York State Education Law. Within forty-five (45) days after being notified of the Department's approval of the Feasibility Study, SII

shall implement the approved remedial action [MME] and shall complete the remedial action within the approved timeframe. [MME]

Within 30 days of the effective date of the 1997 Order, SII shall submit for Department review and approval a report assessing the effectiveness of the Interim Remedial Measure implemented at monitoring well OW-10. [MME] Such report shall include recommendations for any improvements and/or further studies and a schedule for implementation thereof.

## ATTACHMENT 1

### REMEDIAL INVESTIGATION and FEASIBILITY STUDY

This policy outlines how to reduce the size of the reports. Many consultants submit voluminous reports, making it difficult to find pertinent information.

It is difficult to provide guidance to our consultants on how to reduce the size of reports without compromising the quality and content of the reports. By providing an overall table of contents, this guidance provides an overall content of the report to be used by the DHWR project managers, other DEC program staff, the Department of Health and the public.

The purpose of this strategy is to identify the contents of the RI and FS reports, what would be in the main body of the report, and what should be included in the appendices. This would help the consultants to focus and reduce the size of the reports. However, consultants do have the flexibility and responsibility to prepare RI/FS reports specific to individual sites.

#### Remedial Investigation Reports:

The RI Report - Volume I should contain the following information. The list includes all environmental media, some of which (e.g. sewer line) may not exist for individual sites. The Volume I should reference sampling method, pump test method, and other testing methods; analytical method, etc. The details of these testing methods should be presented in Appendices instead of in the main body of the report. The consultant would be directed to submit only one copy of the QA/QC and Data Validation reports since this will only be reviewed by the DHWR's QA/QC staff.

### **EXECUTIVE SUMMARY**

<b>SECTION 1</b>	<b>INTRODUCTION</b>
1.1	Site Background
1.2	RI objectives
1.3	Health and Safety Program
1.4	Quality Assurance/Quality Control Program
1.5	Data Validation
<b>SECTION 2</b>	<b>SITE HISTORY AND DESCRIPTION</b>
2.1	Site Location and History
2.2	Local Land Use
2.3	Natural Resources
2.4	Demography
2.5	Local Climate



2.6	Site Topography
2.7	Waste Types and Characteristics
2.8	Site Reconnaissance Activities
<b>SECTION 3</b>	<b>SOURCE/INVESTIGATION</b>
3.1	Waste/Drums
3.1.1	Sample Collection, Handling and Preservation
Techniques	
3.1.2	Organics Sampling Results
3.1.3	Inorganics Sampling Results
3.1.4	Summary of QA/QC
3.1.5	Summary of Data Validation
3.2	Lagoon Wastewater
3.2.1	Wastewater Collection, Handling and Preservation Techniques
3.2.2	Selection of Analytical Parameters
3.2.3	Organics Sampling Results
3.2.4	Inorganics Sampling Results
3.2.5	Summary of QA/QC
3.2.6	Summary of Data Validation
3.3	Lagoon Sludge/Sewer Sediment Sampling and Analysis
3.3.1	Sample Collection, Handling and Preservation Techniques
3.3.2	Selection of Analytical Parameters
3.3.3	Organics Sampling Results
3.3.4	Inorganics Sampling Results
3.3.5	Summary of QA/QC
3.3.6	Summary of Data Validation
<b>SECTION 4</b>	<b>SURFACE AND SUBSURFACE INVESTIGATION</b>
4.1	Surficial and Subsurface Soils Sampling and Analysis
4.1.1	Selection of Background and Site Sampling Locations
4.1.2	Sample Collection, Handling and Preservation Techniques
4.1.3	Selection of Analytical Parameters
4.1.4	Organics Sampling Results
4.1.5	Inorganics Sampling Results
4.1.6	Summary of QA/QC
4.1.7	Summary of Data Validation
4.2	Surface Water Sampling and Analysis
4.2.1	Selection of Background and Monitoring Sampling Locations
4.2.2	Sample Collection, Handling and Preservation Techniques
4.2.3	Selection of Analytical Parameters
4.2.4	Organics Sampling Results
4.2.5	Inorganics Sampling Results
4.2.6	Summary of QA/QC

- 4.2.7 Summary of Data Validation
- 4.3 Sediment Sampling and Analysis
- 4.3.1 Selection of Background and Monitoring Sampling Locations
- 4.3.2 Sample Collection, Handling and Preservation Techniques
- 4.3.3 Selection of Analytical Parameters
- 4.3.4 Organics Sampling Results
- 4.3.5 Inorganics Sampling Results
- 4.3.6 Summary of QA/QC
- 4.3.7 Summary of Data Validation

## **SECTION 5 HYDROGEOLOGIC INVESTIGATION**

- 5.1 Field Investigation Methods
- 5.1.1 Geophysical Studies
- 5.1.2 Soil Gas Survey
- 5.1.3 Selection of Background and Monitoring Well Locations
- 5.1.4 Soil Boring and Monitoring Well Installation
- 5.1.5 Borehole Logging Tests
- 5.1.6 Permeability Tests
- 5.1.7 Pump Tests
- 5.1.8 Water Level Measurements
- 5.2 Geology
- 5.2.1 Regional Geomorphology
- 5.2.2 Site Geomorphology
- 5.3 Groundwater Hydrology
- 5.3.1 Regional Groundwater Hydrology
- 5.3.2 Site Groundwater Hydrology
- 5.4 Sampling and Analytical Results
- 5.4.1 Organics Sampling Results
- 5.4.2 Inorganics Sampling Results
- 5.4.3 Summary of QA/QC
- 5.4.4 Summary of Data Validation

## **SECTION 6 DISCUSSION OF SITE CONTAMINATION**

- 6.1 Determination of Cleanup Levels
- 6.1.1 Groundwater Standards and Guidance Values
- 6.1.2 Surface Water Guidance and Standards
- 6.2 Source Contamination
- 6.3 Surface Water Contamination
- 6.4 Sediment Contamination
- 6.5 Subsurface Contamination
- 6.6 Groundwater Contamination
- 6.7 Comparison Between Source, Soil, Groundwater, Surface Water and Sediment Contamination
- 6.8 Evaluation of Contamination Migration in Groundwater

6.9 Evaluation of Off-Site Contamination

**SECTION 7**

**HEALTH RISK ASSESSMENT**

- 7.1 Identification of Indicator Chemicals
  - 7.1.1 Indicator Chemicals - Groundwater
  - 7.1.2 Indicator Chemicals - Surface Water
  - 7.1.3 Indicator Chemicals - Soil
  - 7.1.4 Indicator Chemicals - Sediment
- 7.2 Estimation of Exposure Point Concentrations of Indicator Chemicals
  - 7.2.1 Identification of the Population at Risk
  - 7.2.2 Estimation of Worst-Case Concentrations in Mianus River Fish
  - 7.2.3 Estimation of Worst-Case Concentrations in Lake/River Fish
- 7.3 Exposure Assessment for Each Exposure Route
  - 7.3.1 Exposure to Groundwater
    - 7.3.1.1 Ingestion Exposure
    - 7.3.1.2 Indoor Inhalation Exposure
    - 7.3.1.3 Dermal Exposure
    - 7.3.1.4 Summary of Exposure to Groundwater
  - 7.3.2 Exposure to Surface Water
    - 7.3.2.1 Ingestion Exposure
    - 7.3.2.2 Indoor Inhalation Exposure
    - 7.3.2.3 Dermal Exposure
    - 7.3.2.4 Summary of Exposure to Groundwater
  - 7.3.3 Exposure to Surface Water
    - 7.3.3.1 Ingestion Exposure
    - 7.3.3.2 Indoor Inhalation Exposure
    - 7.3.3.3 Dermal Exposure
    - 7.3.3.4 Summary of Exposure to Groundwater
  - 7.3.4 Exposure to Lake/River Fish
- 7.3.5 Exposure of Aquatic Life to Contaminants of Concern
- 7.4 Estimation of Baseline Risk
  - 7.4.1 Non-Carcinogenic Risk
  - 7.4.2 Carcinogenic Risk
- 7.5 Uncertainty Analysis
- 7.6 Conclusions

## **FEASIBILITY STUDY REPORTS:**

The FS Report - Volume 1 should contain the information outlined below. All calculations, unit cost information, etc. should be in the Appendices.

### **EXECUTIVE SUMMARY**

#### **SECTION 1 INTRODUCTION**

#### **SECTION 2 OVERVIEW OF REMEDIAL INVESTIGATION**

#### **SECTION 3 DEVELOPMENT OF PERFORMANCE GOALS**

- 3.1 Remedial Action Objectives
  - 3.1.1 Remedial Action Objections During Remediation
  - 3.1.2 Remedial Action Objections During Post Remediation
- 3.2 Applicable or Relevant and Appropriate Requirements (ARAR's)
  - 3.2.1 Location - Specific ARAR's
  - 3.2.2 Action - Specific ARAR's
  - 3.2.3 Chemical - Specific ARAR's
  - 3.2.4 ARAR's Summary
- 3.3 General Response Actions
- 3.4 Media Area/Volume Summary

#### **SECTION 4 IDENTIFICATION AND SCREENING OF REMEDIAL ACTION TECHNOLOGIES**

- 4.1 Identification of Remedial Action Technologies
- 4.2 Description of Evaluation of Technologies
  - 4.2.1 Description of Technology 1
    - 4.2.1.1 Effectiveness
    - 4.2.1.2 Implementability
    - 4.2.1.3 Advantage and Disadvantage

Provide above information for all technologies under subsection 4.2.2, 4.2.3, etc.

#### **SECTION 5 DESCRIPTION AND DETAILED ANALYSIS OF REMEDIAL ALTERNATIVES**

- 5.1 Introduction
- 5.2 Analysis of Alternative 1
  - 5.2.1 Description of the Alternative

Appendices:

Five (5) Copies

- 5.2.2 Analysis of the Alternative
- 5.2.2.1 Compliance with NYS SCG's
- 5.2.2.2 Overall Protection of Public Health and the Environment
- 5.2.2.3 Short-Term Impacts and Effectiveness
- 5.2.2.4 Long-Term Effectiveness and Permanence
- 5.2.2.5 Reduction of Toxicity, Mobility, and Volume of Waste
- 5.2.2.6 Implementability
- 5.2.2.7 Cost
- 5.2.2.7(a) Capital Cost
- 5.2.2.7(b) Operation and Maintenance Cost
- 5.2.2.7(c) Future Capital Cost
- 5.2.2.7(d) Cost of Future Land use
- 5.2.2.7(e) Accuracy of Cost Estimates
- 5.2.2.7(f) Present Worth Analysis
- 5.2.2.7(g) Cost Sensitivity Analysis

Subsections 5.2, 5.3, 5.4, etc. should present similar information for other remedial alternatives.

## SECTION 6 COMPARISON OF REMEDIAL ALTERNATIVES AND RECOMMENDATION OF A REMEDIAL ALTERNATIVE

- 6.1 Evaluation Summary
- 6.1.1 Alternative 1
- 6.1.2 Alternative 2
- 6.1.x Alternative x
- 6.2 Comparative Analysis
- 6.2.1. Compliance with NYS SCG's
- 6.2 Overall Protection of Public Health and the Environment
- 6.2.3 Short-Term Impacts and Effectiveness
- 6.2.4 Long-Term Effectiveness and Permanence
- 6.2.5 Reduction of Toxicity, Mobility, and Volume of Waste
- 6.2.6 Implementability
- 6.2.7 Cost
- 6.3 Recommendation of a Remedial Alternative

Number of Copies of RI/FS Reports: In order to minimize the cost of reproduction and save precious filing space, copies of draft and final reports should be reduced as indicated below.

### Final Draft Reports:

Main Reports:	Five (5) Copies
Appendices:	Three (3) Copies

### Final Reports:

Main Reports:	Fifteen (15) Copies
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## APPENDIX I

### **"OPERATION AND MAINTENANCE OF BOILER NO. 4"**

The terms and conditions contained in this Appendix I shall cease to have effect at such time as the Department issues a Part 373 permit to SII for the Rotterdam Junction facility. At such time the provisions of such permit shall govern. Certain provisions of the conditions set out below for operations of the incinerator (Boiler No. 4) call for the submission by SII of plans for completion of the activities contemplated therein. In each such case, the plans shall be submitted for Department review and approval, pursuant to the terms covering submissions under the 1997 Order.

#### **I. CONSTRUCTION AND MAINTENANCE**

- A. SII shall maintain Boiler No. 4 in accordance with the design plans and specifications (or equivalent specifications) submitted with the Test Burn Report dated September 1992. After December 31, 1996 and pursuant to the Commissioner's approval, SII may commence operation and shakedown of the Best Available Control Technology (BACT) control technology.
- B. No modification to Boiler No. 4 and its flue gas cleaning system shall be made which would affect the achievement of the performance standards in Condition II, or any other operating conditions specified in this order. No modification shall be made without first obtaining written approval from the Commissioner. This includes replacement of the continuous monitoring instruments or any alteration, including programming changes, to them which will affect their accuracy. This provision does not apply to replacement of parts for normal preventive maintenance and minor repairs; Condition VII sets a schedule for SII to submit a description of these.
- C. SII shall construct and install the approved BACT equipment as specified in Condition VII, and the process controls, instruments, interlocks and other associated equipment specified in the trial burn plan to be submitted (as subsequently approved by the Department). SII may not commence treatment, store or disposal of hazardous waste at a newly constructed facility nor in a modified portion of an existing facility until:
  - 1. SII has submitted to the Commissioner by certified mail or hand delivery a letter signed by SII and an independent registered professional engineer stating that the facility has been constructed or modified in compliance with the approved plans and specifications; and
  - 2. The Commissioner has inspected the modified or newly constructed facility and finds it is in compliance with the approved plans and

specifications, or the Commissioner waives the inspection or has not, within 15 days, notified SII of his or her intent to inspect.

D. After relocation of the probe of the Continuous Emission Monitor (CEM) for Carbon Monoxide (CO) to its current location, the CEM failed the performance Specification Test conducted on March 13, 1997. The Department will nevertheless allow SII to use this instrument to monitor CO emissions from Boiler #4 subject to all of the following conditions:

1. The CEM for CO shall be either repaired or replaced by no later than September 1, 1997 with a system capable of complying with 40 CFR 266 Appendix IX;
2. Within 15 days after either repair or replacement of the instruments SII shall commence a Performance Specification Test (PST) in accordance with the protocols approved by the Department, complete the PST according to the schedule in the protocol, and submit the results to the Department within 30 days of its completion;
3. Until the CEM is replaced or repaired, SII shall set the waste feed cutoff for CO at 80 ppm, set the alarms for 70 ppm and provide the Department with one minute average of CO levels in the flue gases for 15 minutes before and 15 minutes after every CO waste feed cut off. This information shall be included in the monthly operating report; and
4. The daily programmed calibration conducted automatically shall be conducted while the hazardous waste feeds are shut down.

## II. PERFORMANCE STANDARD

SII shall construct and maintain Boiler No. 4 so that, when operated in accordance with the operating requirements specified in the 1997 Order, it will meet the following performance standards:

- A. The incinerator must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) listed in 6 NYCRR Part 371 Appendix 23 for each waste feed. DRE shall be determined using the method specified in 6 NYCRR 373-2.15(d)(1).
- B. SII must control hydrogen chloride (HCl) and chlorine (Cl<sub>2</sub>) emissions from the Boiler No. 4 stack such that the rate of emission of HCl and Cl<sub>2</sub> does not exceed 3.9 lb/hr and 1.00 lb/hr respectively. These emission limits will be



met by limiting the total feed rate of chlorine to Boiler No. 4 as provided in Condition III.D.

- C. SII must control emission of products of incomplete combustion (PICs) from the incinerator such that the CO level corrected to 7% oxygen in the stack gas shall not exceed the limits specified in Condition IV.A.
- D. SII must control emission of toxic metals from Boiler No. 4 stack such that the rate of emission does not exceed the limits specified below. These emission limits will be met by limiting the total feed rate of each metal into Boiler No. 4, as specified in Condition III.D.

<u>METAL</u>	<u>EMISSION RATE</u> <u>(LB/HR)</u>
Antimony	3.12 E-02
Arsenic	5.32 E-04
Barium	4.6 E-03
Beryllium	5.99 E-05
Cadmium	1.13 E-04
Chromium (Hex)	2.78 E-04
Chromium (Total)	8.63 E-03
Lead	1.21 E-03
Manganese	3.53 E-03
Mercury	6.25 E-04
Nickel	1.25 E-02
Selenium	4.88 E-05
Silver	3.81 E-03
Thallium	2.04 E-02

- E. In the absence of direct evidence of violations of the performance standards in this Order, compliance with the operating conditions in this Order shall constitute prima facie evidence of compliance with the performance standards. The discovery of new information that indicates that meeting the

operating standards will not ensure achievement of the performance standards shall constitute grounds for the modification of this Order.

- F. Boiler #4 shall not emit particulate matter in excess of 0.015 grains per standard cubic foot when corrected for the amount of oxygen in the stack according to the formula in 6 NYCRR Part 373-2.15(a)(3).

### III. LIMITATION ON WASTES

SII shall incinerate the following wastes only as allowed by the terms of the 1997 Order.

- A. SII shall incinerate bulk waste streams and drummed wastes pumped into the feed tank which are generated on-site and at its Congress Street, Niskayuna, Broadway or Canadian facilities for which the trial burn was conducted, and herein referred to as "organic waste" and "aqueous waste". SII will submit analyses of all wastes to be incinerated in Boiler No. 4 to the Department. These analyses must include toxic metals analysis, total chlorides, and total ash content. Prior to burning any waste for which SII has not submitted an analysis to the Department, SII must submit a request for approval to burn this material. This request must include a total metals, total chlorides and total ash analyses and, if necessary, a revised health risk assessment.

- B. Deleted

- C. SII shall not incinerate any waste containing polychlorinated biphenyls (PCBs) greater than 50 ppm, polychlorodibenzo-p-dioxins (PCDD), polychlorodibenzo-furans (PCDF) or hazardous wastes with the following waste codes: F020, F021, F022, F023, F026, F027 and F028.

- D. All waste feed streams to be incinerated shall meet the following specifications:

Physical form: Shall be in the form of liquids only.

Total Chlorine: The combined input rate of total chlorine measured as total chlorides from both feed streams shall not

exceed 3.9 lb/hr. The feed rate of total free diatomic ( $\text{Cl}_2$ ) chlorine shall not exceed 1.0 lb/hr.

Ash: The combined input rate of ash from the organic waste, aqueous waste and auxiliary fuels other than natural gas shall not exceed 2.46 lb/hr.

Organic waste: Heating value - 9500 BTU/lb minimum.  
Viscosity - 5.6 centistokes maximum at 25°C.

Aqueous waste: Viscosity - 1.4 centistokes maximum at 25°C.

Until the installation of BACT is complete and the trial burn has been conducted, two grab samples from each waste stream shall be taken from the sampling port just upstream of the Boiler No. 4 feed inlet each week and shall be analyzed for total chlorides and ash concentration. Upon completion of installation of BACT and the acceptance of the trial burn report, the frequency of sampling shall be once per week, or as otherwise set forth in any Part 373 permit issued for SII's Rotterdam Junction Facility.

Operating records showing the date of sampling and the results of the weekly feed stream analysis for total chlorides and ash shall be kept at the facility. The record shall also show the weighted average chloride concentration in the combined waste streams. The waste analysis shall be performed using the methods specified in the Waste Analysis Plan (WAP) to be submitted in accordance with the schedule established in Condition VII, after approval by the Department. A log shall be maintained showing the calculated chlorides and ash feed rates of the combined streams based upon the maximum hourly rolling average waste feed rates that occurred from the time the particular sample was taken until the time of the next sample (starting from midnight prior to the time of sampling until midnight prior to the next time of sampling). Any exceedances determined in this manner shall constitute a violation of the 1997 Order.

- E. The mass feed rates of toxic metals in the combined streams to the incinerator shall not exceed the levels set out in the following table:

<u>METAL</u>	<u>TOTAL FEED RATE<sup>1</sup></u> <u>(LB/HR)</u>
Antimony	3.12 E-02
Arsenic	5.32 E-04
Barium	4.6 E-03
Beryllium	5.99 E-05
Cadmium	1.13 E-04
Chromium (Hex)	2.78 E-04
Chromium (Total)	8.63 E-03
Lead	1.21 E-03
Manganese	3.53 E-03
Mercury	6.25 E-04
Nickel	1.25 E-02
Selenium	4.88 E-05
Silver	3.81 E-03
Thallium	2.04 E-02

<sup>1</sup> Includes contribution from organic waste, aqueous waste and auxiliary fuel (except natural gas).

Until the installation of BACT is complete and the trial burn has been conducted, two grab samples from each waste stream shall be taken from the sampling port just upstream of the Boiler No. 4 feed inlet each week and shall be analyzed for total chlorides and ash concentration. Upon completion of installation of BACT and the acceptance of the trial burn report, the frequency of sampling shall be once per week, or as otherwise set forth in any Part 373 permit issued for SII's Rotterdam Junction Facility.

Operating records showing the date of sampling and the results of the feed stream analysis for the above toxic metals shall be kept at the facility. The waste analysis shall be performed using the methods specified in the Waste Analysis Plan (WAP) to be submitted in accordance with the schedule established in Condition VII, after approval by the Department. A log shall be maintained showing the calculated metal feed rates of the combined waste streams based upon the maximum hourly rolling waste feed rates that occurred from the time the particular sample was taken until the time of the next sample (from midnight prior to the time of sampling to midnight prior to the time of next sampling). Any exceedances determined in this manner shall constitute a violation of this Order.

F. Analysis of Total Heat Contribution:

One grab sample from each waste stream shall be taken from the sampling port just upstream of the Boiler No. 4 feed inlet twice per week. The samples taken from the different waste streams during a single sample event shall be taken at approximately the same time. The one minute block average mass flow rate at the time of sampling will be recorded along with the sample number, date and time. Each sample shall be analyzed for Btu content (Btu/lb) by using Standard ASTM Methods as specified in the WAP. The total heat contribution from the waste stream (THC) will be calculated by the following equation:

Aqueous waste feed rate (lbs/hr) x Aqueous waste heat content (Btu/lb) =  
Aqueous waste heat contribution (Btu/hr).

Organic waste feed rate (lbs/hr) x Organic waste heat content (Btu/lb) =  
Organic heat contribution (Btu/hr).

Total Heat Contribution (THC) = Organic waste heat contribution + Aqueous waste heat contribution.

The THC shall not exceed 14 MBtu/hr.

IV. OPERATING CONDITIONS

- A. SII shall feed the wastes described in Condition III to the Boiler # 4 only under the following conditions:

SII shall operate, monitor, maintain and calibrate the systems specified below to immediately and automatically cut off the organic waste and the aqueous waste feeds to the Boiler #4 when the operating conditions deviate from the limits established herein. The alarms and the automatic cut off systems listed below shall be tested weekly to ensure that, for each interlocked parameter, deviations from the allowed operating limits will result in a pre-cut off alarm activation and an automatic cutoff of all waste feeds. The operating parameters established below are for conducting interim operation until a 6 NYCRR Part 373 permit is issued.

<u>Parameter<sup>9</sup></u>	<u>Operating Limit</u>	<u>Alarm Set Point</u>	<u>Waste Feed Cutoff Limit<sup>6</sup></u>	<u>Cutoff Time Delay</u>	<u>Monitoring /Recording Frequency<sup>1</sup></u>	<u>Calibration Frequency</u>
Temperature		1620°F (MIN) (instant) 1680°F (MAX) (instant)	1600°F (MIN) (instant) 1700°F (MAX) (instant)	0 sec	Continuous Once/min	Weekly span check T/C is compared weekly against a second T/C, in situ, for drift. Quarterly calibration.
Carbon Monoxide		90 ppm <sup>8</sup>	100 ppm <sup>8</sup> (MAX)  (HRA <sup>2</sup> corr. to 7% O <sub>2</sub> , dry <sup>5</sup> )	0 sec	Continuous  (1-min raw data, 1-min corr. data & HRA <sup>2</sup> )	Daily span check. Quarterly <sup>4</sup> CE test. Conduct an annual PST which includes CD, CE, response time, and RA tests (40 CFR 266 Section 2.0 .
Combustion Air Flowrate		4100 ACFM (OMA) <sup>3</sup>	4300 ACFM (OMA) <sup>3</sup> (MAX)	0 sec	Continuous	Weekly span check. Quarterly calibration
Organic Waste Feed Rate		9.4 lb/min (OMA) <sup>3</sup>	9.6 lb/min (OMA) <sup>3</sup> (MAX)	0 sec	Continuous (OMA)	Weekly zero check. Quarterly calibration
Aqueous Waste Feed Rate		48 lb/min (OMA) <sup>3</sup>	50 lb/min (OMA) <sup>3</sup> (MAX)	0 sec	Continuous (OMA)	Weekly zero check. Quarterly calibration

<u>Parameter<sup>9</sup></u>	<u>Operating Limit</u>	<u>Alarm Set Point</u>	<u>Waste Feed Cutoff Limit<sup>6</sup></u>	<u>Cutoff Time Delay</u>	<u>Monitoring /Recording Frequency<sup>1</sup></u>	<u>Calibration Frequency</u>
Combustion Chamber Pressure		0.09" H <sub>2</sub> O (instant)	0.11" H <sub>2</sub> O (MAX) (instant)	15 sec	Continuous Once/15 sec	Weekly span check. Quarterly calibration
Minimum Oxygen		4%	3%	3-min. time delay	Continuous	Daily span check. Quarterly <sup>4</sup> CE test. Conduct an annual PST which includes CD, CE, response time, and RA tests (40 CFR 266 Section 2.0 .
Atomization Air Pressure - Organic Feed	50 psig (min)	53 psig			Once/shift	Weekly span check. Quarterly the gauge is replaced with calibrated pressure gauge.
Atomization Air Pressure - Aqueous (Nozzles A, B, C and D)	50 psig (min)	53 psig			Once/shift	Weekly span check. Quarterly the gauges are replaced with calibrated pressure gauges.
Max. Quench Gas Outlet Temp		172°F	175°F	none	Continuous Once/min	Weekly span check. <sup>7</sup> Quarterly calibration
Min Quench pH		4	3.5	5 min delay on avg pH	Continuous (OMA)	Weekly span check. <sup>7</sup> Quarterly calibration

<u>Parameter<sup>9</sup></u>	<u>Operating Limit</u>	<u>Alarm Set Point</u>	<u>Waste Feed Cutoff Limit<sup>6</sup></u>	<u>Cutoff Time Delay</u>	<u>Monitoring /Recording Frequency<sup>1</sup></u>	<u>Calibration Frequency</u>
Min. Quench Blowdown		4.5 gpm	4.0 gpm	none	Continuous (OMA)	Weekly span check. <sup>7</sup> Quarterly calibration
Min. Quench Recirculation Flow Rate		35 gpm	33 gpm	none	Continuous (OMA)	Weekly span check. <sup>7</sup> Quarterly calibration
Minimum WESP KVA		4.0	3.5	none	Continuous/ 10 minute rolling average	Weekly span check. <sup>7</sup> Quarterly calibration
Thermal Input From Waste Feed	14 MBTU/hr				Twice Weekly	Calculated based on waste analysis
Stack Gas Flow Rate		7800 ACFM (OMA) <sup>3</sup> (MAX)	8000 ACFM (OMA) <sup>3</sup> (MAX)		Continuous OMA <sup>3</sup>	Weekly span check. <sup>7</sup> Quarterly calibration

<sup>1</sup> Monitoring and recording procedure for each parameter shall be as per Condition IV.B , calibrated in accordance with Standard Operating Procedures (SOPs) approved by the Department and 40 CFR 266 App.IX -2.1.2.11 as applicable.

<sup>2</sup> Hourly Rolling Average

<sup>3</sup> One-Minute Average (Average of 12 readings taken every 5 seconds in a minute, as described in work plan to be submitted as per Condition VII.

<sup>4</sup> Or if the monitoring instrument undergoes repairs or replacement, then SII shall ask the Department if a Performance Specification Test is required.

<sup>5</sup> Correction to dry basis as specified in Condition V.6.

<sup>6</sup> Automatic waste feed cutoff (WFCO) shall occur at the limits specified below and when monitoring system malfunction is detected.

<sup>7</sup> SII shall provide by July 1, 1997 SOPs for weekly and quarterly calibration and procedures for checking WFCOs for the Department review and approval.

<sup>8</sup> Except as noted in Condition I.D.3.



- 9 Daily and weekly span check and weekly zero check shall be as per SOPs. Weekly the WFCOs shall be checked in accordance with SOP # LW-10.8

B. SII shall follow the following pertaining to waste feed cutoff and data recording:

PARAMETER	DATA MEASUREMENT		DATA RECORDING			COMMENTS
	TYPE	USED FOR	Once/15 sec <sup>1</sup>	Once/min	WFCO Value	
Combustion Chamber Temperature	Instantaneous (Once/15 sec)	Inst. Hi-Temp WFCO	Yes	Yes	Yes (Once/min value)	
	Instantaneous	Inst. Lo-Temp WFCO				
Oxygen Concentration	Instantaneous once/sec	CO Correction	Yes	Yes		
	Instantaneous (OMA)	Inst. Low O <sub>2</sub> WFCO			Yes	
Combustion Air Flow Rate	Once/5 sec	Calculate OMA				Twelve 5 sec values Recorded on WFCO
	OMA	Hi-flow WFCO		Yes	Yes	Twelve 5 sec values Recorded on WFCO
CO Concentration	Once/sec (raw)	Calculate Corr. CO	Yes	Yes		
	Once/sec (corr)		Yes	Yes		
	Once/5 sec (corr)	Calculate OMA				
	OMA (corr)	Calculate HRA		Yes		
	HRA (corr)	WFCO		Yes	Yes	
Aqueous Waste Feed	Inst. Once/5-sec	Calculate OMA				Twelve 5 sec. values recorded on WFCO
	OMA	Hi-flow WFCO		Yes	Yes	
	Inst. Once/5-sec	Flow Control Loop	Yes	Yes		

PARAMETER	DATA MEASUREMENT		DATA RECORDING			COMMENTS
	TYPE	USED FOR	Once/15 sec <sup>1</sup>	Once/min	WFCO Value	
Organic Waste Flow Rate	Inst. Once/5-sec	Calculate OMA				Twelve 5 sec. values recorded on WFCO
	OMA	Hi-flow WFCO		Yes	Yes	
	Inst. Once/5-sec	Flow Control Loop	Yes	Yes		
Combustion Chamber Press.	Instantaneous		Yes	Yes		
Combustion Chamber Press.	15 sec. Time delay	WFCO			Yes	
Quench Outlet Temperature	Instantaneous (both high & low)	High select logic	Yes	Yes		WFCO is based on high select of 2 thermocouples
	High selected value	WFCO			Yes	
Quench Blow Down rate	Inst. once/5 sec	Calculate OMA	Yes	Yes		Twelve 5 sec. values recorded on WFCO
	OMA	Low Flow WFCO		Yes	Yes	
Quench Recirculating Flow Rate	Inst. Once/5 sec	Calculate OMA	Yes	Yes		Twelve 5 sec. values recorded on WFCO
	OMA	Low Flow WFCO		Yes	Yes	
Quench pH	Inst. Once/5 sec	Calculate OMA	Yes			Twelve 5 sec. values recorded on WFCO
	OMA	5-min time delay input		Yes		
	5-min time delay	WFCO			Yes	
WESP KVA	Inst. Once/5 sec.	Calculate OMA	Yes			Twelve 5 sec. values recorded on WFCO
	OMA	To calculate 10 minute rolling average		Yes		
	10 minute rolling average	Low KVA WFCO			Yes	

PARAMETER	DATA MEASUREMENT		DATA RECORDING			COMMENTS
	TYPE	USED FOR	Once/15 sec <sup>1</sup>	Once/min	WFCO Value	
Combustion Gas Velocity	Inst. Once/5 sec	Calculate OMA	Yes	Yes		Twelve 5 sec. values recorded on WFCO
	OMA	High Flow WFCO		Yes	Yes	

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SII shall maintain one week of data. If SII changes the frequency, SII shall inform the Department within two weeks of this change and will not be considered in violation of the 1997 Order as a result of this change.

- C. The calibration of CEMs for carbon monoxide and oxygen must be checked at least once daily for zero and span and adjusted if the drift exceeds 3% for carbon monoxide or 0.5% for oxygen. When this occurs the necessary corrections must be made and the tests shall be repeated. During recalibration, hazardous waste shall not be incinerated.
- D. The requirements in this Order (including, but not limited to, operating conditions, monitoring requirements, etc.) apply to hazardous wastes including exempt hazardous waste, solid waste and auxiliary fuels other than natural gas.
- E. Continuous monitoring of process parameters shall be in accordance with Paragraph IV-B of this Appendix. The monitoring data may be recorded and stored on digital media but shall be available in printed form or on diskettes upon request by the Department. The installation, operation, calibration and quality assurance of the CO and O<sub>2</sub> CEMs shall be as per 40 CFR 266 Appendix IX. For all the other operating parameters the calibration of the CEMs shall be as per SII's SOPs approved by the Department.
- F. During start-up of the incinerator and, at any other time that the temperature in the incinerator has fallen below 1600°F, waste feed shall not be introduced, or reintroduced, into the incinerator unless the incinerator has been brought up to that temperature, and has operated at or above that temperature, for at least consecutive 10 minutes. If the temperature in the incinerator has been maintained at or above 1600°F for the previous 10 consecutive minutes, there shall be no impediment to reintroducing waste feeds, notwithstanding that the waste feed has been cut off for less than 10 minutes. Additionally, the unit must be within all other operational limits

specified in paragraphs IV.A and B of this Order before waste feeds may be commenced or resumed.

Waste feed shall only be resumed manually, not automatically.

- G. Where the waste feed to Boiler No. 4 has been interrupted, either automatically or manually, auxiliary fuel shall be used to maintain the operating temperature set point specified in this Order for a minimum of 10 minutes following a WFCO except in emergency situations, or in cases of interruptions not related to exceedances of operating conditions specified in the Order.
- H. Where waste feed has been interrupted as in IV.F above, the CO monitor shall continue to monitor and record the hourly rolling average, except that the one-minute CO readings after the interruption may be counted as zero in calculating the HRA.
- I. In the event of an automatic WFCO due to regulatory parameters with a OMA limit, SII shall also record and maintain the twelve 5-second readings comprising the minute average which caused the WFCO.
- J. SII shall notify the Department in writing and seek approval, as specified in Condition I.B, for any changes to the programming of the CEMs specified in IV.A and B or the WFCO systems which could potentially affect the accuracy of the monitoring results or performance of the WFCO system.
- K. Deleted
- L. The atomization media pressure shall be maintained at a minimum of 50 psig for both waste streams. Low pressure alarms shall be set to warn the operator of the approaching limit.
- M. SII shall control fugitive emissions from the combustion zones of the incinerator by maintaining the combustion chamber pressure within the limit specified in IV.A and by daily visual inspection and proper maintenance of the incinerator and its associated equipment.

- N. SII shall not feed either organic or aqueous waste to the incinerator unless all of the monitoring equipment for the parameters listed in IV.A and IV.B are operating properly. During daily preventive maintenance and calibration of CEMs, SII shall not incinerate hazardous waste unless monitoring (every 15 minutes) pursuant to 6 NYCRR 373-3.15(d).
- O. SII shall notify EPA Region II and the Department within 48 hours if the automatic WFCO system has been activated due to regulatory parameters 25 times or more in any calendar month operating period. WFCOs caused by power outages or steam purging of the waste feed nozzles for maintenance purposes shall not be included in this total. However, each WFCO after each startup shall be counted as one, irrespective of the duration of operation between each startup and cutoff. The notification shall include an explanation of the reasons for the WFCOs and actions taken to prevent such frequent shutdowns. SII shall cease burning hazardous wastes in the incinerator if and when the WFCO system has been activated more than 50 times in a calendar month operating period, as described above, until a Department-approved third party qualified New York State registered Professional Engineer certifies that the unit is capable of operating within the 25 cutoff limits specified in this order, and the Department approves the certification.

SII shall, within 3 months of the first working day after the effective date of this Order, submit a report detailing the number of WFCOs that occurred at the incinerator during each of the previous 3 months. If the report indicates that no more than 30 WFCOs occurred in any calendar month, then the above-mentioned 50 WFCO limit shall be reduced to 30 WFCOs per calendar month. If the report indicates that more than 30 WFCOs occurred in any of the previous 3 months, then SII shall also include a workplan, for Department review and approval, in the report. This workplan shall describe why each WFCO occurred and how SII shall reduce the number to 30 per calendar month. This workplan shall also include schedule for implementing the provisions of the workplan.

- P. SII shall maintain a freeboard of 1800 gallons between the floating organic layer and the point from which the aqueous waste is being withdrawn from the incinerator feed tank. In order to ensure that the freeboard is maintained, the following procedure shall be followed by SII:

One of the three effluent tanks (either T-94, T-98, or T-99) shall be operated as a feed tank to Boiler #4, while a second tank will be used as a receiving tank from Resin production processes, and a third tank will be used as a decanting tank.

In general, a tank (Tank "A") will be used to receive wastes for one or more days. After it is at least partially full, it will be taken out of service and allowed to decant, at which time the tank that had been used to decant (Tank "B") will be placed in service as a receiving tank. After Tank "A" has been allowed to settle for a day or more, the aqueous phase will be pumped to the third tank (Tank "C") being used to feed waste to Boiler #4, and the organic phase will be pumped to one of the organic waste tanks. SII shall determine the quantity of, and rate that, aqueous waste can be processed from the feed tank without encroaching upon the 1800 gallon freeboard, required between the floating organic layer and the dropout from which waste is being withdrawn; SII shall make this determination in accordance with the applicable SII's SOP including SOP #LW-1.0B. This evaluation must be done each day for the tank feeding Boiler #4, and must be done if material has been added to or taken from the tank (Note: if no material transfer activity is planned for one or more days, such as over a weekend, the requirement to check interface location daily is not necessary provided that prior to cessation of transfer operations the boiler operators are provided with: 1) a rate at which feed aqueous waste to Boiler #4 that will assure that the freeboard is not encroached upon, and 2) a minimum level in the feed tank at which point feed from that tank will be stopped). This evaluation must also be done whenever a change is made in the dropout used to withdraw material for feed to Boiler #4, until such time that the PROVOX programming is completed to provide the operator with appropriate alarms that the freeboard is being encroached upon. This programming shall be completed by August 31, 1997. Document the evaluations done for compliance with this paragraph on the appropriate form as specified in the applicable SII's SOP.

- Q. The hazardous waste feed to Boiler #4 shall be cut off whenever the auxiliary fuel (natural gas) valve is closed to 90% or more (as indicated by

the output signal from the combustion chamber temperature controller loop being 10%, or less) to prevent burning excessive quantities of organics in the aqueous waste.

- R. The interval between the wash cycles of WESP shall not exceed 7 days with a duration of not less than one half hour for each wash cycle.

## V. MONITORING AND INSPECTION

- A. SII shall install, maintain, calibrate, and operate monitoring equipment which continuously records operating parameters specified in IV.A and B.
- B. Boiler No. 4, APCE and associated equipment (pumps, valves, fans, pipes, etc.) shall be inspected, at least daily, for leaks, spills, emissions, and signs of malfunction (unusual noise, vibration, erratic readings or display, etc.) as required by 6NYCRR 373-2.15(g)(2).
- C. SII shall perform weekly testing of the WFCO systems and all associated alarms, as specified in Conditions IV.A by simulating upset conditions for each parameter, as required by 6NYCRR 373-2.15(g)(3).
- D. The monitoring and inspection data required by Conditions V.A, V.B and V.C must be recorded and the records must be placed in the operating log as required by 6NYCRR 373-2.15(g)(4).
- E. Correction for CO concentration to a dry basis shall be done on a fixed basis accounting for the worst case moisture condition of 30 percent by volume in the stack gas expected to occur during normal operation of the incinerator. This correction factor will be estimated and used annually by conducting stack sampling for moisture according to procedures adopted by SII during the trial burns and by firing simultaneously both organic and aqueous waste streams at their maximum permitted rates.

## VI. RECORD KEEPING

- A. SII shall record and maintain in the operating record all record keeping, monitoring, inspection and calibration data required by this order and 6 NYCRR 373-2.15(g)(4).

- B. SII shall report to the Department all process deviations from allowed operating limits in the 1997 Order and a summary of operations in a monthly report. This must be filed within 30 days of the end of the month for which the report is prepared. At a minimum, the report must address the following items:

1. Process Operating Summary

- hours the unit was operated with hazardous waste
- brief explanation of the reasons for down-time

2. Continuous Monitor Summary

- for each parameter exceeding the operating limit and/or WFCO limit during the month, list the following:
  - \* parameter
  - \* operating and interlock limit
  - \* number of exceedances
  - \* number of interlock shutdowns
  - \* interlock shutdowns for the year to date
  - \* cause of each exceedance and/or shutdown
  - \* corrective action taken
  - \* duration of exceedance
  - \* date, time and duration of interlock shutdown
  - \* alarm activations and steps taken to prevent future occurrences of shutdown.
- for the CO and O<sub>2</sub> monitors found to exceed the acceptable drift range during an audit or a daily span check, list the following:
  - \* parameter
  - \* date
  - \* indicated drift
  - \* corrective action performed



3. Waste Analysis and Inventory

- summary of the periodic waste analysis of each waste feed stream for metals, chlorides and ash, including calculated mass feed rates for the combined waste streams based upon the maximum hourly rolling average waste feed rates and copies of the analytical laboratory results.
- exceedances of the allowable mass feed rates for metals, chlorides and ash.
- the total heat contribution from the waste stream based on one minute block average mass flow rate at the time of sampling, along with the sample number, date and time.

VII. SCHEDULE OF COMPLIANCE FOR CONTROL OF TOXIC EMISSIONS

By March 1, 1995, SII shall submit copies of the SOP required by Condition IV.A, IV.B and IV.D, and begin to implement these procedures.

The schedule for implementing the Best Available Control Technology (BACT) installation, trial burn, and submission of reports shall be as specified in Appendix D of this Order, as amended.

VIII. CLOSURE

SII shall close the incinerator and all associated equipment as required by 6 NYCRR § 373-2.15(h) and as per the closure plan for the incinerator to be submitted with the Part 373 permit application and subsequently approved by the Department.

- IX. The requirements of the Appendix I which pertains to incinerator (Boiler # 4) will govern until the Part 373 permit is issued. After the permit is issued, the permit will govern, among other things, those aspects of the operation of the facility.