

4 SUB

COPIES SENT
8/8/01 By
Date

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK

U.S. DISTRICT COURT - N.D. OF N.Y.
FILED
AUG 3 2001
AT _____ O'CLOCK
Lawrence K. Baerman, Clerk - Syracuse

UNITED STATES OF AMERICA,

Plaintiff,

v.

CIVIL ACTION NO.

3:01-CV-0637

**NAM
GLS**

- Agway, Inc.)
- Agway Energy Products LLC)
- Amphenol Corporation)
- Amphenol Interconnect Products Corp.)
- Ashland Inc.)
- Atofina Chemicals, Inc.)
- Azon Corporation)
- BASF Corporation)
- BMC Industries, Inc.)
- Borden, Inc.)
- Bristol-Myers Squibb Company)
- Bronstein Container Company, Inc.)
- Carrier Corporation)
- Champion International Corporation)
- Chemcoat, Inc.)
- Cooper Industries, Inc.)
- Crash's Auto Parts and Sales, Inc.)
- Daimler Chrysler Corporation)
- Drake Oil Company, Inc.)
- E.I. du Pont de Nemours & Company)
- EJ Footwear L.L.C.)
- Emerson Power Transmission Corp.)
- General Electric Company)
- General Motors Corporation)
- Honeywell International Inc.)
- Inmont Corporation)
- International Business Machines Corporation)
- International Paper Company)
- Jones Chemicals, Inc.)
- Kaplan Container Corporation)
- Malchak Salvage Company, Inc.)
- Masonite Corporation)
- Newton Falls, Inc.)
- Potter Paint Co., Inc.)

U.S. DISTRICT COURT
LAWRENCE K. BAERMAN, CLERK
MAY - 1 2001
RECEIVED

PPG Industries, Inc.)
Rome Cable Corporation)
Schenectady International, Inc.)
Sonoco Flexible Packaging, Inc.)
Tri-Cities Barrel Co., Inc.)
Underwood Industries of New York, Inc.)
Wainwright Oil Co., Inc.)
Francis Warner)
Gary F. Warner)
)
Defendants.)
_____)

CONSENT DECREE

TABLE OF CONTENTS

I. BACKGROUND - 1 -

II. JURISDICTION - 3 -

III. PARTIES BOUND - 3 -

IV. DEFINITIONS - 4 -

V. GENERAL PROVISIONS - 8 -

VI. PERFORMANCE OF THE WORK BY SETTLING DEFENDANTS - 11 -

VII. REMEDY REVIEW - 19 -

VIII. QUALITY ASSURANCE, SAMPLING, and DATA ANALYSIS - 20 -

IX. ACCESS AND INSTITUTIONAL CONTROLS - 22 -

X. REPORTING REQUIREMENTS - 27 -

XI. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS - 29 -

XII. PROJECT COORDINATORS - 31 -

XIII. ASSURANCE OF ABILITY TO COMPLETE WORK - 32 -

XIV. CERTIFICATION OF COMPLETION - 34 -

XV. EMERGENCY RESPONSE - 38 -

XVI. REIMBURSEMENT OF RESPONSE COSTS - 39 -

XVII. INDEMNIFICATION AND INSURANCE - 41 -

XVIII. FORCE MAJEURE - 44 -

XIX. DISPUTE RESOLUTION - 46 -

XX. STIPULATED PENALTIES - 50 -

XXI. COVENANTS NOT TO SUE BY PLAINTIFF - 55 -

XXII. COVENANTS BY SETTLING DEFENDANTS - 58 -

XXIII. EFFECT OF SETTLEMENT; CONTRIBUTION PROTECTION - 60 -

XXIV. ACCESS TO INFORMATION - 62 -

XXV. RETENTION OF RECORDS - 63 -

XXVI. NOTICES AND SUBMISSIONS - 65 -

XXVII. EFFECTIVE DATE - 66 -

XXVIII. RETENTION OF JURISDICTION - 66 -

XXIX. APPENDICES - 67 -

XXX. COMMUNITY RELATIONS - 67 -

XXXI. MODIFICATION - 67 -

XXXII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT - 68 -

XXXIII. SIGNATORIES/SERVICE - 68 -

XXXIV. FINAL JUDGMENT - 69 -

CONSENT DECREE

I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), filed a complaint in this matter pursuant to Sections 106 and 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9606, 9607.

B. The United States in its complaint seeks, inter alia: (1) reimbursement of all response costs incurred or to be incurred by EPA and the Department of Justice for response actions at the Tri-Cities Barrel Superfund Site in the Town of Fenton, Broome County, New York; and (2) performance of studies and response work by the defendants at the Site consistent with the National Contingency Plan, 40 C.F.R. Part 300 (as amended) ("NCP").

C. In accordance with the NCP and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA notified the State of New York (the "State") on May 16, 2000 of negotiations with potentially responsible parties regarding the implementation of the remedial design and remedial action for the Site, and EPA has provided the State with an opportunity to participate in such negotiations and be a party to this Consent Decree.

D. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the U.S. Department of the Interior and the National Oceanic and Atmospheric Administration on May 16, 2000 of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal trusteeship and encouraged the trustee(s) to participate in the negotiation of this Consent Decree.

E. The defendants that have entered into this Consent Decree ("Settling Defendants") do not admit any liability to the Plaintiff arising out of the transactions or occurrences alleged in the

- 2 -

complaint, nor do they acknowledge that the release or threatened release of hazardous substance(s) at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

F. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on October 4, 1989, 54 Fed. Reg. 41000.

G. In response to a release or a substantial threat of a release of a hazardous substance(s) at or from the Site, a group of fourteen potentially responsible parties ("PRPs"), including some of the Settling Defendants (the "RI/FS Respondents") commenced, in 1992, a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to the NCP.

H. The RI/FS Respondents completed a Remedial Investigation ("RI") Report in May 1999, and completed a Feasibility Study ("FS") Report in August 1999.

I. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and of the proposed plan for remedial action on January 22, 2000, in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator based the selection of the response action.

J. The decision by EPA on the remedial action to be implemented at the Site is embodied in a final Record of Decision ("ROD"), executed on March 31, 2000, on which the State had a reasonable opportunity to review and comment and on which the State has given its concurrence. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA.

- 3 -

K. Based on the information presently available to EPA, EPA believes that the Work (as defined below) will be properly and promptly conducted by the Settling Defendants if conducted in accordance with the requirements of this Consent Decree and its appendices.

L. Solely for the purposes of Section 113(j) of CERCLA, the Remedial Action selected by the ROD and the Work to be performed by the Settling Defendants shall constitute a response action taken or ordered by the President.

M. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and implementation of this Consent Decree will expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b). This Court also has personal jurisdiction over the Settling Defendants. Solely for the purposes of this Consent Decree and the underlying complaint, Settling Defendants waive all objections and defenses that they may have to jurisdiction of the Court or to venue in this District. Settling Defendants shall not challenge the terms of this Consent Decree or this Court's jurisdiction to enter and enforce this Consent Decree.

III. PARTIES BOUND

2. This Consent Decree applies to and is binding upon the United States and upon Settling Defendants and their heirs, successors and assigns. Any change in ownership or corporate status

- 4 -

of a Settling Defendant, including, but not limited to, any transfer of assets or real or personal property, shall in no way alter such Settling Defendant's responsibilities under this Consent Decree.

3. Settling Defendants shall provide a copy of this Consent Decree to each contractor hired to perform the Work required by this Consent Decree and to each person representing any Settling Defendant with respect to the Site or the Work and shall condition all contracts entered into hereunder upon performance of the Work in conformity with the terms of this Consent Decree. Settling Defendants or their contractors shall provide written notice of the Consent Decree to all subcontractors hired to perform any portion of the Work required by this Consent Decree. Settling Defendants shall nonetheless be responsible for ensuring that their contractors and subcontractors perform the Work contemplated herein in accordance with this Consent Decree. With regard to the activities undertaken pursuant to this Consent Decree, each contractor and subcontractor shall be deemed to be in a contractual relationship with the Settling Defendants within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3).

IV. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Consent Decree which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Consent Decree or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

"Consent Decree" shall mean this Decree and all appendices attached hereto (listed in

Section XXIX). In the event of conflict between this Decree and any appendix, this Decree shall control.

"Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the close of business of the next working day.

"EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

"Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States may hereafter incur in enforcing this Consent Decree, the costs incurred pursuant to Section VII (except for the costs incurred in the review or other oversight of Work performed by Settling Defendants pursuant to Section VII), Section IX (including, but not limited to, the cost of attorney time and any monies paid to secure access and/or to secure or implement institutional controls, including, but not limited to, the amount of just compensation), Section XV, and Paragraph 86 of Section XXI, and the costs that the United States incurs as a result of claims made against the United States based on negligent or other wrongful acts or omissions of Settling Defendants, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree (i.e., claims of the type referred to in Paragraph 57.a. below).

"Interest" shall mean interest at the rate specified for interest on investments of the Hazardous Substance Superfund established under Subchapter A of Chapter 98 of Title 26 of the U.S. Code, compounded on October 1 of each year, in accordance with 42 U.S.C. § 9607(a).

- 6 -

"National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

"NYSDEC" shall mean the New York State Department of Environmental Conservation and any successor departments or agencies of the State.

"Operation and Maintenance" or "O&M" shall mean all activities required to maintain the effectiveness of the Remedial Action as required under the Operation and Maintenance Plan approved or developed by EPA pursuant to this Consent Decree and the Statement of Work ("SOW").

"Owner Settling Defendants" shall mean the Settling Defendants listed in Appendix E.

"Paragraph" shall mean a portion of this Consent Decree identified by an arabic numeral or an upper case letter.

"Parties" shall mean the United States and the Settling Defendants.

"Performance Standards" shall mean the cleanup standards and other measures of achievement of the goals of the Remedial Action as described in the ROD and the SOW.

"Plaintiff" shall mean the United States.

"RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901 et seq. (also known as the Resource Conservation and Recovery Act).

"Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Tri-Cities Barrel Superfund Site signed on March 31, 2000, by the Regional Administrator, EPA Region II, or her delegate, and all attachments thereto. The ROD is attached as Appendix A.

"Remedial Action" shall mean those activities, to be undertaken by the Settling Defendants to implement the ROD, in accordance with the SOW and the final Remedial Design and

Remedial Action Work Plans and other plans approved by EPA.

"Remedial Action Work Plan" shall mean the document or documents developed pursuant to Paragraph 12 of this Consent Decree and approved by EPA, and any amendments thereto.

"Remedial Design" shall mean those activities to be undertaken by the Settling Defendants to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plan.

"Remedial Design Work Plan" shall mean the document developed pursuant to Paragraph 11 of this Consent Decree and approved by EPA, and any amendments thereto.

"Section" shall mean a portion of this Consent Decree identified by a roman numeral.

"Settling Defendants" shall mean those Parties identified in Appendices D (Complete List of the Settling Defendants) and E (Owner Settling Defendants).

"Site" shall mean the Tri-Cities Barrel Superfund Site, encompassing approximately 14.9 acres, situated adjacent to Old Route 7, approximately five miles northeast of the City of Binghamton, in the Town of Fenton, Broome County, New York and depicted generally on the map attached as Appendix C.

"State" shall mean the State of New York.

"Statement of Work" or "SOW" shall mean the statement of work for implementation of the Remedial Design and Remedial Action, as set forth in Appendix B to this Consent Decree and any modifications made in accordance with this Consent Decree.

"Supervising Contractor" shall mean the principal contractor retained by the Settling Defendants to supervise and direct the implementation of the Work under this Consent Decree.

"United States" shall mean the United States of America.

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of

- 8 -

CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

"Work" shall mean all activities Settling Defendants are required to perform under this Consent Decree (including the securing and implementation of institutional controls), except those required by Section XXV (Retention of Records).

V. GENERAL PROVISIONS

5. Objectives of the Parties

The objectives of the Parties in entering into this Consent Decree are to protect public health or welfare or the environment at the Site by the design and implementation of response actions at the Site by the Settling Defendants, to reimburse Future Response Costs of the Plaintiff, and to resolve the claims of Plaintiff against Settling Defendants as provided in this Consent Decree.

6. Commitments by Settling Defendants

a. Settling Defendants shall finance and perform the Work in accordance with this Consent Decree, the ROD, the SOW, and all work plans and other plans, standards, specifications, and schedules set forth herein or developed by Settling Defendants and approved by EPA pursuant to this Consent Decree. Settling Defendants shall also reimburse the United States for Future Response Costs as provided in this Consent Decree.

b. The obligations of Settling Defendants to finance and perform the Work and to pay amounts owed the United States under this Consent Decree are joint and several. In the event of the insolvency or other failure of any one or more Settling Defendants to implement the requirements of this Consent Decree, the remaining Settling Defendants shall complete all such requirements.

7. Compliance With Applicable Law

All activities undertaken by Settling Defendants pursuant to this Consent Decree shall be performed in accordance with the requirements of all applicable federal and state laws and regulations. Settling Defendants must also comply with all applicable or relevant and appropriate requirements of all Federal and state environmental laws as set forth in the ROD and the SOW. The activities conducted pursuant to this Consent Decree, if approved by EPA, shall be considered to be consistent with the NCP.

8. Permits

a. As provided in Section 121(e) of CERCLA and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Work conducted entirely on-site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work). Where any portion of the Work that is not on-site requires a federal or state permit or approval, Settling Defendants shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

b. The Settling Defendants may seek relief under the provisions of Section XVIII (Force Majeure) of this Consent Decree for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit required for the Work.

c. This Consent Decree is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

9. Notice to Successors-in-Title

a. With respect to any property owned or controlled by the Owner Settling Defendant(s) that is located within the Site, within 15 days after the entry of this Consent Decree, the Settling Defendants shall submit to EPA for review and approval a notice or notices to be

- 10 -

filed with the County Clerk's Office, Broome County, State of New York, which shall provide notice to all successors-in-title that the property is part of the Site, that EPA selected a remedy for the Site on March 31, 2000, and that potentially responsible parties have entered into a Consent Decree requiring implementation of the remedy. Such notice(s) shall identify the United States District Court in which the Consent Decree was filed, the name and civil action number of this case, and the date the Consent Decree was entered by the Court. The Owner Settling Defendant shall execute the notice(s) and Settling Defendants shall cause such notice(s) to be recorded within 10 days of EPA's approval of the notice(s). Settling Defendant(s) shall provide EPA with a certified copy of the recorded notice(s) within 10 days of recording such notice(s).

b. At least 30 days prior to the conveyance of any interest in property located within the Site, including, but not limited to, fee interests, leasehold interests, and mortgage interests, the Owner Settling Defendant conveying the interest shall give the grantee written notice of (i) this Consent Decree, (ii) any instrument by which an interest in real property has been conveyed that confers a right of access to the Site (hereinafter referred to as "access easements") pursuant to Section IX (Access and Institutional Controls), and (iii) any instrument by which an interest in real property has been conveyed that confers a right to enforce restrictions on the use of such property (hereinafter referred to as "restrictive easements") pursuant to Section IX (Access and Institutional Controls). At least 30 days prior to such conveyance, the Owner Settling Defendant conveying the interest shall also give written notice to EPA and the State of the proposed conveyance, including the name and address of the grantee, and the date on which notice of the Consent Decree, access easements, and/or restrictive easements was given to the grantee.

c. In the event of any such conveyance, the Owner Settling Defendant's obligations under this Consent Decree, including, but not limited to, its obligation to provide or secure

access and institutional controls, as well as to abide by such institutional controls, pursuant to Section IX (Access and Institutional Controls) of this Consent Decree, shall continue to be met by the Owner Settling Defendant. In no event shall the conveyance release or otherwise affect the liability of the Owner Settling Defendant to comply with all provisions of this Consent Decree, absent the prior written consent of EPA. If the United States approves, the grantee may perform some or all of the Work under this Consent Decree.

VI. PERFORMANCE OF THE WORK BY SETTTLING DEFENDANTS

10. Selection of Supervising Contractor.

a. All aspects of the Work to be performed by Settling Defendants pursuant to Sections VI (Performance of the Work by Settling Defendants), VII (Remedy Review), VIII (Quality Assurance, Sampling and Data Analysis), and XV (Emergency Response) of this Consent Decree shall be under the direction and supervision of the Supervising Contractor, the selection of which shall be subject to disapproval by EPA. Settling Defendants' Supervising Contractor, as well as all other contractors and subcontractors who engage in the "practice of engineering" at the Site on behalf of Settling Defendants, as the "practice of engineering" is defined at Section 7201 of the New York State Education Law, must comply with all applicable New York State legal requirements regarding the practice of professional engineering within the State of New York, including, but not limited to, all applicable requirements of the New York State Education Law and Articles 15 and 15-A of the Business Corporation Law. Within 15 days after the lodging of this Consent Decree, Settling Defendants shall notify EPA in writing of the name, title, and qualifications of any contractor proposed to be the Supervising Contractor. EPA will issue a notice of disapproval or an authorization to proceed. If at any time thereafter, Settling Defendants propose to change a Supervising Contractor, Settling Defendants shall give

- 12 -

such notice to EPA and must obtain an authorization to proceed from EPA before the new Supervising Contractor performs, directs, or supervises any Work under this Consent Decree.

b. If EPA disapproves a proposed Supervising Contractor, EPA will notify Settling Defendants in writing. Settling Defendants shall submit to EPA a list of contractors (which does not include the contractor previously disapproved by EPA), including the qualifications of each contractor, that would be acceptable to them within 30 days of receipt of EPA's disapproval of the contractor previously proposed. EPA will provide written notice of the names of any contractor(s) that it disapproves and an authorization to proceed with respect to any of the other contractors. Settling Defendants may select any contractor from that list that is not disapproved and shall notify EPA of the name of the contractor selected within 21 days of EPA's authorization to proceed.

c. If EPA fails to provide written notice of its authorization to proceed or disapproval as provided in this Paragraph and this failure prevents the Settling Defendants from meeting one or more deadlines in a plan approved by the EPA pursuant to this Consent Decree, Settling Defendants may seek relief under the provisions of Section XVIII (Force Majeure) hereof.

11. Remedial Design.

a. Within 60 days after EPA's issuance of an authorization to proceed pursuant to Paragraph 10, Settling Defendants shall submit to EPA and the State a work plan for the design of the Remedial Action at the Site ("Remedial Design Work Plan" or "RD Work Plan"). The Remedial Design Work Plan shall provide for the collection of all data needed for performing necessary pre-RD work and for the design of the remedy set forth in the ROD, in accordance with the SOW and for achievement of the Performance Standards and other requirements set

- 13 -

forth in the ROD, this Consent Decree and/or the SOW. The Remedial Design Work Plan shall include plans and schedules for implementation of all pre-design and remedial design tasks identified in the SOW, to the extent required by the SOW, including, but not limited to, plans and schedules for the completion of: (1) design sampling, analysis, testing and monitoring plan (including, but not limited to, a Remedial Design Quality Assurance/Quality Control Project Plan (RD QAPP) in accordance with Section VIII (Quality Assurance, Sampling and Data Analysis)); (2) treatability studies; (3) a Pre-design Work Plan; (4) intermediate design submittal with respect to groundwater work elements; (5) pre-final and final design submittals; (6) plan for securing access, Institutional Controls and approvals; (7) a Construction Quality Assurance Plan; (8) a health and safety contingency plan for field design activities which conforms to the applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, 29 C.F.R. § 1910.120. In addition, the Remedial Design Work Plan shall include a schedule for completion of the Remedial Action Work Plans and a draft schedule for completion of all other Work under this Consent Decree.

b. Upon approval of the Remedial Design Work Plan by EPA, after a reasonable opportunity for review and comment by the State, Settling Defendants shall implement the Remedial Design Work Plan. The Settling Defendants shall submit to EPA and the State all plans, submittals and other deliverables required under the approved Remedial Design Work Plan in accordance with the approved schedule for review and approval pursuant to Section XI (EPA Approval of Plans and Other Submissions). Unless otherwise directed by EPA, Settling Defendants shall not commence further Remedial Design activities at the Site prior to approval of the Remedial Design Work Plan.

c. The intermediate design submittals, shall include, at a minimum, the following:

- 14 -

(1) design criteria and objectives; (2) results of treatability studies; (3) results of additional field sampling and pre-design work; (4) project delivery strategy; (5) plans and specifications developed to that point along with a design analysis, drawings and sketches; (6) technical specification for photographic documentation of the remedial construction work; (7) preliminary drawings, draft piping and instrumentation diagrams, survey work, and engineering plans; (8) preliminary construction schedule; and (9) draft or preliminary schedules for remedial action and monitoring activities. Any value engineering proposals must be identified and evaluated during this review.

d. The pre-final and final design submittals shall include, at a minimum, the following: (1) final plans and specifications; (2) Operation and Maintenance Plan; (3) Construction Quality Assurance Project Plan (CQAPP); (4) report on access and approvals and institutional controls; (5) a plan for establishing institutional controls; (6) final engineer's cost estimate; and (7) a plan for implementation of construction and construction oversight. The CQAPP, which shall detail the approach to quality assurance during construction activities at the Site, shall specify a quality assurance official ("QA Official"), independent of the Supervising Contractor, to conduct a quality assurance program during the construction phase of the project.

12. Remedial Action.

a. Within 60 days after approval of the final design submittal by EPA for each of the soil and sediment work elements and the groundwater work element (herein a "Remedial Work Element"), Settling Defendants shall award a contract for the Remedial Action for the respective Remedial Work Element.

b. Within 45 days after the award of the remedial action contract for a given Remedial Work Element, Settling Defendants shall submit a Remedial Action Work Plan for

- 15 -

remedial construction activities for the respective Remedial Work Element. Each Remedial Action Work Plan shall provide for construction and implementation of the respective Remedial Work Element and achievement of the Performance Standards, in accordance with this Consent Decree, the ROD, the SOW, and the design plans and specifications developed in accordance with the Remedial Design Work Plan and approved by EPA. Each Remedial Action Work Plan shall include an updated Health and Safety Contingency Plan for field activities required by the Remedial Action Work Plan which conforms to the applicable Occupational Safety and Health Administration and EPA requirements including, but not limited to, 29 C.F.R. § 1910.120. Upon its approval by EPA, each Remedial Action Work Plan shall be incorporated into and become enforceable under this Consent Decree.

c. Each Remedial Action Work Plan shall include a Site Management Plan which shall, at a minimum, include the following: (1) the schedule for completion of the Remedial Action; (2) method for selection of the contractor; (3) procedures and schedule for developing and submitting other required Remedial Action plans and deliverables; (4) methodology for implementation of the Construction Quality Assurance Plan; (5) groundwater monitoring plan (with respect to the groundwater work element); (6) methods for satisfying permitting requirements; (7) methodology for implementation of the Operation and Maintenance Plan; (8) methodology for implementation of the Contingency Plan; (9) construction quality control plan; (10) procedures and plans for the decontamination of equipment and the disposal of contaminated materials; (11) discussion of methods by which construction operations will proceed; and (12) discussion of reporting procedures, including frequency and format of reports. Each Remedial Action Work Plan also shall include a schedule for implementation of all Remedial Action tasks identified in the final design submittal and shall identify the initial

- 16 -

formulation of the Settling Defendants' Remedial Action Project Team (including, but not limited to, the Supervising Contractor).

d. Upon approval of a Remedial Action Work Plan by EPA, after a reasonable opportunity for review and comment by the State, Settling Defendants shall implement the activities required under the Remedial Action Work Plan for the work element covered by that Remedial Action Work Plan. The Settling Defendants shall submit to EPA and the State all plans, submittals, or other deliverables required under each approved Remedial Action Work Plan in accordance with the approved schedule for review and approval pursuant to Section XI (EPA Approval of Plans and Other Submissions). Unless otherwise directed by EPA, Settling Defendants shall not commence physical Remedial Action activities at the Site prior to approval of the Remedial Action Work Plan for the work element covered by that Remedial Action Work Plan.

13. The Settling Defendants shall continue to implement the soil and sediment and the groundwater Remedial Actions until the Performance Standards are achieved and for so long thereafter as is otherwise required under this Consent Decree.

14. Modification of the SOW or Related Work Plans.

a. If EPA determines that modification to the Work specified in the SOW and/or in work plans developed pursuant to the SOW is necessary to achieve and maintain the Performance Standards or to carry out and maintain the effectiveness of the remedy set forth in the ROD, EPA may require that such modification be incorporated in the SOW and/or such work plans. Provided, however, that a modification may only be required pursuant to this Paragraph to the extent that it is consistent with the scope of the remedy selected in the ROD.

b. For the purposes of this Paragraph 14 and Paragraphs 50 and 51 only, the

- 17 -

"scope of the remedy selected in the ROD" is: (i.) excavation and/or dredging of unsaturated (above the water table) soil and sediment exceeding soil/sediment cleanup objectives ; (ii.) backfilling of the excavated areas with clean fill and revegetating such areas, as appropriate, and the characterization and transport for treatment/disposal at off-site Resource Conservation and Recovery Act- and/or Toxic Substances Control Act-compliant facilities, as appropriate, for all excavated/dredged material; (iii.) restoration of any wetlands impacted by remedial activities (including routine inspection of the restored wetlands for several years to ensure adequate survival of the planted vegetation); (iv.) extraction of contaminated groundwater utilizing a network of recovery wells to achieve the Performance Standards, and treatment of the extracted groundwater to achieve Performance Standards (by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies, or other appropriate treatment), followed by discharge to surface water; (v.) implementation of institutional controls (i.e., deed restrictions) to prohibit the installation and use of groundwater wells at the Site for drinking water purposes until groundwater cleanup standards are achieved; and (vi.) long-term monitoring of groundwater, surface water, and nearby residential private wells to ensure the effectiveness of the selected remedy.

c. If Settling Defendants object to any modification determined by EPA to be necessary pursuant to this Paragraph, they may seek dispute resolution pursuant to Section XIX (Dispute Resolution), Paragraph 67 (record review). The SOW and/or related work plans shall be modified in accordance with final resolution of the dispute.

d. Settling Defendants shall implement any work required by any modifications incorporated in the SOW and/or in work plans developed pursuant to the SOW in accordance with this Paragraph.

- 18 -

e. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions as otherwise provided in this Consent Decree.

15. Settling Defendants acknowledge and agree that nothing in this Consent Decree, the SOW, or the Remedial Design or Remedial Action Work Plans constitutes a warranty or representation of any kind by Plaintiff that compliance with the work requirements set forth in the SOW and the Work Plans will achieve the Performance Standards.

16. Settling Defendants shall, prior to any off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving facility's state and to the EPA Project Coordinator of such shipment of Waste Material. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. The Settling Defendants shall include in the written notification the following information, where available: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. The Settling Defendants shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by the Settling Defendants following the award of the contract for Remedial Action construction. The Settling Defendants shall provide the information required by Paragraph 16.a. as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

VII. REMEDY REVIEW

17. Periodic Review. Settling Defendants shall conduct any studies and investigations as requested by EPA, in order to permit EPA to conduct reviews of whether the Remedial Action is protective of human health and the environment at least every five years as required by Section 121(c) of CERCLA and any applicable regulations.

18. EPA Selection of Further Response Actions. If EPA determines, at any time, that the Remedial Action is not protective of human health and the environment, EPA may select further response actions for the Site in accordance with the requirements of CERCLA and the NCP.

19. Opportunity To Comment. Settling Defendants and, if required by Sections 113(k)(2) or 117 of CERCLA, the public, will be provided with an opportunity to comment on any further response actions proposed by EPA as a result of the review conducted pursuant to Section 121(c) of CERCLA and to submit written comments for the record during the comment period.

20. Settling Defendants' Obligation To Perform Further Response Actions. If EPA selects further response actions for the Site, the Settling Defendants shall undertake such further response actions to the extent that the reopener conditions in Paragraph 82 or Paragraph 83 (United States' reservations of liability based on unknown conditions or new information) are satisfied. Settling Defendants may invoke the procedures set forth in Section XIX (Dispute Resolution) to dispute (1) EPA's determination that the reopener conditions of Paragraph 82 or Paragraph 83 of Section XXI (Covenants Not To Sue by Plaintiff) are satisfied, (2) EPA's determination that the Remedial Action is not protective of human health and the environment, or (3) EPA's selection of the further response actions. Disputes pertaining to whether the Remedial Action is protective or to EPA's selection of further response actions shall be resolved pursuant to Paragraph 67 (record review).

- 20 -

21. Submissions of Plans. If Settling Defendants are required to perform the further response actions pursuant to Paragraph 20, they shall submit a plan for such work to EPA for approval in accordance with the procedures set forth in Section VI (Performance of the Work by Settling Defendants) and shall implement the plan approved by EPA in accordance with the provisions of this Decree.

VIII. QUALITY ASSURANCE, SAMPLING, and DATA ANALYSIS

22. Settling Defendants shall use quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance and monitoring samples in accordance with "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operation" (EPA QA/R5), dated October 1998; "Preparing Perfect Project Plans" (EPA/600/9-89/087), dated October 1989, and subsequent amendments to such guidelines upon notification by EPA to Settling Defendants of such amendment except as otherwise specified in the Scope of Work for pre-Remedial Design sampling activities. Amended guidelines shall apply only to procedures conducted after such notification. Prior to the commencement of any monitoring project under this Consent Decree, Settling Defendants shall submit to EPA for approval, after a reasonable opportunity for review and comment by the State, a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW and the NCP. If relevant to the proceeding, the Parties agree that validated sampling data generated in accordance with the QAPP(s) and reviewed and approved by EPA shall be admissible as evidence, without objection, in any proceeding under this Decree. Settling Defendants shall ensure that EPA and State personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Settling Defendants in implementing this Consent Decree. In addition, Settling Defendants shall ensure that such laboratories shall analyze all samples submitted by EPA pursuant to the QAPP for

quality assurance monitoring. Settling Defendants shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Decree perform all analyses according to accepted EPA methods. Accepted EPA methods consist of those methods which are documented in the "Contract Lab Program Statement of Work for Inorganic Analysis" (Revision No. 11, 1992) and the "Contract Lab Program Statement of Work for Organic Analysis" (Revision No. 9, 1994), and any amendments made thereto during the course of the implementation of this Decree. Settling Defendants shall ensure that all laboratories they use for analysis of samples taken pursuant to this Consent Decree participate in an EPA or EPA-equivalent QA/QC program. Settling Defendants shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Decree will be conducted in accordance with the procedures set forth in the QAPP approved by EPA.

23. Upon request, the Settling Defendants shall allow split or duplicate samples to be taken by EPA and the State or their authorized representatives. Settling Defendants shall notify EPA not less than 28 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow the Settling Defendants to take split or duplicate samples of any samples it takes as part of the Plaintiff's oversight of the Settling Defendants' implementation of the Work.

24. Settling Defendants shall submit to EPA one copy of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Settling Defendants with respect to the Site and/or the implementation of this Consent Decree within 30 days of the date when those results or data become available to Settling Defendants, unless EPA agrees otherwise.

25. Notwithstanding any provision of this Consent Decree, the United States hereby retains all

- 22 -

of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA and any other applicable statutes or regulations.

IX. ACCESS AND INSTITUTIONAL CONTROLS

26. With respect to that portion of the Site, or any other property where access and/or land/water use restrictions are needed to implement this Consent Decree, that is owned or controlled by the Owner Settling Defendant, or controlled by any of the other Settling Defendants (see, *e.g.*, that certain Grant of Easement and Declaration of Restrictive Covenants dated November 22, 1996, recorded in the County Clerk's Office, Broome County, State of New York at Book 01875, Page 1044), the Owner Settling Defendant and such other Settling Defendants shall:

a. commencing on the date of lodging of this Consent Decree, provide the United States, the State, and their representatives, including EPA and its contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Consent Decree, including, but not limited to, the following activities:

- (1) Monitoring the Work;
- (2) Verifying any data or information submitted to the United States;
- (3) Conducting investigations relating to contamination at or near the Site;
- (4) Obtaining samples;
- (5) Assessing the need for, planning, or implementing additional response actions at or near the Site;
- (6) Implementing the Work pursuant to the conditions set forth in Paragraph 86 of this Consent Decree;
- (7) Inspecting and copying records, operating logs, contracts, or other

documents maintained or generated by Settling Defendants or their agents, consistent with Section XXIV (Access to Information);

(8) Assessing Settling Defendants' compliance with this Consent Decree; and

(9) Determining whether the Site or other property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to this Consent Decree;

b. commencing on the date of lodging of this Consent Decree, refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the integrity or protectiveness of the remedial measures to be implemented pursuant to this Consent Decree. Such restrictions include, but are not limited to, the prohibition of installation or use of groundwater wells at the Site for drinking water purposes until such time as the Performance Standards have been met in the groundwater underlying the Site; and

c. execute and record in the County Clerk's Office, Broome County, State of New York, an easement, running with the land, that (i) grants a right of access for the purpose of conducting any activity related to this Consent Decree, including, but not limited to, those activities listed in Paragraph 26.a. of this Consent Decree, and (ii) grants the right to enforce the land/water use restrictions listed in Paragraph 26.b. of this Consent Decree, or other restrictions that EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Such Settling Defendants shall grant the access rights and the rights to enforce the land/water use restrictions to one or more of the following persons, as determined by EPA: (i) the United States, on behalf of EPA, and its representatives, (ii) the State and its representatives, (iii) the other Settling Defendants and their representatives, and/or (iv) other appropriate grantees. Such

- 24 -

Settling Defendants shall, within 45 days of entry of this Consent Decree, submit to EPA for review and approval with respect to such property:

(1) A draft easement, in substantially the form attached hereto as Appendix F, that is enforceable under the laws of the State of New York, free and clear of all prior liens and encumbrances (except as approved by EPA), and acceptable under the Attorney General's Title Regulations promulgated pursuant to 40 U.S.C. § 255; and

(2) A current title commitment or report prepared in accordance with the U.S. Department of Justice Standards for the Preparation of Title Evidence in Land Acquisitions by the United States (1970) (the "Standards").

Within 15 days of EPA's approval and acceptance of the easement, such Settling Defendants shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment or report to affect the title adversely, record the easement with the County Clerk's Office, Broome County, State of New York. Within 30 days of recording the easement, such Settling Defendants shall provide EPA with final title evidence acceptable under the Standards, and a certified copy of the original recorded easement showing the clerk's recording stamps.

27. If the Site, or any other property where access and/or land/water use restrictions are needed to implement this Consent Decree, is owned or controlled by persons other than any of the Settling Defendants, Settling Defendants shall use best efforts to secure from such persons:

a. an agreement to provide access thereto for Settling Defendants, as well as for the United States on behalf of EPA, and the State, as well as their representatives (including contractors), for the purpose of conducting any activity related to this Consent Decree, including, but not limited to, those activities listed in Paragraph 26.a. of this Consent Decree;

- 25 -

b. an agreement, enforceable by the Settling Defendants and the United States, to abide by the obligations and restrictions established by Paragraph 26.b. of this Consent Decree, or that are otherwise necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Consent Decree; and

c. if EPA so requests, the execution and recordation in the County Clerk's Office, Broome County, State of New York, of an easement, running with the land, that (i) grants a right of access for the purpose of conducting any activity related to this Consent Decree, including, but not limited to, those activities listed in Paragraph 26.a. of this Consent Decree, and (ii) grants the right to enforce the land/water use restrictions listed in Paragraph 26.b. of this Consent Decree, or other restrictions that EPA determines are necessary to implement, ensure non-interference with, or ensure the protectiveness of the remedial measures to be performed pursuant to this Consent Decree. The access rights and/or rights to enforce land/water use restrictions shall be granted to one or more of the following persons, as determined by EPA: (i) the United States, on behalf of EPA, and its representatives, (ii) the State and its representatives, (iii) the Settling Defendants and their representatives, and/or (iv) other appropriate grantees. Within 45 days of the date of a request therefor by EPA, Settling Defendants shall submit to EPA for review and approval with respect to such property:

(1) A draft easement, in substantially the form attached hereto as Appendix F, that is enforceable under the laws of the State of New York, free and clear of all prior liens and encumbrances (except as approved by EPA), and acceptable under the Attorney General's Title Regulations promulgated pursuant to 40 U.S.C. § 255; and

(2) A current title commitment or report prepared in accordance with the Standards.

- 26 -

Within 15 days of EPA's approval and acceptance of the easement, Settling Defendants shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment or report to affect the title adversely, the easement shall be recorded with the County Clerk's Office, Broome County, State of New York. Within 30 days of the recording of the easement, Settling Defendants shall provide EPA with final title evidence acceptable under the Standards, and a certified copy of the original recorded easement showing the clerk's recording stamps.

28. For purposes of Paragraph 27 of this Consent Decree, "best efforts" includes the payment of reasonable sums of money in consideration of access, access easements, land/water use restrictions, and/or restrictive easements. If any access or land/water use restriction agreements required by Paragraphs 27.a. or 27.b. of this Consent Decree are not obtained within 45 days of the date of entry of this Consent Decree, or any access easements or restrictive easements required by Paragraph 27.c. of this Consent Decree are not submitted to EPA in draft form within 45 days of the date of EPA's request therefor, Settling Defendants shall promptly notify the United States in writing, and shall include in that notification a summary of the steps that Settling Defendants have taken to attempt to comply with Paragraph 27 of this Consent Decree. The United States may, as it deems appropriate, assist Settling Defendants in obtaining access or land/water use restrictions, either in the form of contractual agreements or in the form of easements running with the land. Settling Defendants shall reimburse the United States in accordance with the procedures in Section XVI (Reimbursement of Response Costs), for all direct and indirect costs incurred by the United States in obtaining such access and/or land/water use restrictions including, but not limited to, the cost of attorney time and the amount of monetary consideration paid.

29. If EPA determines that land/water use restrictions in the form of state or local laws, regulations, ordinances or other governmental controls are needed to implement the remedy selected in the ROD, ensure the integrity and protectiveness thereof, or ensure non-interference therewith, Settling Defendants shall cooperate with EPA's efforts to secure such governmental controls.

30. Notwithstanding any provision of this Consent Decree, the United States retains all of its access authorities and rights, as well as all of its rights to require land/water use restrictions, including enforcement authorities related thereto, under CERCLA, RCRA and any other applicable statute or regulations.

X. REPORTING REQUIREMENTS

31. In addition to any other requirement of this Consent Decree, Settling Defendants shall submit to EPA and the State written monthly progress reports that: (a) describe the actions which have been taken toward achieving compliance with this Consent Decree during the previous month; (b) include a summary of all results of sampling and tests and all other data received or generated by Settling Defendants or their contractors or agents in the previous month; (c) identify all work plans, plans and other deliverables required by this Consent Decree completed and submitted during the previous month; (d) describe all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next six weeks and provide other information relating to the progress of construction, including, but not limited to, critical path diagrams, Gantt charts and Pert charts; (e) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays; (f) include any modifications to the work plans or other schedules that

- 28 -

Settling Defendants have proposed to EPA or that have been approved by EPA; and (g) describe all activities undertaken in support of the Community Relations Plan during the previous month and those to be undertaken in the next six weeks. Settling Defendants shall submit these progress reports to EPA and the State by the tenth day of every month following the lodging of this Consent Decree until EPA notifies the Settling Defendants pursuant to Paragraph 51.b. of Section XIV (Certification of Completion). If requested by EPA, Settling Defendants shall also provide briefings for EPA to discuss the progress of the Work.

32. The Settling Defendants shall notify EPA of any change in the schedule described in the monthly progress report for the performance of any activity, including, but not limited to, data collection and implementation of work plans, no later than seven days prior to the performance of the activity.

33. Upon the occurrence of any event during performance of the Work that Settling Defendants are required to report pursuant to Section 103 of CERCLA or Section 304 of the Emergency Planning and Community Right-to-know Act ("EPCRA"), Settling Defendants shall within 24 hours of the onset of such event orally notify the EPA Project Coordinator or the Alternate EPA Project Coordinator (in the event of the unavailability of the EPA Project Coordinator), or, in the event that neither the EPA Project Coordinator or Alternate EPA Project Coordinator is available, the Chief of the New York Remediation Branch of the Emergency and Remedial Response Division, EPA Region II. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304.

34. Within 20 days of the onset of an event of the type referred to in the preceding paragraph, Settling Defendants shall furnish to Plaintiff a written report, signed by the Settling Defendants' Project Coordinator, setting forth the events which occurred and the measures taken, and to be

taken, in response thereto. Within 30 days of the conclusion of such an event, Settling Defendants shall submit a report setting forth all actions taken in response thereto.

35. Settling Defendants shall submit all plans, reports, and data required by Section VI, above, the SOW, the EPA-approved Remedial Design Work Plan, the EPA-approved Remedial Action Work Plan, or any other approved plans to EPA in accordance with the schedules set forth in Section VI, above, the SOW and such approved plans. Settling Defendants shall simultaneously submit copies of all such plans, reports and data to the State, in accordance with the requirements of Section XXVI, below.

36. All reports and other documents submitted by Settling Defendants to EPA (other than the monthly progress reports referred to above) which purport to document Settling Defendants' compliance with the terms of this Consent Decree shall be signed by an authorized representative of the Settling Defendants.

XI. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

37. After review of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Decree, EPA, after reasonable opportunity for review and comment by the State, shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that the Settling Defendants modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Settling Defendants at least one notice of deficiency and an opportunity to cure within 30 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects and the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable

deliverable.

38. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 37.a., b., or c., Settling Defendants shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XIX (Dispute Resolution) with respect to the modifications or conditions made by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 37.c. and the submission has a material defect, EPA retains its right to seek stipulated penalties, as provided in Section XX (Stipulated Penalties).

39. a. Upon receipt of a notice of disapproval pursuant to Paragraph 37.d., Settling Defendants shall, within 30 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other item for approval. Any stipulated penalties applicable to the submission, as provided in Section XX, shall accrue during the 14-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 40 and 41.

b. Notwithstanding the receipt of a notice of disapproval pursuant to Paragraph 37.d., Settling Defendants shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Settling Defendants of any liability for stipulated penalties under Section XX (Stipulated Penalties).

40. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by EPA, EPA may again require the Settling Defendants to correct the deficiencies, in accordance with the preceding Paragraphs. EPA also retains the right to modify or develop the plan, report or other item. Settling Defendants shall implement any such plan, report, or item as

modified or developed by EPA, subject only to their right to invoke the procedures set forth in Section XIX (Dispute Resolution).

41. If upon resubmission, a plan, report, or item is disapproved or modified by EPA due to a material defect, Settling Defendants shall be deemed to have failed to submit such plan, report, or item timely and adequately unless the Settling Defendants invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution) and EPA's action is overturned pursuant to that Section. The provisions of Section XIX (Dispute Resolution) and Section XX (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is upheld, or if Settling Defendants do not challenge EPA's disapproval or modification by invoking the dispute resolution procedures set forth in Section XIX, stipulated penalties shall accrue for such violation, as provided in Section XX, from the date on which the initial submission was originally required.

42. All plans, reports, and other items required to be submitted to EPA under this Consent Decree shall, upon approval or modification by EPA, be enforceable under this Consent Decree. In the event EPA approves or modifies a portion of a plan, report, or other item required to be submitted to EPA under this Consent Decree, the approved or modified portion shall be enforceable under this Consent Decree.

XII. PROJECT COORDINATORS

43. Within 20 days of lodging this Consent Decree, Settling Defendants and EPA will notify each other, in writing, of the name, address and telephone number of their respective designated Project Coordinators and Alternate Project Coordinators. If a Project Coordinator or Alternate Project Coordinator initially designated is changed, the identity of the successor will be given to

- 32 -

the other Parties at least 5 working days before the changes occur, unless impracticable, but in no event later than the actual day the change is made. The Settling Defendants' Project Coordinator shall be subject to disapproval by EPA and shall have the technical expertise sufficient to adequately oversee all aspects of the Work. The Settling Defendants' Project Coordinator shall not be an attorney for any of the Settling Defendants in this matter. He or she may assign other representatives, including other contractors, to serve as a Site representative for oversight of performance of daily operations during remedial activities.

44. Plaintiff may designate other representatives, including, but not limited to, EPA and State employees, and federal and State contractors and consultants, to observe and monitor the progress of any activity undertaken pursuant to this Consent Decree. EPA's Project Coordinator and Alternate Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and an On-Scene Coordinator ("OSC") by the National Contingency Plan, 40 C.F.R. Part 300. In addition, EPA's Project Coordinator or Alternate Project Coordinator shall have authority, consistent with the National Contingency Plan, to halt any Work required by this Consent Decree and to take any necessary response action when s/he determines that conditions at the Site constitute an emergency situation or may present an immediate threat to public health or welfare or the environment due to release or threatened release of Waste Material.

45. Settling Defendants' Project Coordinator shall be available to meet with EPA at EPA's request.

XIII. ASSURANCE OF ABILITY TO COMPLETE WORK

46. Within 30 days of entry of this Consent Decree, Settling Defendants shall establish and maintain financial security in an amount which EPA determines to be adequate to perform the remedy as described in the ROD, in one or more of the following forms:

- 33 -

- a. A surety bond guaranteeing performance of the Work;
- b. One or more irrevocable letters of credit equaling the total estimated cost of the Work;
- c. A trust fund established to fund the Work at the Site substantially meeting the requirements of a trust fund described at 40 C.F.R. Part 264.145 and 264.151(a)(1);
- d. A guarantee to perform the Work by one or more parent corporations or subsidiaries, or by one or more unrelated corporations that have a substantial business relationship with at least one of the Settling Defendants and that satisfies the requirements of 40 C.F.R. Part 264.143(f); or
- e. A demonstration that one or more of the Settling Defendants satisfy the requirements of 40 C.F.R. Part 264.143(f).

47. Within thirty (30) days of entry of this Consent Decree, Settling Defendants shall notify EPA as to which form of financial assurance it has established pursuant to Paragraph 46, and shall provide information to demonstrate to EPA that such financial assurance complies with the requirements of Paragraph 46. If the Settling Defendants seek to demonstrate the ability to complete the Work through a guarantee by a third party pursuant to Paragraph 46.d. of this Consent Decree, Settling Defendants shall demonstrate that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f). If Settling Defendants seek to demonstrate their ability to complete the Work by means of the financial test or the corporate guarantee pursuant to Paragraph 46.d. or e., they shall resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the effective date of this Consent Decree. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section are inadequate, Settling Defendants shall, within 30 days of receipt of

notice of EPA's determination, obtain and present to EPA for approval additional financial assurances meeting the requirements of this Section. Settling Defendants' inability to demonstrate financial ability to complete the Work shall not excuse performance of any activities required under this Consent Decree.

48. If Settling Defendants can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 46 above after entry of this Consent Decree, Settling Defendants may, on any anniversary date of entry of this Consent Decree, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining work to be performed. Settling Defendants shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security upon approval by EPA. In the event of a dispute, Settling Defendants may reduce the amount of the security in accordance with the final administrative or judicial decision resolving the dispute.

49. Settling Defendants may change the form of financial assurance provided under this Section at any time, upon notice to and approval by EPA, provided that the new form of assurance meets the requirements of this Section. In the event of a dispute, Settling Defendants may change the form of the financial assurance only in accordance with the final administrative or judicial decision resolving the dispute.

XIV. CERTIFICATION OF COMPLETION

50. Completion of the Remedial Action

a. When Settling Defendants have determined that the Remedial Action has been fully performed and the Performance Standards have been attained for each Remedial Work Element, as set forth in SOW Sections XI, B. and XII, B., Settling Defendants shall submit to

- 35 -

EPA for approval, a Draft Remedial Action Report with respect to each Remedial Work Element within the time periods set forth in SOW Sections XI, C. and XII, B., with a copy to the State, pursuant to Section XI (EPA Approval of Plans and Other Submissions). In each Draft RA Report, a registered professional engineer and the Settling Defendants' Project Coordinator shall state that the Remedial Action has been completed for such Remedial Work Element, in full satisfaction of the requirements of this Consent Decree. Each written report shall include as-built drawings signed and stamped by a professional engineer. Each report shall contain the following statement, signed by a responsible corporate official of a Settling Defendant or Settling Defendants' Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If, after review of the Draft RA Reports, EPA, after reasonable opportunity for review and comment by the State, determines that the respective Remedial Actions or any portion thereof have not been completed in accordance with this Consent Decree, EPA will notify Settling Defendants in writing of the activities that must be undertaken by Settling Defendants pursuant to this Consent Decree to complete the Remedial Action(s). Provided, however, that EPA may only require Settling Defendants to perform such activities pursuant to this Paragraph to the extent that such activities are consistent with the "scope of the remedy selected in the ROD," as that term is defined in Paragraph 14.b. EPA will set forth in the notice a schedule for performance of such activities or require Settling Defendants to submit a schedule to EPA for approval pursuant to Section XI (EPA Approval of Plans and Other Submissions). Settling Defendants shall perform all activities described in the notice in accordance with the

- 36 -

specifications and schedules established pursuant to this Paragraph, subject to their right to invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution). Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions as otherwise provided in this Consent Decree. EPA will either approve each Draft Final Remedial Action Report, thus making each the Final Remedial Action Report for the respective Remedial Work Element, require modifications of it, and/or require corrective measures to fully and properly implement the Remedial Action(s), in accordance with the SOW.

b. If EPA concludes, based on the initial or any subsequent report requesting Certification of Completion and after a reasonable opportunity for review and comment by the State, that the Remedial Action has been performed in accordance with this Consent Decree and that the Performance Standards have been achieved for each Remedial Work Element, EPA will so certify in writing to Settling Defendants. This certification shall constitute the Certification of Completion of the Remedial Action for purposes of this Consent Decree, including, but not limited to, Section XXI (Covenants Not to Sue by Plaintiff). Certification of Completion of the Remedial Action shall not affect Settling Defendants' obligations under this Consent Decree.

51. Completion of the Work

a. Within 90 days after Settling Defendants conclude that all phases of the Work have been fully performed (including Post-Remedial Monitoring), Settling Defendants shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants and EPA. If, after the pre-certification inspection, the Settling Defendants still believe that the Work has been fully performed, Settling Defendants shall submit a written report by a registered professional engineer stating that the Work has been completed in full satisfaction of the requirements of this Consent Decree. The report shall contain the following statement, signed by

a responsible corporate official of a Settling Defendant or the Settling Defendants' Project

Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If, after review of the written report, EPA, after reasonable opportunity for review and comment by the State, determines that any portion of the Work has not been completed in accordance with this Consent Decree, EPA will notify Settling Defendants in writing of the activities that must be undertaken by Settling Defendants pursuant to this Consent Decree to complete the Work.

Provided, however, that EPA may only require Settling Defendants to perform such activities pursuant to this Paragraph to the extent that such activities are consistent with the "scope of the remedy selected in the ROD," as that term is defined in Paragraph 14.b. EPA will set forth in the notice a schedule for performance of such activities or require the Settling Defendants to submit a schedule to EPA for approval pursuant to Section XI (EPA Approval of Plans and Other Submissions). Settling Defendants shall perform all activities described in the notice in accordance with the specifications and schedules established therein, subject to their right to invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution). Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions as otherwise provided in this Consent Decree.

b. If EPA concludes, based on the initial or any subsequent request for Certification of Completion by Settling Defendants and after a reasonable opportunity for review and comment by the State, that the Work has been performed in accordance with this Consent Decree, EPA will so notify the Settling Defendants in writing.

XV. EMERGENCY RESPONSE

52. In the event of any action or occurrence during the performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Settling Defendants shall, subject to Paragraph 53, immediately take all appropriate action to prevent, abate, or minimize such release or threat of release, and shall immediately notify the EPA's Project Coordinator, or, if the Project Coordinator is unavailable, EPA's Alternate Project Coordinator. If neither of these persons is available, the Settling Defendants shall notify the Chief of the Response and Prevention Branch of the Emergency and Remedial Response Division of EPA, Region II, at (732) 321-6656, or, if such person or his/her delegee is unavailable, the EPA Region II Emergency 24-hour Hot Line at (732) 548-8730. Settling Defendants shall take such actions in consultation with EPA's Project Coordinator or other available authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Contingency Plans, the Contingency Plans, and any other applicable plans or documents developed pursuant to the SOW. In the event that Settling Defendants fail to take appropriate response action as required by this Section, and EPA takes such action instead, Settling Defendants shall reimburse EPA for all costs of the response action not inconsistent with the NCP pursuant to Section XVI (Reimbursement of Response Costs).

53. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, or b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or

- 39 -

minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XXI (Covenants Not to Sue by Plaintiff).

XVI. REIMBURSEMENT OF RESPONSE COSTS

54. Settling Defendants shall reimburse the EPA Hazardous Substance Superfund for all Future Response Costs not inconsistent with the National Contingency Plan. To the extent such costs are incurred, the United States will periodically send Settling Defendants billings for such costs. The billings will be accompanied by a printout of cost data in EPA's financial management system, and, if applicable, cost data in the financial management system of the Department of Justice ("DOJ"). Settling Defendants shall make all payments within 30 days of the date of each bill requiring payment, except as otherwise provided in Paragraph 55. Settling Defendants shall make all payments via electronic funds transfer ("EFT"). Payment shall be remitted via EFT to Mellon Bank, Pittsburgh, Pennsylvania, as follows. To make payment via EFT, Settling Defendants shall provide the following information to their bank:

- a. Amount of payment
- b. Title of Mellon Bank account to receive the payment: **EPA**
- c. Account code for Mellon Bank account receiving the payment: **9108544**
- d. Mellon Bank ABA Routing Number: **043000261**
- e. Names of Settling Defendants
- f. Case number: **90-11-3-1514/1**
- g. Site/spill identifier: **025V**

Along with this information, Settling Defendants shall instruct their bank to remit payment in the required amount via EFT to EPA's account with Mellon Bank. To ensure that Settling Defendants' payment is properly recorded, Settling Defendants shall send a letter to the United

- 40 -

States within one week of the EFT, which references the date of the EFT, the payment amount, the name of the Site, the case number, and each Settling Defendant's name and address. Such letter shall be sent to the United States as provided in Section XXVI (Notices and Submissions), and to:

Ronald Gherardi, Chief
Financial Management Branch
U.S. Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

55. Settling Defendants may contest payment of any Future Response Costs under Paragraph 54 if they determine that the United States has made a mathematical error or if they allege that a cost item that is included represents costs that are inconsistent with the NCP. Such objection shall be made in writing within 30 days of the date of the bill and must be sent to the United States pursuant to Section XXVI (Notices and Submissions). Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, the Settling Defendants shall within the 30-day period pay all uncontested Future Response Costs to the United States in the manner described in Paragraph 54.

Simultaneously, the Settling Defendants shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of New York and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. The Settling Defendants shall send to the United States, as provided in Section XXVI (Notices and Submissions), a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow

- 41 -

account. Simultaneously with establishment of the escrow account, the Settling Defendants shall initiate the Dispute Resolution procedures in Section XIX (Dispute Resolution). If the United States prevails in the dispute, within 5 days of the resolution of the dispute, the Settling Defendants shall pay the sums due, with accrued interest (as shown by a bank statement, a copy of which shall be submitted with the payment), to the United States in the manner described in Paragraph 54. If the Settling Defendants prevail concerning any aspect of the contested costs, the Settling Defendants shall pay that portion of the costs for which they did not prevail, plus associated accrued interest (as shown by a bank statement, a copy of which shall be submitted with the payment), to the United States in the manner described in Paragraph 54; Settling Defendants shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XIX (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding the Settling Defendants' obligation to reimburse the United States for its Future Response Costs.

56. In the event that the payments required by Paragraph 54 are not made within 30 days of the date of each bill, Settling Defendants shall pay Interest on the unpaid balance. The Interest to be paid on Future Response Costs shall begin to accrue on the date of the bill. The Interest shall accrue through the date of the Settling Defendants' payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiff by virtue of Settling Defendants' failure to make timely payments under this Section. The Settling Defendants shall make all payments required by this Paragraph in the manner described in Paragraph 54.

XVII. INDEMNIFICATION AND INSURANCE

57. a. The United States does not assume any liability by entering into this agreement or by

- 42 -

virtue of any designation of Settling Defendants as EPA's authorized representatives under Section 104(e) of CERCLA. Settling Defendants shall indemnify, save and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Settling Defendants, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree, including, but not limited to, any claims arising from any designation of Settling Defendants as EPA's authorized representatives under Section 104(e) of CERCLA. Further, the Settling Defendants agree to reimburse the United States for all costs it incurs (including, but not limited to, attorneys fees and other expenses of litigation and settlement) arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of Settling Defendants, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree. The United States shall not be held out as a party to any contract entered into by or on behalf of Settling Defendants in carrying out activities pursuant to this Consent Decree. Neither the Settling Defendants nor any such contractor shall be considered an agent of the United States.

b. The United States shall give Settling Defendants notice of any claim for which the United States plans to seek indemnification pursuant to Paragraph 57.a., and shall consult with Settling Defendants prior to settling such claim.

58. Settling Defendants waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between any one or more of

- 43 -

Settling Defendants and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Settling Defendants shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Defendants and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

59. No later than 15 days before commencing any on-site Work, Settling Defendants shall secure, and shall maintain until the first anniversary of EPA's Certification of Completion of the Remedial Action pursuant to Paragraph 50.b. of Section XIV (Certification of Completion) comprehensive general liability insurance with limits of ten million dollars, combined single limit, and automobile liability insurance with limits of ten million dollars, combined single limit, naming the United States as an additional insured. In addition, for the duration of this Consent Decree, Settling Defendants shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Settling Defendants in furtherance of this Consent Decree. Prior to commencement of the Work under this Consent Decree, Settling Defendants shall provide to EPA certificates of such insurance and a copy of each insurance policy. Settling Defendants shall resubmit such certificates and copies of policies each year on the anniversary of the effective date of this Consent Decree. If Settling Defendants demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Settling Defendants need provide only that

portion of the insurance described above which is not maintained by the contractor or subcontractor.

XVIII. FORCE MAJEURE

60. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of the Settling Defendants, of any entity controlled by Settling Defendants, or of Settling Defendants' contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Settling Defendants' best efforts to fulfill the obligation. The requirement that the Settling Defendants exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force majeure event (1) as it is occurring and (2) following the potential force majeure event, such that the delay is minimized to the greatest extent possible. "Force Majeure" does not include financial inability to complete the Work or a failure to attain the Performance Standards.

61. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, the Settling Defendants shall notify orally EPA's Project Coordinator or, in his or her absence, EPA's Alternate Project Coordinator or, in the event both of EPA's designated representatives are unavailable, the Chief of the New York Remediation Branch, Emergency and Remedial Response Division, EPA Region II, within 48 hours of when Settling Defendants first knew that the event might cause a delay. Within 5 days thereafter, Settling Defendants shall provide in writing to EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; the Settling

- 45 -

Defendants' rationale for attributing such delay to a force majeure event if they intend to assert such a claim; and a statement as to whether, in the opinion of the Settling Defendants, such event may cause or contribute to an endangerment to public health, welfare or the environment. The Settling Defendants shall include with any notice all available documentation supporting their claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Settling Defendants from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Settling Defendants shall be deemed to know of any circumstance of which Settling Defendants, any entity controlled by Settling Defendants, or Settling Defendants' contractors knew or should have known.

62. If EPA agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify the Settling Defendants in writing of its decision. If EPA agrees that the delay is attributable to a force majeure event, EPA will notify the Settling Defendants in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

63. If the Settling Defendants elect to invoke the dispute resolution procedures set forth in Section XIX (Dispute Resolution), they shall do so no later than 15 days after receipt of EPA's notice under the preceding Paragraph. In any such proceeding, Settling Defendants shall have

- 46 -

the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Settling Defendants complied with the requirements of Paragraphs 60 and 61, above. If Settling Defendants carry this burden, the delay at issue shall be deemed not to be a violation by Settling Defendants of the affected obligation of this Consent Decree identified to EPA and the Court.

XIX. DISPUTE RESOLUTION

64. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. However, the procedures set forth in this Section shall not apply to actions by the United States to enforce obligations of the Settling Defendants that have not been disputed in accordance with this Section.

65. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is extended by written agreement of the parties to the dispute. The dispute shall be considered to have arisen when one party sends the other parties a written Notice of Dispute.

66. a. In the event that the parties cannot resolve a dispute by informal negotiations under the preceding Paragraph, then the position advanced by EPA shall be considered binding unless, within 14 days after the conclusion of the informal negotiation period, Settling Defendants invoke the formal dispute resolution procedures of this Section by serving on the United States a written Statement of Position on the matter in dispute, including, but not limited to, any factual

data, analysis or opinion supporting that position and any supporting documentation relied upon by the Settling Defendants. The Statement of Position shall specify the Settling Defendants' position as to whether formal dispute resolution should proceed under Paragraph 67 or Paragraph 68.

b. Within 14 days after receipt of Settling Defendants' Statement of Position, EPA will serve on Settling Defendants its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by EPA. EPA's Statement of Position shall include a statement as to whether formal dispute resolution should proceed under Paragraph 67 or 68. Within 14 days after receipt of EPA's Statement of Position, Settling Defendants may submit a Reply.

c. If there is disagreement between EPA and the Settling Defendants as to whether dispute resolution should proceed under Paragraph 67 or 68, the parties to the dispute shall follow the procedures set forth in the paragraph determined by EPA to be applicable. However, if the Settling Defendants ultimately appeal to the Court to resolve the dispute, the Court shall determine which paragraph is applicable in accordance with the standards of applicability set forth in Paragraphs 67 and 68.

67. Formal dispute resolution for disputes pertaining to the selection or adequacy of any response action and all other disputes that are accorded review on the administrative record under applicable principles of administrative law shall be conducted pursuant to the procedures set forth in this Paragraph. For purposes of this Paragraph, the adequacy of any response action includes, without limitation: (1) the adequacy or appropriateness of plans, procedures to implement plans, or any other items requiring approval by EPA under this Consent Decree; and (2) the adequacy of the performance of response actions taken pursuant to this Consent Decree.

Nothing in this Consent Decree shall be construed to allow any dispute by Settling Defendants regarding the validity of the ROD's provisions or the appropriateness of the remedy selected in the ROD.

a. An administrative record of the dispute shall be maintained by EPA and shall contain all statements of position, including supporting documentation, submitted pursuant to this Section. Where appropriate, EPA may allow submission of supplemental statements of position by the parties to the dispute.

b. The Director of the Emergency and Remedial Response Division ("ERRD"), EPA Region II, will issue a final administrative decision resolving the dispute based on the administrative record described in Paragraph 67.a. This decision shall be binding upon the Settling Defendants, subject only to the right to seek judicial review pursuant to Paragraph 67.c. and d.

c. Any administrative decision made by EPA pursuant to Paragraph 67.b. shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by the Settling Defendants with the Court and served on all Parties within 10 days of receipt of EPA's decision. The motion shall include a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of this Consent Decree. The United States may file a response to Settling Defendants' motion.

d. In proceedings on any dispute governed by this Paragraph, Settling Defendants shall have the burden of demonstrating that the decision of the ERRD Director is arbitrary and capricious or otherwise not in accordance with law. Judicial review of EPA's decision shall be on the administrative record compiled pursuant to Paragraph 67.a.

68. Formal dispute resolution for disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law, shall be governed by this Paragraph.

a. Following receipt of Settling Defendants' Statement of Position submitted pursuant to Paragraph 66 the ERRD Director, EPA Region II, will issue a final decision resolving the dispute. The ERRD Director's decision shall be binding on the Settling Defendants unless, within 10 days of receipt of the decision, the Settling Defendants file with the Court and serve on the parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the Consent Decree. The United States may file a response to Settling Defendants' motion.

b. Notwithstanding Paragraph L of Section I (Background) of this Consent Decree, judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

69. The invocation of formal dispute resolution procedures under this Section shall not extend, postpone or affect in any way any obligation of the Settling Defendants under this Consent Decree, not directly in dispute, unless EPA or the Court agrees otherwise. Stipulated penalties with respect to the disputed matter shall continue to accrue but payment shall be stayed pending resolution of the dispute as provided in Paragraph 76. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Consent Decree. In the event that the Settling Defendants do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XX (Stipulated Penalties).

XX. STIPULATED PENALTIES

70. Settling Defendants shall be liable to the United States for stipulated penalties in the amounts set forth in Paragraphs 71 and 72 for failure to comply with the requirements of this Consent Decree specified below, unless excused under Section XVIII (Force Majeure).

"Compliance" by Settling Defendants shall include performance and completion of the activities under this Consent Decree or any work plan or other plan approved under this Consent Decree identified below in accordance with all applicable requirements of law, this Consent Decree, the SOW, and any plans or other documents approved by EPA pursuant to this Consent Decree and within the specified time schedules established by and approved under this Consent Decree.

71. a. The following stipulated penalties shall accrue per violation per day for any noncompliance with the requirements identified in Subparagraph b. of this Paragraph 71:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 2,000	1st through 14th day
\$ 4,000	15th through 30th day
\$ 8,000	31st day and beyond

b. Subparagraph a. of this Paragraph applies to the following requirements:

(1) submission and, if necessary, revision and resubmission of any plan, report, or other deliverable required by Section VI (Performance of the Work by Settling Defendants) or by the SOW or by any plan which is prepared pursuant to Section VI or the SOW and approved by EPA;

(2) any deadline imposed by Section VI (Performance of the Work by Settling Defendants) or by the SOW or by any plan which is prepared pursuant to Section VI or the SOW and approved by EPA;

- 51 -

- (3) obligations imposed by Section XV (Emergency Response);
- (4) obligations imposed by Section IX (Access and Institutional Controls);
- (5) implementation of the Remedial Action in accordance with the ROD, the approved Remedial Design Reports, the SOW, and this Consent Decree;
- (6) modification of the SOW or related work plans pursuant to Paragraph 14, and implementation of the work called for by such modifications in accordance with the modified SOW or work plan;
- (7) implementation of continued operation of the Remedial Action in accordance with the ROD, the approved O&M Plan, the SOW, and this Consent Decree;
- (8) performance of studies and investigations and further response actions pursuant to Section VII (Remedy Review), and
- (9) any other requirement of this Consent Decree that applies to Settling Defendants and that is not identified in Subparagraph 72.b.

72. a. The following stipulated penalties shall accrue per violation per day for any noncompliance with the requirements identified in Subparagraph b. of this Paragraph 72:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 750	1st through 14th day
\$ 1,500	15th through 30th day
\$ 3,000	31st day and beyond

b. Subparagraph a. of this Paragraph applies to the following requirements:

- (1) permitting split or duplicate samples, quality assurance, and other requirements pursuant to Section VIII (Quality Assurance, Sampling, and Data Analysis);
- (2) designation of Settling Defendants' Project Coordinator as required by

Section XII (Project Coordinators);

(3) obligations imposed by Section XIII (Assurance of Ability to Complete Work);

(4) timely submission and, if necessary, revision and resubmission of the name, title and qualifications of the proposed Supervising Contractor pursuant to Section VI (Performance of the Work by Settling Defendants);

(5) certification of completion requirements set forth in Section XIV (Certification of Completion), including both the requirement to make the certification and the requirement that the certification be truthful;

(6) timely notification regarding any delay or anticipated delay, consistent with Paragraph 61;

(7) indemnification and insurance requirements set forth in Section XVII (Indemnification and Insurance);

(8) reporting requirements set forth in Section X (Reporting Requirements);

(9) timely submission of written notification of any off-site shipment of Waste Material from the Site to an out-of-state waste management facility pursuant to Paragraph 16;

(10) submission of documents and other information in accordance with Section XXIV (Access to Information), and

(11) payments required by Section XVI (Reimbursement of Response Costs).

73. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 86 of Section XXI (Covenants Not to Sue by Plaintiff), Settling Defendants shall be

liable for a stipulated penalty in the amount of \$350,000.

74. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section XI (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Settling Defendants of any deficiency; (2) with respect to a decision by the Director of the Emergency and Remedial Response Division, EPA Region II, under Paragraph 67.b. or 68.a. of Section XIX (Dispute Resolution), during the period, if any, beginning on the 21st day after the date that Settling Defendants' reply to EPA's Statement of Position is received until the date that the Director issues a final decision regarding such dispute; or (3) with respect to judicial review by this Court of any dispute under Section XIX (Dispute Resolution), during the period, if any, beginning on the 31st day after the Court's receipt of the final submission regarding the dispute until the date that the Court issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

75. Following EPA's determination that Settling Defendants have failed to comply with a requirement of this Consent Decree, EPA may give Settling Defendants written notification of the same and describe the noncompliance. EPA may send the Settling Defendants a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified the Settling Defendants of a violation.

76. All penalties accruing under this Section shall be due and payable to the United States

within 30 days of the date of EPA's demand for payment of the penalties, unless Settling Defendants invoke the Dispute Resolution procedures under Section XIX (Dispute Resolution). All payments to the United States under this Section shall be made by EFT, consistent with Paragraph 54 above.

77. The payment of penalties shall not alter in any way Settling Defendants' obligation to complete the performance of the Work required under this Consent Decree.

78. Penalties shall continue to accrue as provided in Paragraph 74 during any dispute resolution period, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to this Court, accrued penalties determined to be owing shall be paid to EPA within 15 days of the agreement or the date of EPA's decision or order.

b. If the dispute is appealed to this Court and the United States prevails in whole or in part, Settling Defendants shall pay all accrued penalties determined by the Court to be owed to EPA within 60 days of receipt of the Court's decision or order, except as provided in Subparagraph c. below.

c. If the District Court's decision is appealed by any Party, Settling Defendants shall pay all accrued penalties determined by the District Court to be owing to the United States into an interest-bearing escrow account within 60 days of receipt of the Court's decision or order. Penalties shall be paid into this account as they continue to accrue, at least every 60 days. Within 15 days of receipt of the final appellate court decision, the escrow agent shall pay the balance of the account to EPA or to Settling Defendants to the extent that they prevail.

79. a. If Settling Defendants fail to pay stipulated penalties when due, the United States may institute proceedings to collect the penalties, as well as interest. Settling Defendants shall pay

- 55 -

Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 76.

b. Nothing in this Consent Decree shall be construed as prohibiting, altering, or in any way limiting the ability of the United States to seek any other remedies or sanctions available by virtue of Settling Defendants' violation of this Decree or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA. Provided, however, that the United States shall not seek civil penalties pursuant to Section 122(l) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of the Consent Decree.

80. Notwithstanding any other provision of this Section, the United States may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Consent Decree.

XXI. COVENANTS NOT TO SUE BY PLAINTIFF

81. In consideration of the actions that will be performed and the payments that will be made by the Settling Defendants under the terms of the Consent Decree, and except as specifically provided in Paragraphs 82, 83, and 85 of this Section, the United States covenants not to sue or to take administrative action against Settling Defendants pursuant to Sections 106 and 107(a) of CERCLA relating to the Site. Except with respect to future liability, these covenants not to sue shall take effect upon the effective date of this Consent Decree. With respect to future liability, these covenants not to sue shall take effect upon Certification of Completion of Remedial Action by EPA pursuant to Paragraph 50.b. of Section XIV (Certification of Completion). These covenants not to sue are conditioned upon the satisfactory performance by Settling Defendants of their obligations under this Consent Decree. These covenants not to sue extend only to the

Settling Defendants and do not extend to any other person.

82. United States' Pre-certification reservations. Notwithstanding any other provision of this Consent Decree, the United States reserves, and this Consent Decree is without prejudice to, the right to institute proceedings in this action or in a new action, or to issue an administrative order seeking to compel Settling Defendants (1) to perform further response actions relating to the Site or (2) to reimburse the United States for additional costs of response if, prior to Certification of Completion of the Remedial Action:

- (i) conditions at the Site, previously unknown to EPA, are discovered, or
- (ii) information, previously unknown to EPA, is received, in whole or in part,

and these previously unknown conditions or information together with any other relevant information indicates that the Remedial Action is not protective of human health or the environment.

83. United States' Post-certification reservations. Notwithstanding any other provision of this Consent Decree, the United States reserves, and this Consent Decree is without prejudice to, the right to institute proceedings in this action or in a new action, or to issue an administrative order seeking to compel Settling Defendants (1) to perform further response actions relating to the Site or (2) to reimburse the United States for additional costs of response if, subsequent to Certification of Completion of the Remedial Action:

- (i) conditions at the Site, previously unknown to EPA, are discovered, or
- (ii) information, previously unknown to EPA, is received,
in whole or in part,

and these previously unknown conditions or this information together with other relevant information indicate that the Remedial Action is not protective of human health or the

environment.

84. For purposes of Paragraph 82, the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date the ROD was signed and set forth in the Record of Decision for the Site and the administrative record supporting the Record of Decision. For purposes of Paragraph 83, the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date of Certification of Completion of the Remedial Action and set forth in the Record of Decision, the administrative record supporting the Record of Decision, the post-ROD administrative record, or in any information received by EPA pursuant to the requirements of this Consent Decree prior to Certification of Completion of the Remedial Action.

85. General reservations of rights. The covenants not to sue set forth above do not pertain to any matters other than those expressly specified in Paragraph 81. The United States reserves, and this Consent Decree is without prejudice to, all rights against Settling Defendants with respect to all other matters, including but not limited to, the following:

- a. claims based on a failure by Settling Defendants to meet a requirement of this Consent Decree;
- b. liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Site;
- c. liability for future disposal of Waste Material at the Site, other than as provided in the ROD, the Work, or otherwise ordered by EPA;
- d. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- e. criminal liability;

- 58 -

f. liability for violations of federal or state law which occur during or after implementation of the Remedial Action; and

g. liability, prior to Certification of Completion of the Remedial Action, for additional response actions that EPA determines are necessary to achieve Performance Standards, but that cannot be required pursuant to Paragraph 14 (Modification of the SOW or Related Work Plans).

86. Work Takeover In the event EPA determines that Settling Defendants have ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portions of the Work as EPA determines necessary. Settling Defendants may invoke the procedures set forth in Section XIX (Dispute Resolution), Paragraph 67, to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by the United States in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Settling Defendants shall pay pursuant to Section XVI (Reimbursement of Response Costs).

87. Notwithstanding any other provision of this Consent Decree, the United States retains all authority and reserves all rights to take any and all response actions authorized by law.

XXII. COVENANTS BY SETTLING DEFENDANTS

88. Covenant Not to Sue. Subject to the reservations in Paragraph 89, Settling Defendants hereby covenant not to sue and agree not to assert any claims or causes of action against the United States with respect to the Site or this Consent Decree, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance

- 59 -

Superfund (established pursuant to the Internal Revenue Code, 26 U.S.C. § 9507) through CERCLA Sections 106(b)(2), 107, 111, 112, 113 or any other provision of law;

b. any claims against the United States, including any department, agency or instrumentality of the United States under CERCLA Sections 107 or 113 related to the Site; or

c. any claims arising out of response activities at the Site, including claims based on EPA's selection of response actions, oversight of response activities or approval of plans for such activities.

89. The Settling Defendants reserve, and this Consent Decree is without prejudice to, claims against the United States, subject to the provisions of Chapter 171 of Title 28 of the United States Code, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States while acting within the scope of his office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, any such claim shall not include a claim for any damages caused, in whole or in part, by the act or omission of any person, including any contractor, who is not a federal employee as that term is defined in 28 U.S.C. § 2671; nor shall any such claim include a claim based on EPA's selection of response actions, or the oversight or approval of the Settling Defendants' plans or activities. The foregoing applies only to claims which are brought pursuant to any statute other than CERCLA and for which the waiver of sovereign immunity is found in a statute other than CERCLA.

90. Nothing in this Consent Decree shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

91. Settling Defendants agree not to assert any claims and to waive all claims or causes of

- 60 -

action that they may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Settling Defendants with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if the materials contributed by such person to the Site containing hazardous substances did not exceed the greater of (i) 0.002% of the total volume of waste at the Site, or (ii) twenty-five (25) drums containing only residues of hazardous substance materials. This waiver shall not apply to any claim or cause of action against any person meeting the above criteria if EPA has determined that the materials contributed to the Site by such person contributed or could contribute significantly to the costs of response at the Site.

92. Settling Defendants agree not to assert any claims and to waive all claims or causes of action that they may have for all matters relating to the Site, including for contribution, against any person that has entered into a final CERCLA § 122(g) *de minimis* settlement with EPA with respect to the Site as of the effective date of this Consent Decree.

XXIII. EFFECT OF SETTLEMENT; CONTRIBUTION PROTECTION

93. Except as provided in Paragraph 91 (Waiver of Claims Against *De Micromis* Parties) and Paragraph 92 (Waiver of Claims Against *De Minimis* Parties), nothing in this Consent Decree shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Consent Decree. The preceding sentence shall not be construed to waive or nullify any rights that any person not a signatory to this Consent Decree may have under applicable law. Except as provided in Paragraph 91 (Waiver of Claims Against *De Micromis* Parties) and Paragraph 92 (Waiver of Claims Against *De Minimis* Parties), each of the Parties expressly reserves any and all rights (including, but not limited to, any right to contribution), defenses,

- 61 -

claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto.

94. The Parties agree, and by entering this Consent Decree this Court finds, that the Settling Defendants are entitled, as of the effective date of this Consent Decree, to protection from contribution actions or claims as provided by CERCLA Section 113(f)(2), 42 U.S.C.

§ 9613(f)(2), for matters addressed in this Consent Decree. For purposes of the preceding sentence, the "matters addressed" in this Consent Decree are all response actions taken or to be taken and all response costs incurred or to be incurred by the United States or any other person with respect to the Site. The "matters addressed" in this settlement do not include those response costs or response actions as to which the United States has reserved its rights under this Consent Decree (except for claims for failure to comply with this Consent Decree), in the event that the United States asserts rights against Settling Defendants coming within the scope of such reservations.

95. The Settling Defendants agree that with respect to any suit or claim for contribution brought by them for matters related to this Consent Decree they will notify the United States in writing no later than 60 days prior to the initiation of such suit or claim.

96. The Settling Defendants also agree that with respect to any suit or claim for contribution brought against them for matters related to this Consent Decree they will notify in writing the United States within 10 days of service of the complaint on them. In addition, Settling Defendants shall notify the United States within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial.

97. In any subsequent administrative or judicial proceeding initiated by the United States for

- 62 -

injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, Settling Defendants shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenants not to sue set forth in Section XXI (Covenants Not to Sue by Plaintiff).

XXIV. ACCESS TO INFORMATION

98. Settling Defendants shall provide to EPA, upon request, copies of all documents and information within their possession or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Consent Decree, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Settling Defendants shall also make available to EPA, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

99. a. Settling Defendants may assert business confidentiality claims covering part or all of the documents or information submitted to Plaintiff under this Consent Decree to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when they are submitted to EPA, or if EPA has notified Settling Defendants that the documents or information are not confidential under the standards of

- 63 -

Section 104(e)(7) of CERCLA, the public may be given access to such documents or information without further notice to Settling Defendants.

b. The Settling Defendants may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Settling Defendants assert such a privilege in lieu of providing documents, they shall provide the Plaintiff with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document, record, or information; and (6) the privilege asserted by Settling Defendants. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

100. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site.

XXV. RETENTION OF RECORDS

101. Until 8 years after the Settling Defendants' receipt of EPA's notification pursuant to Paragraph 51.b. of Section XIV (Certification of Completion of the Work), each Settling Defendant shall preserve and retain all records and documents now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or liability of any person for response actions conducted and to be conducted at the Site, regardless of any corporate retention policy to the contrary. Until 10 years after the Settling

- 64 -

Defendants' receipt of EPA's notification pursuant to Paragraph 51.b. of Section XIV (Certification of Completion), Settling Defendants shall also instruct their contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to the performance of the Work.

102. At the conclusion of this document retention period, Settling Defendants shall notify the United States at least 90 days prior to the destruction of any such records or documents, and, upon request by the United States, Settling Defendants shall deliver any such records or documents to EPA. The Settling Defendants may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Settling Defendants assert such a privilege, they shall provide the Plaintiff with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Settling Defendants. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

103. Each Settling Defendant hereby certifies individually that, to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability regarding the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Section 104(e) and 122(e) of CERCLA, 42 U.S.C.

- 65 -

§§9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. §6927.

XXVI. NOTICES AND SUBMISSIONS

104. Whenever, under the terms of this Consent Decree, written notice is required to be given or a report or other document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. All notices and submissions shall be considered effective upon receipt, unless otherwise provided herein. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of the Consent Decree with respect to the United States, EPA, and the Settling Defendants, respectively.

As to the United States or EPA:

Seven (7) copies of all work plans, design documents, and technical reports and one (1) copy of all required written communications shall be sent to:

Chief, Central New York Remediation Section
New York Remediation Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency, Region II
290 Broadway, 20th Floor
New York, NY 10007-1866
Attention: Young Chang, Superfund Site Remedial Project Manager

One copy of all required written communications other than work plans, design documents and technical reports shall also be sent to each of the following individuals:

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007-1866
Attention: Carl Garvey, Superfund Site Attorney

Chief, Environmental Enforcement Section
Environment and Natural Resources Division

- 66 -

U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044
Re: DOJ # 90-11-3-1514/1

As to the State:

When submitting to EPA any written communication required hereunder, Settling Defendants shall simultaneously submit one (1) copy of that communication (unless the given document is a plan or report, in which case six (6) copies shall be submitted) to:

Director, Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
Room 222
50 Wolf Road
Albany, NY 12233-7010
Attention: Catherine Klatt

As to the Settling Defendants:

Name and address of Settling Defendants' Project Coordinator

XXVII. EFFECTIVE DATE

105. The effective date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court, except as otherwise provided herein.

XXVIII. RETENTION OF JURISDICTION

106. This Court retains jurisdiction over both the subject matter of this Consent Decree and the Settling Defendants for the duration of the performance of the terms and provisions of this Consent Decree for the purpose of enabling any of the Parties to apply to the Court at any time for such further order, direction, and relief as may be necessary or appropriate for the construction or modification of this Consent Decree, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XIX (Dispute Resolution) hereof.

- 67 -

XXIX. APPENDICES

107. The following appendices are attached to and incorporated into this Consent Decree:

"Appendix A" is the ROD.

"Appendix B" is the SOW.

"Appendix C" is the description and/or map of the Site.

"Appendix D" is the complete list of the Settling Defendants.

"Appendix E" is the complete list of the Owner Settling Defendants.

"Appendix F" is the draft easement to secure access and institutional controls.

XXX. COMMUNITY RELATIONS

108. Settling Defendants shall propose to EPA their participation in the community relations plan to be developed by EPA. EPA will determine the appropriate role for the Settling Defendants under the Plan. Settling Defendants shall also cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Settling Defendants shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

XXXI. MODIFICATION

109. Schedules specified in this Consent Decree for completion of the Work may be modified by agreement of EPA and the Settling Defendants. All such modifications shall be made in writing.

110. Except as provided in Paragraph 14 ("Modification of the SOW or Related Work Plans"), no material modifications shall be made to the SOW without written notification to and written approval of the United States, Settling Defendants, and the Court. Prior to providing its approval to any modification, the United States will provide the State with a reasonable opportunity to

review and comment on the proposed modification. Modifications to the SOW that do not materially alter that document may be made by written agreement between EPA (after providing the State with a reasonable opportunity to review and comment on the proposed modification) and the Settling Defendants.

111. Nothing in this Decree shall be deemed to alter the Court's power to enforce, supervise or approve modifications to this Consent Decree.

XXXII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

112. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper, or inadequate. Settling Defendants consent to the entry of this Consent Decree without further notice.

113. If for any reason the Court should decline to approve this Consent Decree in the form presented, this agreement is voidable at the sole discretion of any Party and the terms of the agreement may not be used as evidence in any litigation between the Parties.

XXXIII. SIGNATORIES/SERVICE

114. Each undersigned representative of a Settling Defendant to this Consent Decree and the Assistant Attorney General for Environment and Natural Resources of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind such Party to this document.

115. Each Settling Defendant hereby agrees not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree unless the United States has notified

- 69 -

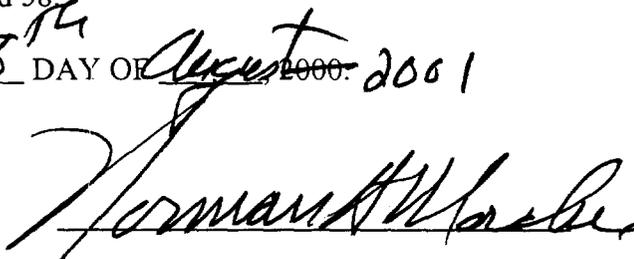
the Settling Defendants in writing that it no longer supports entry of the Consent Decree.

116. Each Settling Defendant shall identify, on the attached signature page, the name, address and telephone number of an agent who is authorized to accept service of process by mail on behalf of that Party with respect to all matters arising under or relating to this Consent Decree. Settling Defendants hereby agree to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons.

XXXIV. FINAL JUDGMENT

117. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between and among the United States and the Settling Defendants. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 8TH DAY OF August ~~2000~~ 2001

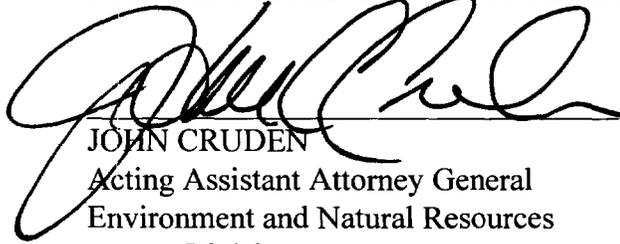

United States District Judge

- 73 -

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR THE UNITED STATES OF AMERICA

Date: 4-13-01



JOHN CRUDEN
Acting Assistant Attorney General
Environment and Natural Resources
Division
U.S. Department of Justice
Washington, D.C. 20530

Date: April 6, 2001



ELISE FELDMAN
Attorney
Environmental Enforcement Section
Environment and Natural Resources
Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044

- 75 -

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR THE UNITED STATES OF AMERICA
(CONTINUED)

DANIEL J. FRENCH
United States Attorney for the
Northern District of New York

Date: 12 April 01

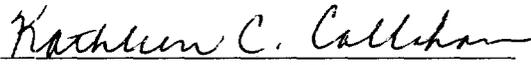
By: Barbara D. Cottrell
Barbara D. Cottrell
Assistant United States Attorney
Northern District of New York
231 Foley U.S. Courthouse
445 Broadway
Albany, NY 12207

- 72 -

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR THE UNITED STATES OF AMERICA
(CONTINUED)

Date: 4/10/01


WILLIAM J. MUSZYNSKI
 Acting Regional Administrator, Region II
U.S. Environmental Protection Agency
290 Broadway
New York, NY 10007-1866

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: AGWAY, INC. , on behalf of itself and its subsidiary Agway Energy Products LLC, formerly known as Agway Petroleum Corporation

Date: 9/25/00

Nels G. Magnuson
[Name -- Please Type or Print]
Nels G. Magnuson

Associate General Counsel
[Title -- Please Type or Print]

P.O. Box 4933, Syracuse, NY 13221-4933
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Nels G. Magnuson
[Please Type or Print]

Title: Associate General Counsel
[Please Type or Print]

Address: Agway, Inc.
P.O. Box 4933
Syracuse, NY 13221-4933
[Please Type or Print]

Tel. Number: (315) 449-6412
[Please Type or Print]

THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: AMPHENOL INTERCONNECT PRODUCTS CORP. (AIPC)
AMPHENOL CORPORATION, (Owner of AIPC's Shares)
(BENDIX CORP. predecessor of certain connector operations of
Amphenol Corporation)

Date: 9/25/2000

Edward C. Wetmore

Edward C. Wetmore
Secretary

for Amphenol Corporation and
Amphenol Interconnect Products Corp.
358 Hall Avenue, Wallingford, Connecticut 06492

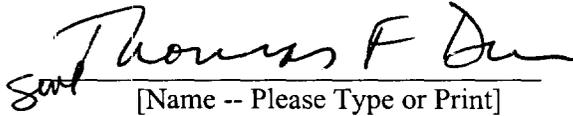
Agent Authorized to Accept Service on Behalf of Amphenol Corporation and AIPC:

Name:	CT Corporation Systems
Address:	One Commercial Plaza Hartford, Connecticut 06103
Telephone Number:	(860) 724-9044

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: ASHLAND INC.

Date: 9/26/00


[Name -- Please Type or Print]

Thomas F. Davis

Associate General Counsel

[Title -- Please Type or Print]

5200 Blazer Parkway
Dublin, Ohio 43017

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

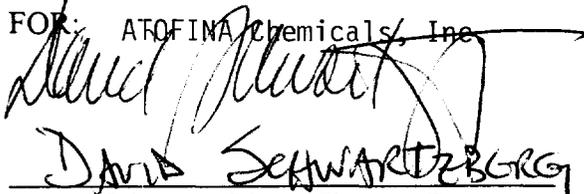
Name: Robin Lampkin-Isabel
[Please Type or Print]

Title: Senior Counsel
[Please Type or Print]

Address: 5200 Blazer Parkway
Dublin, Ohio 43017
[Please Type or Print]

Tel. Number: 614-790-3019
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

10/10/00
Date: _____
FOR: ATOFINA Chemicals, Inc.


[Name -- Please Type or Print]

Vice President Health, Environment and Safety
[Title -- Please Type or Print]

2000 Market Street, Philadelphia, PA 19103

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: David B. Schwartzberg

[Please Type or Print]

Title: Vice President Health, Environment and Safety

[Please Type or Print]

Address: ATOFINA Chemicals, Inc.

2000 Market Street

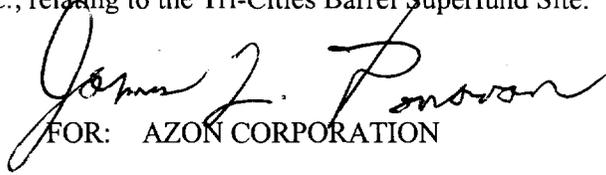
Philadelphia, PA 19103

[Please Type or Print]

Tel. Number: 215-419-7000

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.


FOR: AZON CORPORATION

Date: 9/27/00

James L. Donovan
[Name -- Please Type or Print]

Treasurer
[Title -- Please Type or Print]

P.O. Box 290
Johnson City, N.Y. 13790
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: BASF CORPORATION, on behalf of itself and Inmont Corporation

Date: 9/27/00



Harry M. Baumgartner

[Name -- Please Type or Print]

Counsel

[Title -- Please Type or Print]

Office of the General Counsel
BASF Corporation, 3000 Continental Dr. No.

~~Mt. Olive, NJ 07828-1234~~
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Office of the General Counsel
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: BASF Corporation
3000 Continental Drive - North
Mt. Olive, NJ 07828-1234
[Please Type or Print]

Tel. Number: 973-426-3200
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: BMC INDUSTRIES, INC.

Date:

Sept. 22, 2000


Jon A. Dobson

[Name -- Please Type or Print]

V.P. of Human Resources, General Counsel and Secretary

[Title -- Please Type or Print]

BMC Industries, Inc.
One Meridian Crossings, Suite 850

~~Minneapolis, MN 55423~~
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

Thomas M. Gandolfo

[Please Type or Print]

Title:

Attorneys for Defendant BMC

[Please Type or Print]

Address:

c/o Oppenheimer Wolff & Donnelly LLP

666 Third Avenue, Suite 1900

New York, NY 10017

[Please Type or Print]

Tel. Number:

(212) 884-4500

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: Borden, Inc.

By: William H. Carter

Date: 9/22/00

William H. Carter

[Name -- Please Type or Print]

Executive Vice President and Chief Financial Officer

[Title -- Please Type or Print]

180 E. Broad Street, Columbus, OH 43215

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Colleen K. Nissl
[Please Type or Print]

Title: V.P. and Assistant General Counsel
[Please Type or Print]

Address: Borden, Inc.
180 E. Broad Street
Columbus, OH 43215
[Please Type or Print]

Tel. Number: (614) 225-4791
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: *Bristol-Myers Squibb*

Date: 9/25/00



[Name -- Please Type or Print]

William L. McGarry

Vice President and Senior Counsel

[Title -- Please Type or Print]

Bristol-Myers Squibb Company
6000 Thompson Road

E. Syracuse, New York 13057-5050

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Reed W. Neuman

[Please Type or Print]

Title: Counsel

[Please Type or Print]

Address: Howrey Simon Arnold & White

1299 Pennsylvania Avenue, NW

Washington, DC 20004

[Please Type or Print]

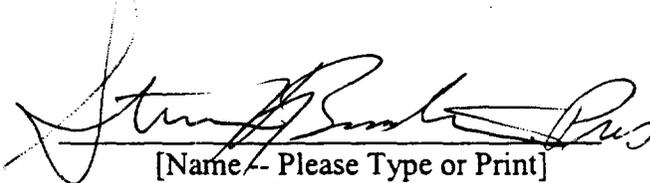
Tel. Number: 202/383-6636

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: BRONSTEIN CONTAINER COMPANY, INC.

Date: 11/15/00


[Name -- Please Type or Print]
Steven Bronstein

President

[Title -- Please Type or Print]

Rock Cut Road & Cor Rams Gulch Road
Syracuse, New York 13210

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Kevin C. Murphy, Esq.
[Please Type or Print]

Title: Attorney at Law
[Please Type or Print]

Address: Devorsetz Stinziano Gilberti Heintz & Smith, P.C.
555 East Genesee Street
Syracuse, New York 13202
[Please Type or Print]

Tel. Number: (315) 442-0178
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: CARRIER CORPORATION

Robert E. Gall

Date: September 28, 2000

Robert E. Gall:

[Name -- Please Type or Print]

Vice President and General Counsel

[Title -- Please Type or Print]

One Carrier Place, Farmington, Ct. 06034

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

[Please Type or Print]

Title:

[Please Type or Print]

Address:

[Please Type or Print]

Tel. Number:

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: CHAMPION INTERNATIONAL CORPORATION



Date: September 25, 2000

Eric G. Johannessen

[Name -- Please Type or Print]

Senior Counsel - Environment, Health & Safety

[Title -- Please Type or Print]

6400 Poplar Avenue
Memphis, Tennessee 38197

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Eric G. Johannessen

[Please Type or Print]

Title: Senior Counsel - Environment, Health & Safety

[Please Type or Print]

Address: 6400 Poplar Avenue

Memphis, Tennessee 38197

[Please Type or Print]

Tel. Number: 901-763-6156

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: CHEMCOAT, INC.

Date: September 25, 2000

Dorothy O'B. Schopfer
[Name -- Please Type or Print]

Compliance Mgr / Cap Sect
[Title -- Please Type or Print]

2740 Canfield Lane
PO Box 188
MONTGOMERY PA 17754-0188
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

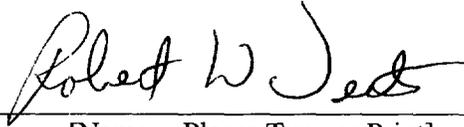
[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: COOPER INDUSTRIES, INC.

Date: 9-27-00



[Name -- Please Type or Print]

Robert W. Teets

Vice President, Environmental Affairs & Risk Management

[Title -- Please Type or Print]

P.O. Box 4446, Houston, TX 77210-4446

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: **J. Ronald Sandberg**
[Please Type or Print]

Title: **Director, Environmental Legal Affairs**
[Please Type or Print]

Address: **P.O. Box 4446, Houston, TX 77210-4446**

[Please Type or Print]

Tel. Number: **(713) 209-8725**
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: CRASH'S AUTO PARTS AND SALES, INC.
D/B/A C.A.P. SURPLUS & METALS

Date: 9/ 100

Joseph T. Basl

[Name -- Please Type or Print]

Vice Pres.

[Title -- Please Type or Print]

132 Arcadia Ave Irawikort, NY .

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

Richard J. Brickwedde, Esq.

[Please Type or Print]

Title:

Green & Seifter, Attys, PLLC

[Please Type or Print]

Address:

One Lincoln Center

Suite 900

Syracuse, New York 13202

[Please Type or Print]

Tel. Number:

(315) 422-1391

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR:

Date: 10/2/00

Kathleen M. Hennessey
Daimler Chrysler Corporation
[Name -- Please Type or Print]

Kathleen M. Hennessey
Senior Staff Counsel
[Title -- Please Type or Print]

1000 Chrysler Drive, CIMS 485-14-18
[Address -- Please Type or Print]
Auburn Hills, MI 48326

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Kathleen M. Hennessey
[Please Type or Print]

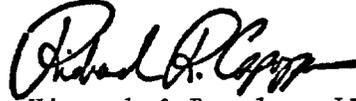
Title: Senior Staff Counsel
[Please Type or Print]

Address: 1000 Chrysler Drive
CIMS 485-14-18
Auburn Hills, MI 48326
[Please Type or Print]

Tel. Number: 248-512-4116
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: DRAKE OIL COMPANY, INC.



Hiscock & Barclay, LLP

[Name -- Please Type or Print]

Date: October 4, 2000

Attorney for Drake Oil Company, Inc.

[Title -- Please Type or Print]

221 South Warren Street, Financial Plaza
Syracuse, New York 13221

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Hiscock & Barclay, LLP
[Please Type or Print]

Title: Attorney for Drake Oil Company, Inc.
[Please Type or Print]

Address: Attn: Richard R. Capozza, Esq.
221 South Warren Street, Financial Plaza
Syracuse, New York 13221
[Please Type or Print]

Tel. Number: (315) 425-2710
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: E.I. DU PONT DE NEMOURS & COMPANY



Date: 9/21/00

[Name -- Please Type or Print]

Ross E. Austin - Corporate Counsel

[Title -- Please Type or Print]

DuPont Legal, D-7084 - 1007 Market Sts. Wilm., DE

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Barbara U. Gravely
[Please Type or Print]

Title: Corporate Legal Assistant
[Please Type or Print]

Address: DuPont Legal, D-7083
1007 Market Streets
Wilmington, DE 19898
[Please Type or Print]

Tel. Number: 302 - 774-4201
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.


FOR: EJ FOOTWEAR CORP.

Date: 9/29/00

John Grzybowski
[Name -- Please Type or Print]

CFO
[Title -- Please Type or Print]

377 Riverside Drive, Suite 200
Franklin, TN 37064
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: EMERSON POWER TRANSMISSION CORP.



Date: September 28, 2000

Frederick S. Phillips

[Name -- Please Type or Print]

Attorney at Law

[Title -- Please Type or Print]

ShawPittman

1255 23rd Street, N.W. 8th Floor

Washington, DC 20037

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

Frederick S. Phillips

[Please Type or Print]

Title:

Attorney at Law

[Please Type or Print]

Address:

ShawPittman

1255 23rd Street, NW, 8th Floor

Washington, DC 20037

[Please Type or Print]

Tel. Number:

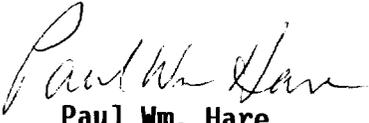
(202) 454-7000

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: GENERAL ELECTRIC COMPANY

Date: 9/29/00


Paul Wm. Hare
[Name -- Please Type or Print] 

Manager, Northeast/Midwest Region, Environmental Remediation
Corporate Environmental Programs
[Title -- Please Type or Print]

General Electric Company
320 Great Oaks Blvd., Suite 323, Albany, NY 12203
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Bonnie Harrington, Esq.
[Please Type or Print]

Title: Counsel, Remediation, Northeast/Midwest Region
[Please Type or Print]

Address: General Electric Company
Corporate Environmental Programs

320 Great Oaks Blvd., Suite 323
Albany, NY 12203
[Please Type or Print]

Tel. Number: (518) 862-2714
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: GENERAL MOTORS CORPORATION

Date: 9/25/00

Don A. Schiemann

[Name -- Please Type or Print]

Don A. Schiemann

Attorney

[Title -- Please Type or Print]

MC 482-C24-D24

300 Renaissance Center

P.O. Box 300

[Address -- Please Type or Print]

Detroit, MI 48265-3000

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Theresa L. Cerwin

[Please Type or Print]

Title: Senior Staff Assistant

[Please Type or Print]

Address: General Motors Corporation

Legal Staff

3031 W. Grand Blvd.

Detroit, MI 48202

[Please Type or Print]

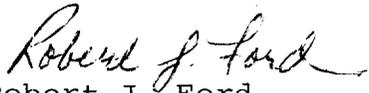
Tel. Number: (313) 974-1822

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

HONEYWELL INTERNATIONAL INC. (f/k/a
FOR: ALLIEDSIGNAL INC.) *

Date: 9/26/00


Robert J. Ford

[Name -- Please Type or Print]

Director - Remediation & Evaluation Services

[Title -- Please Type or Print]

101 Columbia Road
Morristown, NJ 07962

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Heleen Schiller
[Please Type or Print]

Title: Legal Research Assistant
[Please Type or Print]

Address: Honeywell International Inc.
101 Columbia Road
Morristown, NJ 07962
[Please Type or Print]

Tel. Number: 973-455-3104
[Please Type or Print]

* Successor to the Bendix Corporation

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.



FOR: International Business Machines Corporation

Date: 09/25/00

David J. Cartenuto
[Name -- Please Type or Print]

Associate General Counsel - Environmental Affairs
[Title -- Please Type or Print]

Route 100, P.O. Box 100
Somers, NY 10589
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: Corporation Trust
111 Eighth Avenue
New York, NY 10011
[Please Type or Print]

Tel. Number: (212) 894-8800
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: INTERNATIONAL PAPER COMPANY/ANITEC
IMAGE DIVISION



Date: September 25, 2000

Eric G. Johannessen

[Name -- Please Type or Print]

Senior Counsel - Environment, Health & Safety

[Title -- Please Type or Print]

6400 Poplar Avenue
Memphis, Tennessee 38197

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Eric G. Johannessen

[Please Type or Print]

Title: Senior Counsel - Environment, Health & Safety

[Please Type or Print]

6400 Poplar Avenue
Memphis, Tennessee 38197

Address: _____

[Please Type or Print]

Tel. Number: 901-763-6156

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: JONES CHEMICALS, INC.

Date: September 25, 2000

Timothy J. Gaffney
[Name -- Please Type or Print]



Senior Vice President
[Title -- Please Type or Print]

100 Sunny Sol Blvd., Caledonia, NY 14423
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Timothy J. Gaffney
[Please Type or Print]

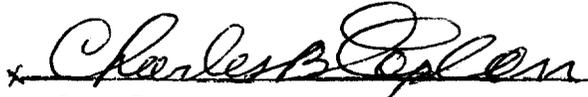
Title: Senior Vice President
[Please Type or Print]

Address: JCI Jones Chemicals, Inc.
100 Sunny Sol Blvd.
Caledonia, NY 14423
[Please Type or Print]

Tel. Number: (716) 538-2314
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: KAPLAN CONTAINER CORPORATION



Date: September 25, 2000

Charles B. Kaplan
[Name -- Please Type or Print]

President
[Title -- Please Type or Print]

130 Despatch Drive
[Address -- Please Type or Print]
East Rochester, NY NY 14445-0107

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Charles B. Kaplan
[Please Type or Print]

Title: President
[Please Type or Print]

Address: Kaplan Container Corp.
130 Despatch Drive
East Rochester, NY 14445-0107
[Please Type or Print]

Tel. Number: (716) 385-1760
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: MALCHIAK SALVAGE COMPANY, INC.

Date: 10/3/00

Willson Malchak (Will Malchak)
[Name -- Please Type or Print]

General Manager
[Title -- Please Type or Print]

360 Castle Creek Rd. Binghamton, NY 13901
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: MASONITE CORPORATION



Date: September 25, 2000

Eric G. Johannessen

[Name -- Please Type or Print]

Senior Counsel - Environment, Health & Safety

[Title -- Please Type or Print]

6400 Poplar Avenue
Memphis, Tennessee 38197

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Eric G. Johannessen
[Please Type or Print]

Title: Senior Counsel - Environment, Health & Safety
[Please Type or Print]

Address: 6400 Poplar Avenue
Memphis, Tennessee 38197
[Please Type or Print]

Tel. Number: 901-763-6156
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: NEWTON FALLS, INC.

Date: Sept. 27, 2000

Edwin F. Bush, II

[Name -- Please Type or Print]

Edwin F. Bush, II

Secretary

[Title -- Please Type or Print]

330 West college Ave., 3d flr

Appleton, WI 54911

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

Edwin F. Bush, II

[Please Type or Print]

Title:

Secretary

[Please Type or Print]

Address:

330 W. college Ave., 3d flr

Appleton, WI 54911

[Please Type or Print]

Tel. Number:

920-993-0760

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: POTTER PAINT CO., INC.

PAIBR

Date: 9/22/00

Peter A. Potter

[Name -- Please Type or Print]

President

[Title -- Please Type or Print]

P.O. Box #150 - 21 Crawford St.

[Address -- Please Type or Print]

Cortland, NY 13045

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

[Please Type or Print]

Title:

[Please Type or Print]

Address:

[Please Type or Print]

Tel. Number:

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: PPG INDUSTRIES, INC.

Date: 28 Sep 2000



Michael A. Ludlow
[Name -- Please Type or Print]

Vice President, Industrial Coatings
[Title -- Please Type or Print]

One PPG Place
Pittsburgh, PA 15272 USA
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: ROME CABLE CORPORATION



David E. Harvey

Date: 9/28/00

[Name -- Please Type or Print]

Chairman & Chief Executive Officer

[Title -- Please Type or Print]

421 Ridge Street
Rome, NY 13440

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name:

[Please Type or Print]

Title:

[Please Type or Print]

Address:

[Please Type or Print]

Tel. Number:

[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

R. Carr

FOR: SCHENECTADY INTERNATIONAL, INC.

Date: September 25, 2000

R. Carr

[Name -- Please Type or Print]

President and Chief Operating Officer

[Title -- Please Type or Print]

1302 Congress & Tenth Avenue
Schenectady, NY 12303

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Ms. Judy Swanker
[Please Type or Print]

Title: Executive Assistant
[Please Type or Print]

Address: 1302 Congress St & Tenth Avenue
Schenectady, New York 12303
[Please Type or Print]

Tel. Number: 518-347-4203
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

Charles J. Huffer

FOR: SONOCO FLEXIBLE PACKAGING, INC.
D/B/A THE MORRILL PRESS

Date: 9/22/2000

CHARLES J. HUFFER
[Name -- Please Type or Print]

VP SECRETARY TREASURER
[Title -- Please Type or Print]

SONOCO PRODUCTS COMPANY
1 NORTH SECOND ST., HARTSVILLE, SC 29550
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: CHARLES J. HUFFER
[Please Type or Print]

Title: VP SECRETARY TREASURER
[Please Type or Print]

Address: SONOCO PRODUCTS COMPANY
1 NORTH SECOND STREET
HARTSVILLE, SC 29550
[Please Type or Print]

Tel. Number: 843/383-7000
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: Tri-Cities Barrel

Date: October 4, 2000

Francis G. Warner
[Name -- Please Type or Print]

[Title -- Please Type or Print]

970 State Route 369
Chenango Forks, NY 13746

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: TRI CITIES BARREL

Date: Oct 3, 2000 Gary F. Warner
[Name -- Please Type or Print]

Owner / manager
[Title -- Please Type or Print]

RR# Bx8, Wynnewood OK.
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: Underwood Inc.

Date: September 21, 2000 Sign: Robert M. Pichette
 [Name -- Please Type or Print]
 Name: ROBERT M. PICHETTE
VICE-PRESIDENT
 [Title -- Please Type or Print]
P.O. BOX 269
WAVERLY, N.Y. 14892-0269
 [Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: Douglas H. Zamelis, Esq
 [Please Type or Print]
 Title: Attorney
 [Please Type or Print]
 Address: 1500 MONY Tower I
PO Box 4976
Syracuse, NY 13221-4976
 [Please Type or Print]
 Tel. Number: (315) 471-3151
 [Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: WAINWRIGHT OIL CO., INC.

Date: 9/23/00

EARL V WAINWRIGHT JR
[Name -- Please Type or Print]

USE TO BE PRESIDENT
[Title -- Please Type or Print]

108 Homer Ave Cortland N.Y 13045
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: Frances G. Warner

Date: October 4, 2000

Frances G. Warner
[Name -- Please Type or Print]

[Title -- Please Type or Print]
970 State Route 369
Chenango Forks, NY 13746

[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site.

FOR: GARY F. WARNER

Date: Oct 3, 2000

Gary F. Warner
[Name -- Please Type or Print]

Tri-Cities Barrel Co. Inc
OWNER / manager
[Title -- Please Type or Print]

RR # 2, Box 8, Wynnewood OK.
[Address -- Please Type or Print]

Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name: _____
[Please Type or Print]

Title: _____
[Please Type or Print]

Address: _____

[Please Type or Print]

Tel. Number: _____
[Please Type or Print]

Exhibit A

Appendix A
To Consent Decree
in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel
Superfund Site

RECORD OF DECISION

Tri-Cities Barrel Superfund Site
Town of Fenton, Broome County, New York

United States Environmental Protection Agency
Region II
New York, New York
March 2000

DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Tri-Cities Barrel Superfund Site
Town of Fenton, Broome County, New York

Superfund Site Identification Number: NYD980509285
Operable Unit 1¹

STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) documents the U.S. Environmental Protection Agency's selection of a remedy for the Tri-Cities Barrel Superfund Site (the "Site"), which is chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. §9601 *et seq.* and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300. This decision document explains the factual and legal basis for selecting the remedy for the Site. The attached index (see Appendix III) identifies the items that comprise the Administrative Record upon which the selection of the remedy is based.

The New York State Department of Environmental Conservation was consulted on the planned remedy in accordance with CERCLA Section 121(f), 42 U.S.C. §9621(f), and it concurs with the selected remedy (see Appendix IV).

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The major components of the selected remedy include the following:

¹ This response action applies a comprehensive approach; therefore, only one operable unit is required to remediate the site.

- Excavation and/or dredging of approximately 50,000 cubic yards of unsaturated (above the water table) soil and sediment exceeding soil/sediment cleanup objectives²;
- Backfilling of the excavated areas with clean fill and revegetating such areas, as appropriate. All excavated/dredged material will be characterized and transported for treatment/disposal at an off-site Resource Conservation and Recovery Act- and/or Toxic Substances Control Act- compliant facility, as appropriate;
- Restoration of any wetlands impacted by remedial activities. The restored wetlands will require routine inspection for several years to ensure adequate survival of the planted vegetation;
- Extraction of contaminated groundwater utilizing a network of recovery wells, and treatment of the extracted groundwater (by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies, or other appropriate treatment), followed by discharge to surface water;
- Implementation of institutional controls (*i.e.*, deed restrictions) to prohibit the installation and use of groundwater wells at the Site until groundwater cleanup standards are achieved;
- Long-term monitoring of groundwater, surface water, and nearby residential private wells to ensure the effectiveness of the selected remedy.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy meets the requirements for remedial actions set forth in CERCLA Section 121, 42 U.S.C. §9621, in that it: 1) is protective of human health and the environment; 2) meets a level or standard of control of the hazardous substances, pollutants and contaminants, which at least attains the legally applicable or relevant and appropriate requirements under federal and state laws; 3) is cost-effective; and 4) utilizes permanent solutions and alternative treatment (or resource

² Three distinctive locations on-site contain "principal threat waste" because the soil contaminants in these areas are highly mobile or toxic and will be a continuing source of groundwater contamination where such contamination is located below the water table. These "principal threat waste" soils will be excavated to the water table; contamination below the water table will be addressed through the groundwater portion of the remedy.

recovery) technologies to the maximum extent practicable. In keeping with the statutory preference for treatment as a principal element of the remedy, the contaminated groundwater will be collected and treated. In addition, the excavated soil/sediment will be treated, as necessary, at an off-site facility prior to disposal.

This remedy will result in the reduction of hazardous substances, pollutants, or contaminants on-site to levels that will permit unlimited use of and unrestricted exposure to the Site. However, because it may take more than five years to attain cleanup levels in the groundwater, a Site review may be conducted within five years after initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

ROD DATA CERTIFICATION CHECKLIST

The ROD contains the remedy selection information noted below. More details may be found in the Administrative Record file for this site.

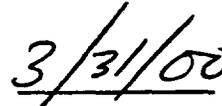
- Chemicals of concern and their respective concentrations (see ROD, pages 5-9);
- Baseline risk represented by the chemicals of concern (see ROD, pages 10-16);
- Cleanup levels established for chemicals of concern and the basis for these levels (see ROD, pages 5 and 7 and Appendix II);
- How source materials constituting principal threats are addressed (see ROD, page 9);
- Current and reasonably-anticipated future land use assumptions and current and potential future beneficial uses of groundwater used in the baseline risk assessment and ROD (see ROD, page 10);
- Potential land and groundwater use that will be available at the Site as a result of the selected remedy (see ROD, page 35);
- Estimated capital, annual operation and maintenance, and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected (see ROD, pages 34-35); and

- Key factors that led to selecting the remedy (*i.e.*, how the selected remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision) (see ROD, pages 33-39).

AUTHORIZING SIGNATURE



Jeanne M. Fox
Regional Administrator



Date

**RECORD OF DECISION FACT SHEET
EPA REGION II**

Site

Site name: Tri-Cities Barrel Site
Site location: Town of Fenton, Broome County, New York
HRS score: 44.06
Listed on the NPL: October 4, 1989

Record of Decision

Date signed: March 31, 2000
Selected remedy: Excavation/dredging of contaminated soils and sediments, followed by off-site treatment/disposal, and extraction and on-site treatment to address the contaminated groundwater.
Capital cost: \$18,677,000
Monitoring cost: \$137,000, annually
Present-worth cost: \$20.4 Million (7% discount rate for 30 years)

Lead

EPA
Primary Contact: Young Chang, Remedial Project Manager, (212) 637-4253
Secondary Contact: Joel Singerman, Chief, Central New York Remediation Section, (212) 637-4258

Main PRPs

See ROD Appendix V-c

Waste

Waste type: Volatile organics, semi-volatile organics, metals, pesticides and PCBs
Waste origin: Hazardous industrial waste remaining in drums that were sent to the Site for reconditioning
Contaminated medium: Groundwater, soil, and sediments

DECISION SUMMARY

**Tri-Cities Barrel Superfund Site
Town of Fenton, Broome County, New York**

**United States Environmental Protection Agency
Region II
New York, New York
March 2000**

TABLE OF CONTENTS

PAGE

SITE NAME, LOCATION, AND DESCRIPTION 1

SITE HISTORY AND ENFORCEMENT ACTIVITIES 2

HIGHLIGHTS OF COMMUNITY PARTICIPATION 4

SCOPE AND ROLE OF OPERABLE UNIT 4

SUMMARY OF SITE CHARACTERISTICS 5

Surface and Subsurface Soils 5

Sediments 7

Groundwater 8

Surface Water 9

PRINCIPAL THREAT WASTE 9

CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES .. 10

SUMMARY OF SITE RISKS 10

Human Health Risk Assessment 11

Ecological Risk Assessment 14

Basis for Action 16

REMEDIAL ACTION OBJECTIVES 16

DESCRIPTION OF ALTERNATIVES 16

Soil/Sediment Alternatives 17

Alternative SS-1 17

Alternative SS-2 18

Alternative SS-3 20

Alternative SS-4 20

Groundwater Remedial Alternatives 21

Alternative GW-1 21

Alternative GW-2 22

Alternative GW-3 22

COMPARATIVE ANALYSIS OF ALTERNATIVES 23

SELECTED REMEDY 32

ATTACHMENTS*

APPENDIX I.	FIGURES	A-I
APPENDIX II.	TABLES	A-II
APPENDIX III.	ADMINISTRATIVE RECORD INDEX	A-III
APPENDIX IV.	STATE LETTER OF CONCURRENCE	A-IV
APPENDIX V.	RESPONSIVENESS SUMMARY	A-V

* Note: Appendix II is attached to this copy of the Record of Decision. Copies of the other Appendices are available from EPA Region 2, 290 Broadway, New York, NY.

SITE NAME, LOCATION, AND DESCRIPTION

The 14.9-acre Tri-Cities Barrel Site¹ (the "Site") is situated adjacent to Old Route 7, approximately five miles northeast of the City of Binghamton, in the Town of Fenton, Broome County, New York. The Site is bordered to the north by Osborne Creek and by rural residential areas, farmland, and woodlands on the other sides. (See Figure 1-1.)

For investigation and remediation purposes, the Site, which is bisected by Interstate-88 (I-88), has been divided into three areas—"North of I-88"; "South of I-88"; and "South of Osborne Hollow Road." The 5.1-acre "North of I-88" section is bordered to the north by Osborne Creek and to the south by I-88. The 6.9-acre "South of I-88" area spans from I-88 to Osborne Hollow Road at the south. The "South of Osborne Hollow Road" section, which includes approximately 2.9 acres, is bordered to the north by Osborne Hollow Road and to the south by railroad tracks. The layout of the Site is presented in Figure 2-1.

The former operational portion of the Site² occupies approximately 3.5 acres within the "South of I-88" area. The former operational portion included a process building, pole barn, garage, barrel burner, two aboveground oil storage tanks, four aboveground propane tanks, two underground fuel tanks, numerous empty and partially full drums, and miscellaneous tools and equipment.

The southern portion of the Site is relatively flat, except in the vicinity of I-88, where the ground surface slopes steeply down to the highway. North of I-88, the ground surface slopes downward gradually northward toward Osborne Creek. In the vicinity of Osborne Creek, the ground surface slopes downward steeply to the creek and the associated flood plain. The elevation of the Site ranges from 930 feet (at Osborne Creek) to 1,025 feet above mean sea level (south of Osborne Hollow Road).

Two small unnamed, intermittent streams parallel the eastern and the western sides of the Site. The eastern tributary is located outside the property boundary; the western tributary is located within the property boundary. Both streams collect the surface water runoff from the southern portion of the Site, including Osborne Hollow Road, Old Route 7, and the railroad tracks. Both of the streams flow north, discharging to Osborne Creek.

A man-made pond (a former lagoon) located north of I-88 occupies approximately 6,000 square feet. However, the size of the pond varies greatly with seasonal precipitation, and is often dry or nearly dry during

¹ Superfund Site Identification Number: NYD980509285.

² The property was a former industrial facility.

the summer months; the pond is at its deepest (2-3 feet) during the spring. Currently, the pond receives water from precipitation directly into the pond and storm water runoff from I-88 and the area between I-88 and the pond.

The United States Environmental Protection Agency (EPA) is the lead agency for this site; the New York State Department of Environmental Conservation (NYSDEC) is the support agency. The investigatory and removal work at this site was performed by the potentially responsible party (PRP) Group under administrative orders on consent with EPA.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

The Tri-Cities Barrel Site was operated by Francis Warner and subsequently by his son Gary Warner as a barrel and drum (hereinafter "drum") reconditioning facility from about 1955 to 1992. The Tri-Cities Barrel Co., Inc., a defunct corporation of which Gary Warner was the most recent president, owned the property during this period of operation, and continues to be the owner.

The drum reconditioning process involved cleaning and reconditioning the interior and exterior of drums through a combination of physical, chemical, and mechanical means. The drums, which were brought to the Site from numerous different sources, typically contained residues of a variety of chemical compounds employed in industrial or commercial operations. Depending on the nature of the residues, Tri-Cities Barrel Co. employed various processes to remove such residues, including water and caustic sodium hydroxide solutions, incineration, particle blasting, and scraping. Following cleaning, if necessary, the drums were reformed and repainted. Reconditioned drums were staged in box trailers or outdoors, east of the process building. Much of the available property South of I-88 was used for drum storage. As many as 1,000 drums per week were reconditioned at the facility.

From the beginning of the facility's operations to the early 1960s, liquid wastes from the reconditioning process were discharged to the ground and allowed to flow downslope toward Osborne Creek. This practice created a distinctive drainage pattern (see Figure 3-1). From the early 1960s to 1980s, liquid wastes were discharged into a series of unlined lagoons on the Site. These lagoons were reportedly three to four feet deep. Prior to the completion of construction of I-88 in 1968, there were five lagoons located north of the former process building that were aligned along a north-south line in the same general area as the earlier discharge pattern. After the construction of I-88, the liquid wastes were directed from east to west across the Site through the lagoons. The discharge from these lagoons flowed to the western tributary.

Tri-Cities Barrel Company discontinued its practice of discharging liquid wastes to the lagoons in 1980 after negotiations with NYSDEC. By 1981, the three lagoons south of I-88 had been backfilled with approximately 7,000 cubic yards of fill. Following the closure of the lagoons, the liquid wastes generated in the drum cleaning process were collected in a holding tank and hauled off-site for disposal. Upon installation of a closed-loop wastewater recirculating system, only infrequent off-site disposal of the liquid wastes was necessary.

Drum reconditioning operations ceased at the facility in 1992, in accordance with an agreement between the PRP Group and Gary Warner. During 1992 and 1993, the property was used by Tri-Cities Barrel Co. to broker clean drums that were brought in by the company from off-site sources, and to sell the existing inventory of empty, clean plastic drums.

Based upon the results of an EPA-performed site investigation and New York State-performed Phase I and Phase II site investigations, the Site was added to the National Priorities List on October 4, 1989.

A PRP search conducted by EPA in 1991 resulted in the initial identification of 23 PRPs for the Site. In May 1991, EPA notified these parties that it considered them PRPs with respect to the Site, and provided those parties with the opportunity to perform a remedial investigation and feasibility study (RI/FS) for the Site under an Administrative Order on Consent (AOC).

On May 14, 1992, EPA entered into an AOC with 14 of these parties, under which they agreed to perform an RI/FS to determine the nature and extent of the contamination at and emanating from the Site and to identify and evaluate remedial alternatives.

Following issuance of the RI/FS AOC, EPA continued its PRP investigation and, in August 1995, notified 64 additional parties of their potential responsibility at the Site. Thirty-one of these parties were determined by EPA to be parties with a minimal, or *de minimis* share of liability, and were offered participation in a *de minimis* settlement. Of those 31 parties, 26 elected to settle their liability with EPA as respondents in an AOC in March 1996. Three more *de minimis* parties settled with EPA in an AOC in July 1997.

On September 25, 1996, the PRP Group and EPA entered into an AOC whereby the PRP Group agreed to perform a removal action at the Site under EPA oversight. EPA then issued a Unilateral Administrative Order in December 1997 to eight nonconsenting parties, directing them to participate in the removal action along with the AOC parties. The objectives of this action were to locate, characterize the contents, and properly dispose of all containers, drums, tanks, and debris located on-

site and decontaminate, demolish, and dispose of all buildings and structures. This work was completed in January 1997. Other than the wastewater recirculating system, which was decontaminated, the Site is currently vacant.

The RI and FS reports, completed by the PRP Group pursuant to the 1992 AOC, were delivered to EPA in May and August 1999, respectively.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

The RI report, FS report, and Proposed Plan for the Site were made available to the public in both the Administrative Record and information repositories maintained at the EPA Docket Room in the Region II New York City office and the information repository at the Fenton Town Hall, 44 Park Street, Port Crane, New York. A notice of availability for the above-referenced documents was published in the *Press and Sun Bulletin* on January 22, 2000. A public comment period was held from January 21, 2000 to February 19, 2000.

On February 9, 2000, EPA conducted a public meeting at the Chenango Valley High School Auditorium to present the findings of the RI/FS and answer questions from the public about the Site and the remedial alternatives under consideration.

In response to separate inquiries by EPA and the PRP Group regarding the Site's reasonably-anticipated future land use, the Town of Fenton Town Board indicated in an August 23, 1999 resolution and a November 2, 1999 letter from Donald F. Brown, Town Engineer, Town of Fenton, to Jack Spicuzza, the PRP Group's technical representative, that the current residential/agricultural zoning would not change. At the public meeting, representatives from EPA solicited a wider cross-section of community input on the reasonably-anticipated future land use of the property and potential future beneficial groundwater uses at the Site.

Responses to the comments received at the public meeting and in writing during the public comment period are included in the Responsiveness Summary (see Appendix V).

SCOPE AND ROLE OF OPERABLE UNIT

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Section 300.5, defines an operable unit as a discrete action that comprises an incremental step toward comprehensively

addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the Site. Operable units may address geographical portions of a site, specific site problems, or initial phase of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.

This response action applies a comprehensive approach; therefore, only one operable unit is required to remediate the Site. The primary objectives of this action are to control the sources of contamination at the Site, to minimize the migration of contaminants, and to minimize any potential future health and environmental impacts.

SUMMARY OF SITE CHARACTERISTICS

The purpose of the RI, conducted from 1992 to 1997, was to determine the nature and extent of the contamination at and emanating from the Site. The results of the RI are summarized below.

Surface and Subsurface Soils

The identification of contaminants of concern (COCs) was based on the RI's analytical results and the risk assessment. Since New York State has not promulgated cleanup standards for soil, preliminary remediation goals (PRGs) were selected for each of the constituents of concern. The PRGs are derived from a variety of sources, including NYSDEC *Technical and Administrative Guidance Memorandum No. 98-HWR-4046* (TAGM) objectives, site background, and site-specific risk-based calculations.

Area North of I-88

In this area, COCs exceeding PRGs were detected in the top two feet of the soils and sediments within the boundaries of the former lagoon and the former surficial discharge drainage pattern. The contaminants are predominantly semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and pesticides. The most prevalent SVOC and its corresponding maximum detected concentration was bis(2-ethylhexyl)phthalate at 31 milligrams per kilogram (mg/kg). The maximum concentrations of the pesticides, heptachlor, dieldrin, alpha-chlordane, and gamma-chlordane, were detected at 0.099 mg/kg, 0.47 mg/kg, 0.66 mg/kg, and 0.12 mg/kg, respectively. The maximum concentration of PCBs was detected at 33 mg/kg. The maximum concentration of metals,

manganese, sodium, and zinc were 2,230 mg/kg, 751 mg/kg, and 686 mg/kg, respectively.

It is estimated that 2,900 cubic yards (cy) of soils exceed the PRGs in this area. (See Figures 4-1 and 4-2.)

Area South of I-88

Approximately 3.9 acres of the top two feet of soil in the Area South of I-88 is contaminated with volatile organic compounds (VOCs), SVOCs, pesticides, PCBs, and metals. The most prevalent VOCs and their corresponding maximum concentrations detected were toluene (210 mg/kg), ethylbenzene (120 mg/kg), xylene (640 mg/kg), tetrachloroethene (120 mg/kg), vinyl chloride (14 mg/kg), 1,1,1-trichloroethane (35 mg/kg), 1,1-dichloroethane (26 mg/kg), and 1,2-dichloroethene (1,100 mg/kg). The SVOCs and their corresponding maximum detected concentrations were indeno(1,2,3-cd)pyrene (28 mg/kg), phenol (120 mg/kg), dibenzofuran (41 mg/kg), diethyl phthalate (80 mg/kg), fluorene (77 mg/kg), phenanthrene (190 mg/kg), anthracene (35 mg/kg), di-n-butyl phthalate (8.8 mg/kg), fluoranthene (120 mg/kg), pyrene (120 mg/kg), benzo(a)anthracene (64 mg/kg), chrysene (67 mg/kg), bis(2-ethylhexyl)phthalate (13,000 mg/kg), benzo(b)fluoranthene (30 mg/kg), benzo(k)fluoranthene (19 mg/kg), benzo(a)pyrene (65 mg/kg), and di-benzo(a,h)anthracene (17 mg/kg). The pesticides and their corresponding maximum concentrations detected were heptachlor (36 mg/kg), aldrin (0.64 mg/kg), dieldrin (65 mg/kg), endrin (0.75 mg/kg), alpha-chlordane (300 mg/kg), gamma-chlordane (400 mg/kg), 4,4-DDD (8.5 mg/kg), and 4,4-DDT (4.3 mg/kg). The maximum total PCB concentration detected was 169.9 mg/kg. The primary metals and their maximum concentrations were antimony (137 mg/kg), barium (1,210 mg/kg), chromium (1,610 mg/kg), lead (8,540 mg/kg), silver (39.6 mg/kg), sodium (853 mg/kg), and zinc (1,980 mg/kg).

The subsurface soil (at varying depths) in this area is also contaminated with VOCs, SVOCs, pesticides, PCBs, and metals. The most prevalent VOCs and their corresponding maximum concentrations detected were toluene (990 mg/kg), ethylbenzene (370 mg/kg), xylene (460 mg/kg), 4-methyl-2-pentanone (32 mg/kg), tetrachloroethene (260 mg/kg), 1,1,1-trichloroethane (4.8 mg/kg), 1,1-dichloroethane (280 mg/kg), and trichloroethene (7,000 mg/kg). The SVOCs and their corresponding maximum detected concentrations were 1,2-dichlorobenzene (150 mg/kg), 2-methylphenol (1.5 mg/kg), 4-methylphenol (4 mg/kg), 1,2,4-trichlorobenzene (240 mg/kg), 2,4,5-trichlorophenol (0.39 mg/kg), diethyl phthalate (28 mg/kg), chrysene (1.6 mg/kg), bis(2-ethylhexyl)phthalate (3,000 mg/kg), benzo(b)fluoranthene (1.9 mg/kg), and benzo(a)anthracene (1.4 mg/kg). The pesticides and the corresponding maximum concentrations detected were heptachlor (1.5 mg/kg),

endosulfan I (170 mg/kg), dieldrin (80 mg/kg), alpha-chlordane (27 mg/kg), gamma-chlordane (30 mg/kg), 4,4-DDD (200mg/kg), and 4,4-DDE (480 mg/kg). The maximum PCB concentration detected was 3,600 mg/kg. The primary metals and their maximum concentrations were barium (501 mg/kg), lead (3,510 mg/kg), mercury (40.2 mg/kg), silver (32.4 mg/kg), sodium (1,230 mg/kg), and zinc (3,800 mg/kg).

It is estimated that a total of 44,500 cy of soils exceed the PRGs in the Area South of I-88. (See Figures 5-1 through 5-12.)

Area South of Osborne Hollow Road

COCs and their corresponding maximum detected concentrations in the surface soils in this area are bis(2-ethylhexyl)phthalate (7 mg/kg) and endrin (0.12 mg/kg). In the subsurface soils, only bis(2-ethylhexyl)phthalate was detected at 2.6 mg/kg.

Based on the data, the COCs which exceed the PRGs are restricted to approximately the top 3 feet (in several locations).

It is estimated that 230 cy of soils exceed the PRGs in this area. (See Figure 6-1.)

Tables 1-1 through 3-1 in the Appendix II summarize surface and subsurface soil data exceeding Applicable or Relevant and Appropriate Requirements (ARARs).

Sediments

Eastern Tributary

Although eastern tributary sediments show levels of SVOCs, pesticides, PCBs, and metals which exceed NYSDEC's sediment criteria (Division of Fish and Wildlife, Division of Marine Resources, *Technical Guidance for Screening Contaminated Sediments*, January 1999), with the exception of alpha- and gamma-chlordane, it is believed that the contaminants are not attributable to the former site operations, but to an adjacent former junkyard. The maximum concentrations detected for alpha- and gamma-chlordane were 0.033 mg/kg and 8.7 mg/kg, respectively.

Based on the data, approximately 780 cy of sediments exceed the sediment criteria.

Western Tributary

The levels of SVOCs, pesticides, PCBs, and metals in this area exceed the sediment criteria. The highest concentration of total SVOCs detected was 111.8 mg/kg. Seven different pesticides were detected at

concentrations exceeding the sediment criteria, of which alpha- and gamma-chlordane were the most prevalent. The maximum concentrations detected for alpha- and gamma-chlordane were 4.6 mg/kg and 6 mg/kg, respectively. The maximum PCBs concentration detected was 10 mg/kg. The highest concentration of the chlordanes and PCBs were collected from a depth of 5-6 feet. The metals and their maximum concentrations detected were iron (42,500 mg/kg), manganese (1,360 mg/kg), and mercury (1.9 mg/kg).

Based on the data, approximately 1,090 cy of sediments exceed the sediment criteria.

Osborne Creek

No constituents of potential concern were detected in sediments in Osborne Creek.

Table 4-1 summarizes sediment data for all areas. Figure 7-1 depicts the locations of the sediment sampling results that exceeded ARARs for all areas.

Groundwater

The affected groundwater at the Site is restricted to the Area South of I-88, within the shallow, unconsolidated water-bearing zone; the deep bedrock aquifer is not contaminated. Based upon the groundwater data, the groundwater plume at the Site appears to be limited to isolated zones of contamination within an approximate 240-foot wide by 500-foot long area. The constituents of concern in the groundwater are VOCs, SVOCs, PCBs, pesticides, and metals. The most prevalent VOCs and their corresponding maximum concentrations detected were toluene (7,500 micrograms per liter ($\mu\text{g/l}$)), xylenes (2,900 $\mu\text{g/l}$), 2-butanone (5,300 $\mu\text{g/l}$), 1,1-dichloroethane (4,700 $\mu\text{g/l}$), cis-1,2-dichloroethene (12,000 $\mu\text{g/l}$), 1,1,1-trichloroethane (310 $\mu\text{g/l}$), methylene chloride (1,600 $\mu\text{g/l}$), and vinyl chloride (21,000 $\mu\text{g/l}$). The most prevalent SVOCs and their corresponding maximum concentrations detected were phenol (6,900 $\mu\text{g/l}$), 2-methylphenol (1,100 $\mu\text{g/l}$), and 4-methylphenol (13,000 $\mu\text{g/l}$). PCBs and pesticides (alpha-chlordane, 4,4'-DDE, and heptachlor) were detected in monitoring wells outside of the VOC plume at relatively low levels of 1.6 $\mu\text{g/l}$, 0.11 $\mu\text{g/l}$, 0.031 $\mu\text{g/l}$, and 0.089 $\mu\text{g/l}$, respectively. The prevalent metals of concern and their maximum concentrations detected were arsenic (28 $\mu\text{g/l}$) and cadmium (6.2 $\mu\text{g/l}$). Other metals appear to be at background concentrations in the groundwater.

Table 5-1 summarizes groundwater quality data. See also, Figures 8-1 through 8-3.

Surface Water

One VOC, carbon disulfide, was detected at a maximum of 13 µg/l in two samples collected from Osborne Creek. However, a surface water quality standard has not been established for carbon disulfide and, most likely, this contaminant is not site-related, since no carbon disulfide was detected within the Site's soil, sediment, or groundwater. The pesticides alpha- and gamma-chlordane were detected in a sample collected from the western tributary near I-88 at 0.034 µg/l and 0.043 µg/l, respectively. No PCBs were detected in any of the surface water samples.

Based on the RI surface water sampling results, surface water in the eastern tributary and Osborne Creek has not been adversely affected by the former site operations, but the surface water in the western tributary may have been slightly impacted by constituents originating from the Site. However, these constituents are not detected in the surface water of the receiving stream (Osborne Creek), indicating that the concentrations are either diluted or not transported to the downstream sampling locations.

PRINCIPAL THREAT WASTE

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP Section 300.430 (a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for the migration of contamination to groundwater, surface water, or air, or acts as a source for direct exposure. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis through a detailed analysis of alternatives, using the remedy selection criteria which are described below. This analysis provides a basis for making a statutory finding that the remedy employs treatment as a principal element.

While widespread soil contamination is present throughout the South of I-88 area, three distinctive locations in this area contain "principal threat waste" since the COCs in these areas are highly mobile or toxic, and will be a continuing source of groundwater contamination because some of the contamination is located below the water table. The locations that contain principal threat waste are in the former incoming drum storage area, the former Lagoon 1 area, and within the former process building area. (See Figure 9-1.)

CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

The property is presently zoned residential/agricultural; the industrial use of the property was a nonconforming use (*i.e.*, the drum reclamation facility was permitted to continue operating after a zoning ordinance prohibiting such use had been established for this area)³. The current land use in the immediate vicinity of the Site is residential, agricultural, and recreational. Based on a number of factors, including EPA's observations as to land use in the area of the Site since at least 1989, the existing zoning for the Site property, an August 1999 resolution by the Town Board of the Town of Fenton affirming that zoning,⁴ and subsequent communications between the Town Board, EPA, and the PRP Group, EPA determined that the reasonably-anticipated future use for the Site is residential/agricultural.

Currently, the on-site shallow, contaminated unconsolidated water bearing zone and the uncontaminated bedrock are not used for drinking water. Residents located in the vicinity of the Site use the deep bedrock as the sole source of potable water. Groundwater near the Site will continue to be used as a source of potable water under future-use scenarios. In addition, the potential future use of the unconsolidated water bearing zone on-site will be a drinking water source once cleanup levels have been achieved.

SUMMARY OF SITE RISKS

Based upon the results of the RI, a baseline risk assessment was conducted to estimate the risks associated with current and future site conditions. A baseline risk assessment is an analysis of the potential adverse human health and ecological effects caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these under current and anticipated future land uses.

The complete risk information for this Site is available in the following documents which were prepared by an EPA contractor and are located in the Administrative Record: A Baseline Risk Assessment - Human Health Evaluation (Final and Revised Addendum) and - Ecological Risk Assessment.

-
- ³ Letter from Donald F. Brown, Town Engineer, Town of Fenton, to Joel Singerman, Chief, Central New York Remediation Section, EPA, dated August 23, 1999. See Site Administrative Record.
- ⁴ Resolution of August 23, 1999 by the Town of Fenton Town Board, and letter from Donald F. Brown, Town Engineer, Town of Fenton, to Jack Spicuzza, Ashland, Inc., dated November 2, 1999. See Site Administrative Record.

Human Health Risk Assessment

A four-step process is utilized for assessing site-related human health risks for reasonable maximum exposure scenarios:

Hazard Identification: In this step, the COCs at the Site in various media (i.e., soil, groundwater, surface water, and air) are identified based on such factors as toxicity, frequency of occurrence, fate and transport of the contaminants in the environment, concentrations of the contaminants in specific media, mobility, persistence, and bioaccumulation.

Exposure Assessment: In this step, the different exposure pathways through which people might be exposed to the contaminants identified in the previous step are evaluated. Examples of exposure pathways include incidental ingestion of and dermal contact with contaminated soil. Factors relating to the exposure assessment include, but are not limited to, the concentrations that people might be exposed to and the potential frequency and duration of exposure. Using these factors, a "reasonable maximum exposure" (RME) scenario, which portrays the highest level of human exposure that could reasonably be expected to occur, is calculated.

Toxicity Assessment: In this step, the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response) are determined. Potential health effects are chemical-specific and may include the risk of developing cancer over a lifetime or other noncancer health effects, such as changes in the normal functions of organs within the body (e.g., changes in the effectiveness of the immune system). Some chemicals are capable of causing both cancer and noncancer health effects.

Risk Characterization: This step summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site risks. Exposures are evaluated based on the potential risk of developing cancer and the potential for noncancer health hazards. The likelihood of an individual developing cancer is expressed as a probability. For example, a 10^{-4} cancer risk means a "one-in-ten-thousand excess cancer risk"; or one additional cancer may be seen in a population of 10,000 people as a result of exposure to site contaminants under the conditions explained in the Exposure Assessment. Current Superfund guidelines for acceptable exposures are an individual lifetime excess cancer risk in the range of 10^{-4} to 10^{-6} (corresponding to a one-in-ten-thousand to a one-in-a-million excess cancer risk). For noncancer health effects, a "hazard index" (HI) is calculated. An HI represents the sum of the individual exposure levels compared to their corresponding reference doses. The key concept for

a noncancer HI is that a "threshold level" (measured as an HI of less than 1) exists below which noncancer health effects are not expected to occur.

The baseline risk assessment began with selecting COCs that would be representative of site risks. The evaluation identified 46 contaminants in the various media (sediment, surface and subsurface soil, and groundwater), including 10 metals, 11 VOCs, 12 SVOCs, PCBs, pesticides, and dioxin as COCs (see Table 6-1). Several of the contaminants, such as vinyl chloride and arsenic, are known to cause cancer in laboratory animals and are suspected to be human carcinogens.

The baseline risk assessment evaluated several potential children and adult exposure pathways (see Table 7-1), including a residential setting, site visitors, and on-site workers, that could result from current and future direct contact with: 1) contaminated soil (e.g., children ingesting soil while playing in the area and gardeners having dermal contact with contaminated soil); 2) contaminated groundwater (e.g., through ingestion of groundwater and inhalation of volatiles released into indoor air from groundwater while showering in an enclosed space); 3) contaminated surface water and sediment (e.g., through ingestion and dermal exposure to contaminated surface water and sediment); 4) inhalation of airborne particles; and 5) ingestion of vegetables grown in contaminated soil.

At the Site, total estimated excess cancer risks (see Table 8-1 and 8-2) for individuals exposed to site media range from 5×10^{-7} to 6×10^{-1} . In the Area South of I-88, the following exposure media, routes, and corresponding cancer risk exceed the upper bound limit (1×10^{-4}) of risk for future residents and present a principal threat: ingestion of overburden groundwater in the unconsolidated till material (4×10^{-1}) and vegetables grown in contaminated soil (1×10^{-2}) and dermal exposure to groundwater (8×10^{-3}) and inhalation of volatiles released into indoor air from groundwater (2×10^{-1}). Also, in this area, ingestion of overburden groundwater for a current/future worker scenario represents a cancer risk of 1×10^{-1} .

In the Area North of I-88, the same risks are presented to the future residents and workers as found in the Area South of I-88 with varying degree. They are as follows: ingestion of overburden groundwater (2×10^{-1}) and vegetables grown in contaminated soil (2×10^{-2}), as well as dermal exposure to groundwater (4×10^{-3}) and inhalation of volatile released into indoor air from groundwater (1×10^{-1}). The ingestion of overburden groundwater for future workers represents a cancer risk of 7×10^{-2} .

In the Area South of Osborne Hollow Road, ingestion of vegetables grown in contaminated soil by future residents represents a cancer risk of 1×10^{-4} , which is the upper bound limit of risk.

Total estimated HI values for the future exposure scenarios at the Site range from 0.007 to 800 (see Tables 9-1 and 9-2). The HI exceeds 1 for the future resident adult for the following pathways in both the South of I-88 and North of I-88 areas: ingestion of soil (HI of 3 and 6, respectively), overburden groundwater (100 and 70), and vegetables grown in contaminated soil (100 and 200); dermal exposure to surface soil (2 and 7) and to groundwater (6 and 2); and inhalation of volatiles released into indoor air from groundwater (10 and 3). The future child resident scenarios also exceed an HI of 1 for all of the pathways listed previously except dermal contact with soil in the Area South of I-88 and range from 1 to 500. The current/future worker scenario that results in an HI above 1 is ingestion of groundwater (40) in the South of I-88 area. In the Area North of I-88, ingestion of groundwater resulted in an HI of 30. In the South of Osborne Hollow Road area, ingestion of soil (2) and vegetables grown in contaminated soil (1) under the future child resident scenario results in a noncancer hazard greater than or equal to 1.

These risks and hazard levels indicate that there would be significant potential risk to future residents from direct exposure to contaminated soil and groundwater, and from vegetables grown in contaminated soil. These risk estimates are based on current reasonable maximum exposure scenarios and were developed by taking into account various conservative assumptions about the frequency and duration of an individual's exposure to the soil and groundwater, as well as the toxicity of chemicals of concern, such as arsenic, vinyl chloride, PAHs, alpha-chlordane, gamma-chlordane, and PCBs.

Uncertainties

The procedures and inputs used to assess risks in this evaluation, as in all such assessments, are subject to a wide variety of uncertainties. In general, the main sources of uncertainty include:

- environmental chemistry sampling and analysis
- environmental parameter measurement
- fate and transport modeling
- exposure parameter estimation
- toxicological data

Uncertainty in environmental sampling arises in part from the potentially uneven distribution of chemicals in the media sampled. Consequently, there is significant uncertainty as to the actual levels present. Environmental chemistry analysis uncertainty can stem from several sources including the errors inherent in the analytical methods and characteristics of the matrix being sampled.

Uncertainties in the exposure assessment are related to estimates of how often an individual will actually come in contact with the chemicals of

concern, the period of time over which such exposure will occur, and in the models used to estimate the concentrations of the chemicals of concern at the point of exposure.

Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the Risk Assessment provides upper bound estimates of the risks to populations near the Site, and is highly unlikely to underestimate actual risks related to the Site.

Ecological Risk Assessment

A four-step process is utilized for assessing site-related ecological risks for a reasonable maximum exposure scenario: *Problem Formulation*—a qualitative evaluation of contaminant release, migration, and fate; identification of COCs, receptors, exposure pathways, and known ecological effects of the contaminants; and selection of endpoints for further study. *Exposure Assessment*—a quantitative evaluation of contaminant release, migration, and fate; characterization of exposure pathways and receptors; and measurement or estimation of exposure point concentrations. *Ecological Effects Assessment*—literature reviews, field studies, and toxicity tests, linking contaminant concentrations to effects on ecological receptors. *Risk Characterization*—measurement or estimation of both current and future adverse effects.

A vegetation and wildlife survey identified five plant communities that exist at the Site that includes deciduous forest, conifer plantation, shrub upland/old field, stream and flood plain, and wetlands. The Area North of I-88 is heavily vegetated with trees and shrubs, and grasses and weed species are present in the area of the seasonal man-made pond (a former lagoon). The Area South of Osborne Hollow Road is also vegetated with stands of weed species and woody shrubs. In contrast, the Area South of I-88 is physically disturbed by historical industrial activities and site cleanup, and contains several unvegetated areas covered with gravel, coarse dirt, and foundations of former structures. The eastern and western borders of the South of I-88 area are dominated by large weed growth and stands of secondary growth trees near the seasonal tributaries. Seasonal tributaries are present along the eastern and western borders of the Site. Wetland vegetation is associated with both tributaries and the man-made pond. Osborne Creek is the only major water feature near the Site, and flows in a westerly direction along the northern border of the Site. The creek flows into the Chenango River approximately one mile downstream.

The baseline risk assessment began with selecting COCs that could pose a risk of adverse effects to exposed ecological resources. The COCs selected for quantitative evaluation include 17 inorganics, 3 VOCs, 19 SVOCs, 13 pesticides, PCBs, and dioxin. Potential risk to several indicator species through exposure to the COCs in soil, surface water, and sediment was evaluated. For assessment of direct exposure to surface water and sediment, concentrations of COCs in these media were compared to benchmark values expected to result in adverse biological effects. For assessment of direct exposure to surface soils, plants, soil invertebrates, the eastern cottontail rabbit, and the American robin were selected as indicator species.

In order to evaluate potential transfer of soil contaminants through the terrestrial food chain, exposure to site media through both a herbivore and omnivore food chain was calculated. The herbivore food chain was evaluated using an eastern cottontail rabbit as the receptor of concern ingesting plant material and surface soils at the Site. The results indicated that several metals, pesticides, and PCBs pose a potential risk to herbivorous mammals. Of the metals, lead poses the greatest risk especially within the Area South of I-88.

During Phase II of the RI, earthworms were collected from several on-site and background locations. At the on-site locations, earthworms were purposely collected in areas of high chemical concentration. PCBs were detected in all tissue samples (including background), and several pesticides (chlordanes, dieldrin, gamma-BHC, endosulfan) and phthalates were detected in earthworm tissue samples collected from the on-site samples. The presence of these chemicals of concern indicates that bioaccumulation is occurring in earthworms.

The omnivore food chain was evaluated using the American robin as the receptor of concern consuming both fruits and invertebrates from the Site. The results of the calculations show that pesticides (dieldrin and chlordanes) and PCBs pose potential risks to omnivorous bird species.

No information has been collected regarding the benthic communities in the tributaries or in the Osborne Creek. Therefore, the extent of uptake of contaminants in the aquatic food chain and the potential for adverse impacts could not be analyzed. However, based on the chemicals detected in site surface waters, chlordane would be the most likely to accumulate in the tissues of aquatic organisms. The pesticides and PCBs found in the sediment samples can bioaccumulate in aquatic species.

On a chemical and site area basis, the major concerns for ecological receptors include: (1) lead, pesticides (primarily chlordane) and PCBs in

the Area South of I-88 soils; (2) PCBs in the Area North of I-88 soils; (3) PCBs and chlordane, in the Area North of I-88 sediments; (4) PCBs and chlordane, in the East Tributary sediments; and (5) chlordane in the West Tributary sediments.

Basis for Action

Based upon the human health and ecological risk assessments, EPA has determined that the response action selected in this ROD is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances from the Site into the environment.

REMEDIAL ACTION OBJECTIVES

Remedial action objectives are specific goals to protect human health and the environment. These objectives are based on available information (e.g., current and reasonably-anticipated future land use) and standards such as ARARs and risk-based levels established in the risk assessment.

The following remedial action objectives have been established for the Site:

- minimize or eliminate contaminant migration to the groundwater and surface waters to levels that ensure the beneficial reuse of these resources;
- restore groundwater quality to levels which meet state and federal drinking-water standards within a reasonable time frame;
- reduce or eliminate the direct contact threat associated with contaminated soil, sediment, and groundwater; and
- minimize exposure of fish and wildlife to contaminants in surface water, sediments, and soils.

DESCRIPTION OF ALTERNATIVES

CERCLA Section 121(b)(1), 42 U.S.C. §9621(b)(1), mandates that a remedial action must be protective of human health and the environment, be cost-effective, comply with other statutory laws, and utilize permanent solutions and alternative treatment technologies and resource recovery alternatives to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ, as a

principal element, treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants and contaminants at a site. CERCLA Section 121(d), 42 U.S.C. §9621(d), further specifies that a remedial action must attain a level or standard of control of the hazardous substances, pollutants, and contaminants, which at least attains ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA Section 121(d)(4), 42 U.S.C. §9621(d)(4).

As was noted previously, principal threat wastes are those source materials considered to be highly toxic or highly mobile that, generally, cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. They include highly mobile toxic materials or materials having high concentrations of toxic compounds. Although no "threshold level" of toxicity or risk has been established to equate to a principal threat, where toxicity and mobility of source material combine to pose a potential risk of 10^{-3} or greater (as is the case with this site), generally, treatment alternatives should be evaluated⁵.

Detailed descriptions of the remedial alternatives for addressing the contamination associated with the Site can be found in the FS report. The FS report presents a total of nine remedial alternatives categorized by the media (soil/sediment and groundwater) they address. This ROD evaluated, in detail, seven remedial alternatives for addressing the contamination associated with the Site.

The construction time for each alternative reflects only the time required to construct or implement the remedy and does not include the time required to design the remedy, negotiate the performance of the remedy with the responsible parties, or procure contracts for design and construction. The present-worth costs for the alternatives discussed below are calculated using a discount rate of seven percent and a 30-year time interval.

The remedial alternatives are:

Soil/Sediment Alternatives

Alternative SS-1: No Action

⁵ *A Guide to Principal Threat and Low Level Threat Wastes*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, 9380.3-06FS, November 1991.

Capital Cost:	\$0
Annual Operation and Maintenance (O&M) and Monitoring Cost:	\$0
Present-Worth Cost:	\$0
Construction Time:	0 months

The Superfund program requires that the "no-action" alternative be considered as a baseline for comparison with the other alternatives. The no-action remedial alternative does not include any physical remedial measures that address the contaminated soils/sediments. This alternative assumes no additional activity takes place beyond the previously-implemented activities.

Because this alternative would result in contaminants remaining on-site above health-based levels, CERCLA requires that the Site be reviewed every five years. If justified by this assessment, remedial actions may be implemented in the future to remove or treat the waste.

Alternative SS-2: Excavation and On-Site Disposal of Contaminated Soils/Sediments, Excavation and Off-Site Treatment/Disposal of Principal Threat Waste Areas, and Installation of Multilayer Cap

Capital Cost:	\$6,719,000
Annual O&M and Monitoring Cost:	\$7,000
Present-Worth Cost:	\$6,806,000
Construction Time:	8 months

This alternative includes excavating heavily-contaminated soils located in the three areas of principal threat within the Area South of I-88. The areas that contain principal threat waste are located in the former incoming drum storage area (1,100 cy), the former Lagoon 1 area (3,300 cy), and within the former process building area (3,350 cy). These areas are characterized by relatively high levels of contamination that extend into the water table. In these areas, soils with PCB concentrations which equal or exceed 50 mg/kg would be excavated. Also, soils within five feet of the water table that exceed VOC TAGM objectives would be excavated to the water table. The excavated soils from these areas would be characterized and transported for treatment/disposal at an off-site

Resource Conservation and Recovery Act (RCRA)- and/or Toxic Substances Control Act (TSCA)-approved facility, as appropriate.

In the North of I-88 and South of Osborne Hollow Road areas, soils contaminated with SVOCs, pesticides, and/or metals exceeding the PRGs would be excavated; for those soils with PCBs and/or VOCs exceeding TAGM objectives, the respective TAGM objectives would be used to define the limits of the excavation.

Sediments in the tributaries which exceed NYSDEC's sediment criteria would be excavated/dredged. The estimated volume of contaminated sediment is 1,870 cy. All excavated/dredged sediments would be dewatered, as necessary.

Those excavated/dredged waste materials, soils, and sediments (from the North of I-88 and South of Osborne Hollow Road areas and the tributaries) that have PCB concentrations less than 50 mg/kg would be consolidated under a multilayer cap with the pre-existing soils in the Area South of I-88 that exceed the PRGs. The cap, which would be in compliance with New York State 6 NYCRR Part 360 requirements, would cover approximately 3.9 acres.

Those excavated/dredged waste materials, soils, and sediments with PCB concentrations which equal or exceed 50 mg/kg would be sent off-site for disposal at a RCRA- and/or TSCA-compliant facility, as appropriate.

In all of the excavated areas, except the area to be capped, clean material would be used as backfill. The excavated areas located within the area to be capped (and greater than five feet above the water table) would be backfilled with excavated material from Area North of I-88 and Area South of Osborne Hollow Road; those excavated areas located within five feet of the water table would be backfilled with clean fill.

Any wetlands impacted by remedial activities would be fully restored. The restored wetlands would require routine inspection for several years to ensure adequate survival of the planted vegetation.

This alternative would also include implementation of institutional controls (the placement of restrictions on the future use of the Site in order to protect the integrity of the cap) and would implement a public awareness program to ensure that the nearby residents are familiar with all aspects of this response action.

Because this alternative would result in contaminants remaining on-site above health-based levels, CERCLA requires that the Site be reviewed

every five years. If justified by this assessment, remedial actions may be implemented to remove or treat the waste.

Alternative SS-3: Excavation of Contaminated Soils/Sediments and Off-Site Treatment/Disposal

Capital Cost:	\$17,430,000
Annual O&M and Monitoring Cost:	\$0
Present-Worth Cost:	\$17,430,000
Construction Time:	6 months

This alternative includes excavating and/or dredging approximately 50,000 cubic yards of unsaturated soil and sediment exceeding soil/sediment cleanup objectives.

For those soils contaminated with SVOCs, pesticides, and metals, the PRGs would be used to define the limits of the excavation. For those soils with PCBs and/or VOCs exceeding TAGM objectives, the respective TAGM objectives would be used to define the limits of the excavation. Also, soils within five feet of the water table that exceed VOC TAGM objectives would be excavated to the water table. Under this alternative, those sediments exceeding NYSDEC's sediment criteria would also be excavated/dredged.

Each excavated area would be backfilled with clean fill and revegetated, as appropriate. All excavated/dredged material would be characterized and transported for treatment/disposal at an off-site RCRA- and/or TSCA-compliant facility, as appropriate.

Any wetlands impacted by remedial activities would be fully restored. The restored wetlands would require routine inspection for several years to ensure adequate survival of the planted vegetation.

A cost estimate is available in the Table 10-1.

Alternative SS-4: Excavation of Contaminated Soils/Sediments and On-Site Incineration and Disposal

Capital Cost:	\$32,039,000
---------------	--------------

Annual O&M and Monitoring Cost:	\$0
Present-Worth Cost:	\$32,039,000
Construction Time:	24 months

This alternative is identical to Alternative SS-3, except that instead of transporting the excavated/dredged material for off-site treatment/disposal, it would be incinerated on-site to destroy the organic contaminants and solidified/stabilized to immobilize the inorganic constituents. The off-gases from the incineration unit would be collected and treated. Once the treated material achieved soil TAGM objectives, it would be tested in accordance with the Toxicity Characteristic Leaching Procedure (TCLP) to determine whether it constitutes a RCRA hazardous waste and, provided that it passes the test, it would be used as backfill material for the excavated areas. Treated material above TCLP levels would either undergo additional treatment or be disposed of at an approved off-site facility, as appropriate.

Groundwater Remedial Alternatives

Alternative GW-1: No Action and Long-Term Monitoring

Capital Cost:	\$0
Annual Monitoring Cost:	\$40,000
Present-Worth Cost:	\$500,000
Construction Time:	0 months

The Superfund program requires that the "no-action" alternative be considered as a baseline for comparison with the other alternatives. The no-action remedial alternative does not include any physical remedial measures that address the problem of groundwater contamination at the Site. This alternative would, however, include a long-term groundwater monitoring program. Under this monitoring program, groundwater samples would be collected and analyzed annually.

Because this alternative would result in contaminants remaining on-site, CERCLA requires that the Site be reviewed every five years. If justified by the review, remedial actions may be implemented in the future to remove or treat the wastes.

Alternative GW-2: Monitored Natural Attenuation

Capital Cost:	\$137,000
Annual Monitoring Cost:	\$60,000
Present-Worth Cost:	\$887,000
Construction Time:	0 months

Under this alternative, the groundwater contamination would be addressed through natural attenuation processes (*i.e.*, biodegradation, dispersion, sorption, volatilization, oxidation-reduction reactions). As part of a long-term groundwater monitoring program, groundwater samples would be collected and analyzed quarterly in order to verify that the level and extent of groundwater contaminants (e.g., VOCs) are declining and that conditions are protective of human health and the environment. In addition, biodegradation parameters (e.g., oxygen, nitrate, sulfate, methane, ethane, ethene, alkalinity, redox potential, pH, temperature, conductivity, chloride, and total organic carbon) would be used to assess the progress of the degradation process.

Under this alternative, the installation and use of groundwater wells at the Site for drinking water purposes would be prohibited by institutional controls. Such prohibition could be removed after cleanup standards were met in the groundwater.

Because this alternative would result in contaminants remaining on-site, CERCLA requires that the Site be reviewed every five years. If this review indicates that monitored natural attenuation was not effective, more aggressive remedies, such as groundwater extraction and treatment, may be implemented.

Alternative GW-3: Groundwater Extraction and Treatment

Capital Cost:	\$1,247,000
Annual O&M and Monitoring Cost:	\$137,000
Present-Worth Cost:	\$2,947,000
Construction Time:	12 months

Under this alternative, a network of recovery wells would be used to extract contaminated groundwater which would be treated by air stripping,

liquid phase carbon adsorption and/or chemical precipitation technologies (or other appropriate treatment technology) and the effluent would be discharged to surface water. The effluent limits would be protective of the aquatic organisms and would meet the surface water quality criteria.

As part of a long-term groundwater monitoring program to evaluate the effectiveness of the groundwater extraction and treatment remedy, groundwater samples would be collected and analyzed semiannually.

Under this alternative, the installation and use of groundwater wells at the Site for drinking water purposes would be prohibited by institutional controls. Such prohibition could be removed after cleanup standards were met in the groundwater.

For cost estimating purposes, a 30-year operation time was used. A more detailed cost estimate is available in the Table 10-2.

COMPARATIVE ANALYSIS OF ALTERNATIVES

In selecting a remedy, EPA considered the factors set out in CERCLA Section 121, 42 U.S.C. §9621, by conducting a detailed analysis of the viable remedial alternatives pursuant to the NCP, 40 CFR §300.430(e)(9) and OSWER Directive 9355.3-01 (*Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA: Interim Final*, October 1988). The detailed analysis consisted of an assessment of the individual alternatives against each of nine evaluation criteria and a comparative analysis focusing upon the relative performance of each alternative against those criteria.

The following "threshold" criteria are the most important and must be satisfied by any alternative in order to be eligible for selection:

1. *Overall protection of human health and the environment* addresses whether or not a remedy provides adequate protection and describes how risks posed through each exposure pathway (based on a reasonable maximum exposure scenario) are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.
2. *Compliance with ARARs* addresses whether or not a remedy would meet all of the applicable or relevant and appropriate requirements of other federal and state environmental statutes and requirements or provide grounds for invoking a waiver.

The following "primary balancing" criteria are used to make comparisons and to identify the major tradeoffs between alternatives:

3. ***Long-term effectiveness and permanence*** refers to the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have been met. It also addresses the magnitude and effectiveness of the measures that may be required to manage the risk posed by treatment residuals and/or untreated wastes.
4. ***Reduction of toxicity, mobility, or volume through treatment*** is the anticipated performance of the treatment technologies, with respect to these parameters, a remedy may employ.
5. ***Short-term effectiveness*** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.
6. ***Implementability*** is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.
7. ***Cost*** includes estimated capital and O&M costs, and net present-worth costs.

The following "modifying" criteria are used in the final evaluation of the remedial alternatives after the formal comment period, and may prompt modification of the preferred remedy that was discussed in the Proposed Plan:

8. ***State acceptance*** indicates whether, based on its review of the RI/FS reports and Proposed Plan, the State concurs with, opposes, or has no comments on the selected remedy.
9. ***Community acceptance*** refers to the public's general response to the alternatives described in the RI/FS reports and Proposed Plan.

A comparative analysis of these alternatives based upon the evaluation criteria noted above, follows.

Overall Protection of Human Health and the Environment

Alternative SS-1 (no action) would not be protective of human health and the environment, since it would not actively address the potential human health and ecological risks posed by the contaminated soils and sediments. The existing deed restrictions on the Site property could, however, limit the intrusiveness of future activity that could occur on the Site.

Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap) would, by contrast, be significantly more protective than Alternative SS-1, in that the risk of incidental contact with waste by humans and ecological receptors would be significantly reduced by excavating, consolidating, and containing the contaminated soil and by removing off-site the most highly contaminated soil. Capping would prevent surface contaminant migration from the Site and would reduce infiltration, thereby significantly reducing the migration of contaminants to the groundwater. Although institutional controls might prevent the utilization of the Site in a manner that would expose human receptors to Site-related contamination, Alternative SS-2 would not be protective of human health if the property were to be used in the future in accordance with the reasonably-anticipated future residential/agricultural land use.

Alternative SS-3 (excavation of contaminated soils/sediments and off-site treatment/disposal) and Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) would be the most protective alternatives, since the long-term risk of incidental contact with waste by humans and ecological receptors would be completely eliminated. Under these alternatives, the contaminants would either be completely removed from the Site or treated on-site. In addition, by removing the contaminated soils, these alternatives would permanently eliminate the source of the groundwater contamination.

Alternative GW-1 (no action) and Alternative GW-2 (monitored natural attenuation) would rely upon natural attenuation to restore groundwater quality to drinking water standards. Alternative GW-3, which would include extraction and treatment of contaminated groundwater, would result in the restoration of water quality in the aquifer more quickly than monitored natural attenuation alone. The results of natural attenuation screening showed limited evidence of natural attenuation. Since the characterization data necessary to quantify the rates of biological degradation processes was not collected, it is not possible to develop time frames for the natural attenuation of contaminants in the groundwater, precluding a determination of remediation time frames for Alternatives GW-1 and GW-2. Based upon preliminary modeling results, it has been estimated that it will take several decades to achieve groundwater standards under Alternative GW-3.

Compliance with ARARs

There are currently no promulgated standards for contaminant levels in soils and sediments, only "To-Be-Considered" cleanup objectives. EPA is using PRGs and NYSDEC's TAGM limits for soils and NYSDEC's

Since the contaminated soils and sediments would not be addressed under Alternative SS-1 (no action), this alternative would not comply with chemical-specific ARARs. Since containment of the contamination would be inconsistent with the reasonably-anticipated residential/agricultural future use of the property, Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap) would not be consistent with local zoning requirements.

A New York State 6 NYCRR Part 360 cap is an action-specific ARAR for closure. Therefore, Alternative SS-2 would satisfy this action-specific ARAR.

Alternative SS-3 (excavation of contaminated soils/sediments and off-site treatment/disposal) and Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) would involve action-specific ARARs. Alternative SS-3 would be subject to state and federal regulations regarding transportation and off-site treatment/disposal of wastes. Both alternatives would involve the excavation of contaminated soils, and would require compliance with fugitive dust and VOC emission regulations. In the case of Alternative SS-4, compliance with air emission standards would be required at the on-site treatment facility. Treatment of off-gases must comply with New York State Air Guide—1 for the Control of Toxic Ambient Air Emissions and may be required to meet the requirements of New York State Regulations for Prevention and Control of Air Contamination and Air Pollution.

EPA and NYSDEC have promulgated health-protective Maximum Contaminant Levels (MCLs), which are enforceable standards for various drinking water contaminants (chemical-specific ARARs). While contamination has not been found in any existing private wells in the vicinity of the Site, groundwater contamination at the Site itself presents very high human health cancer risks for future on-site residents and visitors if not treated. In the northern part of the South of I-88 area, the ingestion of on-site overburden groundwater would pose a 4×10^{-1} risk (for every 10 people that could be exposed, four extra cancers *may* occur as a result of exposure) and the inhalation of volatiles released into indoor air from the on-site groundwater would pose a 2×10^{-1} risk (for every 10 people that could be exposed, two extra cancers *may* occur as a result of exposure). Alternatives GW-1 (no action) and GW-2 (monitored natural attenuation) do not provide for any direct remediation of groundwater and would, therefore, rely upon natural attenuation to achieve chemical-specific ARARs. Alternative GW-3 (groundwater

extraction and treatment) would be the most effective in reducing groundwater contaminant concentrations below MCLs, since it would include the collection and treatment of contaminated groundwater.

Long-Term Effectiveness and Permanence

Alternative SS-1 (no action) would involve no controls other than the current deed restrictions and, therefore, would not be effective in permanently preventing exposure to contaminants on-site or eliminating the potential for contaminants migrating off-site. Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap) would reduce the residual risk of untreated waste on the Site by taking the highly contaminated soil off-site for disposal/treatment and isolating the remaining contaminants from contact with human and environmental receptors and the mobility caused by infiltrating rainwater. The 6 NYCRR Part 360 cap or equivalent multilayer cap would require routine inspection and maintenance to insure long-term effectiveness and permanence. Routine maintenance of the cap, as a reliable management control, would include mowing, fertilizing, reseeding and repairing any potential erosion or burrowing rodent damage.

Alternative SS-3 (excavation of contaminated soils/sediments and off-site treatment/disposal) and Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) would be most effective in the long term and would provide permanent remediation by either removing the wastes from the Site or treating them on-site.

Alternative GW-1 (no action) and Alternative GW-2 (monitored natural attenuation) would be expected to have minimal long-term effectiveness, since they both would rely upon natural attenuation to restore groundwater quality, which has not been proven to be occurring at this site. Alternative GW-3 (groundwater extraction and treatment), by actively pumping and treating the contaminated groundwater, would have long-term effectiveness and permanence and achieve groundwater standards at a faster rate than Alternatives GW-1 and GW-2.

Alternative GW-3 would generate treatment residues which would have to be appropriately handled; Alternatives GW-1 and GW-2 would not generate such residues.

Reduction in Toxicity, Mobility, or Volume Through Treatment

Alternative SS-1 (no action) would provide no reduction in toxicity, mobility or volume.

While excavating contaminated soils and sediments, consolidation, and installation of a landfill cap under Alternative SS-2 would prevent further migration of and potential exposure to these materials, and would nearly eliminate the infiltration of rainwater into the waste disposal areas and the associated leaching of contaminants from these areas, only a small degree of the reduction in mobility would be accomplished through treatment. This alternative would only slightly meet CERCLA's preference for treatment in that only approximately 16 percent of the total quantity of the waste material to be excavated would be sent off-site for treatment/disposal. Similarly, this alternative would only slightly satisfy the statutory preference of CERCLA to use a permanent solution and alternative treatment technology to the maximum extent practicable. Under this alternative, the materials which would be sent off-site would include the soils and sediments exceeding 50 mg/kg PCBs and other principal threat waste soils.

Under Alternative SS-3 (excavation of contaminated soils/sediments and off-site treatment/disposal), contaminants would be removed from the Site for treatment/disposal, thereby reducing their toxicity, mobility, and volume. While it is anticipated that some treatment of the excavated soils and sediments will be necessary prior to their disposal, the quantity is not known.

Under Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment), an overall reduction in volume and toxicity would be achieved, as well as elimination of waste mobility using incineration.

Alternatives GW-1 (no action) and GW-2 (monitored natural attenuation) would not actively reduce the toxicity, mobility, or volume of contaminants through treatment. These alternatives would rely on natural attenuation to reduce the levels of contaminants. Collecting and treating contaminated groundwater under Alternative GW-3, on the other hand, would reduce the toxicity, mobility, and volume of contaminants, thereby satisfying CERCLA's preference for treatment.

Short-Term Effectiveness

Alternative SS-1 (no action) does not include any physical construction measures in any areas of contamination and, therefore, would not present a risk to the community as a result of its implementation.

Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap) would require the delivery of cap construction materials and off-site transport of contaminated waste materials, Alternative SS-3 (excavation of

contaminated soils/sediments and off-site treatment) would require the off-site transport of a greater amount of contaminated waste material, and Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) would require the delivery of treatment system components. All three alternatives would increase vehicle traffic and impact the local roadway system and could subject nearby residents to increased noise levels. Alternatives SS-2 and SS-3 may pose the potential for traffic accidents which could result in releases of hazardous substances. Alternative SS-4 could subject the residents to increased noise levels during the estimated two-year operation of on-site thermal treatment system.

Also, under all three action alternatives, disturbance of the land during excavation and/or construction activities could affect the surface water hydrology of the Site. There is a potential for increased stormwater runoff and erosion during excavation and construction activities that would have to be properly managed to prevent excessive water and sediment loading. For these alternatives, appropriate measures would have to be taken during excavation activities to prevent transport of fugitive dust and exposure of workers and downgradient receptors to volatile organic compounds.

All of the groundwater alternatives might present some limited risk to on-site workers through dermal contact and inhalation related to groundwater sampling activities. Alternative GW-3 (groundwater extraction and treatment) would pose an additional risk to on-site workers since it would involve the installation of extraction wells through potentially contaminated soils and groundwater. The risks to on-site workers could, however, be minimized by utilizing proper protective equipment.

Since no actions would be performed under Alternative S-1, there would be no implementation time. It is estimated that Alternative SS-2 would require eight months to implement, Alternative SS-3 would require six months to implement, and Alternative SS-4 would require two years to implement.

It is estimated that Alternatives GW-1 (no action) and GW-2 (monitored natural attenuation) would require one month to implement, since developing a long-term groundwater monitoring program would be the only activity that is required. It is estimated that the groundwater extraction and treatment systems under Alternative GW-3 would be constructed in about one year.

Because the results of natural attenuation screening were inconclusive, and because of the lack of important site-specific information or

"evidence" of natural attenuation, including characterization data necessary to quantify the rates of biological degradation processes, it is not possible to develop time frames for the natural attenuation of contaminants in the groundwater, precluding a determination of remediation time frames for Alternatives GW-1 and GW-2. Based upon preliminary modeling results, it has been estimated that it will take several decades to achieve groundwater standards under Alternative GW-3.

Implementability

Alternative SS-1 (no action) would be easily implementable, as the only activity is establishing a public awareness program. Alternative SS-3 (excavation of contaminated soils/sediments and off-site treatment) would use reliable earthmoving equipment and proven techniques, and established administrative procedures, and sufficient facilities are available for treatment and disposal of the excavated soils. Therefore, this alternative can be readily implemented. Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap), although more difficult to implement than the no-action alternative and the off-site treatment/disposal alternative, can be accomplished using technologies known to be reliable and can be readily implemented. Equipment, services and materials for this work are readily available. The actions under this alternative would also be administratively feasible.

Although Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) would use proven earthmoving equipment and techniques and established administrative procedures, it would be more difficult to implement than the other alternatives, given the complex nature of operating an on-site incineration process. Special concerns that would need to be addressed involve the capturing and treatment of residuals (volatilized contaminants, dust, and other condensates) due to the fine-grained soils at the Site. Under Alternative SS-4, heavy metals such as lead and mercury would necessitate the installation of an off-gas cleaning system. In addition, some delay may be experienced if an incinerator is not readily available.

Alternative GW-1 (no action) would be easily implementable, as the only activity is establishing a public awareness program. Alternative GW-2 (monitored natural attenuation) would also be easily implementable, however, it would involve monitoring of natural attenuation parameters to demonstrate that it is reliable in achieving the specified performance goals.

The air stripping, liquid phase carbon adsorption, and chemical precipitation technologies that may be used for Alternative GW-3 (groundwater extraction and treatment) are proven and reliable in achieving the specified performance goals and are readily available. All equipment is readily available and easily installed.

Cost

The present-worth costs are calculated using a discount rate of seven percent and a 30-year time interval. The estimated capital, O&M and monitoring (OM&M), and present-worth costs for each of the alternatives are presented below.

Soil/Sediment Alternatives	Capital Cost	Annual OM&M Cost	Present-Worth Cost
SS-1	\$0	\$0	\$0
SS-2	\$6,719,000	\$7,000	\$6,806,000
SS-3	\$17,430,000	\$0	\$17,430,000
SS-4	\$32,039,000	\$0	\$32,039,000

Groundwater Alternatives	Capital Cost	Annual OM&M Cost	Present-Worth Cost
GW-1	\$0	\$40,000	\$500,000
GW-2	\$137,000	\$60,000	\$887,000
GW-3	\$1,247,000	\$137,000	\$2,947,000

As can be seen by the cost estimates, there are no costs associated with the no action alternative for soil, Alternative SS-1. Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) is the most costly soil alternative at \$32,039,100. The least costly groundwater remedy is no action at \$500,000. Alternative GW-2 (monitored natural attenuation) is significantly more expensive than Alternative GW-1 (no action) because of the need to install additional monitoring wells and to analyze for natural attenuation parameters. Alternative GW-3 (groundwater extraction and treatment) is the most costly groundwater alternative at \$2,947,000. Cost estimates for the selected soil and groundwater remedy can be found in Table 10-1 and 10-2, respectively.

State Acceptance

NYSDEC concurs with the selected remedy, a letter of concurrence is attached (see Appendix IV).

Community Acceptance

Comments received during the public comment period indicate that the public generally supports the selected remedy. While the PRP Group supports the groundwater component of the selected remedy, it expressed a preference for a variation of the capping alternative, Alternative SS-2 (rather than the off-site treatment/disposal of only the soils and sediments excavated/dredged from the principal threat waste areas called for by Alternative SS-2, the PRP Group called for the off-site treatment/disposal of all of the excavated soils/sediments). This alternative in either form, however, is not consistent with the reasonably-anticipated future land use, as discussed above.

The PRP Group submitted a letter of March 8, 2000 raising issues about EPA submitting its proposed remedy and the PRP Group's preferred remedy for the Site for review by the National Remedy Review Board (NRRB). EPA responded via a March 23, 2000 letter that indicated that the PRP Group's preferred remedy fails to pass the threshold NCP criterion of being protective of human health and the environment for the reasonably-anticipated future land use. Thus, it is not a viable alternative for consideration by the NRRB.

Comments received during the public comment period are summarized and addressed in the Responsiveness Summary, which is attached as Appendix V to this document.

SELECTED REMEDY

Summary of the Rationale for the Selected Remedy

Based upon consideration of the requirements of CERCLA, the detailed analysis of the alternatives, and public comments, EPA and NYSDEC have determined that Alternative SS-3, excavation of contaminated soils/sediments and off-site treatment/disposal, and Alternative GW-3, extraction and treatment of groundwater contamination are the appropriate remedy, best satisfy the requirements of CERCLA Section 121, 42 U.S.C. §9621 and the NCP's nine evaluation criteria for remedial alternatives, 40 CFR §300.430(e)(9).

Alternative SS-1 (no action) would not be protective of human health and the environment, since it would not actively address the potential human health and ecological risks posed by the contaminated soils and sediments.

Although institutional controls might prevent the utilization of the Site in a manner that would expose human receptors to Site-related

contamination, Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap) would not be protective of human health if the property were to be used in the future in accordance with the reasonably-anticipated future land use (residential/agricultural). In addition, Alternative SS-2 would only slightly meet CERCLA's preferences for treatment, and would be a permanent remedial solution for only a small fraction of the contaminated soils/sediments.

Alternative SS-3 (excavation of contaminated soils/sediments and off-site treatment/disposal) and Alternative SS-4 (excavation of contaminated soils/sediments and on-site treatment) would be the most protective alternatives, since the risk of incidental contact with waste by humans and ecological receptors would be completely eliminated. Under these alternatives, the contaminants would either be completely removed from the Site for treatment/disposal or treated on-site. In addition, by removing the contaminated soils, both of these alternatives would permanently eliminate the source of the groundwater contamination. Of the two alternatives, Alternative SS-3 is believed to be able to achieve ARARs more quickly and at substantially less cost than Alternative SS-4.

Alternative GW-3 includes active treatment of the contaminated groundwater and would restore the aquifer to drinking water quality in a substantially shorter time frame than the Alternatives GW-1 (no action) and GW-2 (monitored natural attenuation).

Description of the Selected Remedy

The selected remedy involves:

- Excavation and/or dredging of approximately 50,000 cubic yards of unsaturated soil and sediments exceeding soil/sediment cleanup objectives. For those soils contaminated with SVOCs, pesticides, and metals, the PRGs will be used to define the limits of the excavation. For those soils with PCBs and/or VOCs exceeding TAGM objectives, the respective TAGM objectives will be used to define the limits of the excavation.
- Sediments exceeding NYSDEC's sediment criteria (*Technical Guidance for Screening Contaminated Sediments*, January 1999) will also be excavated/dredged;
- Each excavated area will be backfilled with clean fill and revegetated, as appropriate. All excavated/dredged material will be characterized and transported for treatment/disposal at an off-site RCRA- and/or TSCA-compliant facility, as appropriate;

- Restoration of any wetlands impacted by remedial activities. The restored wetlands will require routine inspection for several years to ensure adequate survival of the planted vegetation;
- Extraction of contaminated groundwater utilizing a network of recovery wells, and treatment of the extracted groundwater (by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies, or other appropriate treatment), followed by discharge to surface water;
- Implementation of institutional controls (the placement of deed restrictions prohibiting the installation and use of groundwater wells at the Site until groundwater cleanup standards are achieved);
- Long-term monitoring of groundwater, surface water, and nearby residential private wells to ensure the effectiveness of the selected remedy.

As part of a long-term groundwater monitoring program, groundwater samples will be collected and analyzed in order to verify that the level and extent of contaminants are declining from baseline conditions and that conditions are protective of human health and the environment.

During the design phase, a study will be performed to better characterize the extent of sediments that will require remediation in the two tributaries and the flood plain at the mouth of the western tributary and to evaluate the potential ecological impacts, such as loss of a habitat, associated with removing the contaminated sediments.

A wetlands assessment and restoration plan will be needed for any wetlands impacted or disturbed by remedial activities

The selected remedy is believed to be able to achieve the ARARs more quickly, or as quickly than the other alternatives. Therefore, the selected remedy will provide the best balance of tradeoffs among alternatives with respect to the evaluating criteria. EPA and the NYSDEC believe that the selected remedy will be protective of human health and the environment, be cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The selected remedy will meet the statutory preference for the use of treatment as a principal element.

Summary of the Estimated Remedy Costs

Since there are no O&M and monitoring costs associated with the selected soil remedy, the estimated capital and present-worth costs for the selected soil remedy are \$17,430,000; the estimated capital, annual

O&M and monitoring, and present-worth costs for the selected groundwater remedy are \$1,247,000, \$137,000, and \$2,947,000, respectively. Tables 10-1 and 10-2 provide the basis for these cost estimates.

It should be noted that these cost estimates are order-of-magnitude engineering cost estimates that are expected to be within +50 to -30 percent of the actual project cost. These cost estimates are based on the best available information regarding the anticipated scope of the selected remedy. Changes in the cost elements are likely to occur as a result of new information and data collected during the engineering design of the remedy.

Expected Outcomes of the Selected Remedy

The risk assessment indicates that there would be significant potential risk to future residents from direct exposure to contaminated soil and groundwater and from vegetables grown in contaminated soil in the absence of any actions to control or mitigate the contamination. The ecological risk assessment identified contaminant-related concerns for ecological receptors. Specifically, several metals, pesticides, and PCBs pose a potential risk to herbivorous mammals, PCBs, pesticides, and phthalates are bioaccumulating in earthworms, pesticides and PCBs pose potential risks to omnivorous bird species, chlordane is likely to accumulate in the tissues of aquatic organisms, and pesticides and PCBs found in the sediment samples can bioaccumulate in aquatic species.

Under the selected remedy, the risk to human health and the environment would be eliminated in that the contaminated soils that pose an exposure risk would be excavated. In addition, removal of the contaminated soils, which would eliminate the source of the groundwater contamination, in combination with extracting and treating the contaminated groundwater, would eventually restore the groundwater to drinking water standards. These actions would restore the Site such that it could be utilized in the future in accordance with the reasonably-anticipated future land use.

Under the selected remedy, it is anticipated that it will take 6 months to remediate the contaminated soils and sediments and several decades to achieve groundwater standards.

STATUTORY DETERMINATIONS

Under CERCLA Section 121 and the NCP, the lead agency must select remedies that are protective of human health and the environment, comply with ARARs (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment

- 6 NYCRR Part 373, Fugitive Dusts
- 40 CFR 50, Air Quality Standards
- State Permit Discharge Elimination System
- Resource Conservation and Recovery Act

Chemical-specific ARARs:

- Safe Drinking Water Act(SDWA) MCLs and MCLGs (40 CFR Part 141)
- 6 NYCRR Parts 700-705 Groundwater and Surface Water Quality Regulations
- 10 NYCRR Part 5 State Sanitary Code

Location-specific ARARs:

- Clean Water Act Section 404, 33 U.S.C. 1344
- Endangered Species Act of 1973, as amended (16 U.S.C. 1531)
- Fish and Wildlife Coordination Act, 16 U.S.C. 661
- National Historic Preservation Act, 16 U.S.C. 470
- New York State Freshwater Wetlands Law ECL, Article 24, 71 in Title 23
- New York State Freshwater Wetlands Permit Requirements and Classification, 6 NYCRR 663 and 664
- New York State Endangered and Threatened Species of Fish and Wildlife Requirements, 6 NYCRR 182

Other Criteria, Advisories, or Guidance To Be Considered (TBCs):

- Executive Order 11990 (Protection of Wetlands)
- Executive Order 11988 (Floodplain Management)
- EPA Statement of Policy on Floodplains and Wetlands Assessments for CERCLA Actions
- New York Guidelines for Soil Erosion and Sediment Control

technologies or resource recovery technologies to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, or contaminants at a site.

For the reasons discussed below, EPA has determined that the selected remedy meets these statutory requirements.

Protection of Human Health and the Environment

The selected remedy will protect human health through the excavation of contaminated soil and sediments, thereby eliminating the threat of exposure via direct contact with or ingestion of these contaminated media. The selected remedy will also be protective of the environment in that the excavation of contaminated soil and sediments will eliminate contaminant-related concerns related to ecological receptors. The removal of the contaminated soils will also eliminate the source of the groundwater contamination. The groundwater extraction and treatment component of the selected remedy will eventually result in the groundwater meeting standards. The selected remedy will reduce exposure levels to protective ARAR levels or to within EPA's generally acceptable risk range of 10^{-4} to 10^{-5} for carcinogenic risk and below the HI of 1 for noncarcinogens. The implementation of the selected remedy will not pose unacceptable short-term risks or cross-media impacts. The selected remedy will also provide overall protection by reducing the toxicity, mobility, and volume of contamination through the off-site treatment/disposal of the contaminated soils/sediments and the extraction/treatment of the contaminated groundwater.

Compliance with Applicable or Relevant and Appropriate Requirements of Environmental Laws

While there are no federal or New York State soil and sediment ARARs, one of the remedial action goals is to meet NYSDEC soil cleanup objectives. A summary of action-specific, chemical-specific, and location-specific ARARs which will be complied with during implementation of the selected remedy is presented below.

Action-specific ARARs:

- National Emissions Standards for Hazardous Air Pollutants
- 6 NYCRR Part 257, Air Quality Standards
- 6 NYCRR Part 212, Air Emission Standards

- New York State Air Cleanup Criteria, January 1990
- SDWA Proposed MCLs and MCL Goals
- NYSDEC Technical and Operational Guidance Series 1.1.1, November 1991
- EPA Ambient Water Quality Criteria (Federal Register, Volume 57, No. 246, December 22, 1992)
- Technical Guidance for Screening Contaminated Sediments (January 1999), NYSDEC, Division of Fish and Wildlife, Division of Marine Resources
- Soil cleanup objectives specified in NYSDEC Technical Administrative Guidance Memorandum No. 94-HWR-4046.

Cost-Effectiveness

For the foregoing reasons, it has been determined that the selected remedy provides for overall effectiveness in proportion to its cost.

The estimated present-worth cost of the soil component of the selected remedy is \$17,430,000.

Although Alternative SS-2 (excavation and on-site disposal of contaminated soils/sediments, excavation and off-site treatment/disposal of principal threat waste areas, and installation of a multilayer cap) is less costly than the selected remedy, containment of the contaminated soils and sediments would not achieve overall protection of human health and the environment. This conclusion is based on the determination that the reasonably-anticipated future land use of the site is residential and/or agricultural. The capping remedy would not adequately protect potential future site residents or consumers of vegetables grown on the property from the risks posed by the contamination to be left at the site under this alternative. In addition, Alternative SS-2 would only marginally meet CERCLA's preferences for treatment, and would be a permanent remedial solution for only a small fraction of the contaminated soils/sediments.

Although Alternative SS-4, on-site incineration, would be as protective of public health and the environment as the selected remedy and it would offer a higher degree of volume reduction through treatment than the selected remedy, on-site incineration would be substantially more costly and would take longer to implement.

The estimated present-worth cost of the groundwater component of the selected remedy is \$2,947,000. While the selected remedy is the most

costly of the groundwater alternatives, it includes active treatment of the contaminated groundwater and would restore the aquifer to drinking water quality in a substantially shorter time frame than the Alternatives GW-1 (no action) and GW-2 (monitored natural attenuation).

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

The selected remedy provides the best balance of tradeoffs among the alternatives with respect to the balancing criteria set forth in NCP §300.430(f)(1)(i)(B), such that it represents the maximum extent to which permanence and treatment can be practicably utilized at this site.

The selected remedy will provide a permanent solution for the contaminated soils and sediments by removing them from the Site for off-site treatment/disposal. Although on-site incineration would offer a higher degree of volume reduction through treatment than the selected remedy, on-site incineration would be substantially more costly and would take longer to implement than off-site treatment/disposal. Incineration would also be more difficult to implement and would not likely be accepted by the public.

With regard to the groundwater, the selected remedy will provide a permanent remedy and will employ treatment technologies to reduce the toxicity, mobility, and volume of the contaminants in the groundwater.

Preference for Treatment as a Principal Element

The statutory preference for remedies that employ treatment as a principal element is satisfied under the selected remedy in that contaminated soils and sediments would be removed from the Site for treatment/disposal and treatment would be used to reduce the volume of contaminated groundwater in the aquifer.

Five-Year Review Requirements

The selected remedy will not result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited use and unrestricted exposure. However, it may take more than five years to attain remedial action objectives and cleanup levels for the groundwater. Consequently, a policy review may be conducted within five years after initiation of remedial action to ensure that the remedy is, or will be, protective of human health and the environment.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan, released for public comment in January 2000, identified Alternative SS-3, excavation of contaminated soils/sediments and off-site treatment/disposal and Alternative GW-3, extraction and treatment to address the contaminated groundwater, as the preferred remedy. Based upon its review of the written and verbal comments submitted during the public comment period, EPA determined that no significant changes to the remedy, as originally identified in the Proposed Plan, were necessary or appropriate.

APPENDIX II

TABLES

APPENDIX II**TABLES**

Table 1-1	Summary of Surface Soil Data, North of I-88	II-1
Table 1-2	Summary of Subsurface Soil Data, North of I-88	II-1
Table 2-1	Summary of Surface Soil Data, South of I-88	II-2
Table 2-2	Summary of Subsurface Soil Data, South of I-88	II-4
Table 3-1	Summary of Surface Soil Data, South of Osborne Hollow Road	II-6
Table 3-2	Summary of Subsurface Soil Data, South of Osborne Hollow Road ...	II-7
Table 4-1	Summary of Sediment Data	II-8
Table 5-1	Summary of Groundwater Data	II-9
Table 6-1	Chemicals of Potential Concern at Tri-Cities Barrel Site	II-10
Table 7-1	Summary of Exposure Pathways	II-11
Table 8-1	Summary of Excess Cancer Risks for Hypothetical Future Residential Populations	II-12
Table 8-2	Summary of Excess Cancer Risks for Future Worker and Visitor Populations	II-13
Table 9-1	Summary of Hazard Indices for Hypothetical Future Residential Populations	II-14
Table 9-2	Summary of Hazard Indices for Future Worker and Visitor Populations	II-16
Table 10-1	Cost Estimate for Selected Soil Remedy, Alternative SS-3	II-17
Table 10-2	Cost Estimate for Selected Groundwater Remedy, Alternative GW-3	II-18

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	Background Conc. mg/kg	PRG Conc. mg/kg
VOCs						
SVOCs						
bis(2ethylhexyl)phthalate	19	35	ND	31		2
Pesticides						
heptachlor	7	37	ND	0.099		0.010
dieldrin	7	37	ND	0.47		0.0033
alpha-chlordane	8	37	ND	0.66		0.06
gamma-chlordane	16	37	ND	0.12		0.06
PCBs						
Total PCBs	24	37	ND	33.0		1.0
Metals						
Arsenic	21	21	6.1	13.6	9.22	18.45
Barium	21	21	44	164	91.66	300
Beryllium	21	21	0.34	2.4	0.627	518
Cadmium	7	21	ND	3	0.88	1.76
Lead	17	17	12.5	86.6	27.27	400
Manganese	21	21	319	2,230	940.67	2,039
Mercury	12	21	ND	2.1	0.047	10
Nickel	12	21	10	30.9	23.39	2212
Silver	5	21	ND	1.9	0.461	0.92
Sodium	21	21	43.8	751	101.56	203.02
Thallium	8	21	ND	1.4	0.551	1.1
Zinc	21	21	55.5	686	71.97	143.95

Table 1-2 Summary of Subsurface Soil Sampling Data, North of I-88

Metals						
Cadmium	1	5	ND	2.2	0.88	1.76
Mercury	1	45	ND	0.59	0.047	10

Table 2-1 Summary of Surface Soil Sampling Data, South of I-88

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	NYS TAGM mg/kg	PRG Conc. mg/kg
VOCs						
toluene	11	54	ND	210	1.5	5148
ethylbenzene	14	54	ND	120	5.5	5.5
xylene (total)	15	54	ND	640	1.2	1.2
4-methyl-2-pentanone	3	54	ND	13	1	1
tetrachloroethene	16	54	ND	120	1.4	1
acetone	18	54	ND	11	0.2	0.2
1,1,1-trichloroethane	5	54	ND	35	0.8	0.8
vinyl chloride	3	54	ND	14	0.012	0.01
1,1-dichloroethane	5	54	ND	26	0.2	1643
1,2-dichloroethene	7	54	ND	1,100	0.3	156
2-butanone	4	54	ND	0.8	0.3	1798
trichloroethene	9	54	ND	4.9	0.7	5
SVOCs						
indeno(1,2,3-cd)pyrene	12	54	ND	28		0.33
phenol	8	54	ND	120		30
2-methylphenol	1	54	ND	13		0.1
4-methylphenol	3	54	ND	42		0.9
naphthalene	1	54	ND	49		13
dibenzofuran	4	54	ND	41		6.2
diethyl phthalate	8	54	ND	80		7.1
fluorene	6	54	ND	77		50
phenanthrene	19	54	ND	190		50
di-n-butyl phthalate	14	54	ND	8.8		8.1
fluoranthene	22	54	ND	120		50
pyrene	21	54	ND	120		50
benzo(a)anthracene	14	54	ND	64		0.33
chrysene	13	54	ND	67		0.4
bis(2-ethylhexyl)phthalate	36	54	ND	13,000		50
benzo(b)fluoranthene	22	54	ND	30		0.33
benzo(k)fluoranthene	11	54	ND	19		0.33
benzo(a)pyrene	12	54	ND	65		0.33
dibenz(a,h)anthracene	2	54	ND	17		0.33

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	Background Conc. mg/kg	PRG Conc. mg/kg
Pesticides						
heptachlor	9	54	ND	36		0.01
Aldrin	4	54	ND	0.64		0.002
dieldrin	17	53	ND	65		0.0033
endrin	8	53	ND	0.75		0.1
alpha-chlordane	48	54	ND	300		0.06
gamma-chlordane	52	54	ND	400		0.06
4,4'-DDD	19	53	ND	8.5		0.08
4,4'-DDE	9	53	ND	0.68		0.07
4,4'-DDT	15	54	ND	4.3		0.07
PCBs						
Total PCBs	14	55	ND	169.9		1.0
Metals						
Antimony	15	54	ND	137	4.08	52
Barium	54	54	45.6	1,210	91.66	300
Cadmium	37	54	ND	10.2	0.88	1.76
Chromium	54	54	12.8	1,610	16.48	736
Cobalt	54	54	10.0	37.2	12.3	24.7
Copper	53	53	13.8	515	19.2	38.3
Lead	54	54	12.9	8,540	27.27	400
Mercury	48	54	ND	7.9	0.047	10
Selenium	17	54	ND	1.7	0.26	0.52
Silver	27	54	ND	51.7	0.461	0.92
Sodium	48	48	33	853	101.56	203
Thallium	20	54	ND	4.3	0.55	1.1
Zinc	54	54	61.5	510	71.97	143.95

Table 2-2 Summary of Subsurface Soil Sampling Data, South of I-88

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	NYS TAGM mg/kg	PRG Conc. mg/kg
VOCs						
toluene	32	49	ND	990	1.5	5148
ethylbenzene	23	49	ND	370	5.5	5.5
xylene (total)	24	49	ND	460	1.2	1.2
4-methyl-2-pentanone	8	49	ND	32	1	1
tetrachloroethene	16	49	ND	260	1.4	1
1,1,1-trichloroethane	7	49	ND	4.8	0.8	0.8
methylene chloride	3	49	ND	1,400	0.1	100
1,1-dichloroethane	15	49	ND	280	0.2	1643
1,2-dichloroethene	1	49	ND	0.53	0.3	156
acetone	12	49	ND	0.99	0.2	0.2
2-butanone	9	49	ND	60	0.3	1798
trichloroethene	13	49	ND	7,000	0.7	5
SVOCs						
1,2-dichlorobenzene	3	49	ND	150		7.9
2-methylphenol	3	49	ND	1.5		0.43
4-methylphenol	2	49	ND	4		0.9
1,2,4-trichlorobenzene	1	49	ND	240		3.4
2,4,5-trichlorophenol	2	49	ND	0.39		0.1
diethyl phthalate	6	49	ND	28		7.1
pentachlorophenol	4	49	ND	9.5		1.0
benzo(a)anthracene	3	49	ND	1.4		0.33
chrysene	3	49	ND	1.6		0.4
benzo(b)fluoranthene	5	49	ND	1.9		0.33
bis(2-ethylhexyl)phthalate	28	49	ND	3,000		
Pesticides						
heptachlor	3	49	ND	1.5		0.01
endosulfan I	5	49	ND	170		0.9
dieldrin	15	48	ND	80		0.0033
endrin	4	48	ND	0.48		0.1
alpha-chlordane	35	49	ND	27		0.06
gamma-chlordane	36	49	ND	30		0.06
4,4'-DDD	14	46	ND	200		0.08
4,4'-DDE	12	49	ND	480		0.07
4,4'-DDT	2	49	ND	1.9		0.07

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	Background Conc. mg/kg	PRG Conc. mg/kg
PCBs						
Total PCBs	32	49	ND	3,600		10.0
Metals						
Antimony	6	45	ND	41.6	4.08	52
Barium	49	49	55.0	1,810	91.66	300
Beryllium	42	49	ND	640	0.627	518
Cadmium	12	49	ND	47.4	0.88	1.76
Chromium	49	49	12.1	576	16.48	736
Cobalt	49	49	7.9	100	12.3	24.7
Copper	42	42	16.2	409	19.2	38.3
Lead	49	49	8.9	3,510	27.27	400
Mercury	22	49	ND	40.2	0.047	10
Selenium	5	49	ND	31.8	0.258	0.516
Silver	16	49	ND	32.4	0.461	0.92
Sodium	39	39	50.9	1,230	101.56	203.03
Thallium	16	49	ND	1.71	0.551	1.1
Vanadium	49	49	7.9	64.4	17.9	35.9
Zinc	48	48	47.4	3,800	71.97	143.95

Table 3-1 Summary of Surface Soil Sampling Data, South of Osborne Hollow Road

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	Background Conc. mg/kg	PRG Conc. mg/kg
VOCs						
SVOCs						
bis(2ethylhexyl)phthalate	6	6	0.057	7.0		2/50
benzo(b)fluoranthene	5	6	ND	0.340		0.33
Pesticides						
dieldrin	1	6	ND	0.0056		0.0033
endrin	1	6	ND	0.12		0.10
PCBs						
Metals						
Antimony	1	5	ND	11.7	4.08	52
Arsenic	6	6	8.1	13.1	9.22	18.45
Barium	6	6	81	188	91.66	300
Beryllium	6	6	0.55	1.0	0.627	518
Cadmium	5	6	ND	3.4	0.88	1.76
Chromium	6	6	14.3	21.3	16.48	736
Copper	6	6	18.3	34.0	19.2	38.3
Lead	6	6	17.7	141	27.27	400
Manganese	6	6	517	1,640	940.67	2039
Mercury	6	6	0.05	1.4	0.047	10
Selenium	5	6	ND	1.2	0.258	0.516
Silver	5	6	ND	2.3	0.461	0.92
Vanadium	6	6	19.0	23.0	17.9	35.9
Zinc	6	6	70.5	407	71.97	143.95

Case 3:01-cv-00637-NAM-GS Document 4 Filed 08/08/01 Page 179 of 238
 Table 3-2 Summary of Subsurface Soil Sampling Data, South of Osborne Hollow Road

Analyte	Number of Detections	Number Analyzed	Min. Conc. mg/kg	Max. Conc. mg/kg	Background Conc. mg/kg	PRG Conc. mg/kg
SVOCs						
bis(2ethylhexyl)phthalate	1	4	ND	2.6		2
Metals						
Arsenic	1	4	8.1	13.9	9.22	18.45
Beryllium	4	4	0.50	0.95	0.627	518
Cadmium	3	4	ND	2.6	0.88	1.76
Chromium	4	4	14.5	18.9	16.48	736
Cobalt	4	4	11.8	15.3	12.3	24.7
Copper	4	4	14.4	21.7	19.2	38.3
Lead	4	4	12.4	30.1	27.27	400
Manganese	4	4	454	1,420	940.67	2039
Mercury	3	4	ND	1.2	0.047	10
Nickel	4	4	25.5	28.8	0.047	10
Selenium	3	4	ND	0.79	0.258	0.516
Silver	3	4	ND	2.0	0.461	0.92
Vanadium	4	4	17.1	22.6	17.9	35.9

Analyte	Number of Detections above ARAR	Number Analyzed	Min. Conc. ug/g OC	Max. Conc. ug/g OC	ARAR Conc. ug/g OC
VOCs					
SVOCs					
Phenanthrene	4	15	94	600000	120
Fluoranthene	2	15	66	540000	1020
Benzo(a)anthracene	9	15	75	210000	1.3
Chrysene	7	15	130	190000	1.3
Bis(2-Ethylhexyl)phthalate	5	18	38	4600	199.5
Benzo(b)fluoranthene	9	15	65	190000	1.3
Benzo(k)fluoranthene	5	15	40	56000	1.3
Benzo(a)pyrene	7	15	55	110000	1.3
Indeno(1,2,3-cd)pyrene	6	15	44	89000	1.3
Acenaphthene	1	9	ND	68000	140
PESTICIDES					
Endrin aldehyde	4	15	4.3	5.9	0.8
4,4-DDE	3	13	26	890	1
Heptaclor	4	14	2.4	190	0.03
Alpha-Chlordane	12	15	1.3	4600	0.006
Gamma-Chlordane	13	19	0.15	6000	0.006
Dieldrin	1	15	0.38	240	9
Endosulfan-II	0	8	ND	ND	0.03
Toxaphene	1	9	ND	2300	0.01
4,4-DDD	3	8	ND	580	1
4,4-DDT	1	9	ND	11	1
PCBs					
Aroclor 1248	9	16	9	84000	1.4
Aroclor 1254	3	10	ND	17000	1.4
Aroclor 1260	3	15	4.9	55	1.4
METALS					
Iron	1	16	10300000	42500000	40000000
Lead	1	16	6900	132000	110000
Manganese	3	16	286000	1360000	1100000
Mercury	1	13	ND	1900	1300
Zinc	1	16	29300	275000	270000

Table 5-1 Summary of Groundwater Data

Analyte	Number of Detections above ARAR	Number Analyzed	Min. Conc. ug/l	Max. Conc. ug/l	ARAR Conc. ug/l
VOCs					
Vinyl Chloride	11	68	1	2100	2
Chloroethane	6	68	0.6	34	5
1,1-Dichloroethane	10	68	1	17	5
Cis-1,2-Dichloroethene	11	67	1	1200	5
Trichloroethene	6	64	1	29	5
1,1,1-Trichloroethane	4	64	1	310	5
1,2-Dichloropropane	2	60	1	3	1
Xylenes (Total)	1	51	0.7	2.1	2
1,2-Dichloroethane	2	23	1	4700	0.6
2-Butanone	2	35	5	5300	50
Benzene	1	23	ND	1	0.7
Tetrachloroethene	2	43	1	14	5
Toluene	2	35	0.6	7500	5
Ethylbenzene	1	23	ND	400	5
SVOCs					
Phenol	3	40	ND	6900	1
1,2-Dichlorobenzene	2	17	1	24	3
2-Methylphenol	2	39	ND	690	5
4-Methylphenol	2	39	8	13000	5
Naphthalene	1	17	ND	11	10
2,4,5-Trichlorophenol	1	27	1	18	1
Bis(2-Ethylhexyl)phthalate	3	62	1	440	5
TOTAL METALS					
Antimony	3	31	2.2	59.2	3
Arsenic	2	52	3.2	84.6	25
Cadmium	2	42	0.48	6.2	5
Chromium	1	59	4.6	52.8	50
Iron	42	59	35.1	156000	300
Lead	3	55	1.2	58.7	15
Manganese	46	59	1.9	40000	300
Mercury	1	57	0.12	2.3	0.7
Nickel	6	59	14.5	1060	100
Sodium	44	59	7800	692000	20000
Thallium	15	55	1.1	5	2

Note: Most stringent of Federal Maximum Cleanup Level and New York State Drinking Water Standard was used.

Table 6-1 Chemicals of Potential Concern at Tri-Cities Barrel Site

VOCs

tetrachloroethene
 toluene
 methylene chloride
 1,1-dichloroethane
 1,2-dichloroethane
 1,2-dichloroethene (total)
 cis-1,2-dichloroethene
 trans-1,2-dichloroethene
 2-butanone
 trichloroethene
 vinyl chloride

SVOCs

acenaphthylene
 benzo(a)anthracene
 benzo(a)pyrene
 benzo(b)fluoranthene
 benzo(g,h,i)perylene
 bis(2-ethylhexyl)phthalate
 dibenzo(a,h)anthracene
 2,4-dimethylphenol
 indeno(1,2,3-cd)pyrene
 2-methylnaphthalene
 4-(p-cresol)methylphenol
 phenanthrene

Metals

antimony
 arsenic
 beryllium
 cadmium
 chromium
 iron
 lead
 manganese
 mercury
 nickel

Pesticides

aldrin
 alpha-chlordane
 4,4'-DDD
 4,4'-DDE
 delta-BHC
 dieldrin
 gamma-chlordane
 heptachlor

PCBs

Aroclor-1242
 Aroclor-1248
 Aroclor-1254
 Aroclor-1260

Dioxins

2,3,7,8-TCDD

**Table 7-1 Summary of Exposure Pathways
Selected for Quantitative Analysis at Tri-Cities Barrel Site**

Exposure Population	Exposure Point	Exposure Medium	Exposure Route
<u>Current/Future</u> Site Visitor	South of I-88 [Processing Area]	Surface Soil (0-2 feet)	Oral and Dermal
		Outdoor Air	Inhalation
		Surface Water Sediment	Oral and Dermal Oral and Dermal
	North of I-88 [North Area]	Surface Soil (0-2 feet)	Oral and Dermal
		Surface Water	Oral and Dermal
		Sediment	Oral and Dermal
	South of Osborne Hollow Road [South Area]	Surface Soil (0-2 feet)	Dermal
Creek Visitor	Osborne Creek	Surface Water	Oral and Dermal
		Sediment	Oral and Dermal
<u>Future</u> Resident Adult/Child	South of I-88	Soil (0-2 feet or 0-12 feet)	Oral and Dermal
		Outdoor Air	Inhalation
		Vegetables	Oral
		Groundwater	Oral and Dermal
	South of Osborne Hollow Road	Indoor Air	Inhalation
		Surface Soil (0-2 feet)	Oral and Dermal
		Vegetables	Oral
<u>Future</u> Worker	South of I-88	Surface Soil (0-2 feet)	Oral and Dermal
		Outdoor Air	Inhalation
		Groundwater	Oral
	North of I-88	Surface Soil (0-2 feet)	Oral
		Groundwater	Oral
		South of Osborne Hollow Road	Surface Soil (0-2 feet)

[] denotes area name used in the Risk Assessment

Exposure Point	Exposure Medium	Exposure Route	Cancer Risk AVG	Cancer Risk RME
South of I-88 (Surface Soil Scenario)	Surface Soil	Oral	3E-05	5E-04
	Surface Soil	Dermal	1E-06	2E-04
	Outdoor Air	Inhalation	6E-07	2E-06
	Vegetables	Oral	3E-03	2E-02
	Groundwater	Oral	9E-02	4E-01
	Groundwater	Dermal	2E-03	8E-03
	Bedrock Groundwater	Oral	3E-05	1E-04
	Bedrock Groundwater	Dermal	5E-06	2E-05
	Indoor Air	Inhalation	<u>7E-02</u>	<u>2E-01</u>
		Total:	2E-01	6E-01
South of I-88 (All Soils Scenario)	All Soils	Oral	2E-05	4E-04
	All Soils	Dermal	2E-06	2E-04
	Outdoor Air	Inhalation	6E-07	2E-06
	Vegetables	Oral	2E-03	1E-02
	Groundwater	Oral	9E-02	4E-01
	Groundwater	Dermal	2E-03	8E-03
	Bedrock Groundwater	Oral	3E-05	1E-04
	Bedrock Groundwater	Dermal	5E-06	2E-05
	Indoor Air	Inhalation	<u>7E-02</u>	<u>2E-01</u>
		Total:	2E-01	6E-01
North of I-88	Surface Soil	Oral	2E-05	4E-04
	Surface Soil	Dermal	3E-06	4E-04
	Vegetables	Oral	3E-03	2E-02
	Groundwater	Oral	5E-02	2E-01
	Groundwater	Dermal	1E-03	4E-03
	Bedrock Groundwater	Oral	3E-05	1E-04
	Bedrock Groundwater	Dermal	5E-06	2E-05
	Indoor Air	Inhalation	<u>4E-02</u>	<u>1E-01</u>
		Total:	9E-01	3E-01
South of Osborne Hollow Road	Surface Soil	Oral	1E-06	3E-05
	Surface Soil	Dermal	4E-09	6E-07
	Vegetables	Oral	<u>2E-05</u>	<u>1E-04</u>
		Total:	2E-05	1E-04

**Table 8-2 Summary of Excess Cancer Risks for Future Worker
and Visitor Populations at Tri-Cities Barrel Site**

Exposure Population	Exposure Point	Exposure Medium	Exposure Route	Cancer Risk AVG	Cancer Risk RME
Current/Future Worker	South of I-88	Surface Soil	Oral	1E-05	5E-05
		Outdoor Air	Inhalation	3E-07	1E-06
		Groundwater	Oral	3E-02	1E-01
		Bedrock Groundwater	Oral	<u>9E-06</u>	<u>3E-05</u>
		Total:		3E-02	1E-01
Future Worker	North of I-88	Surface Soil	Oral	9E-06	4E-05
		Groundwater	Oral	2E-02	7E-02
		Bedrock Groundwater	Oral	<u>9E-06</u>	<u>3E-05</u>
		Total:		2E-02	7E-02
	South of Osborne Hollow Road	Surface Soil	Oral	<u>7E-07</u>	<u>4E-06</u>
Total:		7E-07	4E-06		
Current/Future Site Visitor	South of I-88	Surface Soil	Oral	2E-06	8E-06
		Surface Soil	Dermal	7E-07	7E-06
		Outdoor Air	Inhalation	3E-08	1E-07
		Surface Water	Oral	1E-10	5E-10
		Surface Water	Dermal	2E-09	6E-09
		Sediment	Oral	4E-06	2E-05
		Sediment	Dermal	<u>5E-08</u>	<u>5E-07</u>
		Total:		7E-06	4E-05
	North of I-88	Surface Soil	Oral	1E-06	6E-06
		Surface Soil	Dermal	1E-06	1E-05
		Sediment	Oral	9E-07	3E-06
		Sediment	Dermal	<u>2E-06</u>	<u>2E-05</u>
	Total:		5E-06	4E-05	
	South of Osborne Hollow Road	Surface Soil	Oral	1E-07	5E-07
		Surface Soil	Dermal	<u>2E-09</u>	<u>2E-08</u>
Total:			1E-07	5E-07	
Current/Future Creek Visitor	Osborne Creek	Sediment	Oral	<u>6E-08</u>	<u>2E-07</u>
		Total:		6E-08	2E-07

**Table 9-1 Summary of Hazard Indices for Hypothetical Future
Residential Populations at Tri-Cities Barrel Site**

Exposure Population	Exposure Point	Exposure Medium	Exposure Route	Hazard Index AVG	Hazard Index RME
Child Resident	South of I-88 (Surface Soils Scenario)	Surface Soil	Oral	10	20
		Surface Soil	Dermal	0.03	1
		Outdoor Air	Inhalation	0.0004	0.0005
		Vegetables	Oral	200	500
		Groundwater	Oral	200	300
		Groundwater	Dermal	4	6
		Bedrock Groundwater	Oral	2	3
		Bedrock Groundwater	Dermal	0.04	0.05
		Indoor Air	Inhalation	<u>10</u>	<u>10</u>
		Total:		400	800
	South of I-88 (All Soils Scenario)	Soils	Oral	4	10
		Soils	Dermal	0.02	0.9
		Outdoor Air	Inhalation	0.0004	0.0005
		Vegetables	Oral	100	200
		Groundwater	Oral	200	300
		Groundwater	Dermal	4	6
		Bedrock Groundwater	Oral	2	3
		Bedrock Groundwater	Dermal	0.04	0.05
		Indoor Air	Inhalation	<u>10</u>	<u>10</u>
		Total:		300	500
	North of I-88	Surface Soil	Oral	5	9
		Surface Soil	Dermal	0.1	5
		Vegetables	Oral	100	200
		Groundwater	Oral	70	100
		Groundwater	Dermal	3	2
		Bedrock Groundwater	Oral	2	3
		Bedrock Groundwater	Dermal	0.04	0.05
		Indoor Air	Inhalation	<u>3</u>	<u>3</u>
		Total		300	500
		South of Osborne Hollow Road	Surface Soil	Oral	0.9
	Surface Soil		Dermal	0.0001	0.006
	Vegetables		Oral	<u>0.9</u>	<u>1</u>
	Total			2	3

(a) Hazard Index is subchronic for child population and chronic for adult population.

Table 9-1 Summary of Hazard Indices for Hypothetical Future (continued)

Residential Populations at Tri-Cities Barrel Site

Exposure Population	Exposure Point	Exposure Medium	Exposure Route	Hazard Index AVG	Hazard Index RME	
Adult Resident	South of I-88	Surface Soils	Oral	1	8	
		Surface Soils	Dermal	0.05	2	
		Outdoor Air	Inhalation	0.0003	0.0002	
		Vegetables	Oral	200	200	
		Groundwater	Oral	100	100	
		Groundwater	Dermal	5	6	
		Bedrock Groundwater	Oral	0.7	1	
		Bedrock Groundwater	Dermal	0.07	0.03	
		Indoor Air	Inhalation	2	10	
		Total:			300	300
	South of I-88	Soils	Oral	0.7	3	
		Soils	Dermal	0.03	1	
		Outdoor Air	Inhalation	0.0003	0.0002	
		Vegetables	Oral	70	100	
		Groundwater	Oral	100	100	
		Groundwater	Dermal	5	6	
		Bedrock Groundwater	Oral	0.7	1	
		Bedrock Groundwater	Dermal	0.02	0.03	
		Indoor Air	Inhalation	2	10	
		Total:			200	200
	North of I-88	Surface Soils	Oral	1	6	
		Surface Soils	Dermal	0.2	7	
		Vegetables	Oral	100	200	
		Groundwater	Oral	50	70	
		Groundwater	Dermal	2	2	
		Bedrock Groundwater	Oral	0.7	1	
		Bedrock Groundwater	Dermal	0.02	0.03	
		Indoor Air	Inhalation	2	3	
		Total:			300	300
		South of Osborne Hollow Road	Surface Soils	Oral	0.7	3
	Surface Soils		Dermal	0.03	1	
	Vegetables		Oral	70	100	
	Total:				200	200
	Total				2	3

(a) Hazard Index is subchronic for child population and chronic for adult population.

Exposure Population	Exposure Point	Exposure Medium	Exposure Route	Hazard Index AVG	Hazard Index RME
Current/Future Worker	South of I-88	Surface Soil	Oral	0.5	1
		Outdoor Air	Inhalation	0.0001	0.0001
		Groundwater	Oral	40	40
		Bedrock Groundwater	Oral	<u>0.3</u>	<u>0.3</u>
		Total:		40	40
Future Worker	North of I-88	Surface Soil	Oral	0.4	0.9
		Groundwater	Oral	20	30
		Bedrock Groundwater	Oral	<u>0.3</u>	<u>0.3</u>
		Total:		20	30
	South of Osborne Hollow Road	Surface Soil	Oral	<u>0.03</u>	<u>0.07</u>
Total:		0.03	0.07		
Current/Future Site Visitor	South of I-88	Surface Soil	Oral	0.08	0.3
		Surface Soil	Dermal	0.02	0.2
		Outdoor Air	Inhalation	0.00001	0.00005
		Surface Water	Oral	0.00002	0.0001
		Surface Water	Dermal	0.0002	0.0006
		Sediment	Oral	0.003	0.01
		Sediment	Dermal	<u>0.001</u>	<u>0.01</u>
		Total:		0.1	0.5
	North of I-88	Surface Soil	Oral	0.06	0.3
		Surface Soil	Dermal	0.06	0.6
		Surface Water	Oral	0.00004	0.0001
		Surface Water	Dermal	0.0002	0.0006
		Sediment	Oral	0.03	0.1
		Sediment	Dermal	<u>0.07</u>	<u>0.7</u>
	Total:		0.2	2	
South of Osborne Hollow Road	Surface Soil	Oral	0.005	0.02	
	Surface Soil	Dermal	<u>0.001</u>	<u>0.01</u>	
	Total:		0.006	0.03	
Current/Future Creek Visitor	Osborne Creek	Surface Water	Oral	0.00001	0.00004
		Surface Water	Dermal	0.00002	0.00009
		Sediment	Oral	0.002	0.007
		Sediment	Dermal	<u>--b--</u>	<u>--b--</u>
		Total:		0.002	0.007

(a) Hazard Index is subchronic for child population and chronic for adult population.

(b) Noncarcinogenic chemicals not detected at this exposure point in this medium.

Item	Unit	Quantity	Unit Price	Extension
Work Plans	LS	1	\$40,000.00	\$40,000
Pre-design Investigations + Ecological Study	LS	1	\$100,000.00	\$100,000
Engineering	LS	1	\$125,000.00	\$125,000
Mobilization/Demobilization	LS	1	\$25,000.00	\$25,000
Site Preparation (inc. access to tributaries)	LS	1	\$100,000.00	\$100,000
Clearing	Acre	10	\$4,000.00	\$40,000
Silt Fence Installation	LF	2,000	\$5.00	\$10,000
Straw Bale Installation	LF	2,000	\$5.00	\$10,000
Hazardous Soil Transportation & Disposal	CY	22,500	\$540.00	\$12,150,000
Excavate & Load Trucks	CY	49,000	\$10.00	\$490,000
PCB Soil Transportation & Disposal	CY	900	\$800.00	\$720,000
Nonhazardous Soil Transportation & Disposal	CY	25,000	\$60.00	\$1,500,000
Backfill for Excavated Areas (c)	CY	49,900	\$20.00	\$998,000
Re-establish Wetland, North of I-88	LS	1	\$25,000.00	\$25,000
Excavate & Dispose Sediments from Tributaries	CY	1,900	\$125.00	\$237,500
Backfill Tributaries w/ Riprap & Sediment	CY	1,900	\$40.00	\$76,000
Top Soil	CY	3,900	\$25.00	\$97,500
Seed and Mulch	Acre	12	\$3,000.00	\$36,000
Surveying	LS	1	\$40,000.00	\$40,000
Confirmatory Analysis	EA	300	\$1,000.00	\$300,000
Geotechnical Testing	LS	1	\$40,000.00	\$40,000
Construction Oversight	Month	6	\$45,000.00	\$270,000
CAPITAL COST			TOTAL	\$17,430,000
Total Annual O&M Cost ¹				\$0
Alternative SS-3				\$17,430,000
TOTAL NET PRESENT WORTH				\$17,430,000

¹ No operation and maintenance costs associated with soil and sediment anticipated for this alternative. From FS Report Table 4-1 prepared by ESC.

Table 10-2 Cost Estimate for Selected Groundwater Remedy, Alternative GW-3

Item	Unit	Quantity	Unit Price	Extension
Pre-design Investigations	LS	1	\$50,000.00	\$50,000
Engineering	LS	1	\$180,000.00	\$180,000
Treatment System and Building	LS	1	\$825,000.00	\$825,000
Extraction Well Network	EA	10	\$7,500.00	\$75,000
Permitting	LS	1	\$30,000.00	\$30,000
Construction Oversight	LS	1	\$87,000.00	\$87,000
CAPITAL COST			TOTAL	\$1,247,000
Total Annual O&M Monitoring Cost ¹				\$137,000
Alternative GW-3 TOTAL NET PRESENT WORTH				\$2,947,000

¹ Includes quarterly sampling and select analysis of 4 resident wells and 4 select onsite wells.

From FS Report Table 4-7 prepared by ESC.

Exhibit B

Appendix B
To Consent Decree
in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site
STATEMENT of WORK

STATEMENT OF WORK

Tri-Cities Barrel Superfund Site

I. WORK TO BE PERFORMED

The objectives of the work (hereinafter "Work," as defined in Section IV of the Consent Decree (the "Consent Decree") to which this Statement of Work is attached) to be conducted at the Tri-Cities Barrel Superfund Site (Site) are to:

- restore the soil at the Site to levels which would allow for unrestricted residential/agricultural use;
- reduce and to the extent possible eliminate, contaminant leaching to groundwater;
- mitigate the migration of contaminated groundwater;
- restore groundwater quality to levels which meet state and federal drinking-water standards; and
- prevent human contact with contaminated soils, sediments, and groundwater.

These objectives are expected to be met through the implementation of the remedy selected in the Environmental Protection Agency's (EPA's) March 31, 2000 Record of Decision (ROD) for the Site, attached as **Appendix A** to the Consent Decree. The major components of the selected remedy include the following two Remedial Work Elements:

Remedial Work Element I

- Excavation and/or dredging of approximately 50,000 cubic yards of contaminated unsaturated soil and sediments exceeding soil/sediment cleanup objectives. For those soils contaminated with semi-volatile organic compounds, pesticides, and metals, the preliminary remediation goals (PRGs defined in Tri-Cities Barrel ROD, March 2000) will be used to define the limits of the excavation. For those soils with PCBs and/or volatile organic compounds exceeding New York State Department of Environmental Conservation's (NYSDEC's) Technical and Administrative Guidance Memorandum No. 94-HWR-4046 (TAGM) objectives, the respective TAGM objectives will be used to define the limits of the excavation. The depth of soil excavation will be limited to the top of the groundwater table. Sediments exceeding NYSDEC's sediment criteria (*Technical Guidance for Screening Contaminated Sediments*, January 1999) will be excavated/dredged;
- All excavated/dredged sediments will be dewatered, as necessary;
- Each excavated area, except the "man-made" pond north of Interstate 88, will be backfilled (to promote positive drainage) with clean imported fill from an off-site location, covered with topsoil, then seeded with grass. All excavated/dredged material will be characterized and transported for treatment/disposal at an off-site Resource Conservation and Recovery Act (RCRA)- and/or Toxic Substances Control Act (TSCA)-compliant facility, as appropriate. The characteristics of a hazardous waste will be used to determine if any site soil would be considered a hazardous waste after excavation;

- Restoration of any wetlands impacted by remedial activities. The restored wetlands will require routine inspection for several years to ensure adequate survival of the planted vegetation; and
- Preparation of a supplement to the Stage 1A Cultural Resources Survey report for the Eastern Tributary, and Stage 1B Cultural Resources Survey for the Site to comply with the provision of the National Historic Preservation Act, 16 U.S.C. § 470.

Remedial Work Element II

- Extraction of contaminated groundwater utilizing a network of recovery wells, and treatment of the extracted groundwater (by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies, or other appropriate treatment), followed by discharge to surface water;
- Implementation of institutional controls (the placement of deed restrictions prohibiting the installation and use of groundwater wells at the Site until groundwater cleanup standards are achieved);
- Continued operation and maintenance of the groundwater extraction/treatment system until cleanup standards are achieved; and
- Long-term monitoring of site groundwater, sediments, if necessary, and selected residential wells.

The Work to be performed under the Consent Decree shall include, but shall not be limited to, the following:

- A. Pre-remedial design (pre-RD) activities associated with Remedial Work Elements I and II;
- B. Remedial design (RD) activities associated with Remedial Work Elements I and II;
- C. Implementation of the remedial action (RA) for Remedial Work Elements I and II; and
- D. Monitoring related to Remedial Work Element II.

II. PERFORMANCE STANDARDS

Performance Standards are the cleanup standards and other measures to achieve the goals of the Remedial Action.

The remedy shall comply with all Applicable or Relevant and Appropriate Requirements (ARARs) as set forth herein and in the ROD. Accordingly, the remedy will eliminate and reduce the risk to human health and the environment at the Site.

The groundwater extraction/treatment system will reduce or minimize the migration of impacted groundwater from the contaminated soil in the saturated zone and restore the aquifer to drinking water standards, as set forth in the ROD.

The excavation and/or dredging of approximately 50,000 cubic yards of unsaturated soil and sediments exceeding soil/sediment cleanup objectives will eliminate human and environmental contact, and uptake by vegetation, reduce or minimize the migration of contaminated soil sediment and minimize impact to fish and other wildlife. An abbreviated ecological study will be conducted during the pre-RD activities in the site tributaries and the floodplain area. The following three criteria will be utilized to assess the abbreviated ecological study: bioavailability, mobility and relationship to the Sediment Guidance Criteria of the contaminants. The results of the abbreviated ecological study will determine if and/or to what extent the sediments in the tributary and the floodplain would require excavation.

The excavation/dredging of the sediment exceeding sediment cleanup objectives will reduce or minimize the migration of contaminated sediment and minimize impact to fish and other wildlife.

Reduction of surface water impacts will be provided through both source control and groundwater extraction and treatment.

III. PROJECT SUPERVISION/MANAGEMENT, PROJECT COORDINATOR

The pre-RD, RD, RA, monitoring, and any other activities performed will be under the direction and supervision of a qualified New York State-licensed professional engineer (hereinafter, Supervising Contractor) and will meet any and all requirements of applicable federal, State and local laws. Within **fifteen (15) days** of the lodging of the Consent Decree, the Settling Defendants (as defined in Section I of the Consent Decree) shall notify EPA and the NYSDEC, in writing, of the names, titles, and qualifications of the Supervising Contractor proposed to be used in the development and implementation of the work to be performed. Selection of any such engineer, contractor, or subcontractor shall be subject to approval by the EPA.

IV. PRE-REMEDIAL DESIGN ACTIVITIES

The pre-RD activities to be performed in the implementation of the selected remedy for the Site include the following:

- A. Collect soil and sediment samples to define the excavation boundaries of the contaminated soil and sediment exceeding cleanup objectives. These efforts will focus on filling data gaps corresponding to existing RI data.
- B. Prepare and implement a Wetland Mitigation Plan to determine possible measures to mitigate wetland loss. The Wetland Mitigation Plan shall outline actions to be taken to avoid disruption of wetlands, minimize impacts to wetlands, and/or compensate (replacement) for wetlands potentially affected by remedial activities associated with the Site. The Wetland Mitigation Plan shall include, but shall not

be limited to, a depiction of the wetland boundaries identified by the delineation and a description of major plant communities, soil type(s), and hydrology, with the results clearly plotted on a Site map;

- C. Revise the Stage 1A Cultural Resources Survey report prepared during the Remedial Investigation and prepare a Stage 1B Cultural Resources Survey report for compliance with the National Historic Preservation Act, 16 U.S.C. § 470;
- D. Perform a hydrogeologic investigation to collect hydrogeologic and chemical data from relevant monitoring wells necessary for the design of the groundwater extraction/treatment system;
- E. Perform an evaluation of the impacts the RA will have on the 100-year and 500-year flood plain;
- F. Conduct an abbreviated ecological study to determine if and/or to what extent excavation of contaminated sediments will be beneficial for the east and west tributaries; and
- G. The Settling Defendants may perform a monitored natural attenuation (MNA) study to evaluate whether or not natural attenuation of the groundwater is occurring at the Site, provided that such study does not interfere with or delay the pre-RD, RD, and RA schedules of the selected remedy in the ROD as set forth in this SOW. If, based upon the MNA study, EPA determines that natural attenuation of the groundwater is occurring, then EPA will consider amending the ROD accordingly. If the ROD is so amended, the Consent Decree and SOW will require conforming modifications. No action taken by EPA pursuant to this Section of the SOW shall be subject to dispute resolution or judicial review.

V. REMEDIAL DESIGN ACTIVITIES

The RD activities to be performed in the implementation of the selected remedy for the Site include the following:

- A. Develop plans and specifications for the excavation of contaminated soil and sediment exceeding cleanup objectives.
- B. Develop a plan for the off-site treatment and/or disposal of contaminated soil and sediment exceeding cleanup objectives.
- C. Design the recontouring and grading for the excavated and backfilled areas.
- D. Design the groundwater extraction/treatment system as outlined in the ROD. The groundwater extraction/treatment system design shall include, at a minimum:
 - 1. Provision for the extraction of contaminated groundwater utilizing a network of recovery wells;
 - 2. Conducting treatability studies for the on-site treatment of the contaminated

groundwater, if necessary;

3. A final determination of the treatment process for groundwater. The conceptual treatment process outlined in the ROD includes by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies (or other appropriate treatment);
 4. A determination of the exact number, depth, pumping rates, and location of extraction wells; and
 5. A determination of the discharge option for treated groundwater.
- E. If the Settling Defendants elects to perform the MNA study, then the Settling Defendants shall submit a MNA Plan.
- F. Performance of air monitoring during construction activities at the Site to ensure that air emissions resulting from construction activities meet applicable or relevant and appropriate air emission requirements.
- G. Provisions for long-term groundwater quality monitoring to evaluate the effectiveness of the remedial action.
- H. Preparation of a plan for establishing institutional controls (i.e., deed restrictions) designed to prevent direct contact with contaminated groundwater and prohibit the installation and use of groundwater wells at the Site until groundwater cleanup standards are achieved.

VI. REMEDIAL DESIGN WORK PLAN

Within **sixty (60) days** of the date on which Settling Defendants receive written notification from EPA of the approval of the Supervising Contractor, Settling Defendants shall submit a detailed Remedial Design Work Plan for the design of the selected remedy to EPA for review and approval. The Remedial Design Work Plan shall provide for the collection of all data needed for performing the pre-RD and the necessary RD activities.

The Work Plan shall comply with CERCLA and relevant EPA guidance, including the EPA document entitled *Guidance on Oversight of Remedial Designs and Remedial Actions performed by Potentially Responsible Parties*, (OSWER directive 9355.5-01, EPA/540/g-90-001), dated April 1990 and shall be in conformance, *inter alia*, with the *Superfund Remedial Design and Remedial Action Guidance*, dated June 1986, and other EPA guidance documents.

A Field Sampling Plan (FSP), Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HSP) approved by EPA for the Site RI/FS may be utilized with appropriate addenda or revisions to these plans, as necessary, to accomplish the pre-RD and RD tasks. The Remedial Design Work Plan shall include plans and schedules for implementation of pre-RD and RD tasks, and shall include, but not be limited to, the following items and as appropriate, the FSP Addendum, QAPP Addendum, and HSP Addendum shall comply with the following requirements:

- A. Quality Assurance/Quality Control Project Plan

A Quality Assurance/Quality Control Project Plan (QAPP) shall be prepared consistent with EPA *Requirements for Quality Assurance Project Plans for Environmental Data Operations*, (EPA QA/R-5, October 1998), and shall include the following elements:

1. A detailed description of the sampling, analysis, and monitoring that shall be performed during the RD phase, consistent with this SOW, the ROD, and the Consent Decree. At a minimum, the QAPP shall provide the following:
 - a. A plan for the performance of air monitoring, including air monitoring prior to and during construction at the Site, as necessary, to ensure that any air emissions resulting from the excavation, loading onto trucks, and transportation meet applicable or relevant and appropriate air emission requirements;
 - b. A plan for defining specific areas of soil and sediment excavation; and
 - c. A plan for conducting treatability studies for the on-site treatment of the contaminated groundwater, if necessary.
2. All sampling, analysis, data assessment, and monitoring shall be performed in accordance with the *Region II CERCLA Quality Assurance Manual*, Revision 1, EPA Region 2, dated October 1989, and any updates thereto, or an alternate EPA-approved test method, and the guidelines set forth in the Consent Decree. All testing methods and procedures shall be fully documented and referenced to established methods or standards.
3. The QAPP shall also specifically include the following items:
 - a. An explanation of the way(s) the sampling, analysis, and monitoring will produce data for the RD phase;
 - b. A detailed description of the sampling, analysis, and testing to be performed, including sampling methods, analytical and testing methods, sampling locations and frequency of sampling;
 - c. A map depicting sampling locations; and
 - d. A schedule for performance of specific tasks.
4. In the event that additional sampling locations and analyses are utilized or required, Settling Defendants shall submit to EPA an addendum to the QAPP for approval by EPA.
5. The QAPP shall address the following elements:

Project Management

- a. Title and Approval Sheet
- b. Table of Contents and Document Control Format
- c. Distribution List
- d. Project/Task Organization and Schedule
- e. Problem Definition/Background
- f. Project/Task Description
- g. Quality Objectives and Criteria for Measurement Data
- h. Special Training Requirements/Certification
- i. Documentation and Records

Measurement/Data Acquisition

- j. Sampling Process Design
- k. Sampling Methods Requirements
- l. Sample Handling and Custody Requirements
- m. Analytical Methods Requirements
- n. Quality Control Requirements
- o. Instrument/Equipment Testing, Inspection, and Maintenance Requirements
- p. Instrument Calibration and Frequency
- q. Inspection/Acceptance Requirements for Supplies and Consumables
- r. Data Acquisition Requirements (Non-Direct Measurements)
- s. Data Management

Assessment/Oversight

- t. Assessments and Response Actions
- u. Reports to Management

Data Validation and Usability

- v. Data Review, Validation, and Verification Requirements
- w. Validation and Verification Methods
- x. Reconciliation with Data Quality Objectives

6. In order to provide quality assurance and maintain quality control with respect to all samples to be collected, Settling Defendants shall ensure the following:

- a. Quality assurance and chain-of-custody procedures shall be performed in accordance with standard EPA protocol and guidance, including the *Region II CERCLA Quality Assurance Manual, Revision 1*, EPA Region 2, dated October 1989, and any updates thereto, and the guidelines set forth in this Consent Decree.
- b. The laboratory to be used must be specified. If the laboratory

participates in the Contract Laboratory Program (CLP) for the analysis to be performed for this investigation, then project specific Performance Evaluation(PE) samples will not be required, as CLP laboratories run EPA PEs on a quarterly basis. If the proposed laboratory does not participate in the CLP for the analyses required, PE samples must be analyzed to demonstrate the capability to conduct the required analysis prior to being approved for use. Once a non-CLP laboratory has been selected, the laboratory should submit a copy of their Laboratory Quality Assurance Program Plan to EPA for review and approval.

For any analytical work performed, including that done in a fixed laboratory, in a mobile laboratory, or in on-site screening analyses, Settling Defendants must submit to EPA a "Non-CLP Superfund Analytical Services Tracking System" form for each non-CLP laboratory utilized during a sampling event, within thirty (30) days after acceptance of the analytical results. Upon completion, such documents shall be submitted to the EPA Project Coordinator, with a copy of the form and transmittal letter to:

Regional Sample Control Center Coordinator
EPA Region 2
Division of Environmental Science & Assessment
2890 Woodbridge Avenue, Bldg. 209, MS-215
Edison, NJ 08837

- c. The laboratory utilized for analyses of samples must perform all analyses according to accepted EPA methods as documented in the *Contract Lab Program Statement of Work for Organic Analysis*, (OLM04.2) or the latest revision, and the *Contract Lab Program Statement of Work for Inorganic Analysis*, (ILM04.0) or the latest revision, or other EPA approved methods.
- d. Unless indicated otherwise in the approved QAPP, all data will be validated upon receipt from the laboratory.
- e. Submission of the validation package (checklist, report, and Form I containing the final data) to EPA, prepared in accordance with the provisions of Subparagraph g., below.
- f. Assurance that all analytical data that are validated as required by the QAPP are validated according to the procedures stated in the *EPA Region II Contract Lab Program Organics Data Review and Preliminary Review* (SOP #HW-6, Revision 11), dated June 1996, or the latest revision, and the *Evaluation of Metals Data for the Contract Laboratory Program* (SOP #HW-2, Revision 11), dated January 1992 or the latest revision, or EPA-approved equivalent procedures.

Region 2 Standard Operating Procedures are available at:
<http://www.epa.gov/region02/smb/sops.htm>

- g. Unless indicated otherwise in the approved QAPP, Settling Defendants shall require deliverables equivalent to CLP data packages from the laboratory for analytical data. Upon the EPA's request, Settling Defendants shall submit to the EPA the full documentation (including raw data) for this analytical data. EPA reserves the right to perform an independent data validation, data validation check, or qualification check on generated data.
- h. Settling Defendants shall insert a provision in its contract(s) with the laboratory utilized for analyses of samples, which will require granting access to EPA personnel and authorized representatives of the EPA for the purpose of ensuring the accuracy of laboratory results related to the Site.

B. Health and Safety Contingency Plan

A Health and Safety Contingency Plan (HSCP) for all activities, except the pre-RD sampling activities, performed under the Consent Decree shall be developed by Settling Defendants to address the protection of public health and safety and the response to contingencies that could impact public health, safety, and the environment. The EPA-approved HSCP during the implementation of the RI may be utilized for the pre-RD efforts with appropriate revisions if necessary. The HSCP shall satisfy the requirements of the *Occupational Safety and Health Guidance for Hazardous Waste Site Activities*, (June 1990, DHHS NIOSH Publication No. 90-117), and the Occupational Safety and Health Administration, U.S. Department of Labor (OSHA) requirements cited below:

- 1. All site activities shall be performed in such a manner as to ensure the safety and health of personnel so engaged. All Site activities shall be conducted in accordance with all pertinent general industry (29 CFR Part 1910) and construction (29 CFR Part 1926) OSHA standards, and EPA's *Standards Operating Safety Guides* (OSWER, 1988), as well as any other applicable State and municipal codes or ordinances. All Site activities shall comply with those requirements set forth in OSHA's final rule entitled *Hazardous Waste Operations and Emergency Response*, 29 CFR §1910.120, Subpart H.
- 2. The HSCP shall include, at a minimum, the following items:
 - a. Plans showing the location and layout of any temporary facilities to be constructed on or near the Site;
 - b. Description of the known hazards and evaluation of the risks associated with the Site and the potential health impacts related to the

Site activities;

- c. List of key personnel and alternates responsible for Site safety, response operations, and protection of the public;
- d. Description of levels of protection (based on specified standards) to be utilized by all personnel;
- e. Delineation of Work, decontamination, and safe zones, and definitions of the movement of zones;
- f. Description of decontamination procedures for personnel and equipment, and handling and removal of disposable clothing or equipment;
- g. Incidental emergency procedures which address emergency care for personnel injuries and exposure problems, and containment measures. These procedures shall include evacuation routes, internal and external communications procedures for response to fire, explosion, or other emergencies, the name of the nearest hospital and the route to that hospital. Local agencies with the capability to respond to emergencies shall be identified and their capabilities shall be described. A description of the procedures for informing the community of these measures shall be outlined;
- h. Description of the personnel medical surveillance program in effect;
- i. Description of monitoring for personnel safety;
- j. Description of routine and special personnel training programs; and
- k. Description of an air monitoring program to determine concentrations of airborne contaminants to which workers on-Site and persons near the Site boundary may be exposed. The results of work-zone air monitoring may be used as a trigger for implementing Site-boundary air monitoring.

C. Description of Pre-Remedial Design and Remedial Design Tasks

The Remedial Design Work Plan shall include a detailed description of all other pre-RD and RD tasks (see **Sections IV. and V., above**) to be performed, along with a schedule for performance of those tasks. Such tasks shall include, at a minimum, the preparation of the RD Reports required by **Section VIII., below**, and tasks necessary to ensure compliance with ARARs, as outlined herein and in the ROD. The Remedial Design Work Plan shall include an outline of the requirements of the RD Reports.

1. Access and Other Approvals

The Remedial Design Work Plan shall include descriptions of any approvals and institutional controls which Settling Defendants will need to comply with the Consent Decree, with the exception of those approvals needed from the EPA. This description shall detail how such approvals will be sought, and shall include a schedule for obtaining all necessary approvals. Such approvals shall include the consent of owners of property at or near the Site regarding access to conduct sampling, monitoring or other activities, in accordance with the Consent Decree, and approval from any off-site facility accepting waste materials from the Site. This description shall be amended if subsequent approvals are required.

2. RD Schedules, Draft Schedule for Remedial Action, and Monitoring

The Remedial Design Work Plan shall include a schedule covering all pre-RD and RD activities, including but not limited to, the submittal of the RD Reports listed in **Section VIII., below**. The Remedial Design Work Plan shall also include a draft schedule for remedial action ("RA") and monitoring activities. The schedule shall be in the form of a task/subtask activity bar chart or critical path method sequence of events. The schedules are dependent on EPA approval of project documents. The schedules may be extended if EPA agrees that weather conditions prevent implementation of field activities.

3. The draft schedule for RA and monitoring activities may be revised during the remedial process, subject to the EPA's approval (see **Sections VIII. A. 4. and VIII. C. 8., below**).
4. The RD schedule shall provide for the completion and submittal to EPA of the Final Design Report for Remedial Work Element I within **eight (8) months** of EPA's written notification of approval of the Remedial Design Work Plan. The RD schedule shall also provide for the completion and submittal to EPA of the Final Design Report for Remedial Work Element II within **twenty-eight (28) months** of EPA's notification of approval of the Remedial Design Work Plan.
5. The draft schedule for the RA shall provide for the completion of the implementation of Remedial Work Element I within **eight (8) months** of EPA approval of the RA Work Plan (RAWP) for Remedial Work Element I. The draft schedule for the RA shall also provide for the completion of construction of Remedial Work Element II within **twelve (12) months** of EPA approval of the RAWP for Remedial Work Element II.

VII. APPROVAL OF REMEDIAL DESIGN WORK PLAN

EPA will either approve the Remedial Design Work Plan, or will require modification of such plan, in accordance with the procedures set forth in the Consent Decree. Settling Defendants shall implement the EPA-approved Remedial Design Work Plan in accordance with the schedules contained therein.

VIII. REMEDIAL DESIGN

Settling Defendants shall perform the pre-RD and RD activities in conformance with the Remedial Design Work Plan approved by the EPA and within the time frames specified in the RD schedule contained therein. The RD shall include the preparation of a pre-final RD Report (95% completion) for Remedial Work Element I, the preparation of an Intermediate RD Report (35% completion) and pre-final RD Report (95% completion) for Remedial Work Element II, and separate Final RD Reports (100% completion) for Remedial Work Elements I and II.

If Settling Defendants propose an industry standard groundwater collection/treatment system, and if EPA agrees with such proposal, then EPA may waive the requirement for the Intermediate RD Report (35% completion) for Remedial Work Element II.

A. Intermediate, Pre-Final, and Final RD Reports

The reports shall be submitted to the EPA and NYSDEC in accordance with the schedule set forth in the approved Remedial Design Work Plan. Each RD report shall include a discussion of the design criteria and objectives, with emphasis on the capacity and ability to meet design objectives successfully. Each report shall also include the plans and specifications that have been developed at that point in time, along with a design analysis. The design analysis shall provide the rationale for the plans and specifications, including results of all sampling and testing performed, supporting calculations and documentation of how these plans and specifications will meet the requirements of the ROD and shall provide a discussion of any impacts these findings may have on the RD. Each of the design reports for Remedial Work Elements I and II shall also include the following items (to the extent that work has been performed regarding the items), as appropriate:

1. A technical specification for photographic documentation of the remedial construction work;
2. A discussion of the manner in which the RA will achieve the Performance Standards;
3. A plan for establishing institutional controls (i.e., deed restrictions on groundwater well use restrictions) designed to prevent direct contact with contaminated groundwater and control groundwater well use till the drinking

water standards are met; and

4. A draft schedule for remedial action activities, and a preliminary schedule for monitoring activities.

B. Additional Intermediate RD Report Requirements

The Intermediate RD Report (35% completion) for Remedial Work Element II shall include, as appropriate:

1. Preliminary drawings showing general arrangement of all work proposed;
2. A discussion of the manner in which the pre-design components detailed in **Section IV., above**, for the Remedial Action will be considered;
3. Draft Piping & Instrumentation diagrams, as necessary, showing all equipment and control systems;
4. Table of Contents for the specifications, including a listing of items from the Construction Specifications Institute master format that are expected to be included in the construction specifications. This master format is presented in the Construction Specifications Institute's *Manual of Practice*, 1985 edition, available from the Construction Specifications Institute, 601 Madison Street, Alexandria, Virginia 22314;
5. Engineering plans representing an accurate identification of existing Site conditions and an illustration of the work proposed. Typical items to be provided on such drawings include, at a minimum, the following:
 - a. Title sheet including at least the title of the project, a key map, the name of the designer, date prepared, sheet index, and EPA/NYSDEC Project identification;
 - b. All property data including owners of record for all properties within 200 feet of the Site;
 - c. A Site survey including the distance and bearing of all property lines that identify and define the project Site;
 - d. All easements, rights-of-way, and reservations;
 - e. All buildings, structures, wells, facilities, and equipment (existing and proposed) if any;
 - f. A topographic survey, including existing and proposed contours and spot elevations for all areas that will be affected by the remedial activities, based on U.S. Coast and Geodetic Survey data;

- g. All utilities, existing and proposed;
 - h. Location and identification of all significant natural features including, *inter alia*, wooded areas, water courses, wetlands, flood hazard areas, and depressions;
 - i. Flood hazard data and 100-year and 500-year flood plain delineation;
 - j. North arrow, scale, sheet numbers and the person responsible for preparing each sheet;
 - k. Decontamination areas, staging areas, borrow areas and stockpiling areas;
 - l. Miscellaneous detail sheets;
 - m. Definitions of all symbols and abbreviations; and
 - n. A specification for a sign at the site. The sign should describe the project, the name of the contractor performing the RD/RA work or the PRP Group, state that the project is being performed under EPA oversight, and provide EPA contact for further information.
- 6. Survey work that is appropriately marked, recorded and interpreted for mapping, property easements and design completion;
 - 7. Drawings of all proposed equipment, improvements, details and all other construction and installation items to be developed in accordance with the current standards and guidelines of the New York State Board of Professional Engineers and Land Surveyors. Drawings shall be of standard size, approximately 24" x 36". A list of drawing sheet titles will be provided;
 - 8. Engineering plans (as necessary) indicating, at a minimum, the following:
 - a. Site security measures;
 - b. Roadways; and
 - c. Electrical, mechanical, structural, and HVAC drawings, if required.
 - 9. Any value engineering proposals.

C. Additional Pre-Final/Final RD Report Requirements

The pre-final and final RD reports for Remedial Work Elements I and II shall also include, as appropriate:

1. Final plans and specifications;
2. An O&M Plan. The O&M Plan shall be prepared in accordance with the *Superfund RD and RA Guidance*, dated September 1986, OSWER Directive 9355.0-4A. The O&M Plan shall include, but not be limited to, the following:
 - a. a description of the personnel requirements, responsibilities, and duties, including a discussion for training, lines of authority;
 - b. a description of all sampling, analysis, and monitoring to be conducted under the Consent Decree; and
 - c. a description of all monitoring requirements related to the groundwater extraction and treatment system.
3. A Construction Quality Assurance Project Plan (CQAPP), which shall detail the approach to quality assurance during construction activities at the Site, shall specify a quality assurance official ("QA Official"), independent of the Supervising Contractor, to conduct a quality assurance program during the construction phase of the project. The CQAPP shall address sampling, analysis, and monitoring to be performed during the remedial construction phase of the Work. Quality assurance items to be addressed include, at a minimum, the following:
 - a. Inspection and certification of the Work;
 - b. Measurement and daily logging;
 - c. Field performance and testing;
 - d. As-built drawings and logs;
 - e. Testing of the Work to establish whether the design specifications are attained; and
 - f. Testing methods appropriate to remedial construction including, at a minimum, testing of remedial construction materials, as necessary, prior to use, and testing of constructed remedial components to ensure that they meet design specifications.
4. A report describing those efforts made to secure access and institutional controls and obtain other approvals and the results of those efforts (**see Section VI. C., above**). Legal descriptions of property or easements to be acquired shall be provided.
5. A final engineer's construction cost estimate, which may be provided under separate cover concurrent with submittal of the Final RD Report.

6. A plan for implementation of construction and construction oversight.
7. A method for selection of the construction contractor(s).
8. A proposed schedule for implementing all of the above.

IX. APPROVAL OF RD REPORTS

- A. EPA will review and comment on each of the RD Reports for Remedial Work Elements I and II. Settling Defendants shall make those changes required by the EPA's comments/modifications in accordance with the procedures set forth in the Consent Decree.
- B. Changes required by EPA's comments on the Remedial Work Element I pre-Final RD Report shall be made in the Remedial Work Element I Final RD Report. Changes required by EPA's comments on the Remedial Work Element II Intermediate RD Report shall be made in the Remedial Work Element II pre-Final RD Report. Changes required by EPA's comments on the Remedial Work Element II pre-Final RD Report shall be made in the Remedial Work Element II Final RD Report.
- C. EPA will either approve the Final RD Reports or require modification of each, in accordance with the procedures set forth in the Consent Decree. The EPA-approved Final RD Reports shall also be referred to as the "Final Design Report I and Final Design Report II" for Remedial Work Elements I and II, respectively.

X. REMEDIAL ACTION

- A. Within **sixty (60) days** after approval of the Final Design Report by EPA for a given Remedial Work Element, Settling Defendants shall award a contract for the RA for the respective Remedial Work Element.
- B. Within **forty-five (45) days** of the award of the RA contract for a given Remedial Work Element, Settling Defendants shall submit an RAWP for remedial construction activities for the respective Remedial Work Element. Each RAWP shall include, at a minimum, the following items:
 1. If applicable, a "Request for Modification of Approved Final RD Report," including any requests for modification of the approved Final Design Report, based on construction methods identified by the contractor(s), or proposed modification of the construction schedule developed under **Section VIII., above**, or any other requests for modification, subject to EPA approval in its sole discretion.
 2. A Site Management Plan (SMP) for RA activities. The SMP for RA shall include, at a minimum, the following items:

- a. Tentative identification of the RA Project Team (including, but not limited to the Construction Contractor).
- b. A final schedule for the completion of the RA and all major tasks therein, as well as a schedule for completion of required plans, and other deliverables (see Section VI. C., above).
- c. Methodology for implementation of the Construction Quality Assurance Plan (developed during the RD).
- d. Methodology for implementation of the O&M Plan.
- e. Procedures and plans for the decontamination of construction equipment and the disposal of contaminated materials.
- f. Methods for satisfying permitting requirements.
- g. Discussion of the methods by which construction operations shall proceed. Discussion shall include the following:
 - (1) Timing of and manner in which activities shall be sequenced;
 - (2) Preparation of the Site including security, utilities, decontamination facilities, construction trailers, and equipment storage;
 - (3) Coordination of construction activities;
 - (4) Site maintenance during the RA;
 - (5) Coordination with local authorities regarding contingency planning and potential traffic obstruction; and
 - (6) Entry and access to the Site during the construction period(s) and periods of inactivity, including provisions for decontamination, erosion control, and dust control.
- h. Discussion of construction quality control, including:
 - (1) Methods of performing the quality control inspections, including when inspections should be made and what to look for;
 - (2) Control testing procedures for each specific test. This includes information which authenticates that personnel and laboratories performing the tests are qualified and the equipment and procedures to be used comply with applicable standards;

- (3) Procedures for scheduling and managing submittals, including those of subcontractors, off-Site fabricators, suppliers, and purchasing agents; and
 - (4) Reporting procedures including frequency of reports and report formats.
3. A Quality Assurance/Quality Control Project Plan (QAPP) shall be prepared consistent with EPA *Requirements for Quality Assurance Project Plans for Environmental Data Operations*, (EPA QA/R-5, October 1998) (see **Section VI. A., above**, for these requirements).
4. An updated HSCP for the Remedial Construction phase of the Work (see **Section VI. B., above**, for these requirements). The HSCP shall address health and safety measures to be implemented and observed by construction personnel, as well as recommended health and safety measures for the adjacent community and general public, together with a description of the program for informing the community of these recommendations. The HSCP shall include the name of the person responsible in the event of an emergency situation, as well as the necessary procedures that must be taken in the event of an emergency, as outlined in the Consent Decree.

C. Approval of Remedial Action Work Plan

EPA will either approve the RAWP for a given Remedial Work Element or require modification of it in accordance with the procedures set forth in the Consent Decree.

D. Performance of Remedial Construction

1. Upon the EPA's written approval of the RAWP for a given Remedial Work Element, Settling Defendants shall initiate the remedial construction in accordance with the RAWP and the approved Final Design Report for the given Remedial Work Element, which includes the approved remedial construction schedule.
2. During performance of the remedial construction, Settling Defendants may identify and request EPA approval for field changes to the approved RAWP for a given Remedial Work Element, Final Design Report and construction schedule, as necessary, to complete the work. EPA will either approve, disapprove, or require modification of any requests for field changes in accordance with the procedures set forth in the Consent Decree.

E. Operation and Maintenance Manual

1. No later than **forty-five (45) days** prior to the scheduled completion date of the remedial construction phase of Remedial Work Element II, Settling

Defendants shall submit to the EPA an O&M Plan. The O&M Plan shall conform to the EPA guidelines contained in *Considerations for Preparation of Operation and Maintenance Manuals*, EPA 68-01-0341.

2. The O&M Plan shall include, at a minimum, the following:
 - a. An amended QAPP consistent with **Section VI.A., above**.
 - b. An HSCP for RA activities consistent with **Section VI.B., above**.
 - c. A discussion of potential operating problems and remedies for such problems.
 - d. A discussion of alternative procedures in the event of system failure.
 - e. A schedule for equipment replacement.
 - f. An RA schedule that identifies the frequency of RA activities and the timing of those activities.
3. EPA will either approve the O&M Plan or require modification of it, in accordance with the procedures set forth in the Consent Decree.
4. Proposed modifications to the approved O&M Plan may be submitted to EPA for consideration upon completion of construction or thereafter if Settling Defendants can demonstrate that such modifications would enhance and/or maintain the environmental monitoring programs.
5. EPA will either approve, disapprove, or require modifications of the request for modification of the O&M Plan in accordance with the procedures set forth in the Consent Decree.

XI. PRE-FINAL INSPECTIONS, REMEDIAL ACTION REPORTS, NOTICE OF CONSTRUCTION COMPLETION

- A. At least **fourteen (14) days** prior to the completion of construction of (a) Remedial Work Element I (the excavation/dredging of the contaminated soil and sediment exceeding soil/sediment cleanup objectives), and (b) Remedial Work Element II (the groundwater extraction/treatment element of the Remedial Action), Settling Defendants and their contractor(s) shall be available to accompany EPA personnel and/or their representatives on a pre-final inspection for each Remedial Work Element. Each pre-final inspection shall consist of a walkover of the Site to determine the completeness of the construction of each Remedial Work Element and its consistency with the RD Reports, the Consent Decree, the ROD and applicable Federal and State laws, rules, and regulations.

B. Following each pre-final inspection, EPA will either specify the necessary corrective measures to the construction phase of the Remedial Action, as appropriate, or determine that construction is complete. If EPA requires corrective measures to either Remedial Work Element, Settling Defendants shall undertake the corrective measures according to a schedule approved by EPA. Within **fourteen (14) days** after completion of the construction of the corrective measures, Settling Defendants and their contractor(s) shall be available to accompany EPA personnel or their representatives on an inspection as provided for in the preceding paragraph. Said inspection will be followed by further directions and/or notifications by EPA as provided above in this paragraph.

C. For each Remedial Work Element set forth in **Subsection A., above**, Settling Defendants shall submit a Draft RA Report within **sixty (60) days** of EPA's determination that construction of the Remedial Work Element is complete as set forth in **Subsection B., above**. These reports shall include the following sections:

1. Introduction

- a. Include a brief description of the location, size, environmental setting, and operational history of the site.
- b. Describe the operations and waste management practices that contributed to contamination of the site.
- c. Describe the regulatory and enforcement history of the site.
- d. Describe the major findings and results of site investigation activities.
- e. Describe prior removal and remedial activities at the site.

2. Background

- a. Summarize requirements specified in the ROD. Include information on the cleanup goals, institutional controls, monitoring requirements, operation and maintenance requirements, and other parameters applicable to the design, construction, operation, and performance of the RA.
- b. Provide additional information regarding the basis for determining the cleanup goals, including planned future land use.
- c. Summarize the RD, including any significant regulatory or technical considerations or events occurring during the preparation of the RD.
- d. Identify and briefly discuss any ROD amendments, explanation of significant differences, or technical impracticability waivers.

3. Construction Activities

- a. Provide a step-by-step summary description of the activities undertaken to construct and implement the RA (*e.g.*, mobilization and site preparatory work; construction of the treatment system; associated site work, such as fencing and surface water collection and control; system operation and monitoring; and sampling activities).
- b. Refer the reader to the Appendices for characteristics, site conditions, and operating parameters for the system.

4. Chronology of Events

- a. Provide a tabular summary that lists the major events for the Remedial Work Element, and associated dates of those events, starting with ROD signature.
- b. Include significant milestones and dates, such as, remedial design submittal and approval; ROD amendments; mobilization and construction of the remedy; significant operational events such as treatment system, application start-up, monitoring and sampling events, system modifications, operational down time, variances or noncompliance situations, and final shutdown or cessation of operations; final sampling and confirmation-of-performance results; required inspections; demobilization; and completion or startup of post-construction operation & maintenance activities.
- c. For Remedial Work Element II, indicate when cleanup goals are projected to be achieved for the ground water restoration.

5. Performance Standards and Construction Quality Control

- a. Describe the overall performance of the technology in terms of comparison to cleanup goals.
- b. For treatment remedies, identify the quantity of material treated, the strategy used for collecting and analyzing samples, and the overall results from the sampling and analysis effort.
- c. Provide an explanation of the approved construction quality assurance and construction quality control requirements or cite the appropriate reference for this material. Explain any substantial problems or deviations.
- d. Provide an assessment of the performance data quality, including the

overall quality of the analytical data, with a brief discussion of QA/QC procedures followed, use of a QAPP, comparison of analytical data with data quality objectives.

6. Final Inspection and Certifications

- a. Report the results of the various RA contract inspections, and identify noted deficiencies.
- b. Briefly describe adherence to health and safety requirements while implementing the RA. Explain any substantial problems or deviations.
- c. For Remedial Work Element II, summarize details of the institutional controls (*e.g.*, the type of institutional control, who will maintain the control, who will enforce the control).
- d. Describe results of pre-certification inspection.
- e. This section shall include a certification statement, signed by a responsible corporate official of one or more of the Settling Defendants or by the Settling Defendants' Project Coordinator, which states the following:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Continued Operation and Maintenance Activities

- a. For Remedial Work Element II, describe the general activities for post-construction operation and maintenance activities, such as monitoring, site maintenance, and closure activities.
- b. Identify potential problems or concerns with such activities.
- c. For Remedial Work Element II, describe the future ground water restoration activities to meet cleanup goals.

8. Summary of Project Costs

- a. Provide the actual final costs for the project. If actual costs are not available, provide estimated costs.

- b. Provide the costs previously estimated in the ROD for the selected remedy, including, as applicable, RA capital costs, RA operating costs, and number of years of operation. Adjust the estimates to the same dollar basis year as the actual project costs, and provide the index used.
- c. Compare actual RA costs to the adjusted ROD estimates. If outside range of -30 to +50 percent, explain the reasons for differences.
- d. For treatment remedies, calculate unit costs based on the sum of the actual RA capital and RA operating costs divided by the quantity of material treated.
- e. Refer the reader to the Appendix for a detailed breakdown of costs.

9. Observations and Lessons Learned

- a. Provide site-specific observations and lessons learned from the project, highlighting successes and problems encountered and how they were resolved.

10. Contact Information

- a. Provide contact information (names, addresses, phone numbers, and contract/reference data) for the major design and remediation contractors, as applicable.

11. Appendices: Cost and Performance Summary

- a. The specific parameters for documenting cost and performance information are presented in the *Guide to Documenting and Managing Cost and Performance Information for Remediation Projects*, EPA 542-B-98-007.
- b. Identify the matrix characteristics and site conditions that most affected the cost and performance, the corresponding values measured for each characteristic or condition, and the procedures used for measuring those characteristics or conditions. For Remedial Work Element I, these items include the soil type and particle size distribution, environmental setting, media properties, and quantity of soils and sediments excavated for off-site treatment/disposal.
- c. Identify the operating parameters specified by the remediation contractor that most affected the cost and performance, the corresponding values measured for each parameter, and the procedures used for measuring those parameters. For Remedial Work

Element II, these items include system throughput, pumping rate, flow rate, mixing rates, residence time, operating pressure and temperature, moisture content, and pH.

- d. Provide a detailed breakout of the actual RA capital costs, estimated RA operating costs (costs to operate and maintain the water treatment process).
 - e. Provide supplemental information in appendices to the RA Report. These could include a map of the site and operable unit, a schematic of the treatment system, supplemental performance information, and a list of references.
- D. EPA will either approve the Draft Remedial Action Reports, thus making them the Final Remedial Action Report for Remedial Work Element I and the Interim Remedial Action Report for Remedial Work Element II, require modifications of them, and/or require corrective measures to fully and properly implement the Remedial Action(s), in accordance with **Subsection B., above**.

XII. PERFORMANCE OF CONTINUED OPERATION OF THE RA

- A. Upon EPA's approval of the Interim Remedial Action Report for Remedial Work Element II (RWE II) in accordance with **Section XI. D., above**, Settling Defendants shall continue remedial action and monitoring activities in accordance with the approved O&M Plan.
- B. Notice of Completion and Final Remedial Action Report for RWE II
- 1. Within **thirty (30) days** of the date that Settling Defendants conclude that they have met the Performance Standards as specified in the ROD and this SOW for the third consecutive year (or a shorter period if approved by EPA in its sole discretion), or, if Alternative Remedial Strategies are authorized by EPA, within **thirty (30) days** of completion of those strategies, Settling Defendants shall submit to EPA a Notice of Completion and a Final Remedial Action Report
 - 2. EPA will determine whether the RA (including any Alternative Remedial Strategies) has been completed in accordance with the standards, specifications and reports required by the Consent Decree. If EPA determines that they have not been so completed, EPA will notify Settling Defendants in writing of those tasks which must be performed to complete the RA (including any Alternative Remedial Strategies). Settling Defendants shall then implement the specified activities and tasks in accordance with the specifications and schedules established by EPA and shall then submit a further report on the specified activities and tasks and certification signed by

a licensed professional engineer, within **thirty (30) days** after completion of the specified activities and tasks. Any modifications to the Final Report for the RA required by EPA shall be in accordance with the procedures set forth in the Consent Decree.

3. Upon EPA's certification of completion of the RA (including any Alternative Remedial Strategies), Settling Defendants shall perform post-remediation monitoring in accordance with the Post-Remediation Monitoring Plan, as set forth in **Section XIII., below**.

C. Goal for Aquifer Restoration

1. As set forth in the ROD, the Performance Standards for aquifer restoration at the Site are the federal and state Maximum Contaminant Levels ("MCLs") and other criteria for various chemicals, including contaminants detected in the Site groundwater. Settling Defendants shall continue the remedial action related to the groundwater remediation system until the Performance Standards have not been exceeded for a period of three (3) consecutive years, or a shorter period if approved by EPA in its sole discretion.
2. Settling Defendants may petition EPA in writing for authorization to amend the groundwater O&M Plan if, based on the results of groundwater monitoring, Settling Defendants believe that some or all of the Performance Standards specified in the ROD will not be reached in the time period projected in the approved O&M Plan. Settling Defendants shall not submit such a petition until they have performed O&M of the groundwater remediation system for at least three (3) years from the date of EPA's approval of the Interim Remedial Action Report for Remedial Work Element II, as set forth in **Section XI. D., above**, or a shorter period if approved by EPA in its sole discretion.
3. Settling Defendants' petition for authorization to amend the groundwater O&M Plan shall include, at a minimum, the following information, as well as any other information and analyses EPA requests prior to or following submission of the petition:
 - a. a list identifying each Performance Standard that has not been met;
 - b. a description of any changes in the conceptual model for Site contamination since issuance of the ROD, including geological, hydrogeologic, and geochemical characterizations;
 - c. comprehensive groundwater monitoring data relevant to the groundwater remedy implemented;
 - d. an analysis of the performance of the groundwater remedy which

describes the spatial and temporal trends in groundwater contaminant concentrations within the groundwater plume (*e.g.*, whether contaminant migration has been effectively prevented (as well as any reduction or changes in the overall size or location of the groundwater plume), or stabilized (or very slow decreases in contaminant concentrations));

- e. a description of any proposed contingency measures; and
- f. a predictive analysis of the approximate time frame required to achieve the Performance Standards with both the existing groundwater remediation system and that to be implemented with any proposed contingency measures using methods appropriate for the data and Site-specific conditions. Such analysis shall also address the uncertainty, if any, inherent in these predictions.

The petition shall not be deemed complete until all information and analyses required and/or requested by EPA are submitted by the Settling Defendants.

- D. If, based on the results of groundwater monitoring, EPA believes that one or more of the Performance Standards specified in the ROD will not be reached in the time period projected in the approved O&M Plan and Settling Defendants have not petitioned EPA in writing for authorization to amend the O&M Plan, EPA may require Settling Defendants to implement contingency measures and to submit a Contingency Measures Plan (see Section XII B. 5., below).
- E. A Contingency Measures Plan shall be submitted to EPA by Settling Defendants within **sixty (60) days** of receipt of EPA's written determination that contingency measures are appropriate. The Contingency Measures Plan shall:
 - 1. address design, construction, and O&M of the Contingency Measures, as appropriate;
 - 2. include an amended QAPP and HSCP for O&M activities, as appropriate; and
 - 3. include a schedule for the implementation of the Contingency Measures.
- F. EPA will either approve the Contingency Measures Plan or disapprove and/or require modification of such plan, in accordance with the procedures set forth in the Consent Decree.
- G. Settling Defendants shall commence with the implementation of the Contingency Measures Plan within **thirty (30) days** of receipt of EPA's written approval of the Contingency Measures Plan.

- H. No action taken by EPA pursuant to this Section of the SOW, including EPA's decision on Settling Defendants' petition(s), shall be subject to dispute resolution or judicial review.

XIII. POST REMEDIATION MONITORING PLAN

- A. Within **sixty (60) days** of the date on which all designated groundwater monitoring points have recorded readings less than or equal to the Performance Standards specified in the ROD and this SOW for the third consecutive year (or a shorter period if approved by EPA in its sole discretion), or within **sixty (60) days** of the date that EPA determines, in its sole discretion, that one or more ARAR waivers are granted and all other groundwater ARARs have been met and/or waived, Settling Defendants shall submit to EPA a Post-Remediation Monitoring ("PRM") Plan.
- B. The PRM Plan shall include, at a minimum, the following:
 - 1. A QAPP for PRM activities consistent with **Section VI.A., above**;
 - 2. An HSCP for PRM activities;
 - 3. A description of work to be performed under PRM activities; and
 - 4. A PRM schedule that identifies the frequency of monitoring and when these activities will commence.
- C. EPA will either approve the PRM Plan, or require modification of it, in accordance with the procedures set forth in this Consent Decree.

XIV. POST-REMEDATION MONITORING

- A. Upon EPA's approval of the PRM Plan, Settling Defendants shall commence with the PRM program for a period of three (3) years, in accordance with the PRM Plan, which includes the PRM schedule.
- B. If groundwater contaminant concentrations increase above the Performance Standards (as specified in the ROD and this SOW), or contaminant concentrations increase above the alternative Performance Standards as set forth in **Section XIII., above**, during post-remediation monitoring, EPA will evaluate the need, and may require Settling Defendants to, reinstate the remediation system.
- C. Notice of Completion and Final Report for Post-Remediation Monitoring
 - 1. Within **five (5) days** of the completion of post-remediation monitoring,

Settling Defendants shall submit to EPA a Notice of Completion for Post-Remediation Monitoring. The Notice of Completion for Post-Remediation Monitoring shall be signed by a licensed professional engineer meeting any and all requirements of applicable Federal, State, and local laws, and shall certify that the PRM activities have been completed in full satisfaction of the requirements of the Consent Decree, this SOW, and all plans, specifications, schedules, reports and other items developed hereunder.

2. Within **sixty (60) days** of the completion of post-remediation monitoring, Settling Defendants shall submit to EPA a Final Report for Post-Remediation Monitoring. The Final Report for Post-Remediation Monitoring shall summarize the Work performed under the PRM Plan and the data so generated. Deliverables under the Final Report for Post-Remediation Monitoring shall be signed by a licensed professional engineer meeting any and all requirements of applicable Federal, State, and local laws, and shall certify that the PRM activities and report deliverables have been completed in full satisfaction of the requirements of the Consent Decree, this SOW, and all plans, specifications, schedules, reports and other items developed hereunder. Any modifications to the Final Report for Post-Remediation Monitoring required by EPA shall be in accordance with the procedures set forth in the Consent Decree.
3. EPA will determine whether the PRM activities or any portions(s) thereof have been completed in accordance with the standards, specifications, and reports required by this Consent Decree. If EPA determines that PRM activities have not been so completed, EPA will notify Settling Defendants in writing of those tasks which must be performed to complete the post-remediation monitoring. Settling Defendants shall then implement the specified activities and tasks in accordance with the specifications and schedules established by EPA and shall then submit a further report on the specified activities and tasks, certified by a licensed professional engineer, within **thirty (30) days** after completion of the specified activities and tasks. EPA will notify Settling Defendants in writing when PRM activities have been completed in accordance with the requirements of the Consent Decree.

XIV. INSTITUTIONAL CONTROLS

Institutional Controls shall be required to prohibit the installation and use of groundwater wells at the Site for the purpose of drinking water until groundwater cleanup standards are achieved. Settling Defendants shall secure Institutional Controls in accordance with the procedures set forth in the Consent Decree. The restrictions shall be maintained until EPA notifies Settling Defendants that EPA has determined, after a reasonable opportunity for review and comment by the State, that the restrictions may be lifted from the Site, or a portion of the Site, without posing a threat to human health and the environment.

XVI. CERTIFICATION OF COMPLETION OF THE WORK

Within **ninety (90) days** after Settling Defendants conclude that all phases of the Work required by the Consent Decree have been fully performed, Settling Defendants shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants and EPA. If, after the pre-certification inspection, Settling Defendants still believes that the Work has been fully performed, Settling Defendants shall submit a written report by a New York State registered professional engineer stating that the Work has been completed in full satisfaction of the requirements of this Consent Decree. If, after review of the written report, EPA, after reasonable opportunity for review and comment by the State, determines that any portion of the Work has not been completed in accordance with this Consent Decree, EPA will notify Settling Defendants in writing of the activities that must be undertaken by Settling Defendants pursuant to this Consent Decree to complete the Work.

If EPA concludes, based on the initial or any subsequent request for Certification of Completion by Settling Defendants and after a reasonable opportunity for review and comment by the State, that the Work has been performed in accordance with this Consent Decree, EPA will so notify Settling Defendants in writing.

Exhibit C

To Consent Decree

in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site

RAZ - 2 \TC\14\141988\ BG2.dwg :February 01, 1999 12:47

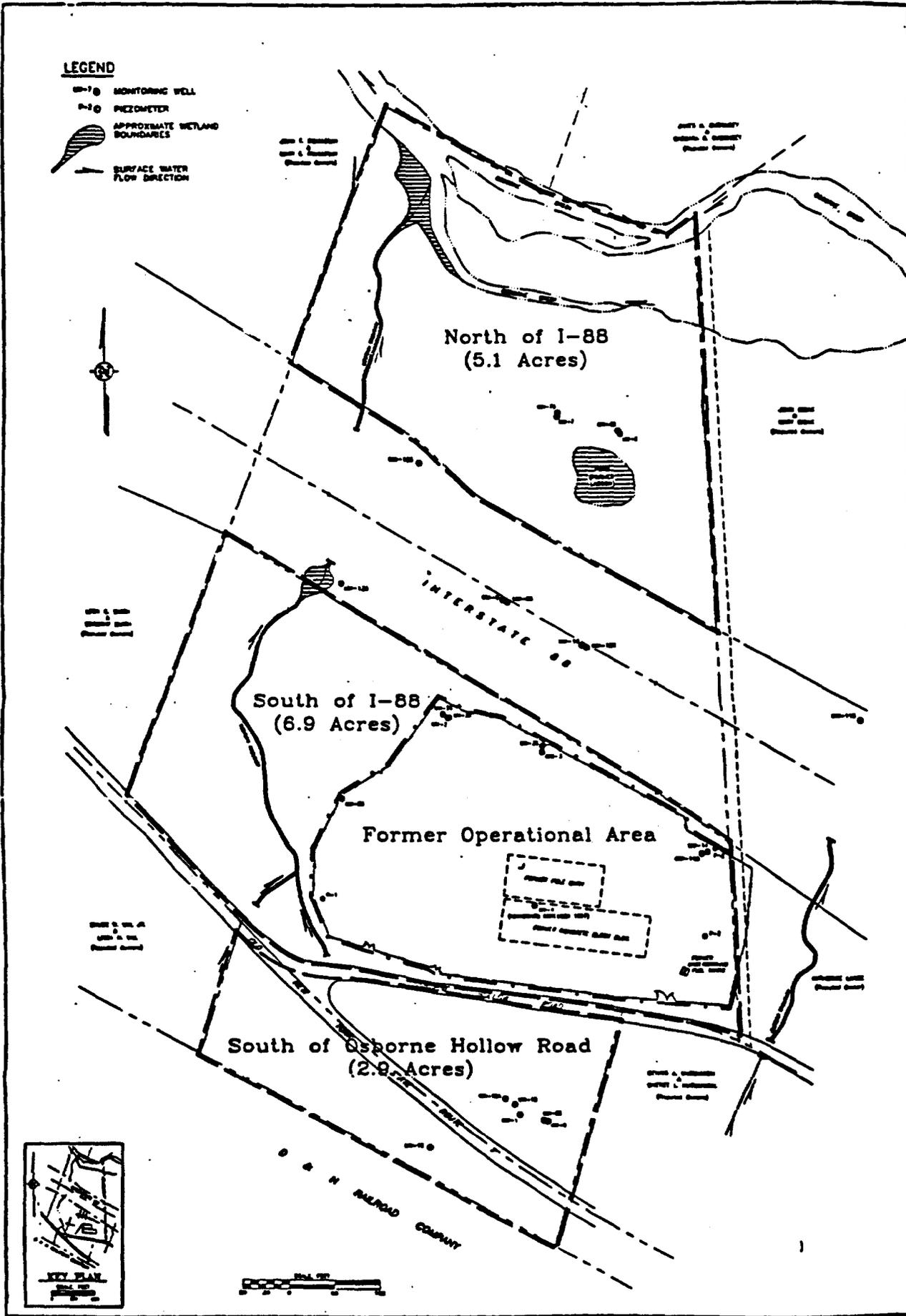


Exhibit D

Appendix D
To Consent Decree

in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site

Complete List of the Settling Defendants

Agway, Inc.
Agway Energy Products LLC (f/k/a Agway Petroleum Corporation)
Amphenol Corporation
Amphenol Interconnect Products Corp.
Ashland Inc.
Atofina Chemicals, Inc.
Azon Corporation
BASF Corporation
BMC Industries, Inc.
Borden, Inc.
Bristol-Myers Squibb Company
Bronstein Container Company, Inc.
Carrier Corporation
Champion International Corporation
Chemcoat, Inc.
Cooper Industries, Inc.
Crash's Auto Parts and Sales, Inc. (d/b/a C.A.P. Surplus & Metals)
Daimler Chrysler Corporation
Drake Oil Company, Inc.
E.I. du Pont de Nemours & Company
EJ Footwear Corp.
Emerson Power Transmission Corp.
General Electric Company
General Motors Corporation
Honeywell International Inc. (f/k/a AlliedSignal Inc.)
Inmont Corporation
International Business Machines Corporation
International Paper Company
Jones Chemicals, Inc.
Kaplan Container Corporation
Malchak Salvage Company, Inc.
Masonite Corporation
Newton Falls, Inc.
Potter Paint Co., Inc.
PPG Industries, Inc.
Rome Cable Corporation
Schenectady International, Inc.
Sonoco Flexible Packaging, Inc. (d/b/a The Morrill Press)
Tri-Cities Barrel Co., Inc.
Underwood Industries of New York, Inc.
Wainwright Oil Co., Inc.
Francis Warner
Gary F. Warner

Exhibit E

Appendix E
To Consent Decree
in the matter of *United States v. Agway, Inc.*, relating to the Tri-Cities Barrel Superfund Site

Owner Settling Defendant

Tri-Cities Barrel Co., Inc.

Exhibit F

APPENDIX F
to Consent Decree in the matter of *United States v. Agway, Inc.*
relating to the Tri-Cities Barrel Superfund Site

ENVIRONMENTAL PROTECTION EASEMENT
AND
DECLARATION OF RESTRICTIVE COVENANTS

This Environmental Protection Easement and Declaration of Restrictive Covenants is made this ____ day of _____, 20____, by and between Tri-Cities Barrel Co., Inc., ("Grantor"), having an address of _____, and _____ ("Grantee"), having an address of _____.

WITNESSETH:

WHEREAS, Grantor is the owner of a parcel of land located in the county of Broome, State of New York, more particularly described on **Exhibit A** attached hereto and made a part hereof together with any buildings and improvements thereon and appurtenances thereto (the "Property"); and

WHEREAS, the Property is part of the Tri-Cities Barrel Superfund Site ("Site"), which the U.S. Environmental Protection Agency ("EPA"), pursuant to Section 105 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9605, placed on the National Priorities List, as set forth in Appendix B of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. Part 300, by publication in the Federal Register on October 4, 1989, 54 Fed. Reg. 41000; and

WHEREAS, in a Record of Decision dated March 31, 2000 (the "ROD"), the Regional Administrator of EPA Region II selected, and the New York State Department of Environmental Conservation ("NYSDEC") concurred with, a "response action" for the Site, which provides, in part, for the following actions: i.) excavation and/or dredging of unsaturated (above the water table) soil and sediment exceeding soil/sediment cleanup objectives ; (ii.) backfilling of the excavated areas with clean fill and revegetating such areas, as appropriate, and the characterization and transport for treatment/disposal at off-site Resource Conservation and Recovery Act- and/or Toxic Substances Control Act-compliant facilities, as appropriate, for all excavated/dredged material; (iii.) restoration of any wetlands impacted by remedial activities (including routine inspection of the

restored wetlands for several years to ensure adequate survival of the planted vegetation); (iv.) extraction of contaminated groundwater utilizing a network of recovery wells, and treatment of the extracted groundwater (by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies, or other appropriate treatment), followed by discharge to surface water; (v.) implementation of institutional controls (i.e., deed restrictions) to prohibit the installation and use of groundwater wells at the Site for drinking water purposes until groundwater cleanup standards are achieved; and (vi.) long-term monitoring of groundwater, surface water, and nearby residential private wells to ensure the effectiveness of the selected remedy. ; and

WHEREAS, settling defendants identified in the Consent Decree have agreed to perform the remedial design and remedial action selected in the ROD; and

WHEREAS, the parties hereto have agreed that Grantor shall grant a permanent easement and covenant a) to provide a right of access over the Property to the Grantee for purposes of implementing, facilitating and monitoring the response action; and b) to impose on the Property use restrictions that will run with the land for the purpose of protecting human health and the environment; and

WHEREAS, Grantor wishes to cooperate fully with the Grantee in the implementation of all response actions at the Site;

NOW, THEREFORE:

1. **Grant:** Grantor, on behalf of itself, its successors and assigns, in consideration of [the terms of the Consent Decree in the case of *United States v. _____*, etc.(Civ. No. _____ United States District Court for the Northern District of New York) (“Consent Decree”) and other good and valuable consideration, does hereby give, grant, covenant and declare in favor of the Grantee that the Property shall be subject to the restrictions on use and rights of access set forth below, and does give, grant and convey to the Grantee with general warranties of title the perpetual right to enforce said restrictions and rights, which shall be of the nature and character, and for the purposes hereinafter set forth, with respect to the Property.
2. **Purpose:** It is the purpose of this instrument to convey to the Grantee real property rights, which will run with the land, to facilitate the remediation of past environmental contamination and to protect human health and the environment by reducing the risk of exposure to contaminants.
3. **Restrictions on use:** The following restrictions on use apply to the use of the Property, run with the land and are binding on the Grantor: the installation and use of groundwater wells at the Site for drinking water purposes shall be prohibited until groundwater cleanup standards identified in the ROD and the Consent Decree have been achieved.

4. Modification or termination of restrictions: The restrictions on use specified in the preceding paragraph of this instrument may only be modified, or terminated in whole or in part, in writing, by the Grantee, with the prior written consent of EPA, provided, however, that any modification or termination of said restrictions shall not adversely affect the remedy selected by EPA for the Site . If requested by the Grantor, such writing will be executed by Grantee in recordable form.
5. Right of access: A right of access to the Property at all reasonable times for the following purposes shall run with the land and be binding on Grantor:
 - a) Implementing the response actions in the ROD, including but not limited to, i.) excavation and/or dredging of unsaturated (above the water table) soil and sediment exceeding soil/sediment cleanup objectives ; (ii.) backfilling of the excavated areas with clean fill and revegetating such areas, as appropriate, and the characterization and transport for treatment/disposal at off-site Resource Conservation and Recovery Act- and/or Toxic Substances Control Act- compliant facilities, as appropriate, for all excavated/dredged material; (iii.) restoration of any wetlands impacted by remedial activities (including routine inspection of the restored wetlands for several years to ensure adequate survival of the planted vegetation); (iv.) extraction of contaminated groundwater utilizing a network of recovery wells, and treatment of the extracted groundwater (by air stripping, liquid phase carbon adsorption, and chemical precipitation technologies, or other appropriate treatment), followed by discharge to surface water; and (vi.) long-term monitoring of groundwater, surface water, and nearby residential private wells to ensure the effectiveness of the selected remedy;
 - b) Verifying any data or information relating to the Site;
 - c) Verifying that no action is being taken on the Property in violation of the terms of this instrument or of any federal or state environmental laws or regulations;
 - d) Conducting investigations under CERCLA relating to contamination on or near the Site, including, without limitation, sampling of air, water, sediments, soils; and
 - e) Implementing additional or new response actions under CERCLA.
6. Reserved rights of Grantor: Grantor hereby reserves unto itself, its successors, and assigns, all rights and privileges in and to the use of the Property which are not incompatible with the restrictions, rights, covenants and easements granted herein.

7. Federal authority: Nothing in this document shall limit or otherwise affect EPA's rights of entry and access or EPA's authority to take response actions under CERCLA, the NCP, or other federal law.
8. No public access and use: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.
9. Public notice: Grantor agrees to include in each instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL PROTECTION EASEMENT AND DECLARATION OF RESTRICTIVE COVENANTS, DATED _____, 20__, RECORDED IN THE COUNTY CLERK'S OFFICE, BROOME COUNTY, STATE OF NEW YORK, ON _____, 19__, IN BOOK _____, PAGE _____, IN FAVOR OF, AND ENFORCEABLE BY, THE [insert name of grantee] AND BY THE UNITED STATES OF AMERICA AND THE STATE OF NEW YORK AS THIRD PARTY BENEFICIARIES.

Within thirty (30) days of the date any such instrument of conveyance is executed, Grantor agrees to provide Grantee and EPA with a certified true copy of said instrument and, if it has been recorded in the public land records, its recording reference.

10. Enforcement: The Grantee shall be entitled to enforce the terms of this instrument by resort to specific performance. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Any forbearance, delay or omission to exercise Grantee's rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Grantee of such term or of any of the rights of the Grantee under this instrument.
11. Damages: Grantee shall also be entitled to recover damages for breach of any covenant or violation of the terms of this instrument including any impairment to the remedial action that increases the cost of the selected response action for the Site as a result of such breach or violation.
12. Waiver of certain defenses: Grantor hereby waives any defense of laches, estoppel, or prescription.
13. Covenants: Grantor hereby covenants to and with the Grantee and its assigns, that the Grantor is lawfully seized in fee simple of the Property, that the Grantor has a good and

lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances and that the Grantor will forever warrant and defend the title thereto and the quiet possession thereof.

- 14. Notices: Any notice, demand, request, consent, approval, or communication under this instrument that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Grantor:

To Grantee:

A copy of each such communication shall also be sent to the following:

To EPA:

To NYSDEC:

To:

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007-1866
Attention: Young Chang, Superfund Site
Remedial Project Manager

[Insert name and address]

and to:

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency, Region II
290 Broadway, 17th Floor
New York, NY 10007-1866
Attention: Carl Garvey, Superfund Site
Attorney

- 15. General provisions:

- a) Controlling law: The interpretation and performance of this instrument shall be governed by the laws of the United States or, if there are no applicable federal laws, by the law of the state where the Property is located.
- b) Liberal construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of CERCLA. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.
- c) Severability: If any provision of this instrument, or the application of it to any person or circumstance, is found to be invalid, the remainder of the provisions of this instrument, or the application of such provisions to persons or circumstances other than those to which it is found to be invalid, as the case may be, shall not be affected thereby.
- d) Entire agreement: This instrument sets forth the entire agreement of the parties with respect to rights and restrictions created hereby, and supersedes all prior discussions, negotiations, understandings, or agreements relating thereto, all of which are merged herein; provided that nothing in this instrument shall be deemed to alter or modify the Consent Decree.
- e) No forfeiture: Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.
- f) Joint obligation: If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.
- g) Successors: The covenants, easements, terms, conditions, and restrictions of this instrument shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and shall continue as a servitude running in perpetuity with the Property. The term "Grantor", wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantor" and their personal representatives, heirs, successors, and assigns. The term "Grantee", wherever used herein, and any pronouns used in place thereof, shall include the persons and/or entities named at the beginning of this document, identified as "Grantee" and their personal representatives, heirs, successors, and assigns.
- h) Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

