

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

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 UNITED STATES OF AMERICA :
 and STATE OF CONNECTICUT, :
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 Plaintiffs, :
 :
 v. :
 :
 TOWN OF SOUTHLINGTON, et al., :
 :
 Defendants. :
 -----X

Civil No. 3:09-cv-1515 (SRU)

**CONSENT DECREE FOR REMEDIAL DESIGN
AND REMEDIAL ACTION REGARDING
OLD SOUTHLINGTON LANDFILL SUPERFUND SITE**

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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 costs incurred by EPA and the Department of Justice for response actions at the Old Southington Landfill Superfund Site (the “Site”) in Southington, Connecticut, together with accrued interest; 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 Connecticut (the “State”) on March 12, 2007 of negotiations with potentially responsible parties (“PRPs”) 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. The State has also filed a complaint against the Defendants in this Court alleging that the Defendants are liable to the State under Section 107 of CERCLA, 42 U.S.C. § 9607, and Conn. Gen. Stats. § 22a-451, for recovery of the response costs incurred by the State and for the recovery of the costs and expenses to be incurred by the State in investigating, containing, removing, monitoring, or mitigating pollution and contamination allegedly caused by the Defendants.

E. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the United States Department of Interior and the United States National Oceanographic and Atmospheric Agency, and the State of Connecticut Department of Environmental Protection, by letter dated March 12, 2007 of negotiations with PRPs regarding the release of hazardous substances that may have resulted in injury to the natural resources under State and Federal trusteeship and encouraged the trustees to participate in the negotiation of this Consent Decree.

F. The Settling Defendants that have entered into this Consent Decree do not admit any liability to the Plaintiffs or any matter of fact or law relating to the Site or arising out of the transactions or occurrences alleged in the complaints, 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. The Settling Federal Agencies do not admit any liability arising out of the transactions or occurrences alleged in any counterclaim asserted by the Settling Defendants or any claim by the State.

G. 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, by publication in the Federal Register on September 21, 1984, 49 Fed. Reg. 37083.

H. In response to a release or a substantial threat of a release of hazardous substances at or from the Site, the Town of Southington (“Town”), United Technologies Corp., Pratt & Whitney Division (“UTC”), and Solvents Recovery Service of New England (“SRSNE”), under EPA oversight, commenced the Remedial Investigation and Feasibility Study (“RI/FS”) for the Site, pursuant to 40 C.F.R. § 300.430, on September 29, 1987. SRSNE later became insolvent

and suspended participation in the RI/FS. In 1989, General Electric Company agreed to participate in the performance of the RI/FS. The Remedial Investigation was completed on December 10, 1993. EPA issued an addendum to the RI/FS ("RI") Report on May 23, 1994. An amended Feasibility Study to address ground water contamination was completed on June 1, 2006, and a supplemental Remedial Investigation Study was approved on June 19, 2006.

I. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the supplemental RI/FS and of the proposed plan for remedial action on June 14, 2006, 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 EPA based the selection of the response action.

J. The decision by EPA on the groundwater remedial action to be implemented at the Site is embodied in a final Record of Decision, executed on September 29, 2006 ("2006 ROD") on which the State has given its concurrence. The 2006 ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA.

K. Based on the information presently available to EPA and the State, EPA and the State believe that the Work 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 2006 ROD and the Work to be performed by the Settling Defendants shall constitute a response action taken or ordered by the President, for which judicial review shall be limited to the Administrative Record.

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 complaints, 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 the State and upon Settling Defendants and their heirs, successors, and assigns. Any change in ownership or corporate status 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 (as defined below) 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:

"1994 ROD" shall mean the Record of Decision issued on September 28, 1994.

"2009 OSL *De Minimis* Settlement" shall mean the "2009 *De Minimis* Settlement Regarding Old Southington Landfill Superfund Site" to be filed with the United States District Court for the District of Connecticut.

"2009 OSL *De Minimis* Settlement Trust" shall mean the Old Southington Landfill Superfund Site Trust Account established by the Settling Defendants on May 27, 2009 at CitiGroup Global Markets/SmithBarney, to receive certain settlement and other payments regarding the Site from the parties to the 2009 OSL *De Minimis* Settlement.

"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.

"CTDEP" shall mean the Connecticut Department of Environmental Protection, which operates under the direction of the Commissioner of Environmental Protection as provided in Conn. Gen. Stat. § 22a-2 and pursuant to the powers enumerated in Conn. Gen. Stat. § 22a-6, and any successor departments or agencies of the State.

"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.

“DOI” shall mean the United States Department of the Interior and any successor departments, agencies or instrumentalities of the United States.

“Effective Date” shall be the effective date of this Consent Decree as provided in Paragraph 127.

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

“Future Oversight Costs” shall mean all costs, including but not limited to direct and indirect costs, that EPA and its representatives (including contractors) incur after the Effective Date in conducting the following activities: reviewing, discussing, commenting on and attending meetings related to plans, proposals, studies, reports or other items related to the Work; verifying the Work; and overseeing Settling Defendants’ implementation of the Work and compliance with the Consent Decree relating to the Work. Future Oversight Costs shall include, but not be limited to, payroll costs, costs incurred by EPA and its representatives (including contractors) under or in connection with a contract or arrangement for technical assistance in overseeing and reviewing the conduct of activities required under the Consent Decree, travel costs, laboratory costs, technical support costs, interagency and intergovernmental agreement costs (including ATSDR costs), costs under a cooperative agreement with the State, and data management costs, insofar as such costs are incurred for activities listed in the first sentence of this definition.

“Future Response Costs” shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs after the Effective Date pursuant to the provisions of this Consent Decree other than those costs specifically included in the definition of Future Oversight Costs. Future Response Costs shall include but not be limited to costs incurred to enforce the Consent Decree (including dispute resolution); costs incurred pursuant to Sections VII (Remedy Review), IX (Access and Institutional Controls) (including the cost of attorney time and monies paid to secure access and/or to secure or implement institutional controls, including the amount of just compensation), XV (Emergency Response), and Paragraph 103 (Work Takeover) of Section XXI (Covenants by Plaintiffs); enforcement support costs; and accrued interest. Future Response Costs shall not include any costs incurred, including but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to the the Consent Decree regarding the Interim Remedy that was approved by the United States District Court of the District of Connecticut on June 9, 1998 in Civ. No. 3:98cv8 and on June 12, 1998 in Civ. No. 3:98cv236 (“1998 Consent Decree”), verifying the work under the 1998 Consent Decree, or otherwise implementing, overseeing, or enforcing the 1998 Consent Decree, and costs associated with the implementation of response actions relating in any way to the GA Area beyond those limited investigation activities described in and required by Section IV.D of the SOW or response actions related in any way to the former Lori Corp. property beyond those limited water level monitoring activities described in and required by Section IV.C.3.c. of the SOW.

“GA Area” shall mean the GA area as shown on the map attached as Attachment 1 to the SOW.

“Interest,” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest

shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

“Municipal solid waste” shall mean waste material: (a) generated by a household (including a single or multifamily residence); or (b) generated by a commercial, industrial or institutional entity, to the extent that the waste material (i) is essentially the same as waste normally generated by a household; (ii) is collected and disposed of with other municipal solid waste as part of normal municipal solid waste collection services; and (iii) contains a relative quantity of hazardous substances no greater than the relative quantity of hazardous substances contained in waste material generated by a typical single-family household.

“Natural Resources” shall mean “natural resources” as that term is defined in Section 101(16) of CERCLA, 42 U.S.C. § 9601(16).

“Natural Resource Damages” shall mean damages for injury to, destruction of, or loss of natural resources relating to the Site, including the reasonable cost of assessing such damages, as provided in Section 107(a)(4)(C) of CERCLA, 42 U.S.C. § 9607(a)(4)(C), and, for purposes of the State’s claim shall also mean for damages for injury to, destruction of, or loss of natural resources relating to the Site, as provided in Conn. Gen. Stat. §§ 22a-6a and 22a-14 through 22a-20, inclusive.

“NR Trustees” shall mean the designated federal and state officials who may act on behalf of the public as trustees for the Natural Resources regarding the Site, namely the National Oceanic and Atmospheric Administration and DOI represented by the Fish and Wildlife Service as the federal Trustees for Natural Resources regarding the Site, and the Commissioner of CTDEP as the State trustee for Natural Resources.

“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.

“Operation and Maintenance” or “O & M” shall mean that portion of the Work 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”).

“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, the State of Connecticut, and the Settling Defendants.

“Performance Standards” shall mean the cleanup standards and other measures of achievement of the goals of the Remedial Action, set forth in the ROD and Section IV of the SOW.

“Plaintiffs” shall mean the United States and the State of Connecticut.

“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 “2006 ROD” shall mean the EPA Record of Decision relating to

the Site signed on September 29, 2006 by the Director, Office of Site Remediation and Restoration, EPA Region I, and all attachments thereto. The 2006 ROD is attached as Appendix A.

“Remedial Action” shall mean the Work, except for Operation and Maintenance, to be undertaken by the Settling Defendants to implement the 2006 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 developed pursuant to Paragraph 11 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 10 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 the GenCorp Inc., Kraft Foods Global Inc., Shell Oil Company, Town of Southington, Connecticut, and United Technologies Corporation.

“Settling Federal Agencies” shall mean the following departments, agencies, and instrumentalities of the United States: United States General Services Administration and the United States Department of Defense, including the United States Department of the Army and the United States Department of the Navy, and their predecessor, component and successor agencies.

“Site” shall mean the Old Southington Landfill Superfund Site, encompassing approximately 13 acres of the former landfill located on the east side of Old Turnpike Road, in Southington, Hartford County, Connecticut as well as all areas where contamination from the landfill has come to be located in Southington, and depicted generally on the map attached as Appendix B and entitled “Figure 1-1 Study Area Old Southington Landfill Superfund Site.”

“State” shall mean the State of Connecticut.

“Statement of Work” or “SOW” shall mean the Statement of Work for implementation of the Remedial Design, Remedial Action, and Operation and Maintenance at the Site, as set forth in Appendix C to this Consent Decree and any modifications made in accordance with this Consent Decree.

“Subparagraph” shall mean a portion of this Consent Decree identified by a lower case letter.

“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.

“Town” shall mean the Town of Southington, Connecticut.

“United States” shall mean the United States of America, including all of its departments, agencies, and instrumentalities, which includes without limitation EPA, the Settling Federal

Agencies, and any federal NR Trustee.

“Waste Material” shall mean (1) any “hazardous substance” under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any “pollutant or contaminant” under Section 101(33), 42 U.S.C. § 9601(33); (3) any “solid waste” under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any “hazardous waste” under Sections 22a-449(c)-100 through 22a-449(c)-110 and Section 22a-449(c)-11 of the Regulations of Connecticut State Agencies and Conn. Gen. Stat. § 22a-115.

“Work” shall mean all activities Settling Defendants are required to perform under this Consent Decree, except those required by Section XXV (“Retention of Records”). The Work does not include: (1) additional response actions relating in any way to the GA Area beyond those limited investigation activities described in and required by Section IV.D of the SOW; or (2) the “Pre-Design studies” at the former Lori Corp. property as such “Pre-Design studies” are described in Part 2, Section L.1.B.1.5. of the 2006 ROD. The Settling Defendants provided a report showing no hydraulic connection between the contaminated groundwater areas on the former Lori Corp. property and groundwater from the Old Southington Landfill. EPA concurred with the findings and determined that the “Pre-Design studies” at the former Lori Corp. property are completed and fully satisfy the ROD requirement.

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 response costs of the Plaintiffs, and to resolve the claims of Plaintiffs against Settling Defendants and the claims of the State and Settling Defendants which have been or could have been asserted against the United States with regard to this Site as provided in this Consent Decree.

6. Commitments by Settling Defendants and Settling Federal Agencies.

a. Settling Defendants shall finance and perform the Work in accordance with this Consent Decree, the 2006 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 under this Consent Decree, and to compensate the United States and the State for damages to Natural Resources are joint and several. In the event of the insolvency or other failure of one or more Settling Defendant to implement the requirements of this Consent Decree, the remaining Settling Defendants shall complete all such requirements.

c. Settling Federal Agencies shall pay a share of the cost of the Work, EPA’s Future Response Costs and shall compensate the United States and the State for damages to Natural Resources under their trusteeship as provided for in this Consent Decree.

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 2006 ROD ("ARARs"). 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") 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.

VI. PERFORMANCE OF THE WORK BY SETTLING DEFENDANTS

9. 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") shall be under the direction and supervision of the Supervising Contractor, the selection of which shall be subject to disapproval by EPA, after a reasonable opportunity for review and comment by the State. Within ten days after the lodging of this Consent Decree, Settling Defendants shall notify EPA and the State in writing of the name, title, and qualifications of any contractor proposed to be the Supervising Contractor. With respect to any contractor proposed to be Supervising Contractor, Settling Defendants shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP") or equivalent documentation as determined by EPA. The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. 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 such notice to EPA and the State and must obtain an authorization to proceed from EPA, after a reasonable opportunity for review and comment by the State, before the new Supervising Contractor performs, directs, or supervises any Work under this Consent Decree.

a. If EPA disapproves a proposed Supervising Contractor, EPA will notify Settling Defendants in writing. Settling Defendants shall submit to EPA and the State a list of

contractors, 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 and the State of the name of the contractor selected within 21 days of EPA's authorization to proceed.

b. 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.

10. Remedial Design.

a. Consistent with the deadlines provided in the SOW, Settling Defendants shall submit to EPA and the State the deliverables required as part of the Remedial Design, as set forth in Section V of the SOW, including, but not limited to, 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 design of the remedy set forth in the 2006 ROD, in accordance with the SOW, and for achievement of the Performance Standards and other requirements set forth in the 2006 ROD, this Consent Decree, and/or the SOW. Upon its approval by EPA, the Remedial Design Work Plan shall be incorporated into and become enforceable under this Consent Decree. Consistent with the deadlines provided in the SOW, the Settling Defendants shall submit to EPA and the State a Health and Safety 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.

b. Upon approval of the Remedial Design Work Plan by EPA, after a reasonable opportunity for review and comment by the State, and submittal of the Health and Safety Plan for all field activities to EPA and the State, Settling Defendants shall implement the activities required under 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 Remedial Design activities at the Site prior to approval of the Remedial Design Work Plan. Upon approval by EPA of the other Remedial Design deliverables required under the SOW, Settling Defendants shall implement the activities required by such deliverables.

11. Remedial Action.

a. Consistent with the deadlines provided in the SOW, the Settling Defendants shall submit to EPA and the State the deliverables required as part of the Remedial Action, as set forth in Section VI of the SOW, including, but not limited to, a work plan for the performance of the Remedial Action at the Site ("Remedial Action Work Plan"). The Remedial Action Work Plan shall provide for construction and implementation of the remedy set forth in the 2006 ROD and achievement of the Performance Standards, in accordance with this Consent Decree, the 2006 ROD, the SOW, and the design plans and specifications developed in

accordance with the Remedial Design Work Plan and approved by EPA. Upon its approval by EPA, the Remedial Action Work Plan shall be incorporated into and become enforceable under this Consent Decree. At the same time as they submit the Remedial Action Work Plan, Settling Defendants shall submit to EPA and the State a Health and Safety 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. The Settling Defendants shall submit to EPA for approval all other Remedial Action plans, submittals, and deliverables described in the SOW, in accordance with the schedule set forth in the SOW and the approved Remedial Action Work Plan.

b. Upon approval of the Remedial Action Work Plan by EPA, after a reasonable opportunity for review and comment by the State, the Settling Defendants shall implement the activities required under the Remedial Action Work Plan. The Settling Defendants shall submit to EPA and the State all plans, submittals, or other deliverables required under the 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. Upon approval by EPA of the other Remedial Action deliverables required under the SOW, Settling Defendants shall implement the activities required by such deliverables.

12. The Settling Defendants shall continue to implement the Remedial Action and O & M until the Performance Standards are achieved and for so long thereafter as is otherwise required under this Consent Decree.

13. 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 2006 ROD, EPA shall notify the Settling Defendants in writing and 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 2006 ROD. EPA will confer with the Settling Defendants prior to requiring a modification of the SOW or of the work plans developed pursuant thereto.

b. For the purposes of this Paragraph 13 and Paragraphs 51 and 52 only, the “scope of the remedy selected in the 2006 ROD” shall mean the actions described in Section L of the 2006 ROD, including, but not limited to, the following: (1) Institutional Controls in the form of Environmental Land Use Restrictions as defined by CT RSRs; (2) Building Ventilation (subslab depressurization systems or similar technology) in existing buildings and controlling vapors in new buildings; (3) Groundwater monitoring; (4) Operating, maintaining and monitoring engineering and institutional controls; and (5) Conducting five year reviews, all as provided in Section III of the SOW.

c. If the 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”).

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.

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.

14. 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 Plaintiffs that compliance with the work requirements set forth in the SOW and the Work Plans will achieve the Performance Standards.

15. a. Settling Defendants shall, prior to any off-Site shipment of Waste Material from the Site to a 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 ten cubic yards or the equivalent in liquid units.

(1) 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.

(2) 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.

b. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-Site location, Settling Defendants shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3) and 40 C.F.R. 300.440.

VII. REMEDY REVIEW

16. 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. EPA will confer, in good faith, with the Settling Defendants before requiring the performance of such studies and investigations.

17. 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.

18. 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.

19. Settling Defendants' Obligation To Perform Further Response Actions. If EPA selects further response actions for the Site, other than response actions relating in any way to the GA Area and/or response actions related in any way to the former Lori Corp. property, the Settling Defendants shall undertake such further response actions to the extent that the reopener conditions in Paragraph 93 or Paragraph 94 (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 93 or Paragraph 94 of Section XXI ("Covenants by Plaintiffs") 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 Section XIX (Dispute Resolution) Paragraph 74.

20. Submissions of Plans. If Settling Defendants are required to perform the further response actions pursuant to Paragraph 19, 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 Consent Decree.

VIII. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS

21. Settling Defendants shall use quality assurance, quality control, and chain of custody procedures for all samples in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), "EPA New England Quality Assurance Project Plan Program Guidance," April 2005, and subsequent amendments to such guidelines upon notification by EPA to the Settling Defendants of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. Prior to the commencement of any sampling or monitoring project under this Consent Decree, the Settling Defendants shall submit to EPA for approval, after a reasonable opportunity for review and comment by the State, a Sampling and Analysis Plan ("SAP"), which includes, among other things, a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW, the NCP, and applicable guidance documents. 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 Consent 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 Consent 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 Organic Analysis” (Multi-Media, Multi-Concentration Organics Analysis, SOMO1.1, which can be found at <http://www.epa.gov/superfund/programs/clp/som1.htm>) and the “Contract Lab Program Statement of Work for Inorganic Analysis,” (Multi-Media, Multi-Concentration Inorganic Analysis, ILM05.3, which can be found at <http://www.epa.gov/superfund/programs/clp/ilm5.htm>) and any amendments made thereto during the course of the implementation of this Consent Decree; however, upon approval by EPA, after opportunity for review and comment by the State, the Settling Defendants may use other analytical methods which are as stringent as or more stringent than the CLP-approved methods. Settling Defendants shall contractually require 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 only use laboratories that have a documented Quality System which complies with ANSI/ASQ E4-2004, “Quality Systems for Environmental Data and Technology Programs: Requirements with Guidance for Use,” and “EPA Requirements for Quality Management Plans (QA/R-2),” (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program (“NELAP”) as meeting the Quality System requirements. Settling Defendants shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Consent Decree will be conducted in accordance with the procedures set forth in the QAPP approved by EPA.

22. 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 and the State not less than 28 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA and the State shall have the right to take any additional samples that EPA or the State deem necessary. Upon request, EPA and the State shall allow the Settling Defendants to take split or duplicate samples of any samples they take as part of the Plaintiffs’ oversight of the Settling Defendants’ implementation of the Work and shall provide Settling Defendants with copies of all sampling data.

23. Settling Defendants shall submit two copies to EPA and two copies to the State 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, unless EPA specifies or the approved QAPP provides for another number of copies.

24. Notwithstanding any provision of this Consent Decree, the United States and the State hereby retain all of their 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

25. 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 (including rights to access and/or rights to impose land/water use restrictions) by any of the Settling Defendants, such 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 or the State;
- (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) Assessing implementation of quality assurance and quality control practices as defined in the approved Quality Assurance Project Plans;
- (7) Implementing the Work pursuant to the conditions set forth in Paragraph 103 (“Work Takeover”);
- (8) 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”);
- (9) Assessing Settling Defendants’ compliance with this Consent Decree; and
- (10) 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 implementation, integrity, or protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Such restrictions include, but are not limited to, (1) prohibiting activities that could harm the capped areas of the Site; (2) prohibiting use of contaminated groundwater; (3) prohibiting activities that could result in exposure to contaminants in the subsurface soils and groundwater; and (4) ensuring that any new structures on the Site will be constructed to minimize potential risk of inhalation of contaminants.

c. execute and record with the Town Clerk, Town of Southington, County of Hartford, State of Connecticut, an easement and environmental land use restriction, 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 25.a of this Consent Decree, and (ii) grants the right to enforce the land/water use restrictions listed in Paragraph 25.b, 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 (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 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 and environmental land use restriction, in substantially the form attached hereto as Appendix D, that is enforceable under the laws of the State of Connecticut, and

(2) a current title insurance commitment, or some other evidence of title acceptable to EPA, which shows title to the land described in the easement to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by EPA or when, despite best efforts, Settling Defendants are unable to obtain release or subordination of such prior liens or encumbrances).

Within 15 days of EPA's approval and acceptance of the easement and title evidence, such Settling Defendants shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment to affect the title adversely, record the easement with the Town Clerk, Town of Southington, County of Hartford, State of Connecticut. Within 30 days of the recording of the easement, Settling Defendants shall provide EPA with a final title insurance policy, or other final evidence of title acceptable to EPA, and a certified copy of the original recorded easement showing the clerk's recording stamps. If the easement is to be conveyed to the United States, the easement and title evidence (including final title evidence) shall be prepared in accordance with the U.S. Department of Justice Title Standards 2001, and approval of the sufficiency of title must be obtained as required by 40 U.S.C. § 255.

26. Consistent with the deadlines provided in the SOW, 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, the Settling Defendants shall use best efforts to secure from such persons:

a. an agreement to provide access thereto for the 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 25.a;

b. an agreement, enforceable by the Settling Defendants and the United States, to refrain from using the Site, or such other property, in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the remedial measures to be performed pursuant to this Consent Decree. Such restrictions include, but are not limited to, those listed in Paragraph 25(b); and

c. the execution and recordation with the Town Clerk, Town of Southington, County of Hartford, State of Connecticut, 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 25.a of this Consent Decree, and (ii) grants the right to enforce the land/water use restrictions listed in Paragraph 25.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 (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 entry of this Consent Decree, 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 D, that is enforceable under the laws of the State of Connecticut, and

(2) a current title insurance commitment, or some other evidence of title acceptable to EPA, which shows title to the land described in the easement to be free and clear of all prior liens and encumbrances (except when those liens or encumbrances are approved by EPA or when, despite best efforts, Settling Defendants are unable to obtain release or subordination of such prior liens or encumbrances).

Within 15 days of EPA's approval and acceptance of the easement and the title evidence, Settling Defendants shall update the title search and, if it is determined that nothing has occurred since the effective date of the commitment to affect the title adversely, the easement shall be recorded with Town Clerk, Town of Southington, County of Hartford, State of Connecticut. Within 30 days of the recording of the easement, Settling Defendants shall provide EPA with a final title insurance policy, or other final evidence of title acceptable to EPA, and a certified copy of the original recorded easement showing the clerk's recording stamps. If easement is to be conveyed to the United States, the easement and title evidence (including final title evidence) shall be prepared in accordance with the U.S. Department of Justice Title Standards 2001, and approval of the sufficiency of title must be obtained as required by 40 U.S.C. § 255.

27. Consistent with the deadlines provided in the SOW, and for purposes of Paragraphs 25 and 26, "best efforts" includes the payment of reasonable sums of money in consideration of access, access easements, land/water use restrictions, restrictive easements, and/or an agreement to release or subordinate a prior lien or encumbrance. If (a) any access or land/water use restriction agreements required by Paragraphs 26.a or 26.b are not obtained by the deadlines provided in the SOW, (b) any access easements or restrictive easements required by Paragraph 26.c are not submitted to EPA in draft form by the deadlines provided in the SOW, or (c) Settling Defendants are unable to obtain an agreement pursuant to Paragraph 25.c(1) or Paragraph 26.c(1) from the holder of a prior lien or encumbrance to release or subordinate such lien or encumbrance to the easement being created pursuant to this Consent Decree by the deadlines provided in the SOW, 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 25 or 26. At the request of Settling Defendants, 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, or in obtaining the release or subordination of a prior lien or encumbrance. Settling Defendants shall reimburse the United States in accordance with the procedures in Section XVI ("Payments for Response Costs"), for all costs incurred, direct or indirect, by the United States in obtaining such access, land/water use restrictions, and/or the release/subordination of prior liens or encumbrances including, but not limited to, the cost of attorney time and the amount of monetary consideration paid or just compensation. If, after having satisfied "best efforts" the Settling Defendants cannot obtain a release or subordination of

the outstanding liens on account of unpaid taxes, easements, or existing mortgages on the Chuck & Eddies, Radio Station, or the Highland Hills Subdivision properties, the Settling Defendants shall seek a waiver from the State pursuant to Conn. Gen. Stat. Section 22a-133o.

28. 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 2006 ROD, ensure the integrity and protectiveness thereof, or ensure non-interference therewith, Settling Defendants shall cooperate with EPA's and the State's efforts to secure such governmental controls.

29. Notwithstanding any provision of this Consent Decree, the United States and the State retain all of their access authorities and rights, as well as all of their 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

30. In addition to any other requirement of this Consent Decree, Settling Defendants shall submit two copies to EPA and two copies to the State (or such other number of copies, if specified by EPA) of 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; (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 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 52.b of Section XIV ("Certification of Completion"). If requested by EPA or the State, Settling Defendants shall also provide briefings for EPA and the State to discuss the progress of the Work. As provided in the SOW, monthly progress reporting will terminate as of the date of EPA approval of the final Construction Completion Report, which triggers commencement of the O & M period. O & M reporting will occur through submission of those reports specified in the SOW.

31. 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.

32. 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, no later than the time required for any notification under Section 103(a) of CERCLA or Section 304(b) of EPCRA, 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 Emergency Response Section, Region I, United States Environmental Protection Agency. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304.

33. Within 20 days of the time required for a notification of such an event under Section 103(a) of CERCLA or Section 304(b) of EPCRA, Settling Defendants shall furnish to Plaintiffs 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 or the time required for a notification of such an event under Section 103(a) of CERCLA or Section 304(b) of EPCRA, Settling Defendants shall submit a report setting forth all actions taken in response thereto.

34. Settling Defendants shall submit two copies (or such other number of copies, if specified by EPA) of all plans, reports, and data required by the SOW, the Remedial Design Work Plan, the Remedial Action Work Plan, or any other approved plans to EPA in accordance with the schedules set forth in such plans. Settling Defendants shall simultaneously submit two copies of all such plans, reports, and data to the State. Upon request by EPA, Settling Defendants shall submit in electronic form all portions of any report or other deliverable Settling Defendants are required to submit pursuant to the provisions of this Consent Decree.

35. 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

36. 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, based upon the submission’s consistency with the ROD, SOW and applicable work plans as determined by EPA: (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 21 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.

37. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 36(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 36(c) and the submission has a material defect, EPA retains its right to seek stipulated penalties, as provided in Section XX (“Stipulated Penalties”).

38. Resubmission of Plans.

a. Upon receipt of a notice of disapproval pursuant to Paragraph 36(d), Settling Defendants shall, within 21 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 21-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 39 and 40.

b. Notwithstanding the receipt of a notice of disapproval pursuant to Paragraph 36(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”).

39. 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”).

40. 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, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XX.

41. 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

42. Within ten days of lodging this Consent Decree, Settling Defendants, the State 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 the other Parties at least five 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.

43. Plaintiffs 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.

44. EPA's Project Coordinator and the Settling Defendants' Project Coordinator will meet in person or by telephone, at a minimum, on a monthly basis.

XIII. PERFORMANCE GUARANTEE

45. In order to ensure the full and final completion of the Work, one or more of the Settling Defendants shall establish and maintain a Performance Guarantee for the benefit of EPA in the total amount of \$695,000 (hereinafter "Estimated Cost of the Work") in one or more of the following forms, which must be satisfactory in form and substance to EPA:

a. A surety bond unconditionally guaranteeing payment and/or performance of the Work that is issued by a surety company among those listed as acceptable sureties on Federal bonds as set forth in Circular 570 of the U.S. Department of the Treasury;

b. One or more irrevocable letters of credit, payable to or at the direction of EPA, that is issued by one or more financial institution(s) (i) that has the authority to issue letters of credit and (ii) whose letter-of-credit operations are regulated and examined by a U.S. Federal or State agency;

c. A trust fund established for the benefit of EPA that is administered by a trustee (i) that has the authority to act as a trustee and (ii) whose trust operations are regulated and examined by a U.S. Federal or State agency;

d. A policy of insurance that (i) provides EPA with acceptable rights as a beneficiary thereof; and (ii) is issued by an insurance carrier (a) that has the authority to issue insurance policies in the applicable jurisdiction(s) and (b) whose insurance operations are regulated and examined by a State agency;

e. A demonstration that one or more Settling Defendants satisfy the financial test criteria of 40 C.F.R. § 264.143(f) with respect to the Estimated Cost of the Work, provided that all other requirements of 40 C.F.R. § 264.143(f) are satisfied;

f. Evidence as provided by the Town of Southington's referendum for its share of the cost of the Work; or

g. A written guarantee to fund or perform the Work executed in favor of EPA by one or more of the following: (i) a direct or indirect parent company of a Settling Defendant, or (ii) a company that has a "substantial business relationship" (as defined in 40 C.F.R. § 264.141(h)) with at least one Settling Defendant; provided, however, that any company providing such a guarantee must demonstrate to the satisfaction of EPA that it satisfies the financial test requirements of 40 C.F.R. § 264.143(f) with respect to the Estimated Cost of the Work that it proposes to guarantee hereunder.

46. Settling Defendants have selected, and EPA has approved, as the Performance Guarantee pursuant to Paragraph 45, the 2009 OSL *De Minimis* Trust, and the trust agreement for such Trust is attached as Appendix E. Settling Defendants have submitted all executed and/or otherwise finalized instruments or other documents required in order to make the selected Performance Guarantee(s) legally binding to the EPA Cincinnati Financial Office in accordance with Section XXVI ("Notices and Submissions"), with a copy to the Regional Financial Assurance Specialist, the United States, EPA, and the State as specified in Section XXVI.

47. If at any time during the effective period of this Consent Decree, the Settling Defendants provide a Performance Guarantee for completion of the Work by means of a demonstration or guarantee pursuant to Paragraph 45(e) or Paragraph 45(f) above, such Settling Defendant shall also comply with the other relevant requirements of 40 C.F.R. § 264.143(f), 40 C.F.R. § 264.151(f), and 40 C.F.R. § 264.151(h)(1) relating to these methods unless otherwise provided in this Consent Decree, including but not limited to: (i) the initial submission of required financial reports and statements from the relevant entity's chief financial officer and independent certified public accountant; (ii) the annual re-submission of such reports and statements within 90 days after the close of each such entity's fiscal year; and (iii) the notification of EPA within 90 days after the close of any fiscal year in which such entity no longer satisfies the financial test requirements set forth at 40 C.F.R. § 264.143(f)(1). For purposes of the Performance Guarantee methods specified in this Section XIII, references in 40 C.F.R. Part 264, Subpart H, to "closure," "post-closure," and "plugging and abandonment" shall be deemed to refer to the Work required under this Consent Decree, and the terms "current closure cost estimate" "current post-closure cost estimate," and "current plugging and abandonment cost estimate" shall be deemed to refer to the Estimated Cost of the Work.

48. In the event that EPA determines at any time that a Performance Guarantee provided by any Settling Defendant pursuant to this Section is inadequate or otherwise no longer satisfies the requirements set forth in this Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, or in the event that any Settling Defendant becomes aware of information indicating that a Performance Guarantee provided pursuant to this Section is inadequate or otherwise no longer satisfies the requirements set forth in this Section, whether due to an increase in the estimated cost of completing the Work or for any other reason, Settling Defendants, within 30 days of receipt of notice of EPA's determination or, as the case may be, within 30 days of any Settling Defendant becoming aware of such information, shall obtain and present to EPA for approval a proposal for a revised or alternative form of Performance Guarantee listed in Paragraph 45 that satisfies all requirements set forth in this Section XIII. In seeking approval for a revised or alternative form of Performance Guarantee,

Settling Defendants shall follow the procedures set forth in Paragraph 50.b.(2). Settling Defendants' inability to post a Performance Guarantee for completion of the Work shall in no way excuse performance of any other requirements of this Consent Decree, including, without limitation, the obligation of Settling Defendants to complete the Work in strict accordance with the terms hereof.

49. The commencement of any Work Takeover pursuant to Paragraph 103 shall trigger EPA's right to receive the benefit of any Performance Guarantee(s) provided pursuant to Paragraphs 45(a), (b), (c), (d), or (f), and at such time EPA shall have immediate access to resources guaranteed under any such Performance Guarantee(s), whether in cash or in kind, as needed to continue and complete the Work assumed by EPA under the Work Takeover. If for any reason EPA is unable to promptly secure the resources guaranteed under any such Performance Guarantee(s), whether in cash or in kind, necessary to continue and complete the Work assumed by EPA under the Work Takeover, or in the event that the Performance Guarantee involves a demonstration of satisfaction of the financial test criteria pursuant to Paragraph 45(e), Settling Defendants shall immediately upon written demand from EPA deposit into an account specified by EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed as of such date, as determined by EPA.

50. Modification of Amount and/or Form of Performance Guarantee.

a. Reduction of Amount of Performance Guarantee. If Settling Defendants believe that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 45, Settling Defendants may, on any anniversary date of entry of this Consent Decree, or at any other time agreed to by the Parties, petition EPA in writing to request a reduction in the amount of the Performance Guarantee provided pursuant to this Section so that the amount of the Performance Guarantee is equal to the estimated cost of the remaining Work to be performed. Settling Defendants shall submit a written proposal for such reduction to EPA that shall specify, at a minimum, the cost of the remaining Work to be performed and the basis upon which such cost was calculated. In seeking approval for a revised or alternative form of Performance Guarantee, Settling Defendants shall follow the procedures set forth in Paragraph 50.b.(2). If EPA decides to accept such a proposal, EPA shall notify the petitioning Settling Defendants of such decision in writing. After receiving EPA's written acceptance, Settling Defendants may reduce the amount of the Performance Guarantee in accordance with and to the extent permitted by such written acceptance. In the event of a dispute, Settling Defendants may reduce the amount of the Performance Guarantee required hereunder only in accordance with a final administrative or judicial decision resolving such dispute. No change to the form or terms of any Performance Guarantee provided under this Section, other than a reduction in amount, is authorized except as provided in Paragraph 50.b.

b. Change of Form of Performance Guarantee.

(1) If, after the Effective Date, Settling Defendants desire to change the form or terms of any Performance Guarantee(s) provided pursuant to this Section, Settling Defendants may, on any anniversary date of entry of this Consent Decree, or at any other time agreed to by the Parties, petition EPA in writing to request a change in the form of the Performance Guarantee provided hereunder. The submission of such

proposed revised or alternative form of Performance Guarantee shall be as provided in Paragraph 50.b.(2). Any decision made by EPA on a petition submitted under this Subparagraph b.(2) shall, after considering the estimated cost of the remaining work to be performed, be made in EPA's sole and unreviewable discretion, and such decision shall not be subject to challenge by Settling Defendants pursuant to the dispute resolution provisions of this Consent Decree or in any other forum.

(2) Settling Defendants shall submit a written proposal for a revised or alternative form of Performance Guarantee to EPA which shall specify, at a minimum, the estimated cost of the remaining Work to be performed, the basis upon which such cost was calculated, and the proposed revised form of Performance Guarantee, including all proposed instruments or other documents required in order to make the proposed Performance Guarantee legally binding. The proposed revised or alternative form of Performance Guarantee must satisfy all requirements set forth or incorporated by reference in this Section. Settling Defendants shall submit such proposed revised or alternative form of Performance Guarantee to the EPA Cincinnati Financial Office, with a copy to the Regional Financial Assurance Specialist in accordance with Section XXVI ("Notices and Submissions"). EPA shall notify Settling Defendants in writing of its decision to accept or reject a revised or alternative Performance Guarantee submitted pursuant to this Subparagraph. Within ten days after receiving a written decision approving the proposed revised or alternative Performance Guarantee, Settling Defendants shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected Performance Guarantee(s) legally binding in a form substantially identical to the documents submitted to EPA as part of the proposal, and such Performance Guarantee(s) shall thereupon be fully effective. Settling Defendants shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected Performance Guarantee(s) legally binding to the EPA Cincinnati Financial Office within 30 days of receiving a written decision approving the proposed revised or alternative Performance Guarantee in accordance with Section XXVI ("Notices and Submissions"), with copies to the Regional Financial Assurance Specialist, the United States, EPA, and the State as specified in Section XXVI.

c. Release of Performance Guarantee. If Settling Defendants receive written notice from EPA in accordance with Paragraph 51 that the Work has been fully and finally completed in accordance with the terms of this Consent Decree, or if EPA otherwise so notifies Settling Defendants in writing, Settling Defendants may thereafter release, cancel, or discontinue the Performance Guarantee(s) provided pursuant to this Section. Settling Defendants shall not release, cancel, or discontinue any Performance Guarantee provided pursuant to this Section except as provided in this Paragraph. In the event of a dispute, Settling Defendants may release, cancel, or discontinue the Performance Guarantee(s) required hereunder only in accordance with a final administrative or judicial decision resolving such dispute.

XIV. CERTIFICATION OF COMPLETION

51. Completion of the Remedial Action.

a. Within 90 days after Settling Defendants conclude that the Remedial

Action has been fully performed and the Performance Standards have been attained, Settling Defendants shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants, EPA, and the State. If, after the pre-certification inspection, the Settling Defendants still believe that the Remedial Action has been fully performed and the Performance Standards have been attained, they shall submit a written report requesting certification to EPA for approval, with a copy to the State, pursuant to Section XI ("EPA Approval of Plans and Other Submissions") within 30 days of the inspection. In the report, a registered professional engineer and the Settling Defendants' Project Coordinator shall state that the Remedial Action has been completed in full satisfaction of the requirements of this Consent Decree. The written report shall include as-built drawings signed and stamped by a professional engineer. 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 completion of the pre-certification inspection and receipt and review of the written report, EPA, after reasonable opportunity to review and comment by the State, determines that the Remedial Action or any portion thereof has not been completed in accordance with this Consent Decree or that the Performance Standards have not been achieved, 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 and achieve the Performance Standards, 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 2006 ROD," as that term is defined in Paragraph 13.b. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW 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 pursuant to this Paragraph, subject to their right to invoke the dispute resolution procedures set forth in Section XIX ("Dispute Resolution").

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, 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 by Plaintiffs"). Certification of Completion of the Remedial Action shall not affect Settling Defendants' obligations under this Consent Decree.

52. Completion of the Work.

a. Within 90 days after Settling Defendants conclude that all phases of the Work (including O & M), have been fully performed, Settling Defendants shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants, EPA, and the State. 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 to 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 2006 ROD," as that term is defined in Paragraph 13.b. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW 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").

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

53. 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 54, 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 EPA Emergency Response Unit, Region 1. 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 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 or, as appropriate, the State take such action instead, Settling Defendants shall reimburse EPA and the State all costs of the response action not inconsistent with the NCP pursuant to Section XVI ("Payments for Response Costs").

54. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States, or the State, 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 minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XXI ("Covenants by Plaintiffs").

XVI. PAYMENTS

55. Payment by Settling Defendants for Future Oversight Costs

a. Within 30 days of the Effective Date, Settling Defendants shall pay to EPA \$500,000 in payment for Future Oversight Costs. Payment shall be made by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice account in accordance with current EFT procedures, referencing the USAO File Number, EPA Site/Spill ID Number 01-58, and DOJ Case Number 90-11-2-420/5. Payment shall be made in accordance with instructions provided to the Settling Defendants by the Financial Litigation Unit of the United States Attorney's Office for the District of Connecticut following lodging of the Consent Decree. Any payments received by the Department of Justice after 4:00 p.m. (Eastern Time) will be credited on the next business day.

b. At the time of payment, Settling Defendants shall send notice that payment has been made to the United States, to EPA, and to the EPA Cincinnati Financial Office, in accordance with Section XXVI ("Notices and Submissions").

c. The total amount to be paid by Settling Defendants pursuant to Paragraph 55 shall be deposited in the Old Southington Landfill Superfund Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

56. Payments by Settling Defendants for Future Response Costs.

a. Settling Defendants shall pay to EPA all Future Response Costs not inconsistent with the National Contingency Plan. On a periodic basis the United States will send Settling Defendants a bill requiring payment that consists of a Region 1 standard cost summary, which is a line-item summary of costs in dollars by category of costs (including but not limited to payroll, travel, indirect costs, and contracts) incurred by EPA and DOJ and their contractors. Settling Defendants shall make all payments within 30 days of Settling Defendants' receipt of each bill requiring payment, except as otherwise provided in Paragraph 57. Settling Defendants shall make all payments required by this Paragraph by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the party making the payment, EPA Site/Spill ID Number 01-58, and DOJ Case Number 90-11-

2-420/5. Settling Defendants shall send the check(s) to:

(For Delivery by First Class Mail)
U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
P.O. Box 979076
St. Louis, MO 63197-9000

(For Delivery by Overnight Mail)
U.S. Bank
1005 Convention Plaza
Mail Station SL-MO-C2GL
St. Louis, MO 63101

b. At the time of payment, Settling Defendants shall send notice that payment has been made to the United States, to EPA, and to the EPA Cincinnati Financial Office, in accordance with Section XXVI (“Notices and Submissions”)-

c. The total amount to be paid by Settling Defendants pursuant to Subparagraph 56.a shall be deposited in the Old Southington Landfill Superfund Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

57. Settling Defendants may contest payment of any Future Response Costs under Paragraph 56 if they determine that the United States has made an accounting 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 receipt 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 56. Simultaneously, the Settling Defendants shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of Connecticut 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 transmittal letter and check paying the uncontested Future Response Costs, and 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 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 five days of the resolution of the dispute, the Settling Defendants shall pay the sums due (with accrued interest) to the United States in the manner described in Paragraph 56. If the Settling Defendants prevail concerning any aspect of the contested costs, the Settling Defendants shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States in the manner

described in Paragraph 56; 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.

58. In the event that the payments required by Paragraph 55 are not made within 30 days of the Effective Date or the payments required by Paragraph 56 are not made within 30 days of the Settling Defendants’ receipt of the bill, Settling Defendants shall pay Interest on the unpaid balance. The Interest to be paid on the payment for Future Oversight Costs under this Paragraph shall begin to accrue 30 days after the Effective Date. The Interest 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 Plaintiffs by virtue of Settling Defendants’ failure to make timely payments under this Section including, but not limited to, payment of stipulated penalties pursuant to Paragraph 79. The Settling Defendants shall make all payments required by this Paragraph in the manner described in Paragraph 56.

59. Payment by Settling Federal Agencies. As soon as reasonably practical as of the Effective Date, the United States, on behalf of the Settling Federal Agencies, shall cause \$507,960.23 to be paid to United Technologies Corporation (“UTC”). This payment is for Settling Federal Agencies’ share of the estimated cost of the Work, Future Response Costs and Natural Resource Damages, including premiums to cover the risk of cost overruns and other contingencies, and a premium to cover the risk that additional work may be required in the Highland Hills subdivision west of the Site. The payment to UTC shall be made by check made payable to UTC or by wire in accordance with the wiring instructions specified by UTC.

60. In the event that payment required by Paragraph 59 is not made within 120 days of the Effective Date, Interest on the unpaid balance shall be paid commencing on the 121st day following the Effective Date and accruing through the date of the payment.

61. The Parties to this Consent Decree recognize and acknowledge that the payment obligations of the Settling Federal Agencies under this Consent Decree can only be paid from appropriated funds legally available for such purpose. Nothing in this Consent Decree shall be interpreted or construed as a commitment or requirement that any Settling Federal Agency obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of law.

62. Payment by Settling Defendants for Federal Natural Resource Damages. Within 30 days of the Effective Date, Settling Defendants shall pay \$537,000 to DOI for Natural Resource Damages. Of this amount, \$13,455.85 is to reimburse the DOI for past assessment costs and \$523,544.15 is for natural resource damages and is to be spent for restoration, replacement or acquisition of the equivalent of the natural resource injuries associated with the Site, including planning, oversight, monitoring, and other allowable expenditures associated with such restoration, replacement or acquisition. Payment to DOI shall be made in accordance with instructions provided by DOI after the Effective Date. Notice that this payment has been made shall be sent to: Department of the Interior, Natural Resource Damage Assessment and Restoration Fund, Attn: Restoration Fund Manager, 1849 C Street, N.W., Washington, DC

20240.

63. Payment by Settling Defendants for State Natural Resource Damages. Settling Defendants shall pay \$2,750,000 to the State for Natural Resource Damages for the permanent loss of use of groundwater due to the alleged actions of the Settling Defendants. Of this amount, \$2,329,433.33 shall be paid within 30 days of the Effective Date. The Town shall pay its allocated share of the State NRD payment in annual installments without interest. The Town's first installment is included in the total described in the second sentence of this Paragraph. The Town's second installment of \$210,283.33 shall be due one year from the Effective Date and the Town's third installment shall be due two years from the Effective Date. All payments to the State shall be made by check made payable to "Treasurer, State of Connecticut" and delivered to the attention of the undersigned counsel for the State at the Office of the Attorney General, 55 Elm Street, Hartford, CT 06106.

XVII. INDEMNIFICATION AND INSURANCE

64. Settling Defendants' Indemnification of the United States and the State.

a. The United States and the State do not assume any liability by entering into this agreement or by 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 (with the exception of the Settling Federal Agencies), the State, and their 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 pay the United States (with the exception of the Settling Federal Agencies) and the State all costs they incur 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 or the State 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. Neither the United States nor the State shall 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 or the State.

b. The United States and the State shall give Settling Defendants notice of any claim for which the United States or the State plan to seek indemnification pursuant to Paragraph 64, and shall consult with Settling Defendants prior to settling such claim.

65. Settling Defendants waive all claims against the United States and the State for damages or reimbursement or for set-off of any payments made or to be made to the United States or the State, 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. In addition, Settling Defendants shall indemnify and hold harmless the United States and the State

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.

66. 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 51.b of Section XIV ("Certification of Completion") comprehensive general liability insurance with limits of three million dollars, combined single limit, and automobile liability insurance with limits of one million dollars, combined single limit, naming the United States and the State as additional insureds. 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 and the State 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. If Settling Defendants demonstrate by evidence satisfactory to EPA and the State 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

67. "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.

68. 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 Director of the Office of Site Remediation & Restoration, EPA Region 1, within 24 hours of when the Settling Defendants first knew that the event might cause a delay. Settling Defendants also shall notify orally the State's Project Coordinator, or in his or her absence, Gennady Shteynberg, within 48 hours of when Settling Defendants first knew that the event might cause a delay. Within five business days thereafter, Settling Defendants shall provide in writing to EPA and the State 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 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.

69. If EPA, after a reasonable opportunity for review and comment by the State, 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, after a reasonable opportunity for review and comment by the State, for such time as is necessary to complete those obligations, and the resulting delay shall not be deemed to be a violation of this Consent Decree. 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, after a reasonable opportunity for review and comment by the State, 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, after a reasonable opportunity for review and comment by the State, 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.

70. 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 denying the applicability of force majeure. In any such proceeding, Settling Defendants shall have 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 67 and 68, 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

71. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes between EPA and Settling Defendants or between the State and Settling Defendants arising under or with respect to this Consent Decree. The procedures for resolution of disputes which involve EPA are governed by Paragraphs 72 to 76. The State may participate in such dispute resolution proceedings to the extent specified in Paragraphs 72 through 76. Disputes exclusively between the State and Settling Defendants are governed by Paragraph 77. However, the

procedures set forth in this Section shall not apply to actions by the United States or the State to enforce obligations of the Settling Defendants that have not been disputed in accordance with this Section.

72. 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 modified 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.

73. Statements of Position.

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 and the State 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 74 or Paragraph 75.

b. Within 21 days after receipt of Settling Defendants' Statement of Position, EPA, after reasonable opportunity for review and comment by the State, 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 74 or 75. 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 74 or 75, 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 74 and 75.

74. 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 2006 ROD's provisions.

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 Settling Defendants, EPA or the State.

b. The Director of the Office of Site Remediation & Restoration, EPA Region 1, will issue, after reasonable opportunity for review and comment by the State, a final administrative decision resolving the dispute based on the administrative record described in Paragraph 74.a. This decision shall be binding upon the Settling Defendants, subject only to the right to seek judicial review pursuant to Paragraphs 74.c and d.

c. Any administrative decision made by EPA pursuant to Paragraph 74.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 ten 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 Director of the Office of Site Remediation & Restoration 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 74.a.

75. 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 73, the Director of the Office of Site Remediation & Restoration, EPA Region 1, after reasonable opportunity for review and comment by the State, will issue a final decision resolving the dispute. The decision of the Director of the Office of Site Remediation & Restoration shall be binding on the Settling Defendants unless, within 20 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 M of Section I ("Background"), judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

76. 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, after reasonable opportunity for review and comment by the State, 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 86. 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”).

77. Disputes Solely Between the State and Settling Defendants. Disputes arising under the Consent Decree between the State and Settling Defendants assessment of stipulated penalties and the adequacy of access and institutional controls following any assignment of a grant of environmental restrictions from the United States to the State, shall be governed in the following manner. The procedures for resolving the disputes mentioned in this Paragraph shall be the same as provided for in Paragraphs 72 to 76, except that each reference to EPA shall read as a reference to CTDEP, each reference to the Director of the Office of Site Remediation & Restoration, EPA Region 1, shall be read as a reference to Director of Permitting, Enforcement, Remediation Division, CTDEP, and each reference to the United States shall be read as a reference to the State.

XX. STIPULATED PENALTIES

78. Settling Defendants shall be liable for stipulated penalties in the amounts set forth in Paragraphs 79 and 80 to the United States and the State for failure to comply with the requirements of this Consent Decree specified below following the Effective Date of this Consent Decree, unless excused under Section XVIII (“Force Majeure”) or by resolution of Dispute Resolution (Section XIX) in Settling Defendants’ favor. Settling Defendants shall pay 90% of stipulated penalties to the United States, and shall pay 10% of stipulated penalties to the State in accordance with the requirements of Paragraph 84. “Compliance” by Settling Defendants shall include 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 or the State pursuant to this Consent Decree and within the specified time schedules established by and approved under this Consent Decree.

79. The following stipulated penalties shall accrue per violation per day for any noncompliance except those identified in Paragraph 80:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 2,000	1st through 14th day
\$ 5,000	15th through 30th day
\$ 7,500	31st day and beyond

80. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports pursuant to Paragraph 30, Section X of the Consent Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500	1st through 14th day
\$ 1,000	15th through 30th day
\$ 2,500	31st day and beyond

81. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph I03 of Section XXI (“Covenants by Plaintiffs”), Settling Defendants shall

be liable for a stipulated penalty in the amount of \$250,000.

82. 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 Office of Site Remediation & Restoration, EPA Region 1, under Paragraphs 74.b or 75.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.

83. Following EPA's determination, after a reasonable opportunity for review and comment by the State, 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, or EPA and the State jointly, may send 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, or the State for violations specified in Paragraph 87, has notified Settling Defendants of a violation.

84. All penalties accruing under this Section shall be due and payable to the United States and/or the State within 30 days of Settling Defendants' receipt from EPA of a 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 paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to EPA Cincinnati Financial Office, 26 Martin Luther King Drive, Cincinnati, OH 45268, shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID # 01-58, the DOJ Case Number 90-11-2-420/5, and the name and address of the party making payment. All payments to the State under this Section shall be made payable to Treasurer, State of Connecticut, and shall be mailed to the Office of the Attorney General, 55 Elm Street, Hartford, Connecticut 06106 Attn: Environment Department. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to the United States and to the State as provided in Section XXVI ("Notices and Submissions").

85. 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.

86. Penalties shall continue to accrue as provided in Paragraph 82 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 and the

State within 15 days of the agreement or the receipt 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 and the State 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 or the State 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 and the State or to Settling Defendants to the extent that they prevail.

87. State Assessment of Stipulated Penalties. Assessment of stipulated penalties by the State shall be governed in the following manner. Following the State's determination that Settling Defendants have failed to submit payment to the State as required under Paragraph 63, the State may, after reasonable opportunity for review and comment by EPA, give Settling Defendants written notification of the same and describe the noncompliance. The provisions for liability, assessment and payment of the stipulated penalties referenced in this Paragraph shall be the same as provided in Paragraphs 81 to 89, except that in Paragraph 86 excluding the last sentence of that Paragraph, and in Paragraph 89, each reference to EPA shall read as a reference to CTDEP, each reference to the United States shall be read as a reference to the State, each reference to the State shall be read as a reference to the United States, and each reference to the State's reasonable opportunity to review and comment shall read as EPA's reasonable opportunity for review and comment. For penalties assessed under this Paragraph, the Settling Defendants shall pay 90% to the State, and shall pay 10% to the United States in accordance with the requirements of Paragraph 78.

88. If Settling Defendants fail to pay stipulated penalties when due, the United States or the State may institute proceedings to collect the penalties, as well as Interest. Settling Defendants shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 82.

89. Nothing in this Consent Decree shall be construed as prohibiting, altering, or in any way limiting the ability of the United States or the State to seek any other remedies or sanctions available by virtue of Settling Defendants' violation of this Consent 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.

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

XXI. COVENANTS BY PLAINTIFFS

91. United States' Covenant for Settling Defendants. 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 93, 94, and 102 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 42 U.S.C. §§ 9606 and 9607, or Section 7003 of RCRA, 42 U.S.C. § 6973, relating to the Site, including Natural Resource Damages. Except with respect to future liability, these covenants not to sue shall take effect upon the Effective Date. 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 51.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.

92. Covenant for Settling Federal Agencies. In consideration of the payment that will be made by the Settling Federal Agencies under the terms of the Consent Decree, and except as specifically provided in Paragraphs 93, 94, and 102 of this Section, EPA and the federal NR Trustees covenant not to take administrative action against the Settling Federal Agencies pursuant to Sections 106 and 107(a) of CERCLA, or Section 7003 of RCRA, 42 U.S.C. § 6973, relating to the Site, including Natural Resource Damages. Except with respect to future liability, these covenants shall take effect upon the receipt of the payment required by Paragraph 59 of Section XVI ("Reimbursement of Response Costs"). With respect to future liability, these covenants shall take effect upon Certification of Completion of Remedial Action by EPA pursuant to Paragraph 51.b of Section XIV ("Certification of Completion"). These covenants are conditioned upon the satisfactory performance by Settling Federal Agencies of their obligations under this Consent Decree. These covenants extend only to the Settling Federal Agencies and do not extend to any other person.

93. 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, and EPA reserves the right to issue an administrative order seeking to compel the Settling Federal Agencies,

- a. to perform further response actions relating to the Site, or
- b. to reimburse the United States for additional costs of response if, prior to Certification of Completion of the Remedial Action:
 - (1) conditions at the Site, previously unknown to EPA, are discovered,

or

 - (2) information, previously unknown to EPA, is received, in whole or

in part,

and EPA determines that 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.

94. 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, and EPA reserves the right to issue an administrative order seeking to compel the Settling Federal Agencies,

- a. to perform further response actions relating to the Site, or
- b. to reimburse the United States for additional costs of response if, subsequent to Certification of Completion of the Remedial Action:
 - (1) conditions at the Site, previously unknown to EPA, are discovered,or
 - (2) information, previously unknown to EPA, is received, in whole or in part,

and EPA determines that 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.

95. For purposes of Paragraph 93, the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date the 2006 ROD was signed and set forth in the 1994 ROD and the 2006 ROD for the Site and the administrative record supporting the 1994 ROD and the 2006 ROD and that information and those conditions known to EPA as set forth in the additional groundwater data and data related to the former Lori Corp. property submitted in writing to EPA prior to the date of lodging this Consent Decree. For purposes of Paragraph 94, 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 1994 ROD and the 2006 ROD, the administrative record supporting the 1994 ROD and the 2006 ROD, the post-1994 ROD and the post-2006 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.

96. State's Covenant Not to Sue the Settling Defendants and the Settling Federal Agencies. In consideration of the actions that will be performed and the payments that will be made by the Settling Defendants and the payment that will be made by the Settling Federal Agencies under the terms of the Consent Decree, and except as specifically provided in Paragraph 102 of this Section, the State covenants not to sue or to take administrative action against Settling Defendants and the Settling Federal Agencies pursuant to Sections 107(a) of CERCLA, Conn. Gen. Stat. §§22a-432, 22a-451, 22a-6a, or 22a-14 through 22a-20 relating to the Site, including Natural Resources Damages. These covenants shall take effect upon receipt of the payment required by Paragraph 59. These covenants are conditioned upon the satisfactory performance by the Settling Defendants and the Settling Federal Agencies of their obligations under this Consent Decree. These covenants extend only to the Settling Defendants and the Settling Federal Agencies and do not extend to any other person.

97. State's Pre-Certification Reservations. Notwithstanding any other provisions of this Consent Decree, the State on behalf of CTDEP, reserves, and this Consent Decree is without

prejudice to, any right jointly with, or separately from, the United States to institute proceedings in this action or in a new action under Section 107 of CERCLA, 42 U.S.C. § 9607, or under any applicable State law, including but not limited to, Conn. Gen. Stat. §§ 22a-6a, 22a-432, 22a-451, or 22a-14 through 22a-20 seeking to compel all or any of the Settling Defendants and the Settling Federal Agencies (1) to perform other response actions at the Site, or (2) to reimburse the State for additional response costs for response actions at the Site, to the extent that EPA has determined that such response actions required under (1) and (2) above in this Paragraph will not significantly delay or be inconsistent with the Remedial Action, if, prior to Certification of Completion of the Remedial Action:

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

and the CTDEP determines, under any applicable State law, including, but not limited to, Conn. Gen. Stat. §§22a-6a, 22a-432, 22a-451, or 22a-14 through 22a-20 based on these previously unknown conditions or this information together with any other relevant information that the response actions taken are not protective of health, safety, public welfare or the environment. The United States reserves all rights it may have under applicable law, to oppose any determinations made or any actions taken, ordered or proposed by the State pursuant to this Paragraph.

98. State's Post-Certification Reservations. Notwithstanding any other provision of this Consent Decree, the State, on behalf of CTDEP, reserves, and this Consent Decree is without prejudice to, the right jointly with, or separately from, the United States to institute proceedings in this action or in a new action under Section 107 of CERCLA, 42 U.S.C. § 9607, or under any applicable State law, including but not limited to, Conn. Gen. Stat. §§ 22a-6a, 22a-432, 22a-451, or 22a-14 through 22a-20 seeking to compel all or any of the Settling Defendants and the Settling Federal Agencies (1) to perform other response actions at the Site, or (2) to reimburse the State for additional response costs for response actions at the Site, to the extent that EPA has determined that such response actions required under (1) and (2) above in this Paragraph will not significantly delay or be inconsistent with the Remedial Action, if, subsequent to Certification of Completion of Remedial Action:

- (i) conditions at the Site, previously unknown to the State, are discovered or become known to the State after the Certification of Completion, or
- (ii) information previously unknown to the State is received by the State, in whole or in part, after the Certification of Completion,

and the CTDEP determines, under any applicable State law, including, but not limited to, Conn. Gen. Stat. §§22a-6a, 22a-432, 22a-451, or 22a-14 through 22a-20 based on these previously unknown conditions or this information together with any other relevant information that the response actions taken are not protective of health, safety, public welfare or the environment. The United States reserves all rights it may have under applicable law, to oppose any determinations made or any actions taken, ordered or proposed by the State pursuant to this Paragraph.

99. For purposes of Paragraph 97, the information and the conditions known to the State shall include only that information and those conditions known to the State as of the date the 2006 ROD was signed and set forth in the 1994 ROD and the 2006 ROD for the Site and the administrative record supporting the 1994 ROD and the 2006 ROD and that information and those conditions known to the State as set forth in the additional groundwater data and data related to the former Lori Corp. property submitted in writing to the State prior to the date of lodging this Consent Decree. For purposes of Paragraph 98, the information and the conditions known to the State shall include only that information and those conditions known to the State as of the date of Certification of Completion of the Remedial Action and set forth in the 1994 ROD and the 2006 ROD, the administrative record supporting the 1994 ROD and the 2006 ROD, the post-1994 ROD and the post-2006 ROD administrative record, or in any information received by the State pursuant to the requirements of this Consent Decree prior to Certification of Completion of the Remedial Action.

100. Notwithstanding any other provision of this Consent Judgment, the United States and the State reserve, and this Consent Decree is without prejudice to, the right to institute civil or administrative proceedings, as applicable, against Settling Defendants in this action or in a new action, and the federal NR Trustees and the State reserve, and this Consent Decree is without prejudice to, the right to institute civil or administrative proceedings, as applicable, against Settling Federal Agencies: seeking recovery of Natural Resource Damages, including costs of damage assessment, under Section 107 of CERCLA, if, after the Effective Date:

a. conditions at the Site, previously unknown to the NR Trustees, are discovered and are found to result in releases of hazardous substances that contribute to injury to, destruction of, or loss of Natural Resources; or

b. information previously unknown to the NR Trustees is received, and the United States or the State determines that the new information together with other relevant information indicate that releases of hazardous substances at the Site have resulted in injury to, destruction of, or loss of Natural Resources of a type that was unknown to the NR Trustees as of the date of lodging of the Consent Decree.

101. For purposes of the preceding Paragraph, the information and conditions known to the NR Trustees shall include only the information and conditions (a) known to the NR Trustees as of the date of lodging of this Consent Decree and (b) set forth in (i) the administrative record as of the date of lodging of this Consent Decree or (ii) additional groundwater data and data related to the former Lori Corp. property, submitted to the EPA and the State in writing prior to the date of lodging this Consent Decree.

102. General reservations of rights. The United States and the State reserve, and this Consent Decree is without prejudice to, all rights against Settling Defendants, and EPA and the federal NR Trustees and the State reserve, and this Consent Decree is without prejudice to, all rights against the Settling Federal Agencies, with respect to all matters not expressly included within Plaintiff's covenant not to sue. Notwithstanding any other provision of this Consent Decree, the United States reserves all rights against Settling Defendants, and EPA and the federal NR Trustees reserve all rights against Settling Federal Agencies, with respect to:

a. claims based on a failure by Settling Defendants or the Settling Federal Agencies 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 Material outside of the Site;

c. liability based upon the Settling Defendants' or Settling Federal Agencies' ownership or operation of the Site, or upon the Settling Defendants' or the Settling Federal Agencies' transportation, treatment, storage, or disposal, or the arrangement for the transportation, treatment, storage, or disposal of Waste Material at or in connection with the Site, other than as provided in the 2006 ROD, the Work, or otherwise ordered by EPA, that occurs after signature of this Consent Decree by the Settling Defendants;

d. criminal liability;

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

f. 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 13 ("Modification of the SOW or Related Work Plans"); and

g. liability regarding response actions relating in any way to the GA Area beyond those limited investigation activities described in and required by Section IV.D of the SOW and liability regarding response actions related in any way to the former Lori Corp. property beyond those limited water level monitoring activities described in and required by Section IV.C.3.c. of the SOW.

103. Work Takeover.

a. In the event EPA determines that Settling Defendants have (i) ceased implementation of any portion of the Work, or (ii) are seriously or repeatedly deficient or late in their performance of the Work, or (iii) are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may issue a written notice ("Work Takeover Notice") to the Settling Defendants. Any Work Takeover Notice issued by EPA will specify the grounds upon which such notice was issued and will provide Settling Defendants a period of ten days within which to remedy the circumstances giving rise to EPA's issuance of such notice.

b. If, after expiration of the ten-day notice period specified in the previous Paragraph, Settling Defendants have not remedied to EPA's satisfaction the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice, EPA may at any time thereafter assume the performance of all or any portions of the Work as EPA deems necessary ("Work Takeover"). EPA shall notify Settling Defendants in writing (which writing may be electronic) if EPA determines that implementation of a Work Takeover is warranted under this Paragraph.

c. Settling Defendants may invoke the procedures set forth in Section XIX (Dispute Resolution), Paragraph 74, to dispute EPA's implementation of a Work Takeover under the previous Paragraph. However, notwithstanding Settling Defendants' invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion commence and continue a Work Takeover under the previous Paragraph until the

earlier of (i) the date that Settling Defendants remedy, to EPA's satisfaction, the circumstances giving rise to EPA's issuance of the relevant Work Takeover Notice or (ii) the date that a final decision is rendered in accordance with Section XIX ("Dispute Resolution"), Paragraph 74.b, requiring EPA to terminate such Work Takeover.

d. After commencement and for the duration of any Work Takeover, EPA shall have immediate access to and benefit of any performance guarantee(s) provided pursuant to Section XIII, in accordance with the provisions of Paragraph 49 of that Section. If and to the extent that EPA is unable to secure the resources guaranteed under any such performance guarantee(s) and the Settling Defendants fail to remit a cash amount up to but not exceeding the estimated cost of the remaining Work to be performed, all in accordance with the provisions of Paragraph 49, any unreimbursed costs incurred by EPA in performing Work under the Work Takeover shall be considered Future Response Costs that Settling Defendants shall pay pursuant to Section XVI ("Payment for Response Costs").

104. Notwithstanding any other provision of this Consent Decree, the United States and the State retain all authority and reserve all rights to take any and all response actions authorized by law.

XXII. COVENANTS BY SETTLING DEFENDANTS AND SETTLING FEDERAL AGENCIES

105. Covenant Not to Sue by Settling Defendants. Subject to the reservations in Paragraph 109, Settling Defendants hereby covenant not to sue and agree not to assert any claims or causes of action against the United States or the State 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 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 actions at or in connection with the Site, including any claim under the United States Constitution, the Connecticut State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law.
- d. any claim against the State, including any department, agency or instrumentality of the State, under Conn. Gen. State §22a-452, related to the Site.

106. UTC acknowledges that it is a past and current party to certain government contracts, and certifies that no costs for the Work or federal Natural Resource Damages paid by Settling Federal Agencies pursuant to this Consent Decree have been or will be billed to any department, agency, or instrumentality of the United States, under overhead pools and allocation bases used for cost allocation to government contracts.

107. Covenants by Settling Federal Agencies. Settling Federal Agencies hereby agree not to assert any direct or indirect claim for reimbursement from the Hazardous Substance 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 with respect to

the Site, past response actions and Future Response Costs as defined herein or this Consent Decree. This covenant does not preclude demand for reimbursement from the Superfund of costs incurred by a Settling Federal Agency in the performance of its duties (other than pursuant to this Consent Decree) as lead or support agency under the National Contingency Plan (40 C.F.R. Part 300).

108. Except as provided in Paragraph 113 (“Waiver of Claims Against *De Minimis* Parties”) and Paragraph 118 (“Waiver of Claim-Splitting Defenses”), the covenants not to sue in this Section shall not apply in the event that the United States or the State brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 93, 94, 97, 98, 102(b) - (d) or 102(g), but only to the extent that Settling Defendants’ claims arise from the same response action, response costs, or damages that the United States or the State is seeking pursuant to the applicable reservation.

109. The Settling Defendants reserve, and this Consent Decree is without prejudice to: (a) 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; and (b) contribution claims against the Settling Federal Agencies in the event any claim is asserted by the United States or the State against the Settling Defendants under the authority of or under Paragraphs 93, 94, 97, 98 or 102(b) - (d) or 102(g) of Section XXII (“Covenants by Plaintiffs”), but only to the same extent and for the same matters, transactions, or occurrences as are raised in the claim of the United States or the State against Settling Defendants.

110. 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).

111. 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 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 Municipal Solid Waste (“MSW”) at the Site, if the volume of MSW disposed, treated or transported by such person to the Site did not exceed 0.2 percent of the total volume of waste at the Site.

112. The waiver in Paragraph 111 shall not apply with respect to any defense, claim, or cause of action that a Settling Defendant may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Settling

Defendant. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines that: (a) the MSW contributed significantly or could contribute significantly, either individually or in the aggregate, to the cost of the response action or natural resource restoration at the Site; (b) the person has failed to comply with any information request or administrative subpoena issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. § 9604(e) or § 9622(e), or Section 3007 of RCRA, 42 U.S.C. § 6927; or (c) the person impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site.

113. Waiver of Claims Against *De Minimis* Parties. Settling Defendants agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Section 107(a) and 113(f) of CERCLA) that they may have for all response costs regarding the Site and Natural Resource Damages against any person that has entered into a final CERCLA § 122(g) *de minimis* settlement with EPA regarding the Site as of the Effective Date. This waiver shall not apply to: (a) any defense, claim, or cause of action that a Settling Defendant may have against any person if such person asserts a claim or cause of action regarding the Site against such Settling Defendant; (b) any contractual claim in the nature of indemnification from such person or for reimbursement from an insurance carrier; (c) any liability regarding response actions relating in any way to the GA Area beyond those limited investigation activities described in and required by Section IV.D of the SOW; and (d) any liability regarding response actions related in any way to the former Lori Corp. property beyond those limited water level monitoring activities described in and required by Section IV.C.3.c. of the SOW.

XXIII. EFFECT OF SETTLEMENT; CONTRIBUTION PROTECTION

114. Except as provided in Paragraph 113 (“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 113 (“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, 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.

115. The Parties agree, and by entering this Consent Decree this Court finds, that the Settling Defendants and the Settling Federal Agencies are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by CERCLA Section 113(f)(2), 42 U.S.C. § 9613(f)(2), or as may be otherwise provided by law, for matters addressed in this Consent Decree. The “matters addressed” in this Consent Decree are all (a) response actions taken or to be taken and all response costs incurred or to be incurred by the United States, the State or any other person with respect to the Site pursuant to this Consent Decree, and (b) Natural Resource Damages. In addition, the Parties agree, and by entering into this Consent Decree this Court finds, that each Settling Defendant and the Settling Federal Agencies are entitled to any applicable provision of Connecticut law governing contribution protection with respect to any claim regarding the Site that otherwise might be asserted against them under Connecticut law. The “matters addressed” in this settlement do not include those response costs

or response actions as to which the United States or the State 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 or the State asserts rights against Settling Defendants coming within the scope of such reservations.

116. 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 and the State in writing no later than 60 days prior to the initiation of such suit or claim.

117. 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 and the State within ten days of service of the complaint on them. In addition, Settling Defendants shall notify the United States and the State within ten days of service or receipt of any Motion for Summary Judgment and within ten days of receipt of any order from a court setting a case for trial.

118. Waiver of Claim-Splitting Defenses. In any subsequent administrative or judicial proceeding initiated by the United States or the State for 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 or the State 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 by Plaintiffs”).

XXIV. ACCESS TO INFORMATION

119. Settling Defendants shall provide to EPA and the State, 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 and the State, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

120. Business Confidential and Privileged Documents.

a. Settling Defendants may assert business confidentiality claims covering part or all of the documents or information submitted to Plaintiffs 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 and the State, or if EPA has notified Settling Defendants that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, 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 Plaintiffs 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.

121. 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

122. Until ten years after the Settling Defendants' receipt of EPA's notification pursuant to Paragraph 52.b of Section XIV ("Certification of Completion of the Work"), each Settling Defendant shall preserve and retain all non-identical copies of records and documents (including records or documents in electronic form) now in its possession or control or which come into its possession or control that relates to its or its predecessor's arrangement for disposal at the Site, provided, however, that Settling Defendants who are potentially liable as owners or operators of the Site must retain, in addition, all documents and records that relate to the liability of any other person under CERCLA with respect to the Site. Each Settling Defendant must also retain, and instruct its contractors and agents to preserve, for the same period of time specified above all non-identical copies of the last draft or final version of any documents or records (including documents or records in electronic form) 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, provided, however, that each Settling Defendant (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned documents required to be retained. Each of the above record retention requirements shall apply regardless of any corporate retention policy to the contrary.

123. The United States acknowledges that each Settling Federal Agency (a) is subject to all applicable Federal record retention laws, regulations, and policies; and (b) has certified that it has fully complied with any and all EPA and State requests for information pursuant to Section 104(e) and 122(e) of CERCLA, 42 U.S.C. 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. 6927.

124. At the conclusion of this document retention period, Settling Defendants shall notify the United States and the State at least 90 days prior to the destruction of any such records or documents, and, upon request by the United States or the State, Settling Defendants shall deliver any such records or documents to EPA or the State. 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 Plaintiffs 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.

125. 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 (other than identical copies) 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. 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. 6927.

XXVI. NOTICES AND SUBMISSIONS

126. 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. 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, the Settling Federal Agencies, the State, and the Settling Defendants, respectively.

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DOJ Case No. 90-11-2-420-5

and

Chief, Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986
Re: DOJ Case No. 90-11-2-420-5

and

James T. Owens III, Director
Office of Site Remediation & Restoration
U.S. Environmental Protection Agency
Region 1
One Congress Street, Suite 1100 (HIO)
Boston, MA 02114-2023

As to EPA: Almerinda Silva
EPA Project Coordinator
U.S. Environmental Protection Agency
Region 1
One Congress Street, Suite 1100 (HBT)
Boston, MA 02114-2023

As to EPA Cincinnati Financial Office: U.S. Environmental Protection Agency
Cincinnati Financial Office
26 Martin Luther King Drive
Cincinnati, OH 45268

As to the State : John Looney, Assistant Attorney General
Lori D. DiBella, Assistant Attorney General
Office of the Attorney General
55 Elm Street
Hartford, CT 06106

and

Gennady Shteynberg, Project Coordinator
State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

As to the Settling Defendants: [Name]
Settling Defendants' Project Coordinator
[Address]

XXVII. EFFECTIVE DATE

127. 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

128. 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.

XXIX. APPENDICES

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

"Appendix A" is the 2006 ROD.

"Appendix B" is the map of the Site.

“Appendix C” is the SOW.

“Appendix D” is the Draft Easement.

“Appendix E” is the Trust Agreement for the 2009 OSL *De Minimis* Trust.

XXX. COMMUNITY RELATIONS

130. Settling Defendants shall propose to EPA and the State 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 and the State in providing information regarding the Work to the public. As requested by EPA or the State, 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 or the State to explain activities at or relating to the Site.

XXXI. MODIFICATION

131. Material modifications to the SOW may be made only by 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.

132. Modifications to the schedules specified in the Consent Decree for completion of the Work, or 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. Such non-material modifications will become effective upon agreement of the parties.

133. Non-material modifications to the Consent Decree other than those addressed in Paragraph 132 may be made only by written notification to and written approval of the United States, the State and the Settling Defendants. Such modifications will become effective upon filing with the Court by the United States. Material modifications to the Consent Decree and any modifications to the Performance Standards may be made only by written notification to and written approval of the United States, the State, the Settling Defendants, and the Court.

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

135. For purposes of this Section, the Consent Decree shall not include the SOW or other attachments to the Consent Decree.

XXXII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

136. This Consent Decree shall be lodged with the Court for a period of not less than 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. The State may withdraw or withhold its consent to the entry of this Consent Decree if comments received disclose facts or considerations which show that the Consent Decree violates state law. The United States reserves the right to challenge in court the State withdrawal from the Consent

Decree, including the right to argue that the requirements of state law have been waived, pre-empted or otherwise rendered inapplicable by federal law. The State reserves the right to oppose the United States' position taken in opposition to the proposed withdrawal. In addition, in the event of the United States' withdrawal from this Consent Decree, the State reserves its right to withdraw from this Consent Decree. Settling Defendants consent to the entry of this Consent Decree without further notice.

137. 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

138. Each undersigned representative of a Settling Defendant to this Consent Decree and the Assistant Attorney General for the Environment and Natural Resources Division 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.

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

140. 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. The parties agree that Settling Defendants need not file an answer to the complaint in this action unless or until the court expressly declines to enter this Consent Decree.

XXXIV. FINAL JUDGMENT

141. This Consent Decree and its appendices constitute the final, complete, and exclusive agreement and understanding among the parties with respect to the settlement embodied in the Consent Decree. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Consent Decree.

142. 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 23rd DAY OF November, 2009.

/s/ Stefan R. Underhill, USDJ
Stefan R. Underhill
United States District Judge

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR THE UNITED STATES OF AMERICA:

Date



ELLEN M. MAHAN
Deputy Section Chief
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice

MARK A. GALLAGHER
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20044-7611

LETITIA GRISHAW
Section Chief
Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice

9/21/09

Date



LAUREL A. BEDIG
Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986

NORA R. DANNAHEY
Acting United States Attorney
District of Connecticut

JOHN B. HUGHES
Assistant United States Attorney
District of Connecticut
Connecticut Financial Center
157 Church Street
New Haven, CT 06510

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

8/19/09

Date



IRA LEIGHTON

Acting Regional Administrator, Region 1
U.S. Environmental Protection Agency
One Congress Street, Suite 1100
Boston, MA 02114-2023

August 11, 2009

Date



MICHELLE LAUTERBACK

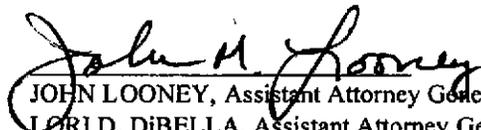
Senior Enforcement Counsel
U.S. Environmental Protection Agency
Region 1
One Congress Street, Suite 1100
Boston, MA 02114-2023

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR THE STATE OF CONNECTICUT:

8/12/09

Date

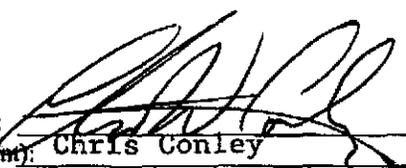


JOHN LOONEY, Assistant Attorney General
LORI D. DiBELLA, Assistant Attorney General
Office of the Attorney General
55 Elm Street
Hartford, CT 06106

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR GenCorp, Inc.

7/21/09
Date

Signature: 
Name (print): Chris Conley
Title: Vice President, Environmental, Health
& Safety
Address: P. O. Box 13222
Sacramento, CA 95813

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

Name (print): David Rymph
Title: GenCorp, Inc.
Address: 26677 W. 12 Mile Road, Suite 140
Southfield, MI 48034
Phone: (248) 358-2696

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR Kraft Foods Global, Inc. (for
itself and on behalf of Rexall Chemical,
Sundown Vitamins and Kraft General
Foods)

July 23, 2009
Date

Signature: [Handwritten Signature]
Name (print): Ken Wengert
Title: Director Safety & Environmental
Address: Kraft Foods
Three Lakes Drive
Northfield IL 60093

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

Name (print): Christopher P. Davis
Title: Attorney
Address: Goodwin Procter LLP
Exchange Place
Boston, MA 02109
Phone: (617) 570-1354

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR Shell Oil Company

7-27-09
Date

Signature: Raymond Collins
Name (print): Raymond T. Collins
Title: Gen. Mgr. PCRO Shell Downstream Int
Address: P.O. Box 2463
Houston, Tx 77252

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

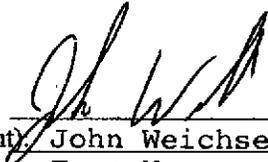
Name (print): Kim Lesniak, Esq
Title: ENVIRONMENTAL ATTORNEY - CERCLA
Address: ONE Shell PLAZA
910 LOUISIANA ST.
HOUSTON, TX 77002
Phone: (713) 241-5403

Registered Agent : The Corporation Trust Company
Corporation Trust Center
1209 Orange St.
Wilmington, New Castle, DE
19801

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR TOWN OF SOUTHINGTON, CT

7/23/09
Date

Signature: 
Name (print): John Weichsel
Title: Town Manager
Address: 75 Main Street
P. O. Box 610
Southington, CT 06489

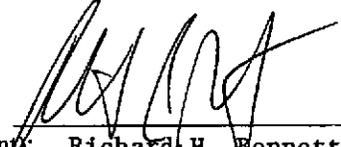
Agent Authorized to Accept Service on Behalf of Above-signed Party:

Name (print): Martin T. Bocher
Title: Partner
Address: Dewey & LeBoeuf LLP
Goodwin Square
Phone: 225 Asylum Street
Hartford, CT 06103
Phone: 212-259-7038

Signature Page for Remedial Design/Remedial Action Consent Decree Regarding
Old Southington Landfill Superfund Site in Southington, Connecticut.

FOR United Technologies Corporation

July 27, 2009
Date

Signature: 
Name (print): Richard H. Bennett
Title: Vice President, Environment, Health & Safety
Address: United Technologies Corporation
One Financial Plaza
Hartford, CT 06101

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

Name (print): William F. Leikin
Title: Assistant General Counsel
Address: United Technologies Corporation
One Financial Plaza, MS-524
Hartford, CT 06101
Phone: (860) 728-6430

OSL SUPERFUND SITE
RD/RA CONSENT DECREE

APPENDIX A

2002 ROD

PART 1 OF 2

Superfund Records Center
SITE: Old Southington
BREAK: S-4
OTHER: 256971



SDMS DocID 256971

EPA NEW ENGLAND

FINAL RECORD OF DECISION SUMMARY

OLD SOUTHTON LANDFILL SUPERFUND SITE
SOUTHTON, CONNECTICUT

SEPTEMBER 2006

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DECLARATION FOR THE RECORD OF DECISION

A. SITE NAME AND LOCATION

Old Southington Landfill
Old Turnpike and Rejean Road
Town of Southington
Hartford County, Connecticut
CTD980670806

B. STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) document presents the final selected remedial action for the Old Southington Landfill in Southington, Connecticut, which was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 USC § 9601 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300 *et seq.*, as amended. The Deputy Director of the Office of Site Remediation and Restoration (OSRR) has been delegated the authority to approve this Record of Decision.

This decision was based on the Administrative Record, which has been developed in accordance with Section 113 (k) of CERCLA, and which is available for review at the Southington Library and Museum located at 255 Main Street in Southington, Connecticut and at the United States Environmental Protection Agency (EPA) Region 1 OSRR Records Center in Boston, Massachusetts. The Administrative Record Index (Appendix G to the ROD) identifies each of the items comprising the Administrative Record upon which the selection of the remedial action is based.

The State of Connecticut concurs with the Selected Remedy.

C. ASSESSMENT OF THE SITE

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 into the environment.

D. DESCRIPTION OF THE SELECTED REMEDY

This ROD follows the 1994 Record of Decision for Interim Remedial Action for Limited Source Control (1994 ROD) for the Old Southington Landfill Superfund Site (the Site) that addressed the landfill. The 1994 ROD required relocation of residences and businesses, relocation of

excavated hot spot soil contamination into a lined cell beneath the cap, placement of a cap on the landfill, and continued groundwater investigations.

The selected remedy is a comprehensive approach for this final decision that addresses all remaining current and potential future risks at the Site. The remaining risks are from vapor intrusion into buildings above groundwater contamination at the Site. The 1994 ROD addressed all of the other media exposure pathways of concern (See 1994 ROD for more detail.) Specifically, this final remedial action includes implementation of engineering controls, institutional controls, and long term monitoring on property located immediately west of the Site and Old Turnpike Road. The focus of this remedial action is currently on three properties: Chuck & Eddy Salvage Yard property, the Radio Station property, and the former Lori Corp. property. However, if additional information becomes available, including any information obtained during long-term monitoring, that indicates vapor intrusion presents an unacceptable risk to any additional existing or proposed buildings or properties affected by the Site groundwater plume, additional remedial action(s) will be taken to address this risk consistent with the actions taken at the other three properties under this ROD. In addition, operation and maintenance, long-term monitoring, as well as five-year reviews will be conducted to assure that the final remedy provides overall protection to human health and to the environment in the long term.

a. 1994 ROD

The remedial action selected in the 1994 ROD was based principally upon EPA's *Presumptive Remedy for CERCLA Municipal Landfill Sites* (EPA, 1993), EPA Document No. 540-F-93-035. (Presumptive Remedy Guidance).

The 1994 ROD addressed all affected media (i.e. soil, soil gas, surface water, and sediment) at the landfill, at the adjacent Black Pond, and at the Unnamed Stream across Old Turnpike Road west of the landfill. The following are the major components of the 1994 ROD:

- Relocation of existing residences and businesses located on top of the landfill;
- Construction of a synthetic cap over the landfill to prevent human contact with contaminated subsurface soil, stop rainwater infiltration through the soil to the groundwater, and allow for the containment and collection of landfill gas;
- Excavation and consolidation of a highly contaminated area "hot spot" in a lined cell underneath the landfill cap;
- Removal of all buildings from the landfill;
- Installation of a soil gas collection/treatment system;
- Performance of long term operation and maintenance; and
- Performance of long-term monitoring.

b. 2006 ROD

This ROD sets forth the final selected remedy that addresses risks from vapor intrusion into buildings above groundwater contamination at the Site. The components of this final remedy compliment those in the 1994 ROD. In addition, this ROD confirms that the components of the 1994 ROD are the final components for the remedial action for the areas of the Site addressed by that ROD. As such, the 1994 ROD is effective in the long term, protective of human health and the environment, meets applicable and relevant and appropriate requirements (ARARs), fully addresses the principal threats posed by that portion of the Site, and addresses the statutory preference for treatment that reduces the toxicity, mobility and volume consistent with EPA's Presumptive Remedy Guidance.

Description of Remedial Components

The major components of this ROD are as follows:

- 1.) Institutional controls, in the form of Environmental Land Use Restrictions (ELURs) as defined in Connecticut's Remediation Standard Regulations (CT RSRs) will be placed on properties or portions of properties where groundwater Volatile Organic Compound (VOC) concentrations exceed the CT RSR volatilization criteria for residential or commercial/industrial use (also denoted as volatilization or vapor intrusion criteria) as appropriate. Periodic inspections would be performed or other procedures or requirements would be put in place to ensure compliance with the institutional controls and to ensure notification to EPA and the State and the appropriate local governmental agencies if the institutional control is breached.
- 2.) Building ventilation (sub-slab depressurization systems or similar technology) will be used in existing buildings located over portions of properties where VOCs in groundwater exceed the CT RSRs volatilization criteria to either prevent migration of VOC vapors into buildings or to control the level of VOCs in vapors beneath existing buildings. Similarly, vapor barriers (or similar technology) or sub-slab depressurization (or similar technology) will be used to control vapors in new buildings.
- 3.) Groundwater monitoring will be conducted in areas where the potential for vapor intrusion is a concern. Such areas include, but are not limited to, the three parcels that are the initial focus of this remedial action (Chuck & Eddy's, Radio Station, former Lori Corp.), the properties adjacent and south of Chuck & Eddy's, and the new residential neighborhood west of Chuck & Eddy's. Compliance wells will be installed at appropriate locations, to collect groundwater to evaluate long-term fluctuations in accordance with the monitoring requirements of the CT RSRs and other federal requirements to ensure the protectiveness of the remedy in the future.

- 4.) Conduct operation, maintenance, and monitoring of engineering and institutional controls to ensure remedial measures are performing as intended and continue to protect human health and the environment in the long-term.
- 5.) Five-year reviews.

This Record of Decision addresses the low level threat presented by vapor intrusion by the use of engineering controls and institutional controls to prevent exposure to contamination that presents an unacceptable risk to human health and the environment.

E. STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. However, this remedy does not satisfy the statutory preference for treatment as a principal element of the remedy.

Because this remedy will result in hazardous substances remaining on-site above levels that allow for unlimited use and unrestricted exposure (groundwater and land use restrictions are necessary), a review will be conducted within five years after initiation of remedial action, and every five years after that, to ensure that the remedy continues to provide adequate protection of human health and the environment.

F. ROD DATA CERTIFICATION CHECKLIST

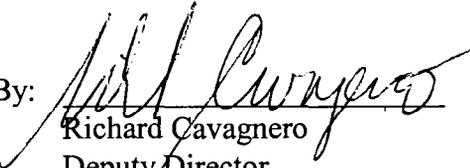
The following information is included in the Decision Summary section of this Record of Decision. Additional information can be found in the Administrative Record file for this site.

1. Chemicals of concern and their respective concentrations (Connecticut RSRs). See Tables G1, G2, and G2 in Appendix B.
2. A finding of potential harm to human health
3. Action Levels for vapor intrusion pathway (Connecticut RSRs). See Table L-1 in Appendix B.
4. Land and groundwater use that will be available at the Site as a result of the selected remedy
5. Estimated capital, operation and maintenance (O&M), and total present worth costs; discount rate; and the number of years over which the remedy cost estimates are projected; and
6. Key factor(s) that led to selection of this final remedy

G. AUTHORIZING SIGNATURES

This ROD documents the final selected remedy for the Old Southington Landfill Site, located on Old Turnpike Road and Rejean Road in Southington, Connecticut. This remedy was selected by EPA with concurrence from the Connecticut Department of Environmental Protection.

U.S. Environmental Protection Agency

By: 
Richard Cavagnero
Deputy Director
Office of Site Remediation and Restoration
EPA – New England

Date: 9-29-06

A. SITE NAME, LOCATION AND BRIEF DESCRIPTION

The Old Southington Landfill Superfund Site encompasses the approximately thirteen acres of the former municipal landfill (Landfill) located on the east side of Old Turnpike Road, in Southington, Connecticut (see figure 1-1.) as well as all areas where contamination has come to be located (Site). Rejean Road abuts the Site to the north. Black Pond abuts the Landfill to the east. An unnamed stream is located across Old Turnpike Road and directly west of the Site. The Site is located in a mixed residential, industrial, and commercial area. A small road traverses the southern portion of the Site from Old Turnpike Road to a construction company that abuts the Site to the east. The Quinnapiac River is approximately 3,100 feet west of the Landfill. The Site includes the former location of a municipal and industrial landfill that operated between 1920 and 1967.

A more complete description of the Site can be found in Section I of the *Supplemental Remedial Investigation Report*, Kleinfelder, June 2006.

B. SITE HISTORY AND ENFORCEMENT ACTIVITIES

1. History of Site Activities

During the period from about 1920 to 1967, local residents and area businesses used portions of the landfill for disposal of waste materials. During this time frame, the landfill was known as the Old Turnpike Landfill. Based upon historical information, Remedial Investigation (RI) data, and differences in ownership between the northern and southern portion of the Site, it is clear that the northern and southern portions of the landfill were used for distinct and separate purposes. The northern portion of the landfill was a "stump dump" that was used for the disposal of wood and construction debris. The southern portion of the landfill was used throughout the period the landfill was in operation for the co-disposal of municipal and industrial waste. Historical information, interviews with current and past Town employees, and information contained in public documents on disposal practices indicate that for a short period of time (1964-1967) two areas (SSDA 1 and SSDA 2) in the southern portion of the landfill (see Figure 1-1) were used for disposal of semi-solid industrial wastes. Closure of the landfill was completed shortly after it ceased operating in 1967 and included compaction, cover with two feet of clean fill, and seeding for erosion control.

Between 1973 and 1980, the landfill property was subdivided and sold for residential and commercial development. Several residential and commercial buildings were built on the Site and on adjacent areas.

The landfill is located approximately 700 feet southeast of the former municipal Well No. 5, which was installed in 1965 by the Town of Southington Water Department and was used as a public water supply. The Connecticut Department of Public Health and Addiction Services (then the Department of Health Services) sampled Southington Production Well No. 5, located west and north of the Site, on several occasions between December 1978 and March 1979. Analyses

of the water samples collected indicated the presence of chlorinated volatile organic compounds (VOCs). Because of the detection of 1,1,1-trichloroethane (TCA) at levels that exceeded State standards, Well No. 5 was closed in August 1979. The well has permanently been closed since that time.

In February 1980, EPA authorized a hydrogeologic investigation aimed at defining the nature and extent of contamination in groundwater in the area around Well No. 5. Analysis of groundwater samples collected from two monitoring wells installed between the landfill and Well No. 5 indicated the presence of VOCs (Warzyn Engineering, Inc., 1980). In November 1980, the Connecticut Department of Environmental Protection (CT DEP) collected soil samples from a manhole excavation within the industrial park located on land that had previously been part of the landfill. Analysis of the soil samples indicated the presence of chlorinated and non-chlorinated VOCs.

Based on the above findings and a hazard ranking performed in 1982, EPA, on September 8, 1983, proposed that the Old Turnpike Landfill be placed on the National Priorities List (NPL), pursuant to Section 105(8)(b) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9605(8)(b). On September 21, 1984, the Old Turnpike Landfill was listed on the NPL as the Old Southington Landfill Superfund Site.

A more detailed description of the Site history can be found in Section I of the *Supplemental Remedial Investigation Report*, Kleinfelder, June 2006.

2. History of Federal and State Investigations and Removal and Remedial Actions

In 1987, EPA entered into an Administrative Order on Consent (AOC) with three Potentially Responsible Parties (PRPs or Potentially Responsible Parties) to define the nature and extent of Site contamination. In 1993, the PRPs completed an RI, a Human Health Risk Assessment (HHRA), an Ecological Risk Assessment (ERA), and a Feasibility Study (FS). EPA issued an Addendum to the RI/FS Report in 1994.

In September 1994, EPA issued the 1994 ROD that addressed the landfill and included the following major components:

- Relocation of existing residences and businesses located on top of the landfill
- Construction of a synthetic cap over the landfill to prevent human contact with contaminated subsurface soils, stop rainwater infiltration through the soil to the groundwater, and allow for the containment and collection of landfill gas;
- Excavation and consolidation of a highly contaminated area "hot spot" in a lined cell underneath the landfill cap;
- Removal of all buildings from the landfill;
- Installation of a soil gas collection/treatment system;

- Performance of long term operation and maintenance (O&M); and
- Performance of long-term monitoring.

The remedy selected in the 1994 ROD also required additional groundwater studies be undertaken concurrent with the implementation of the cap on the landfill. In addition, because it was uncertain whether or not the landfill gas collection system would be effective and protective of human health, the 1994 ROD required an additional evaluation be conducted.

In 1998, a Consent Decree was entered between EPA and approximately 320 PRPs, two of which are the Performing Settling Defendants (Performing Settling Defendants or PSDs). Pursuant to the Consent Decree, the PSDs were required to implement the remedy selected in the 1994 ROD. Construction of the remedy selected in the 1994 ROD was completed in 2001. Operation and maintenance as well as long term monitoring are currently being conducted by the PSDs.

As discussed above, the PSDs agreed to conduct additional groundwater studies (a second RI/FS) to address the remaining issues at the Site under the 1998 Consent Decree. In 1999, the PSDs initiated the Supplemental Groundwater Investigation (2006 Remedial Investigation or 2006 RI). The 2006 RI and the Amended Feasibility Study (2006 FS) were completed in June 2006. The first five-year review for the Site was conducted in September 2005.

A more detailed description of the Site history can be found in Section I of the *Supplemental Remedial Investigation Report*, Kleinfelder, June 2006.

3. History of CERCLA Enforcement Activities

In January 1993, EPA notified approximately 320 parties who either owned or operated the facility, generated wastes that were shipped to the facility, arranged for the disposal of wastes at the facility, or transported wastes to the facility of their potential liability with respect to the Site.

In June 1998, EPA and a group of Potentially Responsible Parties entered into a Consent Decree to address the remedy selected in the 1994 ROD. Pursuant to this Consent Decree, two parties agreed to perform the remedial action selected in the 1994 ROD (PSDs). The Performing Settling Defendants were also required to complete groundwater investigations (the second RI/FS) in the 1998 Consent Decree. The results of these investigations formed the basis for the 2006 ROD.

In June 1999, EPA entered into two additional settlements: one with six parties and the other with 119 de minimis parties who all agreed to contribute to the cost of the remedial action in the 1994 ROD.

C. COMMUNITY PARTICIPATION

Prior to cleanup activities taking place at the Site, community concern and involvement was high. At this time, community participation can be characterized as low. EPA, CT DEP and the parties conducting the work have kept the community and other interested parties apprised of site activities through public informational meetings, fact sheets, press releases, and door-to-door canvassing throughout the immediate vicinity of the landfill. Below is a brief chronology of the significant Superfund public outreach efforts since the Site was listed on the National Priorities List.

- In October 1988, EPA released a community relations plan which outlined a program to address community concerns and keep citizens informed about and involved in remedial activities.
- On December 14, 1988, EPA held an informational meeting in the Southington Public Library and Museum to describe plans for the Remedial Investigation and Feasibility Study. EPA published and mailed a December 1988 Superfund Program Fact Sheet.
- In June 1990, EPA published and mailed a Superfund Program Fact Sheet which described the status of ongoing and upcoming field activities and the availability of the Superfund Technical Assistance (TAG) program.
- In July 1991, EPA published and mailed a Superfund Program Fact Sheet which described the completion of Phase I Remedial Investigation activities.
- On August 26, 1992, EPA held an informational meeting in Southington to discuss issues related to methane gas at the Site.
- In January 1993, EPA announced that a TAG grant had been awarded to a local citizens group known as Southington Old Landfill Victims (SOLV).
- In April 1993, EPA published and mailed a Superfund Program Fact Sheet which described the completion and preliminary results of site activities from 1989 - 1991.
- In November 1993, EPA attended a community meeting held by SOLV and presented a project status update.
- On May 23, 1994, EPA made available the administrative record to support the 1994 proposed remedy for the site. These documents are available for public review at EPA's offices in Boston, Massachusetts and at the site repository at the Southington Public Library in Southington, CT.
- The proposed plan was made available to the public on May 23, 1994 at the Southington Public Library.
- EPA published a notice and brief description of the proposed plan on June 1, 1994 in the Meriden Record Journal and on June 2, 1994 in the Southington Observer.
- On June 14, 1994, EPA held a public meeting to discuss the results of the Remedial Investigation,

the cleanup alternatives presented in the Feasibility Study, and to answer questions regarding the Agency's proposed plan.

- From June 15, 1994 to July 14, 1994, the Agency held a 30-day public comment period to accept written comments on the Feasibility Study, the alternative recommended by EPA in the proposed plan, and on any other documents previously released to the public. On June 29, 1994, community residents requested a 30-day extension of the public comment period to August 13, 1994 which was granted by EPA.
- On July 12, 1994, the Agency held a public hearing to accept comments on the proposed cleanup plan. A transcript of this hearing and comments, along with the Agency's response to comments are included in the Responsiveness Summary found in Appendix A of the 1994 Record of Decision.
- In 1998, EPA completed the relocation process for all residential and commercial properties from the site.
- On June 24, 1998, EPA held a meeting attended by approximately 24 local residents to update the community about upcoming predesign field activities at the landfill.
- In late July 1998, EPA distributed a neighborhood notice alerting local residents of field work scheduled to begin on August 3 at the landfill.
- In the spring of 1999, EPA conducted community interviews in preparation for a Community Involvement Plan Update of the 1988 Community Relations Plan. The Update was completed and released in June 1999 in an effort to keep citizens informed and involved in remedial activities.
- On June 30, 1999, EPA held a community meeting to update the community about activities and schedules for both landfill field activities and groundwater studies.
- During the fall of 1999, EPA distributed a Community Survey in an effort to better understand community concerns regarding the appearance and potential passive reuse of the landfill upon completion of construction activities. Twenty-three completed surveys were returned to EPA.
- On December 1, 1999, EPA held a community meeting to update the community about the results of the survey and to further discuss the status of the final landfill design. Following subsequent meetings with town officials, agreement was reached in June with officials and local residents that the northern portion of the landfill would be landscaped and made available to the public for passive recreation, but would not be designated as a town park.
- On March 20, 2000, EPA held a pre-construction meeting with local public safety officials to discuss emergency planning and coordination during the upcoming landfill construction period.
- On April 3, 2000, EPA held a public meeting to discuss the start of landfill construction activity including schedules, air monitoring, and traffic plans.
- In the fall of 2000, EPA published and mailed a Community Update Fact Sheet which described the

completion of construction activity in 2000 and outlined activities to be resumed in the spring of 2001.

- In the spring of 2001, EPA published and mailed a Community Update Fact Sheet which described ongoing soil gas and groundwater monitoring and upcoming landfill construction activities.
- In June 2005, EPA announced that a five-year review was in process for the Site. Community interviews were conducted by EPA during the summer and the five-year review was completed and released at the end of September.
- In early October 2005, EPA distributed a Neighborhood Notice in the vicinity of the landfill to describe upcoming groundwater investigations to be conducted over a five-week period beginning October 10.
- In early June 2006, EPA mailed the proposed plan that addresses vapor intrusion issues at the Site to approximately 650 residents, local media, town and elected officials, including individuals associated with the Solvents Recovery Services of New England PRP Group. Bulk copies of the proposed plan were made available to the public at both the Southington Town Hall and the Southington Public Library. Copies were also distributed door-to-door in the immediate vicinity of the landfill in the neighborhood overlying the down gradient groundwater plume.
- EPA published a public notice of the public comment period and a brief analysis of the proposed plan which appeared in the Meriden Record Journal on June 14, 2006 and in the Southington Observer on June 16, 2006 announcing the availability of the plan and supporting documents beginning June 21, 2006 at public information repositories at the Southington Public Library and Museum and at EPA's office in Boston, Massachusetts.
- On June 21, 2006, EPA made the administrative record available for public review at EPA's office in Boston and at the Southington Public Library and Museum.
- On June 21, 2006, EPA held a public meeting to discuss the results of the Remedial Investigation and the cleanup alternatives presented in the Feasibility Study and to present the Agency's recommended cleanup plan to a broad community. At this meeting, representatives from EPA and CT DEP answered questions from the public.
- From June 22, 2006 to July 24, 2006, the Agency held a 30-day public comment period to accept public comment on the alternatives presented in the Feasibility Study and the proposed plan and on any other documents previously released to the public.
- On July 6, 2006, EPA held a public hearing to discuss the proposed plan and to accept any comments. A transcript of this meeting and the comments and the Agency's response to comments are included in the Responsiveness Summary, Part 3 of this Record of Decision.
- On July 21, 2006, an extension to the public comment period was requested and on July 25, 2006, EPA issued a press release to announce that the comment period had been extended to August 24, 2006.

D. SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

The selected remedy provides overall protection of human health and the environment by addressing the risk presented from vapor intrusion. The selected remedy for the Site addresses the remaining risks from the Site taking into account decisions made in the 1994 ROD. This ROD addresses the threat that remains from groundwater should vapors from groundwater present an unacceptable risk to residents/occupants of buildings/dwellings existing above the contaminated groundwater by taking appropriate action to address this risk. The selected remedy provides for a combination of engineering controls (sub-slab depressurization systems or vapor barriers (or similar technologies)) to prevent exposure from the volatilization of contamination in groundwater, institutional controls to prevent any future use of the Site that might result in an unacceptable exposure to contamination, and long-term monitoring and operation and maintenance to insure that the remedy remains protective in the long term. This decision relies on the fact that the 1994 ROD required construction of a landfill cap and gas collection system and also required the relocation of businesses and residents from the Site. This final remedy for the Site also confirms that the remedy selected in the 1994 is appropriate as the final remedy for the portion of the Site addressed by the 1994 ROD. As with the 1994 ROD, this ROD requires five-year reviews to insure that the remedy continues to be protective of human health and the environment.

In summary, the response action contained in this ROD addresses the remaining threats to human health and the environment posed by groundwater at the Site.

E. SITE CHARACTERISTICS

This section presents an overview of the groundwater-related Remedial Investigation for the Site. The initial Remedial Investigation (RI) for the Site was conducted by the PRP group and is documented in *Remedial Investigation Report*, Volumes 1-3 Environmental Science & Engineering, Inc., December 1993. The 2006 Remedial Investigation, focusing primarily on groundwater at the Site, was also conducted by the PRP group and is documented in the *Supplemental Remedial Investigation Report*, Volumes 1 and 2, Kleinfelder, approved in June 2006. Section 1.0 of the 2006 Feasibility Study contains a summary of the 2006 Remedial Investigation.

Groundwater at the Old Southington Site has been sampled extensively. Sampling was conducted in 1993 in support of the initial Remedial Investigation for the Site. During the Phase I component of the 2006 RI, groundwater microwell sampling for volatile organic compounds (VOCs) was conducted. In addition, extensive groundwater sampling has been conducted under the site long term monitoring program, with semi-annual to quarterly groundwater sampling having been conducted since May 2000. The information summarized below can be found Volume 1A of the 1993 RI and Sections 1-6 of the *Supplemental Remedial Investigation Report*.

1. Site Setting, Geology, and Hydrogeology

Site Setting

The Old Southington Landfill lies in the Plantsville Section of the Town of Southington in Hartford County, Connecticut (Figure 1-1). The Site itself encompasses approximately 13 acres and is defined as the area encompassed by the capped landfill and bordered on the west by Old Turnpike Road, and on the north by Rejean Road, and also includes all areas where contamination has come to be located. Along its northeastern boundary, the Site is bordered by Black Pond. The landfill is bordered by residential areas to the north, commercial businesses to the immediate west and a mixture of commercial and residential areas to the east and south. As noted above, the landfill was capped in accordance with the 1994 ROD. All commercial and residential buildings were removed from the landfill footprint which is now grass covered. The area studied included the landfill and surrounding areas extending northwest, southwest, and west to the Quinnipiac River.

Site Geology

The Old Southington Landfill Site is located within the Connecticut Valley Lowland section of the New England physiographic province in west-central Connecticut. It is characterized by moderately broad valleys separated by low north-northeastward-trending ridges. This north-south trending lowland section, also known as the Triassic Basin, is about 17 miles wide and is flanked by uplands consisting of crystalline igneous and metamorphic rock complexes. Southington is on the western flank of the lowland within the subarea known as the Quinnipiac Lowland. The Quinnipiac Lowland is underlain by Triassic sediments including the New Haven Arkose (red sandstone). Locally, the igneous West Rock Diabase intrudes into the New Haven Arkose coring the north-northeast trending hills south of the Site.

The sediments in the area studied are glacial in nature and correlate with Wisconsinan time. The regional topography can be termed kame and kettle. The regional surface is a complex area of kames, comprised primarily of gravel and sand interspersed with kettle lakes. Unconsolidated deposits associated with glacial, glaciolacustrine and glaciofluvial sedimentation, in addition to fluvial sediments, overlay bedrock throughout the area studied.

Bedrock beneath the area studied is overlain by undifferentiated sand and gravel considered to be glacial till. This sand and gravel has varying amounts of silt and cobbles and is generally more compact than the overlying deposits. Overlying the sandy, gravelly till at certain locations are interfingering deposits of fine sand, laminated fine sand and silt, and/or undifferentiated sand. Above the interfingering deposit is an upper sand and gravel unit that contains relatively less silt than the lower sand and gravel unit. This upper sand and gravel unit may extend to the surface or be overlain by peat deposits in certain locations. A locally extensive peat deposit associated with Black Pond is of varying depth and thickness and underlies most of the Site.

Bedrock beneath the Site is mapped as New Haven Arkose. This bedrock is sedimentary in origin and consists of grayish-orange-pink arkose with inter-bedded micaceous siltstone of the

Triassic age. An L-shaped bedrock basin lies beneath the area studied with overburden depths to bedrock ranging from approximately 83 to 180 feet.

Site Hydrogeology

The unconfined overburden aquifer of the area studied is comprised of layers of permeable glacial drift that overlie less permeable sandstone bedrock. There are no significant confining layers with the exceptions of the landfill itself and the sediments of Black Pond.

At the Site, the depth to the water table is quite variable and ranges from less than 10 feet below ground surface (bgs) at certain locations in the northern portion of the Site, to 30 to 40 feet bgs, at certain locations in the southern portion of the Site. Overburden aquifer transmissivities in the range of 100,000 to 250,000gpd/ft have been suggested based upon pump tests conducted in the area studied.

The overburden aquifer is primarily recharged by precipitation. Immediately upgradient of the Site, a limited contribution to the shallow aquifer is believed to derive from Black Pond. Immediately to the west and downgradient of the Site, significant recharge from precipitation occurs tending to depress the groundwater plume leaving the landfill.

Groundwater flow in the shallow, moderate, and deeper depth overburden aquifers is generally from east to west across the Site, moving toward the Quinnipiac River. Downgradient of the Site, groundwater flow in the moderate depth and deeper overburden aquifer shifts to a somewhat more northwesterly direction as it approaches the Quinnipiac River, slightly over a half mile away.

Groundwater Classification and Use

Groundwater both beneath and downgradient of the Site is currently classified by CTDEP as GB (nonpotable). This classification extends downgradient to the Quinnipiac River that serves as the surface discharge point for groundwater from the Site. The northern boundary of a groundwater aquifer area classified as (potable) GA by CTDEP is located several hundred feet to the southwest of the Site.

The GB classification for groundwater immediately downgradient of the Site permits certain designated uses including 1) industrial process waters and cooling waters, and 2) base-flow for hydraulically connected surface water bodies presumed not suitable for human consumption without treatment. A groundwater use evaluation was conducted as part of the 2006 RI. The results indicated that there were currently no private residential wells in use in the area between the Site and the Quinnipiac River and that all of the residences within this area were supplied by water from the Town of Southington system.

2. Nature and Extent of Contamination in Groundwater

Landfill Source Contamination

The primary sources of groundwater contamination at the Site are wastes including liquid organic solvents and semi-solid organic sludges, deposited in the landfill during its operation. Deposition of limited amounts of metal containing wastes has also contributed to localized areas of elevated levels of certain metals, in groundwater beneath the landfill.

Overall, the RI results indicated that industrially related chemical waste was deposited primarily in the southern portion of the landfill. VOCs were detected in soils at sporadically high concentrations throughout this portion of the landfill. Low to moderate concentrations of several other contaminants, including semivolatile organic compounds (SVOCs) [primarily polycyclic aromatic hydrocarbons (PAHs)], polycyclic biphenyl compounds (PCBs) and some metals, were also detected, although less frequently. Studies during the original RI identified two areas (SSDA 1 and SSDA 2) where semisolid industrial waste materials contaminated with relatively high levels of VOCs and/or SVOCs were deposited. Past records and results also indicated that the northern portion of the landfill was primarily used as a dump for stumps and demolition debris with waste materials including wood, ash, cinders and some brick and asphalt. Moderate concentrations of PAHs were detected in soils at certain locations in the northern portion of the landfill.

Test borings conducted throughout the southern portion of the landfill during the RI, indicated that elevated levels of soil volatile organic contamination were sporadic but relatively widespread. The primary VOCs detected were chlorinated solvents including tetrachloroethene (PCE), trichloroethene (TCE), 1,2-dichloroethene (1,2-DCE), and vinyl chloride (VC). Some volatile aromatic solvents including ethyl benzene, toluene, and xylene were also observed at certain subsurface soil locations.

Nature and Distribution of Contaminants in Groundwater

The results of groundwater sampling conducted during the RI indicated that VOCs were the primary contaminants of concern measured in groundwater beneath and immediately downgradient of the Site. Metals were detected to a significantly lesser extent at certain locations beneath the landfill. SVOCs, pesticides and PCBs were rarely detected and when detected were at generally low levels. VOC contamination in groundwater was widespread beneath and immediately downgradient of the southern and central portions of the landfill with little VOC contamination detected downgradient of the northern portion of the landfill. These results were consistent with the historical uses of the southern and northern portions of the landfill.

RI results indicated that given the north-south configuration of the landfill and distribution of the contaminant plume downgradient of the southern portion of the Site, contaminants were not being introduced into groundwater from any single, isolated source area. Rather multiple locations in the southern and central portions of the landfill were acting as VOC sources. This conclusion is consistent with the results of the soil boring studies. The primary VOCs detected in groundwater were chlorinated ethenes, (including TCE, 1,2-DCE, and VC), chlorinated

ethanes (1,1,1-trichloroethane), and petroleum related aromatics (including benzene, toluene, and xylenes) while other VOCs were detected but less frequently and, generally, at lower levels. Metals were detected in excess of maximum contaminant levels (MCLs or maximum contaminant levels) at some locations.

3. Fate and Transport of Contaminants in Groundwater

Groundwater Plume Delineation

The results of the 2006 RI confirmed that groundwater flow beneath the Site is generally east to west. However, the groundwater has developed a somewhat more northwesterly flow in the moderate depth and deeper overburden as it approached the Quinnipiac River. Overall, groundwater flow was postulated to generally follow the bedrock topography, flowing along a west-northwest trending bedrock trough, with the impact of the bedrock topography being potentially greater on the flow in the deeper portions of the aquifer. Hydrogeologic evaluations also indicated that the bedrock surface rises in the western part of the area studied, pinching out the overburden groundwater aquifer west of the Quinnipiac River.

The dissolved contaminants derived from the waste mass in the southern portion of the Site flow relatively quickly down into the medium to deep portions of the aquifer, upon leaving the landfill. This appears to be due to significant differences in the permeability of the waste mass versus the very permeable sand and gravel aquifer and the impact of precipitation recharging such a permeable aquifer. Contaminants are then transported at depth to the west by regional groundwater flow. Contaminants from the northern portions of the landfill move downward more slowly and migrate greater distances through the shallow aquifer immediately west and northwest of the landfill.

Groundwater Plume Contaminants

Extensive sampling was conducted from 2000-2006 during the long-term monitoring of groundwater. Sampling was conducted at over 30 monitoring wells screened throughout the shallow, moderate and deeper depths of the overburden aquifer. Results indicated that the primary contaminants of concern in the downgradient groundwater contaminant plume are chlorinated volatile organics, primarily TCE and its related daughter products 1,2-DCE and VC. Other VOCs, including chlorinated ethanes and several volatile aromatic compounds, when detected, are found within the footprint of the TCE plume and are generally measured at concentrations considerably lower than TCE-related contaminants. No SVOC plume appears to be emanating from the Site. SVOCs have only been detected sporadically throughout the area studied and in most cases at trace concentrations. Long-term monitoring results also did not indicate evidence of a metals plume emanating from the Site. In the downgradient aquifer, metals have only been detected sporadically at certain locations with no consistent pattern of detection that would suggest a plume originating at the landfill.

As noted above, the bulk of the VOC plume migrates into the deeper portions of the overburden aquifer after leaving the landfill footprint. VOC concentrations at most downgradient well locations tend to increase with depth.

The concentrations of VOCs in the downgradient groundwater plume vary widely depending upon location and sampling depth. Most of the highest VOC concentrations were observed at specific monitoring wells immediately downgradient of the southern portion of the landfill. Representative maximum concentrations detected during long-term monitoring for specific VOC contaminants include the following:

- Trichloroethene – 900 ug/L
- Cis, 1,2-dichloroethene – 11,000 ug/L
- Vinyl chloride – 1,600 ug/L
- 1,1,1-Trichloroethane – 150 ug/L
- Toluene – 20,000 ug/L
- Ethyl benzene – 10,000 ug/L
- Xylenes – 14,000 ug/L

Chlorinated VOC concentrations in the core of the groundwater plume further downgradient are significantly lower than these values. Representative ranges for chlorinated VOCs in certain wells located in core portions of the groundwater plume approximately 500 to 800 feet downgradient of the Site are as follows:

- Trichloroethene – 110-300 ug/L
- Cis, 1,2-dichloroethene – 88-230 ug/L
- Vinyl chloride – 8-29 ug/L
- Chloroform – 64-170 ug/L

Further to the west as the plume migrates toward the Quinnipiac River, chlorinated VOC concentrations tend to slowly diminish, apparently in response to groundwater dilution processes.

The results of long-term monitoring conducted from 2000 to 2006 indicate that the overall groundwater chlorinated VOC concentrations have changed relatively little since the 1994 RI sampling was conducted. Some decreases have been noted for certain contaminants at certain locations. However, at other locations, concentrations of certain contaminants appear to have increased since the original RI. Overall plume chlorinated VOC concentrations appear to be diminishing, but only very slowly. These results indicate that the VOC source within the landfill has not been depleted and that VOC migration from the landfill will probably persist for a long time, possibly decades.

Long-term monitoring results also indicate that natural attenuation processes, particularly biodegradation processes, appear to be having relatively little impact on the overall downgradient chlorinated VOC plume. At a few locations immediately downgradient of the landfill, biodegradation processes appear to be active, apparently due to the presence of adequate dissolved organic matter. However, throughout the bulk of the downgradient plume, there is relatively little evidence of TCE being degraded to 1,2-DCE and/or VC.

4. Conceptual Site Model, Exposure Pathways, and Vapor Intrusion

The sources of contamination, release mechanism, and exposure pathways to receptors for the soil, groundwater, surface water, sediment and air were considered while developing a Conceptual Site Model (CMS). The CMS is a three dimensional picture of the site conditions that identifies contaminant sources, release mechanisms, exposure pathways, migration routes, and potential human ecological receptors. It documents current and potential future site conditions and shows what is known about human and environmental exposure through contaminant release and migration to potential receptors. The risk assessment and response action for all environmental media at the area studied are based on this CMS.

With the exception of vapor intrusion, there are no current or potential pathways of exposure to the VOC plume to human health or environmental receptors. The overall hydrogeologic results indicate that the bulk of the groundwater plume remains relatively deep within the aquifer throughout most of its migration from the Site to the Quinnipiac River. Available information suggests that the bulk of the plume remains more than 30 feet bgs until it closely approaches the Quinnipiac. There is also no firm evidence that the plume discharges to any surface waters prior to discharge to the Quinnipiac. Studies suggest that although some elements of the plume closely approach the Unnamed Stream immediately downgradient of the northern portion of the Site, it does not appear to discharge to the stream.

The absence of plume discharge to surface water bodies other than the Quinnipiac River, coupled with the prohibition of use of the downgradient aquifer as a potable water source, minimizes environmental and human health exposure pathways. Calculations also indicate that dilution from surface waters in the Quinnipiac eliminates direct exposure concerns in the discharge area. However, potential human exposure may occur through VOC vapor intrusion from the shallow aquifer into buildings downgradient of the Site.

Shallow Aquifer VOC Distributions and Vapor Intrusion

Shallow groundwater leaving the northern portion of the landfill does not migrate downward into the aquifer as quickly as in the southern portion of the aquifer. Extensive groundwater drive-point VOC sampling studies conducted in fall 2005 as part of the 2006 RI indicated the presence of chlorinated VOCs in shallow groundwater (less than 30 feet) immediately downgradient of the central and northern portions of the landfill on what is known as the Former Lori Corporation parcel, the Radio Station, and on the parcel known as Chuck & Eddy's, west of Old Turnpike Road. As groundwater continues to migrate in a westerly direction from these properties, the contamination migrates deeper into the aquifer, increasing in depth from the ground surface, greatly diminishing any potential impacts from vapor intrusion. Based on three shallow wells placed adjacent to the Quinnipiac River (SDW 6, SDW 7, and SDW8), shallow groundwater adjacent to the River does not reveal high concentrations of VOCs that might be of concern for vapor intrusion.

Due to the volatile nature of the compounds detected in the shallow aquifer immediately west of Old Turnpike Road, there is the potential for groundwater contamination to be a potential source of vapor contamination in buildings situated directly over this area. At many locations sampled, certain chlorinated VOC concentrations in shallow groundwater exceeded Connecticut's

volatilization criteria for vapor intrusion (CT RSRs) applicable to either residential or commercial land use. Most of the observed exceedences were due to elevated levels of vinyl chloride in the shallow groundwater. Concentrations of vinyl chloride in the shallow aquifer at Chuck & Eddy's (MW 304A) were as great as 2000 times the CT RSR value. Other volatile compounds such as 1,1-dichloroethylene, cis-1,2 dichloroethylene, benzene, carbon tetrachloride, 1,2-dichloroethane, ethylbenzene, tetrachloroethylene, toluene, trichloroethylene and xylenes also exceeded their respective volatilization criteria in the shallow downgradient aquifer at one or more sample locations. Appendix B, Tables G-1 through G-3 present the Connecticut volatilization criteria for residential and commercial/industrial land use, the well identifier, and the shallow groundwater results for samples exceeding the Connecticut volatilization criteria at the Former Lori Corporation, the Radio Station, and at Chuck & Eddy's.

Although vapor intrusion is not considered a principal threat as this term is defined in EPA guidance (EPA, November 1991), the selected remedy addresses this contamination due to the risk presented from vapor intrusion. It should be noted that the 1994 ROD addressed principal threats presented for that portion of the Site consistent with EPA's Presumptive Remedy Guidance.

F. CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

Land Uses

1.) Current land use on the former Landfill Property

The landfill portion of the Site has been capped on the northern part with a single low permeability cap and on the southern part of the Site with a double low permeability cap. A soil gas vent system has been installed underneath and through out the entire capped area that currently operates as a passive venting system. The northern part of the landfill has been enclosed with a 3-foot high chain link fence that provides public access and is used as a passive recreation area. The southern part of the landfill is enclosed with a 6-foot high fence and public access is not allowed.

2.) Current land use adjacent to the former landfill /surrounding area

This portion of the Site is situated in a mixed residential, commercial, and industrial zoned area. Directly to the north of the landfill is a residential neighborhood. East and adjacent to the northern part of the landfill is Black Pond that is used for recreation such as canoeing and fishing. East of Black Pond is a hill and east of the hill is another residential area. East of the southern part of the landfill is a commercial property consisting of a storage facility and construction company. To the south of the Site is a mixture of commercial and residential properties. Directly west of the Site and Old Turnpike Road are several commercial and industrial facilities. At least three of these properties will be directly addressed by the remedy selected in this ROD. These properties are Chuck & Eddy's Salvage Yard located at 450 Old Turnpike Road, the Radio Station property located at 440 Old Turnpike Road, and the former Lori Corp. property located at 384 Old Turnpike Road.

3.) Reasonably anticipated future use and basis for future use assumptions

Based on discussions between representatives from Chuck & Eddy's Salvage Yard and representatives from the PSDs, it appears that the owner of Chuck & Eddy's Salvage Yard plans to construct new structures and a large parking lot some time in the near future. Other than that, based upon discussions with local business representatives, Town of Southington officials, and the PSDs, it is reasonable to assume that the current land use on and surrounding the landfill will remain the same as current land use in the foreseeable future (residential/commercial/industrial).

- **Ground/Surface Water Uses:**

1. Current ground/surface water uses

In 1993, the Town of Southington petitioned the State to reclassify the aquifer in this area. The Connecticut Department of Environmental Protection reclassified the groundwater within the area studied and west to the Quinnipiac River as a GB aquifer (see figure 1-2). A GB aquifer signifies that the aquifer is not suitable for human consumption. Historically this area has been a highly urbanized area. Groundwater use studies have been completed throughout the area studied: from east of the Site, west to the Quinnipiac River and north of the Site to Main Street and Maple Street and south to Mulberry Street, and west of the Quinnipiac River to Canal Street. The groundwater use studies have confirmed that public drinking water is available in the entire area studied and that groundwater is not, and may not be, used for drinking water within this area. Therefore, there are no dermal or ingestion receptors via this pathway. There is, however, a vapor intrusion pathway in an isolated area that is discussed in more detail in Sections D and G of this document.

Black Pond is currently a limited recreational water body with expected similar use in the future. Black Pond is adjacent and east of the northern portion of the landfill. The unnamed stream is an intermittent stream located west and across Old Turnpike Road from the Site and is currently used as a drainage pathway and is expected to be used in a similar fashion in the future. Surface water sampling in these areas does not indicate adverse impacts from the landfill.

G. SUMMARY OF POTENTIAL HARM TO HUMAN HEALTH AND ECOLOGICAL RECEPTORS

1. Human Health Receptors

Connecticut DEP has classified the groundwater within the study area (between the landfill and the Quinnipiac River) as "GB" which means that groundwater is not suitable for use as a drinking water supply. Consequently, potential human health risks resulting from ingestion and other exposures related to use of groundwater as a domestic water supply (e.g. dermal contact and inhalation of volatile compounds while bathing) were not evaluated through a formal human health risk assessment process. Groundwater that is contaminated with volatile constituents and which is in close proximity to the ground surface, may serve as a source of indoor air contamination via vapor migration through the subsurface. Thus, occupants of structures overlying shallow groundwater contamination may potentially be exposed to volatile

contamination originating from the groundwater.

The following represents the route of potential human exposure to site-related contamination relevant to this ROD and that is described in detail below:

- Inhalation of volatile organic compound (VOC) constituents indoors resulting from the migration from shallow contaminated groundwater through the subsurface, and into an overlying structure.

a. Potential Human Health Risk Due to Vapor Intrusion

In general, contaminated groundwater from the landfill migrates in a westerly direction toward the Quinnipiac River. As it travels, it descends in depth west of Old Turnpike Road (Figure 14, Supplemental RI, 2006). Thus, parcels immediately to the west of the landfill along Old Turnpike Road include areas where contaminated groundwater is relatively close to the ground surface. Such contaminated shallow groundwater may serve as a source of volatile contamination that may migrate through the subsurface, into an overlying structure where exposure may occur.

Connecticut has established CT RSRs for groundwater (RCSA, Section 22a-133k-3c) that include specific volatilization criteria developed for the purpose of providing public health protection as a result of vapor intrusion. Due to the complexity of evaluating site-related vapor intrusion risk at facilities together with the fact that Connecticut has regulations governing vapor intrusion, a quantitative baseline human health risk evaluation was not performed for the vapor intrusion exposure pathway at this Site. Instead, concentrations of volatile contamination in the shallow groundwater aquifer were compared to Connecticut's regulations for groundwater vapor intrusion. Shallow groundwater concentrations noted in excess of CT DEP RSR criteria for vapor intrusion were used as justification for remedial action in accordance with EPA Directive 9355.0-30 (Role of the Baseline Risk Assessment in Remedy Selection, 1991).

Connecticut's volatilization criteria for groundwater are health based chemical specific standards that are specific to the type of land use (i.e. residential or commercial/industrial) overlying the contaminated groundwater. CT RSRs were subject to rulemaking in 1996 and have been consistently applied by CT DEP since they were promulgated, with many provisions meeting the definition of ARARs under CERCLA. In March of 2003, Connecticut proposed revisions to the volatilization criteria that included revised numeric criteria for several compounds as well as the provision that the criteria be applied to polluted water located within 30 feet of the ground surface (previously, the RSRs applied only to contaminated groundwater located within 15 feet of ground surface). The proposed revisions to the CT RSRs of March 2003 are viewed as "to be considered" criteria by EPA for decision-making purposes.

The following represents a parcel-by-parcel summary of those parcels for which concentrations of contaminants in shallow groundwater exceed either the promulgated or the proposed CT RSRs for vapor intrusion. All other parcels overlying contaminated groundwater sit above contamination that is either too deep to be subject to the Connecticut regulations or that does not exceed CT RSRs for vapor intrusion. The summary below is based on groundwater monitoring

data collected between December 2003 and November 2005. A complete record of all samples obtained can be found in Tables 1 and 7 of the *Supplemental Remedial Investigation Report, 2006*.

b. Summary of Vapor Intrusion Threats at the Former Lori Corporation Parcel

One or more promulgated and proposed exceedences of Connecticut's volatilization criteria for both residential and industrial/commercial land use for vinyl chloride were noted in well locations G314A, SDW3, SDW4, and M63 (Appendix B, Table G-1, and Appendix A, Figure 1, and Figure 2). This suggests a potential for harm to human health via vapor intrusion given current commercial/industrial land use as well as for any future residents who may reside on this parcel should land use change. As several shallow wells (M26, M27, M70, and M71) located between the landfill and these four locations did not exceed the volatilization criteria for vinyl chloride, there is some question as to the source of the observed shallow groundwater contamination on the former Lori Corporation parcel. Consequently, further investigation of the vapor intrusion pathway is warranted for the former Lori Corporation parcel before a decision can be made regarding whether or not this is a Site-related risk.

c. Summary of Vapor Intrusion Threats at the Radio Station Parcel

On the Radio Station parcel, well locations M28, M30, M31, M32, M45, M46, M47, M68, PZ-2, and PZ-3 had one or more detections of vinyl chloride exceeding both the promulgated and proposed Connecticut's volatilization criteria for both residential and commercial/industrial land use (Appendix B, Table G-2, and Appendix A, Figure 1 and Figure 2). A few shallow groundwater samples (M30, M31, and M45) had detections of vinyl chloride that were between 50-400 times the volatilization criteria for vinyl chloride. As this parcel is presently used for commercial purposes, the data suggest there may be potential harm to human health via vapor intrusion given current land use thereby warranting the need for remedial action. Furthermore, the data suggest there may be a potential threat to future residents at this parcel via vapor intrusion should the parcel be used for residential purposes in the future. In addition to vinyl chloride, M31 also had detections of 1,1 DCE and cis-1,2 DCE in excess of the volatilization criteria for residential land use but not exceeding the volatilization criteria for commercial/industrial use.

d. Summary of Vapor Intrusion Threats at the Chuck and Eddy's Parcel

Fifteen shallow wells located on the Chuck and Eddy's parcel had one or more detections of vinyl chloride exceeding both the promulgated and proposed Connecticut's volatilization criteria for both residential and commercial/industrial land use (Appendix B, Table G-3, and Appendix A, Figure 1 and Figure 2). Two adjacent sample locations (G304A and M36) had concentrations of vinyl chloride that were between 100 to 2000 times the volatilization criteria. Shallow groundwater concentrations exceeding commercial/industrial volatilization criteria for TCE, 1,1-DCE, and CCl₄ were also noted but were limited in extent to a few locations (G304A, M36, M41, and M60). Based on these observations, the data suggest there may be a threat via vapor intrusion given the current commercial/industrial use of the parcel such that remedial action is warranted. Locations G304A, M36, M40, M41, M42, M54, M55, M60, M76 also noted

concentrations in shallow groundwater in excess of the residential volatilization criteria for benzene, cis-1,2 DCE, 1,2-dichloroethane, ethylbenzene, PCE, toluene, and xylene in addition to vinyl chloride, TCE, 1,1-DCE, and CCl₄ (Appendix B, Table G-3). Thus, there may be a threat to public health via vapor intrusion should the Chuck and Eddy's parcel be used for residential purposes in the future.

Appendix A, Figure 1 and Figure 2 denote locations where the CT RSRs for vapor intrusion have been exceeded for residential and commercial/industrial land use respectively for the three parcels described above.

2. Ecological Receptors

An Ecological Risk Assessment (ERA) was conducted during the RI for the 1994 ROD and is included as Volume 2A of the first RI/FS. The ERA included the delineation of existing wetlands and an evaluation of the social significance, effectiveness, and viability of the wetlands (Wet II), as well as an evaluation of potential impacts to aquatic and terrestrial wildlife. The ERA relied upon previous ecological field assessments and surface water and sediment analytical data collected during the RI and concluded that potential risks to aquatic or terrestrial wildlife are generally minimal, and limited to specific, isolated locations.

The ERA resulted in the following findings:

Surface water is not adversely impacted by chemical stressors identified in the area studied and is not a significant risk to environmental receptors;

Sediment is not adversely impacted by metals. Sediment at sampling locations SED-5, SED-6, and SED-8 has been somewhat impacted by PAH and chlordane. However, it is unlikely that a risk exists to environmental receptors because of the lack of bioavailability of these compounds at the concentrations detected; and

Surface soil in the area studied is impacted by SVOCs primarily PAHs. There may be an increased risk to terrestrial receptors in areas where PAH concentrations in surface soil exceed background concentrations.

The risk from surface soil has been eliminated with the placement of the cap on the landfill. Surface water and sediment samples were collected during the 2006 RI (Section 4.2 *Supplemental Remedial Investigation Report*). The results were similar and in many cases have decreased in concentrations when compared to the samples from the first RI used for the ecological risk assessment. Thus, no unacceptable adverse impacts to the ecology at Black Pond or at the unnamed stream exist at the Site with the placement of the cap at the landfill.

For more information regarding the ecological risk assessment see *Ecological Risk Assessment*, Volume 2A of the *Remedial Investigation*, December 1993 and Sections 1 and 4 of the *Supplemental Remedial Investigation Report, 2006*.

3. Basis for Response Action

In conclusion, threats to human health via vapor intrusion on the Radio Station and Chuck and Eddy's parcels given current land use exist and consequently warrant remedial action. In addition, a potential threat exists from vapor intrusion at these two locations in the future, should the land use change to include residential use. While there is evidence indicating that vapor intrusion may pose a potential health risk to current occupants of the building located on the former Lori Corporation parcel, the source of the contamination warrants further investigation. Potential health threats via vapor intrusion to receptors on other parcels in the area studied were not significant at this time.

H. REMEDIAL ACTION OBJECTIVE

Based on preliminary information relating to type of contaminants, environmental medium of concern, and the one identified potential exposure pathway, a response action objective (RAO) was developed to aid in the development and screening of alternatives. This RAO was developed to mitigate and prevent existing and future potential threats to human health.

The RAO for the selected final remedy for the Site is to prevent inhalation of VOCs by occupants of residential/commercial/industrial buildings resulting from volatilization of VOCs in groundwater, in excess of 10^{-4} to 10^{-6} excess cancer risk, a hazard index >1 and/or to comply with applicable or relevant, and appropriate volatilization criteria.

I. DEVELOPMENT AND SCREENING OF ALTERNATIVES

A. Statutory Requirements/Response Objectives

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that are protective of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences, including: a requirement that EPA's remedial action, when complete, must comply with all federal and more stringent state environmental and facility siting standards, requirements, criteria or limitations, unless a waiver is invoked; a requirement that EPA select a remedial action that is cost-effective and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and a preference for remedies in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances is a principal element over remedies not involving such treatment. Response alternatives were developed to be consistent with these Congressional mandates.

B. Technology and Alternative Development and Screening

CERCLA and the National Contingency Plan (NCP) set forth the process by which remedial actions are evaluated and selected. In accordance with these requirements, a range of alternatives was developed for the Site.

With respect to the groundwater/vapor intrusion response action, the 2006 RI/FS developed a

limited number of remedial alternatives that potentially could attain site-specific action levels; engineering control alternatives ; and a no action alternative. These alternatives were initially screened to determine whether or not they were technically implementable.

As discussed in Section 2.0 of the 2006 FS, from this initial screening, groundwater/vapor intrusion alternatives were identified, assessed and screened again based on implementability, effectiveness, and cost. Section 3.0 of the 2006 FS presented the remedial alternatives developed by combining the technologies identified in the previous screening process in the categories identified in Section 300.430(e)(3) of the NCP. These combined alternatives were then screened again as to implementability, effectiveness, and cost. The purpose of the screening steps was to narrow the number of potential remedial actions for further detailed analysis while preserving a range of options. Each alternative that was retained during the screening process was then evaluated in detail in Section 4.0 of the 2006 FS.

In summary, of the 14 remedial technologies screened in Section 2.0 of the 2006 FS, six were retained as possible options for the cleanup of the Site. From these screening steps, remedial options were combined, and 3 alternatives were selected for detailed analysis.

J. DESCRIPTION OF ALTERNATIVES

This Section provides a narrative summary of each alternative evaluated in the detailed analysis to address groundwater/vapor intrusion. Three remedial alternatives have been developed:

- **Alternative GW-1: No Action**

No action would be taken under Alternative GW-1. As required by the NCP, the No Action alternative is carried through the detailed analysis for comparative purposes.

Under Alternative GW-1, volatilization of VOCs from groundwater would not be addressed through active remedial measures and no institutional controls would be put in place. This Alternative would not prevent exposure to VOCs in vapor resulting from volatilization from groundwater. As a result, this Alternative does not reduce toxicity, mobility or volume through treatment; does not minimize residual risks and/or afford long-term protection or comply with ARARs; does not minimize the time to achieve acceptable levels in the groundwater. As a result, this Alternative does not provide adequate protection of human health and the environment. Alternative GW-1 could be easily implemented, since it would require no measures to be taken. There would be minimal costs associated with Alternative GW-1, related to the performance of five-year reviews.

- **Alternative GW-2: Institutional Controls/Groundwater Monitoring/Building Ventilation (Sub-slab Depressurization)/Vapor Barriers**

Alternative GW-2 is the selected alternative. Alternative GW-2 requires building ventilation (sub-slab depressurization) for existing buildings located in areas where the CT RSRs volatilization criteria are exceeded. This alternative also allows use of vapor barriers (or possibly sub-slab depressurization) to address vapor intrusion at new buildings.

Under Alternative GW-2, the following measures would be implemented:

- Institutional controls in the form of ELURs would be placed on properties or portions of properties where groundwater VOC concentrations exceed the CT RSR volatilization criteria, to remain in place as long as groundwater VOC concentrations exceed the criteria;
- Monitoring of groundwater, consistent with the requirements of the CT RSRs volatilization criteria and federal requirements to confirm that the remedy remains protective in the long term;
- Use of engineering controls to prevent migration of VOC vapors into any existing or new buildings, and/or to control the level of VOCs in vapor beneath or in any existing or new buildings; and
- Five-year site reviews to evaluate the effectiveness and adequacy of the remedial measure.

Under Selected Alternative GW-2, in new buildings exposure to VOCs in vapor resulting from volatilization from groundwater would be prevented through the use of ELURs on any parcel of land or portion thereof overlying areas where groundwater impacted by the Site exceeds the CT RSRs residential or commercial/industrial volatilization criteria. The use of ELURs is to prevent new construction of buildings unless adequate controls are first put in place. Alternative GW-2 also requires building ventilation for existing buildings where the CT RSRs commercial/industrial/residential volatilization criteria are exceeded, consistent with the CT RSRs. Alternative GW-2 would prevent exposure from VOCs in vapor beneath or in any existing buildings located in areas where the VOC concentrations in groundwater exceed the CT RSRs commercial/industrial/residential volatilization criteria, by using building ventilation controls to either prevent migration of VOC vapors into, or control the level of VOCs in vapors beneath and in, any existing buildings. Vapor barriers (or possibly subslab depressurization) would be used to prevent VOC migration into new buildings. As a result, this Alternative does not reduce toxicity, mobility or volume through treatment and does not actively address residual risks nor does it reduce the time to achieve acceptable levels in the groundwater. It does, however, afford long-term protection, comply with ARARs and has no unacceptable short-term impacts. As a result, the Selected Alternative provides overall protection of human health and the environment.

Assuming a 30-year operational period and seven (7) percent interest, order of magnitude costs for Alternative GW-2 could range from approximately \$200,000 to \$700,000. Detailed cost estimates and sensitivity analysis are provided in Section 4, Detailed Analysis of the 2006 FS.

- **Alternative GW-3: Permeable Reactive Barrier/Institutional Controls/Groundwater Monitoring/Building Ventilation/Vapor Barriers**

Alternative GW-3 includes installation of a permeable reactive barrier (PRB or Permeable Reactive Barrier) to treat VOC contaminated groundwater to levels below the CT RSRs

volatilization criteria. Alternative GW-3 also requires institutional controls, in the form of ELURs, be placed on properties or portions of properties where groundwater VOC concentrations exceed the CT RSR volatilization criteria, to remain in place as long as groundwater VOC concentrations exceed the criteria. In addition, Alternative GW-3 requires the same engineering controls for existing and new commercial/industrial buildings as Alternative GW-2.

Under Alternative GW-3, the following measures would be implemented:

1. Groundwater treatment would be provided through the construction of a Permeable Reactive Barrier to intercept and treat shallow aquifer VOC contaminated groundwater leaving the Site;
2. Institutional controls in the form of ELURs would be placed on properties or portions of properties where groundwater VOC concentrations exceed the CT RSR volatilization criteria, and will remain in place as long as groundwater VOC concentrations exceed the criteria;
3. Monitoring of groundwater, consistent with the requirements of the CT RSRs volatilization criteria and federal requirements and to confirm in the future that the remedy remains protective in the long-term;
4. Use of engineering controls to prevent migration of VOC vapors into any existing or new building, and/or to control the level of VOCs in vapor beneath or in any existing building; and
5. Five-year site reviews to evaluate the effectiveness and adequacy of the remedial measure.

Under Alternative GW-3, exposure to VOCs in vapor resulting from volatilization from groundwater would be prevented in the long term through the installation of a Permeable Reactive Barrier that would intercept and treat shallow VOC contaminated groundwater (within 30 ft of ground surface) leaving the Site. Although some uncertainty exists regarding the effectiveness of this alternative, groundwater VOC levels are expected to be reduced below respective CT RSR criteria for volatilization. Exposure to VOCs in vapor would also be prevented through the use of ELURs on any parcel of land or portion thereof overlying areas where groundwater impacted by the Site exceeds the CT RSR's volatilization criteria. Alternative GW-3 requires building ventilation or vapor barriers for new or existing buildings in areas where the CT RSR's volatilization criteria are exceeded. Alternative GW-3 would prevent exposure from VOCs in any residual vapor beneath or in any new or existing buildings located in areas where the VOC concentrations in groundwater exceed the CT RSRs volatilization criteria, by using building ventilation controls or vapor barriers to prevent migration of VOC vapors into, or control the level of VOCs in vapors beneath and in, any new and existing buildings. This alternative reduces toxicity, mobility or volume through treatment and minimizes residual risks until protective levels are reached in groundwater. It affords long-term protection and complies with ARARs. The alternative does have some significant short-term impacts on the community due to construction along Old Turnpike Road. This alternative provides overall protection of human health and the environment.

Permeable reactive barriers under Alternative GW-3 would be moderately difficult to construct at the Site because of the varied surface terrain and the extensive length and depth of trenching required. This alternative would also likely require placement of the PRB on private property immediately downgradient of the landfill. Securing access to this property could delay implementation of this alternative. In addition, excavation would result in significant disruption on Old Turnpike Road, a major road in the community. However, PRBs have been successfully installed at other similar sites and expected construction difficulties are not insurmountable. PRBs are expected to be easy to operate since there is no active operating equipment, no power requirements, no special techniques or facility relocation required and no water or air discharges.

Assuming a 30-year operational period and seven (7) percent interest, order of magnitude costs for Alternative GW-3 could range from approximately \$10,000,000-\$12,000,000. Detailed cost estimates and sensitivity analysis are provided in the Section 4 Detailed Analysis.

K. SUMMARY OF THE COMPARATIVE ANALYSIS OF ALTERNATIVES

Section 121(b)(1) of CERCLA presents several factors that at a minimum EPA is required to consider in its assessment of alternatives. Building upon these specific statutory mandates, the NCP requires nine evaluation criteria to be used in assessing the individual remedial alternatives.

A detailed analysis was performed on the alternatives using the nine evaluation criteria in order to select a site remedy. The following is a summary of the comparison of each alternative's strength and weakness with respect to the nine evaluation criteria. These criteria are summarized as follows:

Threshold Criteria

The two threshold criteria described below must be met in order for the alternatives to be eligible for selection in accordance with the NCP:

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 pathway are eliminated, reduced or controlled through treatment, engineering controls, or institutional controls.
2. **Compliance with applicable or relevant and appropriate requirements (ARARs)** addresses whether or not a remedy will meet all Federal environmental and more stringent State environmental and facility siting standards, requirements, criteria or limitations, unless a waiver is invoked.

Primary Balancing Criteria

The following five criteria are utilized to compare and evaluate the elements of one alternative to another that meet the threshold criteria:

3. **Long-term effectiveness and permanence** addresses the criteria that are utilized to assess alternatives for the long-term effectiveness and permanence they afford, along with the degree of certainty that they will prove successful.
4. **Reduction of toxicity, mobility, or volume through treatment** addresses the degree to which alternatives employ recycling or treatment that reduces toxicity, mobility, or volume, including how treatment is used to address the principal threats posed by the site.
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** addresses 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 Operation Maintenance (O&M) costs, as well as present-worth costs.

Modifying Criteria

The modifying criteria are used as the final evaluation of remedial alternatives, generally after EPA has received public comment on the RI/FS, in this case SGI, and Proposed Plan:

8. **State acceptance** addresses the State's position and key concerns related to the preferred alternative and other alternatives, and the State's comments on ARARs or the proposed use of waivers.
9. **Community acceptance** addresses the public's general response to the alternatives described in the Proposed Plan and RI/FS report.

Following the detailed analysis of each individual alternative, a comparative analysis, focusing on the relative performance of each alternative against the seven criteria, was conducted. This comparative analysis can be found in Appendix B, Table 4-1.

The section below presents the nine criteria and a brief narrative summary of the alternatives and the strengths and weaknesses according to the detailed and comparative analysis. Only those alternatives that satisfied the first two threshold criteria were balanced and modified using the remaining seven criteria.

Threshold Criteria

The two threshold criteria described below must be met in order for the alternatives to be eligible for selection in accordance with the NCP:

1.) Overall Protection of Human Health and the Environment

There are no adverse impacts to wetlands or surface waters under any of the alternatives. Likewise, there is no risk of ingestion or dermal contact with VOCs in groundwater under any of the alternatives.

Except for the No Action Alternative (GW-1), Alternatives GW-2 and GW-3 provide protection against exposure to VOCs volatilizing from shallow groundwater. Alternatives GW-2 and GW-3, through the use of ELURs, rely on institutional controls to protect against exposure to VOCs volatilizing from shallow groundwater on any parcel of land or portion thereof overlying areas where groundwater impacted by the landfill exceeds the CT RSR's residential or commercial/industrial volatilization criteria. Where there are existing buildings over areas where groundwater impacted by the landfill exceeds the CT RSR's volatilization criteria, building ventilation (sub-slab depressurization), consistent with the CT RSRs, provides protection by preventing migration of VOC vapors into, or controlling the level of VOCs in vapor beneath or in, any existing buildings. For new buildings, both Alternatives GW-2 and GW-3 require engineering controls such as vapor barriers to prevent exposure to VOC vapors.

In addition to the above components, overall protection under Alternative GW-3 is also provided by a shallow groundwater treatment through the use of PRBs. Unlike the other two alternatives, overall protection of human health and the environment under Alternative GW-3 is achieved through permanent reduction of contaminant concentrations in groundwater below CT RSR's criteria for vapor intrusion.

2.) Compliance with Applicable or Relevant and Appropriate Environmental Requirements (ARARs)

Alternatives GW-2 and GW-3 would meet Chemical-Specific ARARs for volatilization of VOCs from shallow groundwater (CT RSRs), Action-Specific ARARs, and any identified Location-Specific ARARs. Alternative GW-1 would not meet Chemical-Specific ARARs for volatilization of VOCs from shallow groundwater. See Appendix D for ARARs Tables.

Primary Balancing Criteria

The following five criteria are utilized to compare and evaluate the elements of one alternative to another that meet the threshold criteria:

3.) Long-Term Effectiveness and Permanence

The risk with respect to groundwater residual contamination under Alternatives GW-1 and GW-2 is high because the source of vapor intrusion (contaminated groundwater) is not addressed. The residual risk with respect to groundwater under Alternative GW-3 is low as levels of contamination in groundwater are reduced permanently in the long term under this Alternative. Unlike the other two alternatives, Alternative GW-3, through the use of PRBs, provides long-term effectiveness and permanence as it theoretically reduces contaminant concentrations in groundwater through treatment. If designed and constructed properly, this Alternative combines

the advantages of an effective groundwater treatment technology (PRB) with the institutional and engineering controls of Alternative GW-2. This assumes, however, that the PRB can effectively address the contamination in groundwater. While PRB treatments are considered a moderately reliable technology, there is some uncertainty regarding their effectiveness as well as the time it would take to achieve levels required under the CT RSRs. Site-specific pilot or design studies would be required in order to maximize effectiveness.

Alternatives GW-2 and GW-3 provide long-term effectiveness through institutional and engineering controls. Both alternatives rely on institutional and engineering controls to protect against exposure to VOCs volatilizing from shallow groundwater on any parcel of land or portion thereof overlying areas where groundwater exceeds the CT RSR's vapor intrusion criteria. These controls are reliable as long as they are properly implemented and maintained, and in the case of institutional controls, enforced.

4.) Reduction of Toxicity, Mobility, or Volume Through Treatment (TMV)

Neither Alternatives GW-1 nor GW-2 reduces toxicity, mobility or volume through treatment (although some minimal treatment may be used to address vapor intrusion). Alternative GW-3 reduces the toxicity, mobility, and volume of contaminants through treatment of contaminated groundwater. Under this Alternative, shallow contaminated groundwater passing through the PRB would be treated. This Alternative destroys and removes the contaminants in groundwater that have migrated from the landfill. It is estimated that the landfill will continue to discharge contamination into the groundwater for decades. Groundwater in the shallow plume east of the PRB would be treated as it passes through the wall. Groundwater that had already passed the location of the PRB at the time of construction would take a longer time to reach cleanup levels.

5.) Short-Term Effectiveness

Neither Alternative GW-1 nor Alternative GW-2 would significantly impact the community, workers, or the environment. Alternative GW-2 would meet the remedial response objective within six to twelve months. This time period would be required to obtain the necessary ELURs and implement building ventilation or other engineering controls, as necessary.

Alternative GW-3 has installed treatment components that may create relatively minor visual and auditory nuisances. The potential for remediation workers to have direct contact with contaminants in soil or groundwater may exist during installation, maintenance and monitoring operations. For example, environmental drilling to install monitoring wells and/or excavation may produce contaminated soil cuttings and liquids that present some risk to remediation workers at the Site. These risks would need to be addressed through the use of industry standard health and safety procedures. Excavation activities under Alternative GW-3 would result in significant disruption to the impacted surface soils along a major roadway and to the community that would have to be addressed. Groundwater monitoring will have minimal impact on workers responsible for periodic sampling. It is expected that the groundwater component of GW-3 would meet CT RSR volatilization criteria within 30 years.

6.) Implementability

Alternatives GW-1 and GW-2 could be easily implemented and would be consistent with any additional remedial actions, if required in the future.

Institutional controls would be readily implementable as ELURs are commonly used in Connecticut. Groundwater monitoring would be easily implementable and qualified personnel and equipment are readily available. Building ventilation and vapor barriers would be easily implemented as these rely on standard, reliable construction methods.

Unlike the other two Alternatives, permeable reactive barriers under Alternative GW-3 would be moderately difficult to construct at the Site because of the varied surface terrain and the extensive length and depth of trenching required. This alternative would also likely require placement of the PRB on private property immediately downgradient of the landfill. Securing access to this property could delay implementation of this alternative. In addition, excavation would result in significant disruption on Old Turnpike Road, a major road in the community. However, PRBs have been successfully installed at other similar sites and expected construction difficulties are not insurmountable. PRBs are expected to be easy to operate since there is no active operating equipment, no power requirements, no special techniques or facility relocation required and no water or air discharges.

7.) Cost

There would be relatively minor costs associated with Alternative GW-1, as no remedial measures would be implemented. Alternative GW-1 would, however, require the performance of five-year reviews estimated at \$5,000 (or more) every five years over 30 years. The present worth cost range for Alternative GW-2 is approximately \$226,219 to \$695,240. The present worth cost range for Alternative GW-3 is approximately \$10,700,000 to \$12,500,000.

Modifying Criteria

The modifying criteria are used as the final evaluation of remedial alternatives, generally after EPA has received public comment on the 2006 RI/FS and Proposed Plan:

8.) State Acceptance

The CT Department of Environmental Protection has reviewed the various alternatives and has indicated its support for the selected remedy. Although the State concurred in the selection of this remedy, in its concurrence letter, it noted continuing concerns regarding surface water and sediment quality at the Site.

9.) Community Acceptance

All community comments received during the 60-day comment period have been in support of this final remedy. See Part 3, Responsive Summary, for more detail.

L. THE SELECTED REMEDY (GW-2)

1. Summary of the Rationale for the Selected Remedy

The selected remedy is a comprehensive approach for this final decision that addresses all remaining current and potential future risks caused by vapor intrusion from groundwater contamination at this Site. The 1994 ROD has successfully addressed all of the other exposure pathways of concern (See 1994 ROD for more detail.)¹. Specifically, this final remedial action addresses the implementation of engineering controls, institutional controls, and long-term monitoring at parcels above groundwater contamination that exceeds the CT RSRs.

At this time, the focus of the selected remedy is on three parcels: Chuck & Eddy Salvage Yard property, the Radio Station property, and potentially the former Lori Corp property. However, if during the long term monitoring program or if any other information becomes available that shows a potential unacceptable vapor intrusion pathway in any existing or new building affected by the Site groundwater plume, the components of the selected remedy will also apply to such affected properties as part of the selected remedy. In addition, operation and maintenance as well as five-year reviews will be conducted to assure that the final remedy provides overall protection to human health and to the environment in the long-term.

A. The 1994 ROD

The 1994 ROD addressed all affected media (i.e. soil, soil gas, surface water, and sediment) at the landfill, at the adjacent Black Pond, and at the Unnamed Stream across Old Turnpike Road west of the landfill. The 1994 ROD required the following major actions:

- permanent relocation of all on-site homes and businesses;
- covering the entire landfill with an impermeable cap (the northern portion of the cap provides passive recreation to the public, the southern portion of the cap has restricted access to the public.);
- excavation and placement of a highly contaminated “hotspot” area in a lined cell which was placed under the cap and above the watertable;
- installation and monitoring of the landfill gas collection system under the landfill cap;
- long-term monitoring of groundwater, landfill gas, sediment and surface water to determine cap effectiveness;
- implementation of institutional controls to prevent damage to the cap and exposure to contaminated soils and groundwater at the landfill;
- five-year reviews and operation and maintenance to insure that all remedy components remain protective of human health and the environment.

¹ Although EPA has determined that all components selected in the 1994 ROD are the appropriate components to meet statutory cleanup requirements, specific components under the 1994 ROD will be periodically adjusted to reflect Site conditions. This means, for example, that long term monitoring and operation and maintenance requirements may need to be periodically revised. In addition, although the landfill gas collection system is operating as intended, it may not be collecting all of the site-related methane. As a result, the system may, for example, need to be expanded. In addition, the groundwater monitoring program, for example, will be expanded to include impacts of the landfill on the CT DEP classified GA areas.

All of the above remedial components have been finalized and are functioning as intended¹.

As discussed previously, the major components of the 1994 ROD were based upon *Presumptive Remedy for CERCLA Municipal Landfill Sites* (EPA, 1993), EPA Document No. 540-F-93-035. (Presumptive Remedy Guidance). The 1994 ROD evaluated the interim remedy against four criteria: (1) provide long-term protection of human health and the environment; (2) comply with ARARs; (3) fully address principal threats posed by the site; and (4) address the statutory preference for treatment that reduces the toxicity, mobility, or volume of wastes. All of these criteria were adequately addressed by the 1994 ROD. A review of the work conducted under the 1994 ROD confirms that all the components of the interim remedy are working as intended and, as a result, this is the final remedy for this portion of the Site. As such, the 1994 ROD is effective in the long term, protective of human health and the environment, meets applicable and relevant and appropriate requirements (ARARs), fully addresses the principal threats posed by this portion of the Site, and addresses the statutory preference for treatment that reduces the toxicity, mobility and volume consistent with the EPA's Presumptive Remedy Guidance. The remaining work required under the 1994 ROD (operation and maintenance, long-term monitoring, etc.) will continue as required by the 1994 ROD.

B. The 2006 ROD

This 2006 ROD sets forth the final selected remedy by addressing groundwater impacts via the vapor intrusion pathway for the Site. The components of this final remedy supplement those selected in the 1994 ROD and confirm that the actions selected in the 1994 ROD are the final actions for that portion of the Site.

The selected response action addresses low-level threat wastes at the Site by:

- restricting inappropriate land use through the use of Institutional Controls in the form of Environmental Land Use Restrictions (ELURs);
- implementing engineering controls to prevent highly contaminated vapors from migrating in either existing buildings or new buildings;
- conducting long term groundwater monitoring;
- conducting five-year reviews and operation and maintenance to assure the remedy remains protective and effective in the long-term.

Groundwater studies to date show that the shallow groundwater plume migrating from the landfill in a westerly direction contains Volatile Organic Compound (VOC) concentrations that exceed the CT RSRs for volatilization criteria. To date, EPA has identified three commercial properties currently impacted by this shallow groundwater plume via vapor intrusion. These properties are the Chuck & Eddy Salvage Yard, located at 450 Old Turnpike Road, the Radio Station parcel, located at 440 Old Turnpike Road, and potentially the former Lori Corp. property, located at 384 Old Turnpike Road.

1. Description of Remedial Components

The major components of this remedy are:

- 1.) Institutional controls, in the form of Environmental Land Use Restrictions (ELURs) as defined in Connecticut's Remediation Standard Regulations (CT RSRs) or other necessary measures will be placed on properties or portions of properties where groundwater Volatile Organic Compound (VOC) concentrations exceed the CT RSR volatilization criteria for residential or commercial/industrial use (also denoted as volatilization or vapor intrusion criteria) as appropriate [Appendix B, Table L-1, Groundwater Action Levels for Vapor Intrusion]. Periodic inspections or other procedures and requirements would be performed to ensure compliance with the institutional controls and to ensure notification to EPA and the State and the appropriate local governmental agencies if the institutional control is breached.
- 2.) Building ventilation (sub-slab depressurization systems or similar technology) will be used in existing buildings located over portions of properties where VOCs in groundwater exceed the CT RSRs volatilization criteria to either prevent migration of VOC vapors into buildings or to control the level of VOCs in vapors beneath existing buildings. Similarly, vapor barriers (or similar technology) or sub-slab depressurization (or similar technology) will be used to control vapors in new buildings. In addition, under this remedy, minor amounts of treatment residuals (such as from carbon filters) might be generated depending on the concentrations of VOC in the vapor removed during sub-slab ventilation and whether the emissions require treatment.
- 3.) Groundwater monitoring will be conducted in areas where the potential for vapor intrusion is a concern. Such areas include, but are not limited to, the three parcels that are the initial focus of this remedial action (Chuck & Eddy's, Radio Station, former Lori Corp.), the properties adjacent and south of Chuck & Eddy's, and the new residential neighborhood west of Chuck & Eddy's. Compliance wells will be installed at appropriate locations to collect groundwater to evaluate long-term fluctuations in accordance with the monitoring requirements of the CT RSRs and in accordance with the most stringent of either the proposed or promulgated action levels for vapor intrusion (see Appendix B, Table L-1), and other federal requirements to ensure the protectiveness of the remedy in the future. If there is an exceedance of the CT RSR volatilization criteria or other information indicates there may be an unacceptable risk, an action plan with proposed actions and respective schedule for implementation will be prepared. All additional response actions will be subject to EPA approval.
- 4.) Conduct operation, maintenance, and monitoring of engineering and institutional controls to ensure remedial measures are performing as intended and that the remedy remains protective in the future. Periodic inspections or other procedures and requirements would be performed to ensure compliance with the institutional

controls and to ensure notification to EPA, the State and the appropriate local governmental agencies if the institutional control is not effective.

- 5.) Pre-Design Studies will be conducted at the former Lori Corp. Property to determine if groundwater contamination from the landfill is adversely impacting this property with respect to vapor intrusion. If results indicate that it is, then this property will be addressed consistent with the other two properties.

2. Summary of the Estimated Remedy Costs

The present worth cost range for the selected remedy (GW-2), is \$226,219 to \$695,240. Table A-1, Table A-2, and Table A-3 in Appendix B, show a cost breakdown for capital costs and operation & maintenance costs for low, medium, and high ranges respectively. Below is a summary of such costs.

Cost Case Scenario	Capital Cost	Present Worth O&M Cost	Total Present Worth Cost
GW-2 – Low	\$77,456	\$148,763	\$226,219
GW-2- Medium	\$192,814	\$235,950	\$428,764
GW-2-High	\$345,803	\$349,438	\$695,240

The cost sensitivity analysis for the selected remedy considered the potential range of costs associated with any necessary ELURs and engineering control costs, as appropriate. The cost calculation assumed that one or two buildings will require building ventilation at the onset of the remedial activities. The low cost assumed the ventilation of one existing building (1200 sq. ft.; 12,000 cu. ft.) using an exhaust fan to remove air from within the building. The medium and high costs assumed a sub-slab ventilation system (as is preferred by CT DEP) is installed in one existing building of 1200 sq. ft. (medium cost) and two existing buildings of 1200 sq. ft. and 4000 sq. ft. (high cost). Costs also assumed a level of groundwater monitoring for VOCs that would be required by the CT RSRs volatilization criteria and other federal requirements to demonstrate that the ELUR boundaries estimated to date are correct and then for additional monitoring in the future to ensure that the remedy remains protective in the long term. Low and medium costs assumed a capital cost for installation of 10 small diameter wells for compliance monitoring. The high cost, as discussed above, assumed that an additional five small diameter wells are required in year four, following the first three years of monitoring.

The information in these cost estimate summary tables is 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 selected remedy. Major changes may be documented in the form of a memorandum in the Administrative Record file, an ESD, or a ROD amendment. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost.

3. Expected Outcomes of the Selected Remedy

The expected outcome of this remedy is that exposure to unsafe levels of VOCs migrating into buildings will be prevented under the selected remedy. Further, the selected remedy will insure that vapor intrusion will not present a future unacceptable risk to human health from direct exposure (inhalation) to indoor air. The selected remedy will rely upon a combination of land use restrictions, institutional controls, and engineering solutions to comply with Connecticut law and the cleanup standards established in the ROD in accordance with the most stringent of either the proposed or promulgated action levels for vapor intrusion (see Appendix B, Table L-1), and other federal requirements to ensure the protectiveness of the remedy in the future. Compliance wells will be installed at appropriate locations to collect groundwater to evaluate long-term fluctuations.

EPA's new Cancer Guidelines and Supplemental Guidance (March 2005) will be used as the basis for EPA's analysis of all new carcinogenicity risk assessments. If updated carcinogenicity risk assessments become available, EPA will determine whether an evaluation should be conducted as part of the remedial design and 5 Year Review to assess whether adjustments to the target cleanup levels for this remedial action are needed in order for this remedy to remain protective of human health.

M. STATUTORY DETERMINATIONS

The remedial action selected for implementation at the Site is consistent with CERCLA and, to the extent practicable, the NCP. The selected remedy is protective of human health and the environment, will comply with ARARs, and is cost effective. In addition, the remedial action utilizes permanent solutions and alternate treatment technologies or resource recovery technologies to the maximum extent practicable, but does not satisfy the statutory preference for treatment that permanently and significantly reduces the mobility, toxicity or volume of hazardous substances as a principal element.

1. The Selected Remedy is Protective of Human Health and the Environment

The remedy at this Site will adequately protect human health and the environment by eliminating, reducing, or controlling exposures to human receptors by preventing exposure to VOCs in vapors resulting from volatilization of VOCs in groundwater through the use of ELURs and, where appropriate, building ventilation (or vapor barriers), in areas where groundwater VOC concentrations exceed the CT RSR's residential or commercial/industrial volatilization criteria. This remedy would include development and implementation of operation and maintenance and monitoring plans to insure these controls remain protective of human health and the environment. Appendix B, Table L-1 includes a list of groundwater action levels for vapor intrusion.

2. The Selected Remedy Complies With ARARs

Alternative GW-2 will comply with all federal and any more stringent state ARARs that pertain to the Site. A thorough discussion of these requirements as well as all other ARARs for this Site is included in Appendix D, Table 1-1. Appendix B, Table L-1 includes a list of groundwater action

levels for vapor intrusion.

3. The Selected Remedy is Cost-Effective

In EPA's judgment, the selected remedy is cost-effective because the remedy's costs are proportional to its overall effectiveness (see 40 CFR 300.430(f)(1)(ii)(D)). This determination was made by evaluating the overall effectiveness of those alternatives that satisfied the threshold criteria (i.e., that are protective of human health and the environment and comply with the CT RSRs and other ARARs). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination – long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness. The overall effectiveness of each alternative then was compared to the alternative's costs to determine cost-effectiveness. In this case, while Alternative GW-3 provides greater long term protectiveness and permanence and also reduces toxicity, mobility, and volume through treatment, it does so at a cost approximately 55 times higher than the selected remedy (Alternative GW-2- \$226,219 to \$695,240 vs. Alternative GW-3 - \$10,700,000 to \$12,500,000). Given the magnitude of the risk and the fact that the selected remedy is also protective in the long term, the relationship of the overall effectiveness of this remedial alternative was determined to be proportional to its costs and hence represents a reasonable value for the money to be spent.

4. The Selected Remedy Utilizes Permanent Solutions and Alternative Treatment or Resource Recovery Technologies to the Maximum Extent Practicable

The remedy selected in this ROD utilizes permanent solutions and alternative treatment or resource recovery technologies to the maximum extent practicable. These determinations were made by deciding which identified alternatives provided the best balance of trade-offs among alternatives in terms of: 1) long-term effectiveness and permanence; 2) reduction of toxicity, mobility or volume through treatment; 3) short-term effectiveness; 4) implementability; and 5) cost. The balancing test emphasized long-term effectiveness and permanence and the reduction of toxicity, mobility and volume through treatment; and considered the preference for treatment as a principal element, the bias against off-site land disposal of untreated waste, and community and state acceptance.

The nature of the remaining risk at the Site, vapor intrusion, is potentially limited in scope to a small number of commercial/industrial parcels. Taking into account the implementability and short-term effectiveness issues raised by Alternative GW-3, and the fact that both the community and the State support the selected remedy, Alternative GW-2 provides the best balance given the trade-offs that would occur if permanent treatment via PRB were selected. This is also supported by the fact that there is some uncertainty regarding the effectiveness of Alternative GW-3 in treating groundwater contamination and the fact that EPA has classified the vapor intrusion pathway as a low-level threat.

5. The Selected Remedy Does Not Satisfy the Preference for Treatment Which Permanently and Significantly Reduces the Toxicity, Mobility or Volume of the Hazardous Substances as a Principal Element

The selected alternative does not satisfy the preference for treatment that permanently and significantly reduces the toxicity, mobility or volume of the hazardous substances as a principal element. This remedy does not use any treatment or recycling processes (except to the extent that air emissions generated during building venting might require treatment) and does not reduce the amount of hazardous substances. There is no reduction in toxicity, mobility or volume of the waste due to treatment. However, this remedy does reduce the mobility of the waste through use of building ventilation or vapor barriers. Under this remedy, minor amounts of treatment residuals (such as from carbon filters) might be generated depending on the concentrations of VOC in the vapor removed during sub-slab ventilations and whether the emissions require treatment.

Because of the limited scope of the problem being addressed at the Site, combined with long-term effectiveness, short-term effectiveness and implementability issues raised by the one alternative that did satisfy this preference (Alternative GW-3), there are good reasons to not satisfy this preference for treatment. This determination is also supported by the significant difference in cost between the selected remedy and Alternative GW-3 and the fact that EPA has classified the vapor intrusion pathway as a low-level threat.

6. Five-Year Reviews of the Selected Remedy Are Required

Because this remedy will result in hazardous substances remaining on-site above levels that would otherwise allow for unlimited use and unrestricted exposure, a review will be conducted within five years after initiation of the remedial action to ensure that the remedy continues to provide adequate protection of human health and the environment.

N. DOCUMENTATION OF NO SIGNIFICANT CHANGES

In compliance with statutory requirements for ensuring the public has the opportunity to comment on major remedy selection decisions, a Proposed Plan was prepared presenting Alternative GW-2 as the preferred alternative. The plan was made available to the public on June 21, 2006. All comments received during the comment period were in support of the selected remedy.

Based upon supporting comments from the community and the State, there are no significant changes to the remedy presented in the Proposed Plan. However, Connecticut raised some concern regarding state water quality issues and, as a result, additional requirements for long term monitoring will be included in the long term monitoring plan for the 1994 ROD.

O. STATE ROLE

The Connecticut Department of Environmental Protection has reviewed the 2006 Remedial Investigation/ Feasibility Study and Proposed Plan and has indicated its support for the selected remedy. See Appendix E, CT DEP Letter of Concurrence.

PART 3

**RESPONSIVENESS SUMMARY
FOR THE OLD SOUTHWINGTON LANDFILL
SUPERFUND SITE FINAL REMEDY**

OLD SOUTHWINGTON LANDFILL SUPERFUND SITE
PREFACE

The U. S. Environmental Protection Agency (EPA) held a 60-day public comment period from June 22, 2006 through August 24, 2006 to provide an opportunity for public comment on the Proposed Plan for the final groundwater remedy at the Old Southington Landfill Superfund Site (Site) in Southington, Connecticut. EPA prepared the Proposed Plan based on the results of the Supplemental Groundwater Investigation (2006 RI) and the Amended Feasibility Study (2006 FS) which are the Remedial Investigation (RI) and Feasibility Study (FS) respectively for the final groundwater remedy. The 2006 RI was conducted to determine the nature and extent of the groundwater plume emanating from the landfill and to determine if it was adversely impacting any human or ecological receptors. The 2006 FS examined and evaluated various options, or alternatives to address the contamination. The Proposed Plan presented EPA's preferred alternative for the Site, before the start of the comment period. All documents which were used in EPA's selection of the preferred alternative were placed in the Site Administrative Record, which is available for public review at the EPA Records Center, located at One Congress St, Boston, Massachusetts, and at the Southington Public Library, located at 255 Main Street, Southington, Connecticut.

The purpose of this Responsiveness Summary is to document EPA's responses to the questions and comments raised during the public comment period. EPA considered all of the comments summarized in this document before selecting the final remedial alternative to address contamination at the Site.

The Responsiveness Summary is organized into the following sections:

- A. Overview of the Remedial Alternatives Considered in the 2006 FS and the Proposed Plan, including the Preferred Alternative** — This section briefly outlines the remedial alternatives evaluated in the 2006 FS and the Proposed Plan, including EPA's preferred alternative.
- B. Site History and Background on Community Involvement and Concerns** --- This section provides a brief history of the Site and an overview of community interests and concerns regarding the Site.
- C. Summary of Comments Received During the Public Comment Period** —This section summarizes and provides EPA's responses to the oral and written comments received from the public during the comment period.

A. OVERVIEW OF REMEDIAL ALTERNATIVES CONSIDERED IN THE 2006 FEASIBILITY STUDY AND THE PROPOSED PLAN, INCLUDING THE SELECTED ALTERNATIVE

- **Alternative GW-1: No Action**
- **Alternative GW-2: Institutional Controls/Monitoring/Building Ventilation/Vapor Barriers/Operation & Maintenance/Five-Year Reviews**
- **Alternative GW-3: Permeable Reactive Barrier/Institutional Controls/Monitoring/Building Ventilation/Vapor Barriers/Operation & Maintenance/Five-Year Reviews**

Using information gathered during the 2006 RI and the Human Health Risk Assessment, EPA identified the remedial action objective for the Old Southington Landfill Site (Site). The remedial action objective for the selected final remedy is to prevent the potential exposure of inhalation of volatile organic compounds (VOCs) by occupants of residential, commercial, and/or industrial buildings resulting from volatilization of VOCs from groundwater, in excess of 10^{-4} to 10^{-6} excess cancer risk, hazard index > 1 , and/or applicable, relevant and appropriate volatilization criteria.

After identifying the remedial action objective, EPA developed and evaluated potential remedial alternatives to address Site contamination. The 2006 FS describes the remedial alternatives and the criteria EPA used to narrow the potential alternatives to control sources of contamination and address migration of contaminants.

EPA's Selected Remedy includes the following features:

- Institutional controls in the form of Environmental Land Use Restrictions (ELURs) on properties or portions of properties where groundwater VOC concentrations exceed the CT RSR volatilization criteria, to remain in place as long as groundwater VOC concentrations exceed the criteria;
- Monitoring of groundwater, consistent with the requirements of the CT RSRs volatilization criteria and other federal requirements to confirm in the future that the remedy remains protective;
- Installation of building ventilation (sub-slab depressurization or similar technology) to prevent migration of VOC vapors into any existing building, and/or control of level of VOCs in vapor beneath or in any existing building; also vapor barriers (or possibly sub-slab depressurization or similar technology) for new buildings;
- Long term operation and maintenance;
- Five-year reviews.

In the 2006 FS the estimated net present worth of the selected remedy ranged from \$226,219 to \$695,240.

This Alternative was selected because it achieved the best balance among the criteria that EPA is required by law to evaluate for remedial options. The selected remedy significantly reduces risk to human health to a safe level. The remedy will attain State and Federal ARARs. All of the remedial alternatives considered for implementation at the Site are described in the Final Record of Decision and are discussed in detail in the 2006 FS.

B. SITE HISTORY AND BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

1. Site History

The Old Southington Landfill Superfund Site (Site) operated between 1920 and 1967 as a mixed municipal and industrial landfill. It was operated by the Town of Southington and consists of approximately 13 acres. The landfill is located on the east side of Old Turnpike Road, in Southington, Connecticut (see figure 1-1.) Rejean Road abuts the Site to the north. Black Pond abuts the Site to the east. An unnamed stream is located across Old Turnpike Road and directly west of the Site. The Site is located in a mixed residential, industrial, and commercial area. A small road traverses the southern portion of the Site from Old Turnpike Road to a construction company that abuts the Site to the east. The Quinnapiac River is approximately 3,100 feet west of the Site.

Under the 1994 ROD issued by the EPA, four homes, five commercial businesses, and one town facility were permanently relocated from the Site. The Site has been capped and fenced. A soil gas collection system has been installed throughout the entire landfill and is operating as a passive venting system. The northern portion of the landfill, as well as Black Pond, is used for passive recreation. Public access is not allowed on the southern portion of the landfill.

The northern area was used primarily for disposal and burning of municipal waste consisting primarily of wood and construction debris. The southern area received some municipal but mostly industrial and commercial wastes. Two areas in the southern portion of the landfill were used for disposal of aqueous, semi-solid, and semi-liquid wastes.

In 1967, the Town of Southington (Town) closed the landfill. From the early 1970's to the 1980's, the landfill property was subdivided and developed into residential, industrial, and commercial properties.

In 1979, contamination was discovered in a nearby municipal drinking water well (Well No. 5). As a result, EPA initiated hydrogeologic investigations around the landfill area to define the nature and extent of groundwater contamination surrounding Well No. 5. Based on this contamination and hazard ranking performed, the Site was placed on the National Priority List (NPL) in September 1984. In 1987, EPA entered into an agreement with a group of potentially responsible parties to complete a Remedial Investigation (RI), a Human Health Risk Assessment (HHRA), an Ecological Risk Assessment (ERA), and a Feasibility Study (FS). These reports

were completed in 1993.

In September 1994, EPA issued the 1994 ROD. This ROD required construction of a cap over the landfill and permanent relocation of residential and commercial properties. In 1998, a Consent Decree was entered between EPA and a group of potentially responsible parties to complete the work required by the 1994 ROD. This work was mostly completed by 2001.

In 1999, a group of potentially responsible parties began work on the 2006 RI/FS. The results in these investigations formed the basis of this final ROD. A more complete description of the Site can be found in Section I of the *Supplemental Remedial Investigation Report*, Kleinfelder, June 2006.

2. History of Community Involvement

Following permanent relocation of residential and commercial properties and construction of the cap in 2001, community participation and concern can be characterized as low. EPA has kept the community and other interested parties apprised of Site activities through informational meetings, fact sheets, and press releases (see section C of Final ROD Decision Summary for more detail.)

C. SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSES

This Responsiveness Summary addresses comments pertaining to the Proposed Plan that were received by EPA during the 60-day public comment period (June 22 to August 24, 2006). The Proposed Plan was mailed to approximately 650 members of the general public, elected officials, and local media. Three comments were received from members of the community. One written comment was received from CT DEP. Written comments were also received from a contractor, on behalf of a group of potentially responsible parties.

What follows are EPA's responses to these comments that pertain to the remedial action. A copy of the transcript of the public hearing and copies of all written comments received during the 60-day comment period can be found in the Administrative Record.

1. Request for Extension to the Comment Period

One written request was made to extend the comment period by 30 days.

EPA Response to Comment 1

On July 25, 2006, EPA issued a press release to announce that the comment period had been extended by 30 days. The 60-day comment period ran from June 22 thru August 24, 2006.

2. State Support for EPA's Preferred Remedy

Christine Lacas, Supervising Environmental Analyst, Bureau of Water Protection & Land Reuse, on behalf of the Connecticut Department of Environmental Protection (CT DEP),

submitted a letter in support of EPA's proposed remedy. However, CT DEP expressed concern that EPA did not identify Connecticut's Water Quality Standards and Criteria as applicable or relevant and appropriate requirements (ARARs).

EPA Response to Comment 2

EPA's risk assessments as well as follow up data collected over the past year, indicate that contamination in sediment and surface water do not present an unacceptable risk at the Site. Because a risk to human health and the environment was not identified in sediment and surface water, EPA is not taking any action in these areas of the Site under the selected remedy. As a result, CT's Water Quality Standards and Criteria would not be ARARs for the selected remedy. However, to address concerns raised by Connecticut, EPA plans to modify the long-term monitoring plan for the Site to require additional sampling to provide information in the future which EPA can use to reassess the risk posed in these areas.

3. Verbal Comments by Mr. John Weichsel, Town Manager

The town strongly supports EPA's choice of a proposed groundwater remedy at the Old Southington Landfill Site, which includes the use of institutional controls such as environmental land use restrictions, building ventilation and long-term monitoring to address potential issues with groundwater contamination.

The town agrees that the proposed remedy will adequately protect the health and safety of residents and the environment, and will meet all applicable standards and regulations including the remediation standard regulations developed by the Connecticut Department of Environmental Protection. The town further agrees that the proposed alternative (GW-2) provides a cost effective means of achieving a high level of protection.

EPA Response to Comment 3

EPA agrees with this comment and has selected the proposed alternative as the selected remedy.

4. Verbal Comments from Mr. Sev Vovino, town resident

This commenter also expressed support for the proposed alternative.

EPA Response to Comment 4

EPA agrees with this comment and has selected the proposed alternative as the selected remedy.

5. Comments on Behalf of a Group of Potentially Responsible Parties

The commenter acknowledged that the remedy described in the Proposed Plan is fully protective of human health and the environment. Notwithstanding support of the overall

remedy recommended in the Proposed Plan, the commenter raised concerns regarding specific components of EPA's cleanup plan.

5.a.) Further groundwater studies at the former Lori Corp. property

The commenter objects to additional investigations on the former Lori Corp. property being included as part of the selected remedy. This is based upon the commenter's belief that all contamination on this property is unrelated to the Site.

EPA Response to Comment 5.a.)

Based upon its review of the available groundwater investigation data, EPA does not believe that the exact source of VOC contamination on the Lori Corp. property has been definitely identified. The available data is somewhat ambiguous. While it is true that drive point sampling studies in 2005 did not detect VOCs at the landfill boundary immediately east of monitoring well cluster G314 on the Lori Corp. property, considerable VOC contamination was detected in shallow groundwater immediately south of the unnamed stream. This contamination is likely to have originated from the northern portion of the Old Southington Landfill. VOC results from several locations immediately south and one location immediately north of the unnamed stream exceeded CT DEP RSR standards for residential and/or commercial/industrial vapor intrusion.

EPA is also concerned that VOC contaminated groundwater originating from the northern portion of the landfill is migrating to the west and/or northwest to locations immediately south of the stream. It appears possible that this groundwater contamination could then flow under the stream and migrate underneath portions of the Lori Corp. property. The detection of shallow groundwater VOC contamination at sampling point M63 in 2005 also increases EPA's concern that the landfill may be a source of this contamination. This location is immediately north of the unnamed stream and may reflect groundwater VOC contamination originating at the Landfill. Given these uncertainties, EPA believes that it is appropriate to conduct additional investigations of the groundwater VOC contaminant plume (and associated vapor intrusion implications) with respect to the Lori Corp. property.

5.b.) Additional fish studies in Black Pond

The commenter objects to additional fish studies in Black Pond in light of previous investigations and concern that further fish sampling at Black Pond would place undue stress on the ecology of the Pond.

EPA Response to Comment 5.b.)

Requirements related to monitoring of surface water and sediment are part of the long-term monitoring plan required in the 1994 ROD, and as such, this is not a comment on the selected remedy.

That being said, fish in Black Pond are an important potential environmental receptor. As a result, EPA believes that it is appropriate to monitor this environmental exposure pathway in

the future. Consumption of fish from Black Pond also represents a possible indirect future human exposure pathway. As a result, EPA will require the long-term monitoring plan be revised consistent with these concerns.

It should also be noted that EPA is required by law to review the protectiveness of the remedy for the Site every five years. To conduct this evaluation, data regarding this potential exposure pathway is required. EPA believes that sampling of fish in Black Pond is necessary as part of this evaluation for this Site. EPA also believes that sampling of fish is a more direct means of monitoring environmental exposures, than attempting to assess the indirect (and potentially complex) hydrogeologic relationships between contaminated groundwater beneath the landfill and the Pond.

5.c.) Impacts to adjacent GA areas

The commenter believes that the groundwater plume emanating from the landfill has been clearly delineated and that further studies related to the plume are unnecessary and should not be part of the Final ROD.

EPA Response to Comment 5.c.)

Requirements related to monitoring of groundwater are part of the long-term monitoring plan required in the 1994 ROD and as such, this is not a comment on the selected remedy.

That being said, EPA agrees that the overall configuration of the groundwater plume emanating from the landfill has been generally characterized. However, EPA does not agree that the exact plume boundaries have been precisely defined in all areas of the plume, which stretches over half a mile from the landfill to the Quinnipiac River. In particular, EPA is concerned that the southern boundary of the plume has not been completely defined in certain areas immediately downgradient of the Landfill. EPA notes that elevated VOC contamination has been consistently detected at moderate depths at well cluster GZ14 to the southwest of the Landfill. This well lies only a few hundred feet from the Connecticut Class GA (potable water) aquifer lying to the west and southwest of this location. It is currently uncertain how far to the southwest and west beyond well cluster GZ14, the plume boundary lies. As such, EPA believes that in order to verify the overall protectiveness of the remedy for the Site, it is essential to confirm that the groundwater VOC plume does not and will not adversely impact the Class GA aquifer.

5.d.) Combustible gases north of the Landfill

The commenter expresses concern with EPA's intent to require additional studies to determine the source of methane at and north of the landfill and to determine whether mitigation measures are warranted. This is based upon the commenter's belief that the landfill gas collection system is effectively collecting any gases that are generated, and preventing migration of any such gases in any manner or direction. In addition, any detection of combustible gases north of the Landfill, near the Landfill, and in areas remote from the Landfill is the result of naturally occurring pockets of methane gases that have nothing to do

with the Landfill.

EPA Response to Comment 5.d.)

Methane evaluation and monitoring are required by the 1994 ROD, and as such, this is not a comment on the selected remedy.

That being said, EPA feels that some uncertainty remains regarding the exact source, location and migration pathways of methane detected in portions of the landfill and immediately adjacent areas. EPA acknowledges that naturally occurring organic degradation processes related to historic wetland and peat deposits may be responsible for a fraction of the methane that has been detected. However, EPA also notes that significantly elevated levels of methane have been and continue to be detected at certain gas probes along the perimeters of the landfill. It should be noted that the landfill gas collection system is passive in nature and does not actively collect landfill gas. Therefore, the exact extent to which the gas collection system is controlling methane migration along the landfill perimeter is not completely confirmed.

Given the repeatedly elevated and often high levels of methane at certain gas probe locations along the perimeter of the landfill, EPA believes that additional monitoring and further evaluation of this issue is warranted.

5.e.) Landfill Gas Vents

The commenter believes the landfill gas collection system, as currently operating, does not present a risk to human health. Accordingly, further data collection is not necessary and should not be part of the final ROD.

EPA Response to Comment 5.e.

Requirements related to monitoring of gas vents are part of the monitoring and operation and maintenance plans required in the 1994 ROD, and as such, this is not a comment on the selected remedy.

That being said, EPA agrees that landfill risk assessment evaluations based upon chlorinated VOC gas vent data collected to date, demonstrate no unacceptable risk to neighboring residences or on-site workers on the Landfill. However, EPA is required by law to perform five-year reviews at the Site to confirm the continuing protectiveness of the remedy over time. To support the risk evaluations required during the five-year review, it is necessary to collect appropriate supporting data (including gas vent data). This data must be collected within the time frame encompassed by the review. Therefore, some additional gas vent monitoring data may be required at the Site and will be included in the long term monitoring plan.

5.f. Comments on Alternative GW3

The PSDs agree that Alternative GW-3 is inappropriate and unnecessary because Alternative

GW-2 already fully meets applicable, relevant and appropriate requirements (ARARs). The further actions listed under Alternative GW-3 are redundant, only partially effective, and would result in significant disruptions to the community. The PSDs have a few comments on the assessment of Alternative GW-3 in the Amended Feasibility Study (AFS), as follows.

EPA Response to Comment 5f

EPA agrees with the commenter that the selected remedy is the best alternative for this Site in light of the nine criteria EPA is required to evaluate under CERCLA although EPA does not necessarily agree with the commenter's own evaluation of these criteria. Because EPA has selected the alternative endorsed by this commenter, no additional response is required in response to this comment.

OSL SUPERFUND SITE
RD/RA CONSENT DECREE

APPENDIX A

2006 ROD

PART 2 OF 2

Superfund Records Center
SITE: Old Southington
BREAK: 5-4
OTHER: 256971



SDMS DocID 256971

EPA NEW ENGLAND

FINAL RECORD OF DECISION SUMMARY

OLD SOUTHINGTON LANDFILL SUPERFUND SITE
SOUTHINGTON, CONNECTICUT

SEPTEMBER 2006

APPENDIX A
FIGURES

LIST OF FIGURES:

Figure 1-1. Study Area

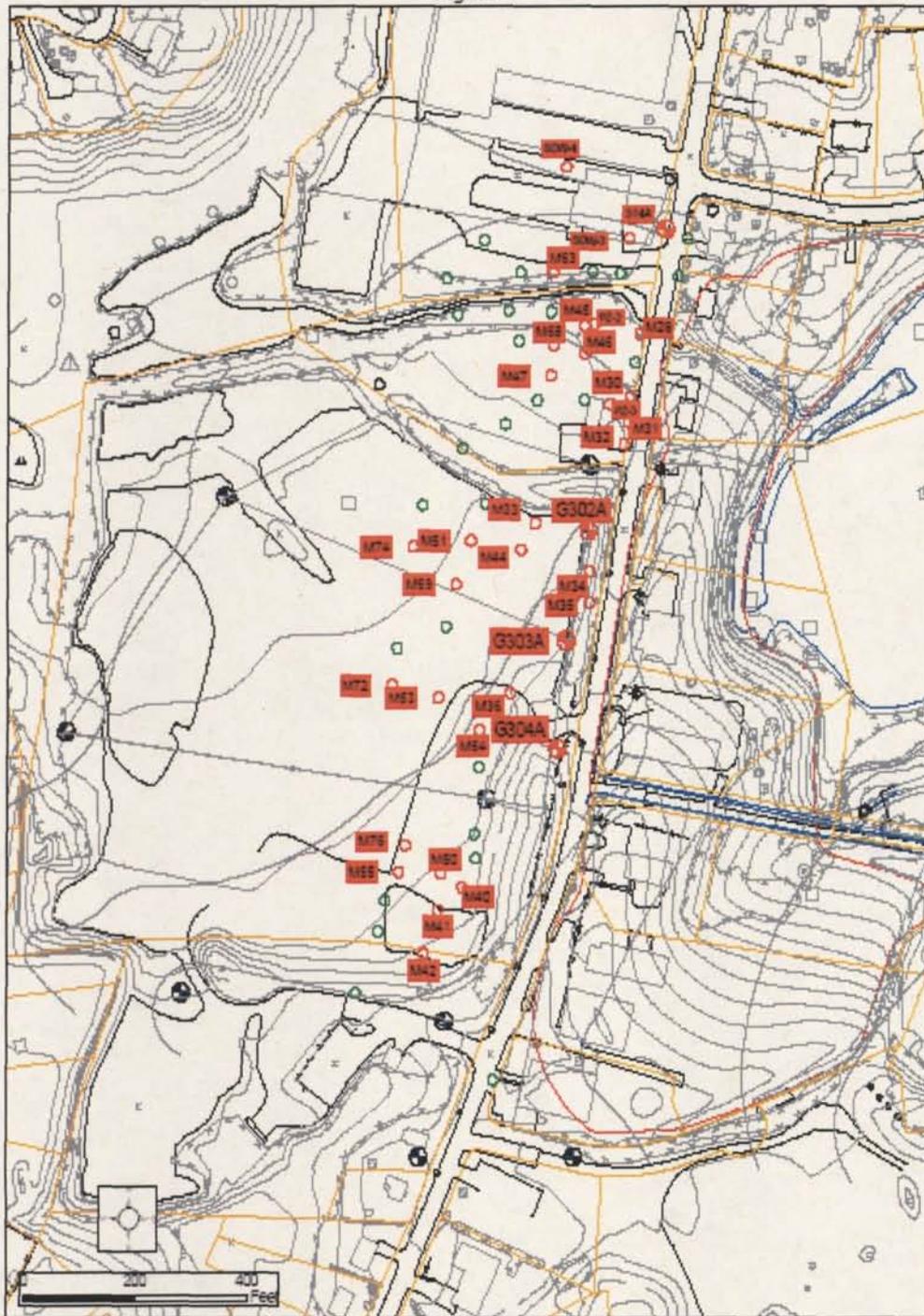
Figure 1-2. Groundwater Classification Boundaries

Figure 1. Wells Exceeding Residential Action Levels for Vapor Intrusion

Figure 2. Wells Exceeding Commercial/Industrial Action Levels for Vapor
Intrusion

**Record of Decision
Part 2: The Decision Summary**

**Old Southington Landfill Superfund Site:
Wells Exceeding Residential Action Levels for Vapor Intrusion
Figure 1**

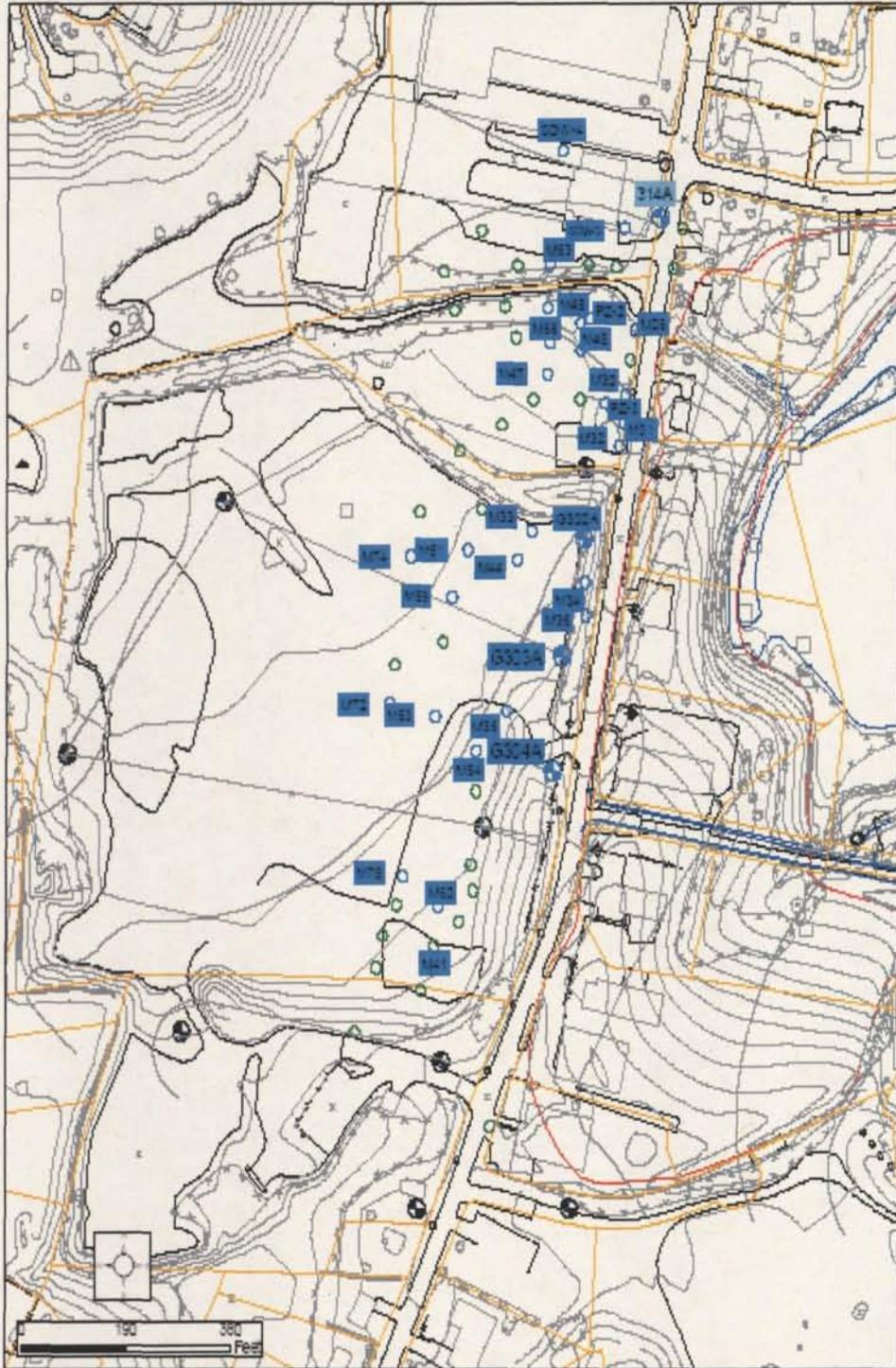


- | | | | |
|-----------------------------------|---|---|--|
| Legend: | | Current Sampling Points Oct/Nov 2006 | |
| Existing/Previous Sampling Points | | PZ-1 | Piezometer (does not exceed CT RSRs req'd. volatilization) |
| 0004A | Microwell Points - Sept. 2004 | M29-77 | Microwell Points (does not exceed CT RSRs req'd. volatilization) |
| SDN-1 | Small Diameter Monitoring Wells | | Microwell/Piezometer Points Exceeding Resid. Volat. RSRs |
| MD-25 | Microwell Points - Sept. 2004 | | Microwell Points Exceeding Commercial Volat. RSRs |
| | Existing/Previous Sampling Points Exceeding Resid. Vol. RSRs | | |
| | Existing/Previous Sampling Points Exceeding Comm. Vol. RSRs | | |

Based on Kleinfielder Figure ref number 050201.02RSR5

**Record of Decision
Part 2: The Decision Summary**

**Old Southington Landfill Superfund Site:
Wells Exceeding Commercial/Industrial Action Levels for Vapor Intrusion
Figure 2**



- | | |
|---|---|
| Legend | Current Sampling Points Oct/Nov 2005 |
| Existing/Previous Sampling Points | PC-1 Piezometer (does not exceed CT RSRs read, volatilization) |
| G304A Microwell Points - Sept. 2004 | M26-77 Microwell Points (does not exceed CT RSRs read, volatilization) |
| SDW-1 Small Diameter Monitoring Wells | Microwell/Piezometer Points Exceeding Read, Volat. RSRs |
| M19-25 Microwell Points - Sept. 2004 | Microwell Points Exceeding Commercial Volat. RSRs |
| Existing/Previous Sampling Points Exceeding Read, Vol. RSRs | |
| Existing/Previous Sampling Points Exceeding Comm. Vol. RSRs | |

Based on Kleinfeider Figure ref number D60201.03RSRS

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Table A-3. Alternative GW2: Institutional Controls/Monitoring/Engineering Controls, Estimate of Costs – High Costs.

TABLE G-1

FORMER LORI CORPORATION: SUMMARY OF SHALLOW WELL DATA EXCEEDING VOLATILIZATION CRITERIA

Results in ug/l (ppb)		SDW3									SDW4									G 314A									M63-1	M63-2							
Analyte	Residential Volatilization Criteria	Commercial / Industrial Volatilization Criteria	Sampling Date									Sampling Date									Sampling Date									Date	Date						
			12/03	3/04	8/04	9/04	12/04	3/05	6/05	9/05	12/03	3/04	8/04	9/04	12/04	3/05	6/05	9/05	12/03	3/04	6/04	9/04	12/04	3/05	6/05	9/05	11/05	11/05									
Vinyl chloride	1.6 ^a		N.S.	N.S.						5	N.S.	N.S.	3.8	2													7	3			2				2	3.3	3.8
Vinyl chloride		2 ^b	N.S.	N.S.						5	N.S.	N.S.	3.8	2													7	3			2				2	3.3	3.8

^a Proposed CT RSR volatilization criteria. 2003

^b Promulgated CT RSR volatilization criteria. 1996.

N.S. indicates sample not collected.

Blanks indicate no value reported in excess of volatilization criteria.

Source: Tables 1 and 7, Supplemental RI 2006. Comprising sampling period 12/03-11/05.

TABLE G-2

RADIO STATION: SUMMARY OF SHALLOW WELL DATA EXCEEDING VOLATILIZATION CRITERIA

Results in ug/l (ppb)			M28-2	M30-1	M30-2	M31-1	M31-2	M32-1	M32-2	M45-1	M45-2	M46-1	M46-2	M47-2	M68-1	M68-2	PZ-2	PZ-3
			Date															
Analyte	Residential Volatilization Criteria	Commercial / Industrial Volatilization Criteria	10/05	10/05	10/05	10/05	10/05	10/05	10/05	10/05	10/05	10/05	10/05	10/05	11/05	11/05	11/05	11/05
1,1-Dichloroethylene	1 ^b					1.1	2.2											
1,1- Dichloroethylene		6 ^b																
cis-1, 2 Dichloroethylene	830 ^a					950	1500											
cis-1, 2 Dichloroethylene		11,000 ^a																
Vinyl chloride	1.6 ^a		5.9	46	100	290	790	4.5	25	160	210	3.9	21	12	3	5.8	12	4.2
Vinyl chloride		2 ^b	5.9	46	100	290	790	4.5	25	160	210	3.9	21	12	3	5.8	12	4.2

^a Proposed CT RSR volatilization criteria. 2003

^b Promulgated CT RSR volatilization criteria. 1996.

Blanks indicate no value reported in excess of volatilization criteria.

Source: Tables 1 and 7, Supplemental RI 2006. Comprising sampling period 12/03-11/05.

TABLE G-3
CHUCK AND EDDY'S: SUMMARY OF SHALLOW WELL DATA EXCEEDING VOLATILIZATION CRITERIA

Results in ug/l (ppb)			M35-1	M35-2	M36-1	M36-2	M40-2	M41-1	M41-2	M42-2	M44-1	M44-2	M51-2	M53-2	M54-1	M54-2	M55-1	M59-1	M59-2	M60-1	M60-2	M72-1	M74-2	M76-1
Analyte	Residential Volatilization Criteria	Commercial / Industrial Volatilization Criteria	Date																					
Benzene	130 ^a																250							150
Benzene		310 ^a																						
Carbon Tetrachloride	5.3 ^a																							
Carbon Tetrachloride		14 ^a																						
1,1-Dichloroethylene	1 ^b					15		1.7							3.2									
1,1- Dichloroethylene		6 ^b				15																		
1,2- Dichloroethane	6.5 ^a				6.9	19																		
1,2- Dichloroethane		68 ^a																						
cis-1,2-Dichloroethylene	830 ^a					1100																		
cis-1,2-Dichloroethylene		11,000 ^a																						
Ethylbenzene	2,700 ^a																							
Ethylbenzene		36,000 ^a																						
Tetrachloroethylene (PCE)	340 ^a					490																		
Tetrachloroethylene (PCE)		810 ^a																						
Toluene	7,100 ^a																							
Toluene		41,000 ^a																						
Trichloroethylene (TCE)	27 ^a						64	42	210	42										31	68			
Trichloroethylene (TCE)		67 ^a						210													68			
Vinyl chloride	1.6 ^a		2.1	1.8	650	1000					2.1	18	3	4.5	2.4	6.7		4.1	12			2.1	5.7	5.7
Vinyl chloride		2 ^b	2.1		650	1000					2.1	18	3	4.5	2.4	6.7		4.1	12			2.1	5.7	5.7
Xylenes	8,700 ^a																							
Xylenes		48,000 ^a																						

TABLE G-3

CHUCK AND EDDY'S: SUMMARY OF SHALLOW WELL DATA EXCEEDING VOLATILIZATION CRITERIA

Footnotes

^aProposed CT RSR volatilization criteria. 2003

^bPromulgated CT RSR volatilization criteria. 1996.

Blanks indicate no value reported in excess of volatilization criteria.

Source: Tables 1 and 7, Supplemental RI, 2006. Comprises Sampling Period 12/03 - 11/05.

Table L-1
Groundwater Action Levels for Vapor Intrusion

Compound	Residential (ug/L)	Industrial/ Commercial (ug/L)	Basis
Acetone	50000	50000	CT RSR (1)
Benzene	130	310	p CT RSR (2)
Bromoform	75	2300	p CT RSR
2-Butanone (MEK)	50000	50000	CT RSR
Carbon tetrachloride	5.3	14	p CT RSR
Chlorobenzene	1800	6150	CT RSR
Chloroform	26	62	p CT RSR
1,2-Dichlorobenzene	5100	50000	p CT RSR
1,3-Dichlorobenzene	4300	50000	p CT RSR
1,4-Dichlorobenzene	1400	3400	p CT RSR
1,1-Dichloroethane	3000	41000	p CT RSR
1,2-Dichloroethane	6.5	68	p CT RSR
1,1-Dichloroethylene	1	6	CT RSR
cis-1,2-Dichloroethylene	830	11000	p CT RSR
trans-1,2-Dichloroethylene	1000	13000	p CT RSR
1,2-Dichloropropane	7.4	58	p CT RSR
1,3-dichloropropane	6	25	CT RSR
Ethylbenzene	2700	36000	p CT RSR
Ethylene dibromide (EDB)	0.3	11	p CT RSR
Methyl-tert-butyl-ether	21000	50000	p CT RSR
Methyl isobutyl ketone	13000	50000	p CT RSR
Methylene chloride	160	2200	p CT RSR
Styrene	580	2065	CT RSR
1,1,1,2-Tetrachloroethane	2 (2)	50 (1)	p RSR (2)/ RSR (1)
1,1,2,2-Tetrachloroethane	1.8	54	p CT RSR
Tetrachloroethylene	340	810	p CT RSR
Toluene	7100	41000	p CT RSR
1,1,1-Trichloroethane	6500	16000	p CT RSR
1,1,2-Trichloroethane	220	2900	p CT RSR
Trichloroethylene	27	67	p CT RSR
Vinyl chloride	1.6 (2)	2 (1)	p RSR (2)/ RSR (1)
Xylenes	8700	48000	p CT RSR
Trichlorofluoromethane	1300	4200	p CT RSR
Chloroethane	12000	29000	p CT RSR
Chloromethane	390	5500	p CT RSR
Dichlorodifluoromethane	93	1200	p CT RSR
Isopropyl benzene (Cumene)	2800	6800	p CT RSR
Bromodichloromethane	2.3	73	p CT RSR
N-butylbenzene	1500	21000	p CT RSR
Sec-butylbenzene	1500	20000	p CT RSR
1,2,4-trimethylbenzene	360	4800	p CT RSR
1,3,5-trimethylbenzene	280	3900	p CT RSR
4-isopropyltoluene (4-cymene)	1600	22000	p CT RSR

(1) Connecticut Remediation Standard Regulations Volatilization Criteria for Groundwater. 1996.

(2) Proposed Revisions to Connecticut Remediation Standard Regulations Volatilization Criteria for Groundwater. 2003.

Table 4-1
Summary of Detailed Analysis of Remedial Alternatives

Assessment Factor	GW1: No Action	GW2: Institutional Controls/Groundwater Monitoring/Engineering Controls	GW3: Permeable Reactive Barrier Installed Downgradient of Site
Major Components	No remedial actions would be taken. Five-year site reviews.	Institutional controls, including CT ELURs to address exceedances of residential and commercial/industrial volatilization (vapor intrusion) criteria. Monitoring of VOCs in groundwater, consistent with the requirements of the CT RSRs volatilization criteria. Building ventilation, acceptable to CT DEP, to either prevent migration of VOC vapors into, or control the level of VOCs in vapor beneath or in, any existing buildings located in areas where VOC concentrations in groundwater exceed the CT RSRs vapor intrusion criteria. Installation of vapor barriers to prevent migration of VOC vapors into new buildings. Five-year site reviews.	Installation of a permeable reactive barrier (PRB) to treat VOC contaminated groundwater to meet CT RSRs for vapor intrusion. Institutional controls, including CT ELURs to address exceedances of vapor intrusion criteria. Monitoring of VOCs in groundwater, consistent with the requirements of the CT RSRs vapor intrusion criteria and federal requirements. Building ventilation, acceptable to CT DEP, to either prevent migration of VOC vapors into, or control the level of VOCs in vapor beneath or in, any existing buildings located in areas where VOC concentrations in groundwater exceed the CT RSRs vapor intrusion criteria. Installation of vapor barriers to prevent migration of VOC vapors into new buildings. Five-year site reviews.
Overall Protection of Human Health and the Environment	No protection against VOCs volatilizing from shallow groundwater into existing or future buildings. No adverse impacts to wetlands or surface waters. Study Area groundwater CT classification GB and groundwater use for drinking water is precluded. There is no exposure pathway for ingestion of groundwater used as drinking water.	ELURs address exceedances of vapor intrusion criteria, thereby preventing exposure to VOCs in vapors. Existing buildings would be protected by the use of building ventilation, consistent with CT RSRs. New buildings would be protected by vapor barriers. No adverse impacts to wetlands or surface waters. Study Area groundwater CT classification GB and groundwater use for drinking water is precluded. There is no exposure pathway for ingestion of groundwater used as drinking water.	Overall reduction in downgradient groundwater VOCs, due to treatment by PRB, to meet CT RSRs for vapor intrusion. ELURs also address exceedances of vapor intrusion criteria, thereby preventing exposure to VOCs in vapors. Existing buildings would be protected by the use of building ventilation, consistent with CT RSRs. New buildings would be protected by vapor barriers. No adverse impacts to wetlands or surface waters. Study Area groundwater CT classification GB and groundwater use for drinking water is precluded. There is no exposure pathway for ingestion of groundwater used as drinking water.
Compliance with AARs	Would not meet Chemical-Specific AARs for volatilization of VOCs from groundwater. Would meet Chemical-Specific AARs for water quality. Would meet Action-Specific AARs. No Location-Specific AARs identified.	Would meet Chemical-Specific AARs for volatilization of VOCs from groundwater, with building ventilation for existing buildings, and vapor barriers for new buildings. Would meet Chemical-Specific AARs for water quality. Would meet Action-Specific AARs. Would meet Location-Specific AARs.	Would meet Chemical-Specific AARs for volatilization of VOCs from groundwater, with building ventilation for existing buildings. Would meet Chemical-Specific AARs for water quality. Would meet Action-Specific AARs. Would meet Location-Specific AARs.
Long-Term Effectiveness and Permanence	No protection against VOCs volatilizing from groundwater into existing or future buildings. No adverse impacts to wetlands or surface waters. Study Area groundwater CT classification GB and groundwater use for drinking water is precluded. There is no exposure pathway for ingestion of groundwater used as drinking water.	ELURs address exceedances of vapor intrusion criteria, thereby preventing exposure to VOC in vapors. Existing buildings would be protected by the use of building ventilation. New buildings would be protected by vapor barriers. No adverse impacts to wetlands or surface waters. Study Area groundwater CT classification GB and groundwater use for drinking water is precluded. There is no exposure pathway for ingestion of groundwater used as drinking water.	Residual risk in the long term is low as contaminated groundwater is permanently addressed through the use of PRBs. In the short term, residual risk is addressed through the use of institutional controls and engineering controls as described for Alternative GW2. These controls are adequate and reliable to the extent that they are monitored, maintained, and/or enforced.
Reduction of Toxicity, Mobility, or Volume	No reduction in TMV. No treatment residuals.	No reduction in TMV. Minor quantities of treatment residuals might be generated during building ventilation.	Overall reduction in toxicity, mobility and volume in downgradient groundwater VOCs, due to treatment by PRB to meet CT RSRs for vapor intrusion. Minor quantities of treatment residuals might be generated during building ventilation.
Short-Term Effectiveness	Would not impact the community or workers. The remedial response objectives would not be met.	Would not impact the community or workers. The remedial response objectives would be met within 6-12 months.	Impact to surrounding community and local environment during PRB installation. Minimal impact to workers. The remedial response objectives would be met within 6-12 months. No impact to environments.
Implementability	Could be easily implemented and would not obstruct any additional remedial actions, if necessary.	Institutional controls would be readily implemented and readily enforceable. Building ventilation and vapor barriers would be readily implemented using standard, reliable techniques. Periodic monitoring of groundwater would be easily implemented. Would not obstruct any additional remedial actions, if necessary.	Technically and administratively implementable with projected PRB installation of moderate difficulty. The presence of utility lines and an elevated soil berm would generate certain challenges during design and construction. Building ventilation and vapor barriers would be readily implemented using standard, reliable techniques. Periodic monitoring of groundwater would be easily implemented. Would not obstruct any additional remedial actions, if necessary.
Cost (present worth)	\$5,000 or more for each Five-Year Review.	\$236,219 TO \$695,240	\$10.7M TO \$12.5M

TABLE A-2
ALTERNATIVE GW2: INSTITUTIONAL CONTROLS/MONITORING/ENGINEERING CONTROLS
ESTIMATE OF COSTS - MEDIUM COST
AMENDED FEASIBILITY STUDY
OLD SOUTHRINGTON LANDFILL

CAPITAL COST

Item No.	Component Description	Quantity	Units	Unit Cost \$/Unit	Item Cost	Ref.
1	Institutional controls/URS	1	yr	\$50,000	\$50,000	P
2	Installation of SDW compliance walls	10	lin	\$18,000	\$180,000	P
Ventilation System Components:						
3	ERTOS Return Blower (2HP, single-phase)	1	ea	\$1,450	\$1,450	V
4	Mechanical Separator (65260P3)	1	ea	\$790	\$790	V
5	Associated System Instrumentation	1	ea	\$500	\$500	V
6	Modifications Material and Equipment Supplies	1	ea	\$250	\$250	V
7	Ventilation System Installation Service	1	ea	\$4,000	\$4,000	V
8	Shed Decking	1	ea	\$5,000	\$5,000	V
9	Control Panel	1	ea	\$3,500	\$3,500	V
10	Vapor Phase Carbon (3-100 lb vessels)	1	ea	\$2,000	\$2,000	V
11	Electrical Service Installation and Start-up	1	ea	\$10,000	\$10,000	V
12	System Start-up	1	ea	\$5,000	\$5,000	P
Sub-Sub Ventilation Components						
13	1/2" Crushed Stone	1,200	ft ³	\$2.15	\$2,580	V
14	4' x 40' 0.010" slot PVC Screen	1,200	ft ²	\$0.25	\$300	V
15	4" x 40' PVC Chalk	1,200	ft ²	\$0.15	\$180	V
16	Installation including Geotextile Fabric	1,200	ft ²	\$0.95	\$1,140	V
17	Dimensional Drilling	80	LF	\$120.00	\$9,600	V
SUBTOTAL CONSTRUCTION:					\$134,180	
CONSTRUCTION CONTINGENCIES AND ADMIN.:					25%	\$33,595
HEALTH AND SAFETY CONTROLS 6%:					10%	\$11,418
TOTAL CONSTRUCTION:					\$154,293	
ENGR. DESIGN AND CONSTR. SUPERV.:					25%	\$38,563
TOTAL CAPITAL COST:					\$192,856	

Capital Costs Notes:

- 3. - 17) Assumes ventilation system on 1 existing building
- 12) Assumes 3-Week days

OPERATION AND MAINTENANCE COST

Item No.	Component Description	Quantity	Units	Unit Cost \$/Unit	Item Cost	Ref.
1	Quarterly Compliance Monitoring - 1st year	4	Yr	\$7,000	\$28,170	V,P
2	Post-Compliance Monitoring (quarterly)	4	Yr 2,3,4,5	\$7,000	\$28,640	P
3	Five-year site review	6	Yrs	\$5,000	\$10,790	P
Existing Building Ventilation System						
4	Utilities	1	YE	\$3,000	\$37,230	P,V
5	Ventilation System O&M Labor (2 hrs per month)	24	yr	\$45	\$1,080	P
6	Ventilation System Equipment Repair	1	yr	\$500	\$6,300	P
7	Ventilation System System Enhancement	1	Yr 15	\$17,460	\$6,330	P
SUBTOTAL OPERATION AND MAINTENANCE COST:					\$180,740	
O&M CONTINGENCIES (as a percent of the total present value)					15%	\$27,111
HEALTH AND SAFETY CONTROL					10%	\$18,074
TOTAL O&M COST:					\$225,925	
TOTAL ALT COST:					\$420,744	

Other Notes:

- 4. - 7.) Assumes ventilation systems on 1 existing building

General Notes:

- 1.) Contingency percentages for capital costs were estimated from the Society of Cost Engineers model and site specific information
- 2.) O&M item costs are Present Worth values based on a 7% interest rate
- 3.) The total project cost is rounded off to the nearest \$100
- 4.) M= March 1996, V= Vendor quote, P= previous project experience, H= Estimated value

TABLE A-1
ALTERNATIVE GW2: INSTITUTIONAL CONTROLS/MONITORING/ENGINEERING CONTROLS
ESTIMATE OF COSTS - LOW COST
AMENDED FEASIBILITY STUDY
OLD SOUTHINGTON LANDFILL

CAPITAL COST

Item No.	Component Description	Quantity	Units	Unit Cost \$/unit	Item Cost	Ref.
1	Institutional controls/BLUES	1	ls	\$25,000	\$25,000	P
2	Installation of EDPW compliance with	10	ls	\$18,000	\$18,000	P
Exhaustion System Components:						
3	BN404 Radon Blower (1HP, single phase)	1	ea	\$1,150	\$1,150	V
4	Miscellaneous Supplies	1	ea	\$250	\$250	V
5	Ventilation System Installation & Ducts	1	ea	\$1,500	\$1,500	V
SUBTOTAL CONSTRUCTION:					\$45,900	
CONSTRUCTION CONTINGENCIES AND ADMIN.:					25%	\$11,475
HEALTH AND SAFETY CONTROLS 9%:					10%	\$4,590
TOTAL CONSTRUCTION:					\$61,965	
ENGIN. DESIGN AND CONST. SUPERV.:					25%	\$15,401
TOTAL CAPITAL COST:					\$77,456	

Capital Costs Notes:

1. - 5.) Assume ventilation system on 1 existing building.
- 11.) Assume 3-field days

OPERATION AND MAINTENANCE COST

Item No.	Component Description	Quantity	Units	Unit Cost \$/unit	Item Cost	Ref.
1	Quarterly Compliance Monitoring - 1st year	4	Yr1	\$7,000	\$26,170	V,P
2	Raw-Compliance Monitoring (semi-annual)	2	Yr 2,3	\$7,000	\$23,660	P
3	Five-year site review	6	Spr	\$5,000	\$10,790	P
Existing Building Ventilation System						
4	Utilities	1	yr	\$2,500	\$36,020	P,V
5	Ventilation System O&M Labor (0.5 hr per month)	6	yr	\$45	\$3,350	P
6	Ventilation System Equipment Repair	1	yr	\$100	\$1,240	P
7	Ventilation System System Replacement	1	yr1,5	\$1,600	\$690	P
8	Semi-annual Indoor Air Monitoring	2	yr 1,2,3,4,5	\$2,600	\$17,090	P
SUBTOTAL OPERATION AND MAINTENANCE COST:					\$119,010	
O&M CONTINGENCIES (as a percent of the total present value)					15%	\$17,851
HEALTH AND SAFETY CONTROL					10%	\$11,901
TOTAL O&M COST:					\$148,763	
TOTAL ALT COST:					\$226,319	

O&M Notes:

4. - 8.) Assume ventilation system on 1 existing building

General Notes:

- 1.) Contingency percentages for capital costs were estimated from the Society of Cost Engineers model and site specific information.
- 2.) O&M item costs are Present Worth values based on a 7% interest rate.
- 3.) The total project cost is rounded off to the nearest \$100.
- 4.) M= Means 1996, V= Vendor quote, P= previous project experience, E= Estimated value

**TABLE A-3
ALTERNATIVE GW2: INSTITUTIONAL CONTROLS/MONITORING/ENGINEERING CONTROLS
ESTIMATE OF COSTS - HIGH COST
AMENDED FEASIBILITY STUDY
OLD SOUTHINGTON LANDFILL**

CAPITAL COST

Item No.	Component Description	Quantity	Units	Unit Cost \$/Unit	Item Cost	Ref.
1	Institutional controls/BLM2	1	ln	\$15,000	\$15,000	P
2	Installation of RDM compliance with Ventilation System Components	10	ln	\$18,000	\$18,000	P
3	EMERSON Motor Blower (2HP, single-phase)	2	ea	\$1,450	\$2,900	V
4	Motorine Separator (MSE20PS)	2	ea	\$750	\$1,500	V
5	Associated System Installation	2	ea	\$500	\$1,000	V
6	Miscellaneous Material and Equipment Supplies	2	ea	\$250	\$500	V
7	Ventilation System Installation Services	2	ea	\$4,000	\$8,000	V
8	Shed Building	2	ea	\$5,000	\$10,000	V
9	Control Panel	2	ea	\$3,500	\$7,000	V
10	Vapor Phase Carbon (2-100 lb vessels)	2	ea	\$2,000	\$4,000	V
11	Electrical Service Installation and Start-up	2	ea	\$10,000	\$20,000	V
12	System Start-up	2	ea	\$5,000	\$10,000	P
Sub-Sub Ventilation Components						
13	1/2" Crushed Stone	5,300	ft ³	\$2.15	\$11,190	V
14	4' Sch. 40, 0.010" slot PVC Screen	5,300	ft ²	\$0.25	\$1,390	V
15	4' Sch. 40 PVC Casing	5,300	ft ²	\$0.15	\$780	V
16	Installation including Geotextile Fabric	5,300	ft ²	\$0.95	\$4,940	V
17	Directional Drilling	240	LF	\$128.00	\$28,800	V
SUBTOTAL CONSTRUCTION:					\$304,920	
CONSTRUCTION CONTINGENCIES AND ADMIN.:					25%	\$76,230
HEALTH AND SAFETY CONTROLS 10%:					10%	\$30,492
TOTAL CONSTRUCTION:					\$411,642	
ENGR. DESIGN AND CONSTR. SUPERV.:					25%	\$102,161
TOTAL CAPITAL COST:					\$513,803	

Capital Costs Notes

- 3 - 17.) Assumes ventilation system on 2 existing buildings
- 12.) Assumes 3-field days

OPERATION AND MAINTENANCE COST

Item No.	Component Description	Quantity	Units	Unit Cost \$/Unit	Item Cost	Ref.
1	Quarterly Compliance Monitoring - 1st year	4	Yr	\$7,000	\$28,000	V,P
2	Post-Compliance Monitoring (quarters)	4	Yr 2,3,4,5,6	\$7,000	\$28,000	P
3	Five-year site service	6	Serv	\$3,000	\$18,000	P
4	Installation of 5 RDM	5	Yr	\$11,000	\$55,000	P
Existing Building Ventilation System						
5	Utilities	2	yr	\$3,000	\$7,450	P,V
6	Ventilation System O&M Labor (2 hrs per month)	48	yr	\$45	\$2,160	P
7	Ventilation System Equipment Repair	2	yr	\$500	\$1,000	P
8	Ventilation System System Replacement	2	yr15	\$17,400	\$34,800	P
SUBTOTAL OPERATION AND MAINTENANCE COST:					\$279,550	
O&M CONTINGENCIES (as a percent of the total present value)					15%	\$41,933
HEALTH AND SAFETY CONTROL					10%	\$27,955
TOTAL O&M COST:					\$349,438	
TOTAL ALT COST:					\$863,240	

O&M Notes

- 5 - 8.) Assumes ventilation system on 2 existing buildings

General Notes:

- 1.) Contingency percentages for capital costs were estimated from the Society of Cost Engineers model and site specific information
- 2.) O&M item costs are Present Worth values based on a 7% interest rate
- 3.) The total project cost is rounded off to the nearest \$100.
- 4.) M= Means 1996, V= Vendor quote, P= previous project experience, B= Estimated value

APPENDIX C
GLOSSARY OF ACRONYMS

Acronyms:

1,1-DCE	1,1-Dichloroethene
1,2-DCE	1,2-Dichloroethene
1,1,1-TCA	1,1,1-trichloroethane
AFS	Amended Feasibility Study
AOC	Administrative Order by Consent
ARAR	Applicable or Relevant and Appropriate Requirements
bgs	Below ground surface
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
cis-1,2-DCE	Cis-1,2-Dichloroethene
CCl ₄	Carbon Tetrachloride
COC	Chemicals of Concern
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
CT DEP	Connecticut Department of Environmental Protection
CT RSR	Connecticut Remediation Standard Regulations
DEC	Direct Exposure Criteria
1,1-DCE	1,1-Dichloroethene
1,2-DCE	1,2-Dichloroethene
ELUR	Environmental Land Use Restriction
EPA	United States Environmental Protection Agency
ERA	Ecological Risk Assessment
ESD	Estimate of Significant Differences
FS	Feasibility Study
GW-1	Groundwater Alternative – 1
GW-2	Groundwater Alternative – 2
GW-3	Groundwater Alternative -3
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
IC	Institutional Control
LTMP	Long Term Monitoring Plan
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
O&M	Operation and Maintenance
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PCE	Tetrachloroethene (or tetrachloroethylene or perchloroethylene)
PMC	Pollutant Mobility Criteria
ppb	Parts per billion
PRB	Permeable Reactive Barrier
PRP	Potentially Responsible Party
PSDs	Performing Settling Defendants
RAO	Remedial Action Objective

MCL	Maximum Contaminant Levels
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priority List for Superfund Sites
O&M	Operation and Maintenance
OSRR	Office of Site Remediation and Restoration
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986
SGI	Supplemental Groundwater Investigation
SSDA	Semi Solid Disposal Area
SVOC	Semivolatile Organic Compound
TCA	1,1,1,-trichloroethane
TCE	trichloroethene
VC	vinyl chloride
VOC	Volatile Organic Compound

APPENDIX D
ARARs TABLES

Table 1-1
 Chemical Specific ARARs: Criteria, Advisories and Guidance
 Old Southington Landfill Superfund Site
 Southington, Connecticut

Medium	Requirements	Status	Synopsis of Requirement	Applicable Alternatives
Groundwater/ Vapor Intrusion	Federal EPA Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway From Groundwater and Soils	To Be Considered	Non-enforceable guidelines establishing pollutant concentrations which are considered to be adequate to protect indoor air quality.	GW1 GW2 GW3
Groundwater/ Vapor Intrusion	Connecticut Draft Characterization Guidance Document, dated June 12, 2000. Connecticut Draft 3/18/03 Proposed Revisions to Connecticut's Remediation Standard Regulations Volatilization Criteria, dated March 2003.	To Be Considered	Proposed standards for volatilization criteria	GW1 GW2 GW3
Groundwater/ Vapor Intrusion	Connecticut Remediation Standard Regulations (RCSA 22a-133k -3 (c))	Applicable	Establishes remediation standards for contaminated groundwater including standards for volatilization. Volatilization criteria address levels in groundwater that present a possible unacceptable risk where residential/commercial/industrial buildings are located above groundwater that exceeds these levels. Alternative GW1 does not meet this requirement. Alternatives GW2 and GW3 meet this requirement.	GW1 GW2 GW3

Table 1-1 (Continued)
Action Specific ARARs: Criteria, Advisories and Guidance
Old Southington Landfill Superfund Site
Southington, Connecticut

Medium	Requirements	Status	Synopsis of Requirement	Applicable Alternatives
Groundwater/ Vapor Intusion	CT Hazardous Waste Management: Generator & Handler Requirements – General Standards, Listing & Identification (RCSA 22a-449(c) 100-101)	Applicable	Establish standards for listing and identification of hazardous waste. The standards of 40 CFR 260-261 are incorporated by reference. Any waste material generated under this option that is determined to be hazardous shall be treated, stored and disposed of in accordance with these requirements.	GW2 GW3
Groundwater/ Vapor Intrusion	Environmental Land Use Restrictions (RCSA 22a-133q-1)	Applicable	Establishes requirements for placement of environmental land use restrictions.	GW2 GW3
Groundwater/ Vapor Intrusion	Connecticut Remediation Standard Regulations (RCSA 22a-133k -3 (c))	Applicable	Establishes remediation standards for contaminated groundwater including standards for volatilization. These regulations include options for addressing vapor intrusion. Alternative GW1 does not meet this requirement. Alternatives GW2 and GW3 meet this requirement.	GW1 GW2 GW3
Groundwater	Groundwater Monitoring 40 CFR 264 Subpart F	Relevant and Applicable	Standards for groundwater monitoring	GW2 GW3
Air	Connecticut Air Pollution Regulations – Fugitive Dust - RSCA 22a-174-18(b)	Applicable	Requires that reasonable precautions be taken to prevent particulate matter from become airborne during construction and material handling operations.	GW3
Groundwater	Connecticut Well Drilling Industry Regulations - RSCA 25-128-33 through 64	Applicable	Apply mainly to any new water supply or withdrawal wells. The rules specify that non-water supply wells must be constructed so that they are not a source or cause of groundwater contamination.	GW3
N/A	Federal – RCRA standards for hazardous waste generators – 40 CFR 262	Applicable	Generators of hazardous waste must obtain an EPA identification number, characterize waste streams, label and date containers, use a manifest and use an approved transporter.	GW2 GW3
N/A	Connecticut Guidelines for Soil Erosion and Sediment Control (May 2002)	To Be Considered	Provides technical and administrative guidance for the development, adoption and implementation of an erosion and sediment control program. May 2002 document also identified as DEP Bulletin 34.	GW3

APPENDIX E
CT DEP LETTER OF CONCURRENCE



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



August 24, 2006

Almerinda Silva
Remedial Project Manager
US EPA
1 Congress Street
Suite 1100 (HBT)
Boston Ma 02114-2023

Subject: Old Southington Landfill Proposed Plan

Dear Ms. Silva,

Staff of the Connecticut Department of Environmental Protection have reviewed the Proposed Plan dated June 2006 for the Old Southington Landfill Superfund Site. Technical comments have been provided by DEP staff on a variety of documents and topics throughout the long history of this site in the Superfund program. Although there may be some technical issues in which we are not in complete agreement, DEP concurs with EPA's approach to addressing the groundwater plume emanating from the Old Southington Landfill and the risks the plume poses to human health and the environment.

One specific concern DEP has with the Proposed Plan and the supporting documents is EPA's failure to identify and acknowledge Connecticut's Water Quality Standards and Criteria as ARARs, as has been done for all other NPL sites in CT for which remedies requiring action have been selected.

Sincerely,

A handwritten signature in cursive script that reads "Christine Lacas".

Christine Lacas
Supervising Environmental Analyst
Remediation Division
Bureau of Water Protection & Land Reuse
CT DEP

APPENDIX F
REFERENCES

References:

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APPENDIX G
ADMINISTRATIVE RECORD INDEX

Old Southington Landfill
NPL Site Administrative Record
Final Record of Decision (ROD)

Index

ROD Signed
September 29, 2006

Administrative Record Released
October 16, 2006

Prepared by
EPA New England
Office of Site Remediation & Restoration

Introduction to the Collection

This is the Administrative Record for the Old Southington Landfill Superfund site, Southington, CT, Final Record of Decision (ROD) was released on October 16, 2006. The file contains site-specific documents and a list of guidance documents used by EPA staff in selecting a response action at the site.

This file updates and replaces the Administrative Record for the Final Record of Decision Proposed Plan, June 2006.

This file includes, by reference, the administrative record file for the Old Southington Landfill Interim Record of Decision (ROD), September, 1994.

The administrative record file is available for review at:

Southington Library & Museum
225 Main Street
Southington, CT 06489
860-628-0947 (phone)
860-628-0488 (fax)
<http://www.southingtonlibrary.org/>

EPA New England Superfund Records & Information Center
1 Congress Street, Suite 1100 (HSC)
Boston, MA 02114 (by appointment)
617-918-1440 (phone)
617-918-0440 (fax)
<http://www.epa.gov/region01/superfund/resource/records.htm>

Questions about this administrative record file should be directed to the EPA New England site manager.

An administrative record file is required by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA).

AR Collection: 3873
ROD ADMINISTRATIVE RECORD
AR Collection QA Report
For External Use

10/16/2006

Page 1 of 9

03: REMEDIAL INVESTIGATION (RI)

252933 HYDROGEOLOGIC REVIEW OF REPORT ENTITLED "SUPPLEMENTAL REMEDIAL INVESTIGATION (RI) REPORT"

Author: MARY JANE DAPKUS CT DEPT OF ENVIRONMENTAL PROTECTION

Doc Date: 04/15/2005 # of Pages: 6

Addressee:

File Break: 03.06

Doc Type: MEMO

258004 HEALTH CONSULTATION, PUBLIC HEALTH EVALUATION OF GAS VENT SAMPLING DATA REPORTS

Author: US DEPT OF HEALTH AND HUMAN SERVICES

Doc Date: 10/04/2005 # of Pages: 12

Addressee:

File Break: 03.09

Doc Type: REPORT

252931 SUPPLEMENTAL REMEDIAL INVESTIGATION (RI) REPORT, REVISED (WITH TRANSMITTAL DATED 05/17/2006)

Author: KLEINFELDER, INC.

Doc Date: 05/05/2006 # of Pages: 283

Addressee: US EPA REGION 1

File Break: 03.06

Doc Type: REPORT

252929 RISK ASSESSMENT FOR GAS VENT VOC DATA, REVISION 1.1

Author: W GARY WILSON KLEINFELDER, INC.

Doc Date: 06/14/2006 # of Pages: 20

Addressee: ALMERINDA SILVA US EPA REGION 1

File Break: 03.10

Doc Type: REPORT

AR Collection: 3873
ROD ADMINISTRATIVE RECORD
AR Collection QA Report
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10/16/2006

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03: REMEDIAL INVESTIGATION (RI)

252930 APPROVAL OF RISK ASSESSMENT FOR GAS VENT VOC DATA, REVISION 1.1

Author: ALMERINDA SILVA US EPA REGION 1

Doc Date: 06/19/2006 **# of Pages:** 1

Addressee: DAVID E MONTANY PRATT & WHITNEY

File Break: 03.10

Doc Type: LETTER

252934 APPROVAL OF THE SUPPLEMENTAL REMEDIAL INVESTIGATION (RI) REPORT

Author: ALMERINDA SILVA US EPA REGION 1

Doc Date: 06/19/2006 **# of Pages:** 8

Addressee: DAVID E MONTANY PRATT & WHITNEY

File Break: 03.06

Doc Type: LETTER

04: FEASIBILITY STUDY (FS)

252921 COMBUSTIBLE GAS COMPREHENSIVE SUMMARY REPORT

Author: W GARY WILSON MACTEC ENGINEERING AND CONSULTING INC

Doc Date: 05/06/2006 **# of Pages:** 45

Addressee: ALMERINDA SILVA US EPA REGION 1

File Break: 04.02

Doc Type: REPORT

AR Collection: 3873
ROD ADMINISTRATIVE RECORD
AR Collection QA Report
For External Use

10/16/2006

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04: FEASIBILITY STUDY (FS)

252920 AMENDED FEASIBILITY STUDY (FS)

Author: US EPA REGION 1

Addressee:

Doc Type: REPORT

Doc Date: 06/01/2006 # of Pages: 105

File Break: 04.06

253202 PROPOSED PLAN FOR OLD SOUTHINGTON LANDFILL SUPERFUND SITE

Author: US EPA REGION 1

Addressee:

Doc Type: FACT SHEET

Doc Date: 06/07/2006 # of Pages: 16

File Break: 04.09

258006 REQUEST FOR PUBLIC COMMENT EXTENSION

Author: TERRY DELAHUNTY SOUTHINGTON(CT)RESIDENT

Addressee: ALMERINDA SILVA US EPA REGION 1

Doc Type: MEMO

Doc Date: 07/21/2006 # of Pages: 1

File Break: 04.09

258007 COMMENTS ON PROPOSED PLAN

Author: CHRIS LACAS CT DEPT OF ENVIRONMENTAL PROTECTION

Addressee: ALMERINDA SILVA US EPA REGION 1

Doc Type: LETTER

Doc Date: 08/24/2006 # of Pages: 1

File Break: 04.09

05: RECORD OF DECISION (ROD)

256971 FINAL RECORD OF DECISION (ROD) SUMMARY

Author: RICHARD CAVAGNERO US EPA REGION 1

Doc Date: 09/29/2006 **# of Pages:** 94

Addressee:

File Break: 05.04

Doc Type: DECISION DOCUMENT

Doc Type: RECORD OF DECISION

256974 CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION (CT DEP) LETTER OF CONCURRENCE WITH PROPOSED REMEDY FOR OLD SOUTHINGTON

Author: GINA MCCARTHY CT DEPT OF ENVIRONMENTAL PROTECTION

Doc Date: 09/29/2006 **# of Pages:** 1

Addressee: SUSAN STUDLIEN US EPA REGION 1 - OFFICE OF SITE REMEDIATION & RESTORATION

File Break: 05.01

Doc Type: LETTER

06: REMEDIAL DESIGN (RD)

252351 100% REMEDIAL DESIGN (RD) REPORT, LANDFILL CAPPING (WITH TRANSMITTAL DATED 02/29/2000)

Author: CONESTOGA-ROVERS & ASSOCIATES

Doc Date: 02/01/2000 **# of Pages:** 727

Addressee:

File Break: 06.04

Doc Type: REPORT

AR Collection: 3873
ROD ADMINISTRATIVE RECORD
AR Collection QA Report
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06: REMEDIAL DESIGN (RD)

252352 APPROVAL OF THE 100% REMEDIAL DESIGN (RD) AND REMEDIAL ACTION (RA) WORK PLAN

Author: ALMERINDA SILVA US EPA REGION 1

Doc Date: 04/12/2000 **# of Pages:** 1

Addressee: DAVID E MONTANY PRATT & WHITNEY

File Break: 06.06

Doc Type: LETTER

07: REMEDIAL ACTION (RA)

252345 FINAL INTERIM REMEDY REMEDIAL ACTION (RA) REPORT (WITH TRANSMITTAL DATED 09/24/2001)

Author: CONESTOGA-ROVERS & ASSOCIATES

Doc Date: 09/01/2001 **# of Pages:** 1199

Addressee:

File Break: 07.05

Doc Type: REPORT

252346 AS-RECORDED DRAWINGS, LANDFILL CAPPING

Author: CONESTOGA-ROVERS & ASSOCIATES

Doc Date: 09/21/2001 **# of Pages:** 17

Addressee:

File Break: 07.05

Doc Type: DRAWING

AR Collection: 3873
ROD ADMINISTRATIVE RECORD
AR Collection QA Report
For External Use

10/16/2006

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07: REMEDIAL ACTION (RA)

252348 APPROVAL OF THE FINAL INTERIM REMEDY REMEDIAL ACTION (RA) REPORT AND AS-RECORDED DRAWINGS LANDFILL CAPPING

Author: DONALD F BERGER US EPA REGION 1

Doc Date: 09/28/2001 # of Pages: 1

Addressee:

File Break: 07.05

Doc Type: MEMO

252349 RECOMMENDATION FOR APPROVAL OF THE FINAL INTERIM REMEDY REMEDIAL ACTION (RA) REPORT AND AS-RECORDED DRAWINGS LANDFILL CAPPING

Author: ALMERINDA SILVA US EPA REGION 1

Doc Date: 09/28/2001 # of Pages: 1

Addressee: DONALD F BERGER US EPA REGION 1

File Break: 07.05

Doc Type: MEMO

252350 APPROVAL OF THE FINAL INTERIM REMEDY REMEDIAL ACTION (RA) REPORT AND AS-RECORDED DRAWINGS LANDFILL CAPPING

Author: DONALD F BERGER US EPA REGION 1

Doc Date: 09/28/2001 # of Pages: 3

Addressee: DAVID E MONTANY PRATT & WHITNEY

File Break: 07.05

Doc Type: LETTER

252347 APPROVAL OF THE FINAL INTERIM REMEDY REMEDIAL ACTION (RA) REPORT AND DRAWINGS

Author: DONALD F BERGER US EPA REGION 1

Doc Date: 04/02/2002 # of Pages: 1

Addressee: DAVID E MONTANY PRATT & WHITNEY

File Break: 07.05

Doc Type: LETTER

08: POST REMEDIAL ACTION

258013 OPERATION AND MAINTENANCE (O&M) PLAN

Author: CONESTOGA-ROVERS & ASSOCIATES

Doc Date: 09/06/2001 # of Pages: 142

Addressee:

File Break: 08.03

Doc Type: REPORT

258014 OPERATION AND MAINTENANCE (O&M) PLAN, APPENDIX B: QUALITY ASSURANCE PROJECT PLAN (QAPP) ADDENDUM FOR VENT SAPLING PROGRAM AND APPENDIX E: VENT SAMPLING PROGRAM WORK PLAN

Author: HARDING ESE

Doc Date: 10/05/2001 # of Pages: 308

Addressee: US EPA REGION 1

File Break: 08.03

Doc Type: REPORT

237343 FIVE-YEAR REVIEW REPORT

Author: US EPA REGION 1

Doc Date: 09/13/2005 # of Pages: 85

Addressee:

File Break: 08.03

Doc Type: FIVE-YEAR REVIEW REPORT

Doc Type: REPORT

256973 GROUNDWATER USE AND VALUE DETERMINATION [9/29/06 CONCLUSIONS AND RECOMMENDATIONS LETTER IS ATTACHED]

Author: CT DEP WATER COMPLIANCE UNIT

Doc Date: 09/29/2006 # of Pages: 16

Addressee:

File Break: 08.04

Doc Type: REPORT

10: ENFORCEMENT/NEGOTIATION

252356 CONSENT DECREE, UNITED STATES DISTRICT COURT DISTRICT OF CONNECTICUT, CIVIL ACTION NOS. 3:99CV8 (GLG) AND 3:98CV236 (AIIN)

Author: US DEPT OF JUSTICE
Addressee: US EPA REGION 1
Doc Type: LITIGATION

Doc Date: 06/12/1998 **# of Pages:** 202
File Break: 10.08

252353 UNOPPOSED MOTION TO ENTER CONSENT DECREE, UNITED STATES DISTRICT COURT DISTRICT OF CONNECTICUT, CIVIL ACTION NO 3:99-CV-0470 (JCH) AND 3:99-CV-0472 (JCH)

Author: US DEPT OF JUSTICE
Addressee: US EPA REGION 1
Doc Type: LITIGATION

Doc Date: 05/14/1999 **# of Pages:** 8
File Break: 10.08

252354 UNOPPOSED MOTION TO ENTER CONSENT DECREE, UNITED STATES DISTRICT COURT DISTRICT OF CONNECTICUT, CIVIL ACTION NO 3:99-CV-0470 (JCII) AND 3:99-CV-0472 (JCII)

Author: US DEPT OF JUSTICE
Addressee: US EPA REGION 1
Doc Type: LITIGATION

Doc Date: 06/01/1999 **# of Pages:** 35
File Break: 10.08

252355 UNOPPOSED MOTION TO ENTER CONSENT DECREE, UNITED STATES DISTRICT COURT DISTRICT OF CONNECTICUT, CIVIL ACTION NO 3:99-CV-0470 (JCII) AND 3:99-CV-0472 (JCII)

Author: US DEPT OF JUSTICE
Addressee: US EPA REGION 1
Doc Type: LITIGATION

Doc Date: 06/01/1999 **# of Pages:** 36
File Break: 10.08

AR Collection: 3873
ROD ADMINISTRATIVE RECORD
AR Collection QA Report
For External Use

10/16/2006

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13: COMMUNITY RELATIONS

258005 PUBLIC HEARING: RE: OLD SOUTHINGTON LANDFILL SUPERFUND SITE

Author: US EPA REGION 1

Doc Date: 07/06/2006 # of Pages: 6

Addressee:

File Break: 13.04

Doc Type: PUBLIC MEETING RECORD

Number of Documents in Collection 30

EPA Region 1 AR Compendium GUIDANCE DOCUMENTS

EPA guidance documents may be reviewed at the EPA Region I Superfund Records Center in Boston, Massachusetts.

TITLE

INTERIM FINAL GUIDANCE FOR CONDUCTING REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES UNDER CERCLA.

DOCDATE	OSWER/EPA ID	DOCNUMBER
10/1/1988	OSWER #9355.3-01	2002

TITLE

RI/FS IMPROVEMENTS

DOCDATE	OSWER/EPA ID	DOCNUMBER
7/23/1987	OSWER #9355.0-20	2008

TITLE

RI/FS IMPROVEMENTS FOLLOW-UP

DOCDATE	OSWER/EPA ID	DOCNUMBER
4/25/1988	OSWER #9355.3-05	2009

TITLE

FEASIBILITY STUDY - DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES [QUICK REFERENCE FACT SHEET]

DOCDATE	OSWER/EPA ID	DOCNUMBER
11/1/1989	OSWER #9355.3-01FS3	2018

TITLE

FEASIBILITY STUDY: DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES [QUICK REFERENCE FACT SHEET]

DOCDATE	OSWER/EPA ID	DOCNUMBER
3/1/1990	OSWER #9355.3-01FS4	2019

TITLE

CONSIDERATIONS IN GROUND WATER REMEDIATION AT SUPERFUND SITES

DOCDATE	OSWER/EPA ID	DOCNUMBER
10/18/1989	OSWER #9355.4-03	2410

TITLE

INTERIM GUIDANCE ON SUPERFUND SELECTION OF REMEDY

DOCDATE	OSWER/EPA ID	DOCNUMBER
12/24/1986	OSWER #9355.0-19	9000

TITLE

GUIDE TO SELECTING SUPERFUND REMEDIAL ACTIONS

DOCDATE	OSWER/EPA ID	DOCNUMBER
4/1/1990	OSWER #9355.0-27FS	9002

TITLE

GUIDANCE ON PREPARING SUPERFUND DECISION DOCUMENTS: THE PROPOSED PLAN, THE RECORD OF DECISION, E.S.D.'S, R.O.D. AMENDMENT. INTERIM FINAL.

DOCDATE	OSWER/EPA ID	DOCNUMBER
7/1/1989	OSWER 9355.3-02	C179

TITLE

GUIDE TO PREPARING SUPERFUND PROPOSED PLANS RECORDS OF DECISION AND OTHER REMEDY SELECTION DECISION DOCUMENTS

DOCDATE	OSWER/EPA ID	DOCNUMBER
7/1/1999	OSWER 9200.1-23P	C525

TITLE

DRAFT GUIDANCE FOR EVALUATING THE VAPOR INTRUSION TO INDOOR AIR PATHWAY FROM GROUNDWATER AND SOILS (SUBSURFACE VAPOR INTRUSION GUIDANCE)

DOCDATE	OSWER/EPA ID	DOCNUMBER
10/20/2002		C574

OSL SUPERFUND SITE
RD/RA CONSENT DECREE

APPENDIX B

MAP OF SITE

OSL SUPERFUND SITE
RD/RA CONSENT DECREE

APPENDIX C

SOW

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REMEDIAL DESIGN/REMEDIAL ACTION STATEMENT OF WORK OLD SOUTHTON LANDFILL SUPERFUND SITE

April 22, 2009 Revisions

I. INTRODUCTION AND PURPOSE

This Remedial Design/Remedial Action (“RD/RA”) Statement of Work (“SOW”) defines the response activities and submittals that the Settling Defendants are obligated to perform in order to implement the Work required under the 2006 ROD and respective Consent Decree (“CD”) at the Old Southington Landfill (“OSL”) Superfund Site in Southington, Connecticut (the “Site”). The Settling Defendants shall mean those parties identified in Appendix D of the CD. The activities described in this SOW are based upon the United States Environmental Protection Agency’s (“EPA”) Record of Decision (“ROD”) for the Site signed by the Deputy Director of the Office of Site Remediation and Restoration, New England Region, on September 29, 2006. Data generated in compliance with the long-term cap effectiveness monitoring plan developed under the 1998 CD and the December 5, 1997 SOW for the 1994 ROD will be integrated with the data generated through monitoring required pursuant to this SOW, so that a single, comprehensive report can be provided to EPA. A single Project Operations Plan (“POP”) for all Site field activities will be developed under this SOW and under the December 5, 1997 SOW. This single POP, once approved, will become an enforceable document pursuant to the 1994 ROD and respective CD and the 2006 ROD and respective CD as follows: (a) activities required under the 1994 ROD and respective SOW, will be enforceable under the 1998 CD; and (b) activities required under the 2006 ROD and respective SOW, specifically those activities set forth in Sections IV.C and IV.D of this SOW will be enforceable under the 2006 ROD CD. All data resulting from Site monitoring, including cap-effectiveness monitoring required by the 1998 CD and December 5, 1997 SOW, and monitoring required under this SOW, will be integrated for data assessment and reporting purposes. Cap effectiveness monitoring data from sampling conducted under the 1997 SOW and vapor intrusion monitoring data conducted under this SOW will be used during the site-wide Five-Year Reviews.

II. DEFINITIONS

The Site shall mean the definition of "Site" as provided in Section IV of the CD. Other definitions provided in CD are incorporated herein by reference. In addition, the following definitions shall apply to this SOW:

A. “Contaminated Groundwater” shall mean groundwater containing contaminants originating from Old Southington Landfill above the Connecticut Remediation Standard Regulations (“CT RSRs”) Ground Water Volatilization Criteria (“GWVC”). In accordance with the CT RSRs, the GWVC apply to groundwater within 30 feet of the ground surface or a building.

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- B. “Design” shall mean an identification of the technology and its performance and operational specifications, in accordance with all applicable federal, state, and local laws, including, but not limited to:
1. computations used to: size units, process or treatment rates, emissions or discharge rates; determine the appropriateness of technologies, and evaluate the projected effectiveness of the remedial action;
 2. scale drawings of all system layouts (as appropriate), including, but not limited to: topographic plans, schematics, grading plans, process and instrument diagrams (“P&IDs”), boring and well construction logs, and geologic cross-sections;
 3. system layouts that include sizes and locations of process units for building ventilation units (or similar technology), vapor emissions controls, vapor barriers (or similar technology), and locations of electrical equipment and utility lines;
 4. quantitative analysis demonstrating the anticipated effectiveness of the Remedial Design to achieve the Performance Standards;
 5. technical specifications that detail the following:
 - a. size and type of each major component; and
 - b. required performance criteria of each major component;
 6. description of the extent of environmental and ambient air monitoring including equipment, monitoring locations, and data handling procedures; and
 7. description of access, land easement, land use restrictions and any other institutional controls required to be supplied with the construction plans and specifications.
- C. “EPA” shall mean the United States Environmental Protection Agency.
- D. “DEP” shall mean the Connecticut Department of Environmental Protection.
- E. “Groundwater Remedy” shall mean the response action selected in the Record of Decision dated September 29, 2006 regarding the groundwater at or migrating from the Site

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- F. “Settling Defendants” shall mean those parties listed in Appendix C of the Consent Decree.
- G. “Settling Defendants’ Certification” shall mean the following statement: “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.”
- H. The “2006 ROD” shall mean the Record of Decision for the Site issued on September 29, 2006.
- I. “Highland Hills Subdivision” shall mean the 15.74-acre subdivision identified as Parcel No. 073 on the 2008 Town of Southington Connecticut Assessment Parcel Map No. 064 containing 38 individual lots identified as Lot Nos. 064073001 through 064073038.

III. **SELECTED REMEDY**

The 2006 ROD describes the remedy for the Site. The major components of the selected remedy include the following:

- A. Institutional controls, in the form of Environmental Land Use Restrictions (“ELURs”) as defined in CT RSRs, or other necessary measures, will be placed on properties or portions of properties where groundwater Volatile Organic Compound (“VOC”) concentrations in shallow groundwater exceed the requirements presented in the CT RSR volatilization criteria for residential or commercial/industrial use (also denoted as volatilization or vapor intrusion criteria), and as appropriate, Appendix B of the 2006 ROD, Table L-1, Groundwater Action Levels for Vapor Intrusion (“VI”). Periodic inspections or other procedures and requirements would be performed to ensure compliance with the institutional controls and to ensure notification to EPA and the State and the appropriate local governmental agencies if the institutional control is breached or compromised.
- B. Building ventilation (sub-slab depressurization (“SSD”) systems or similar technology) will be used in existing buildings located over portions of properties where VOCs in shallow groundwater exceed the CT RSRs volatilization criteria to either prevent migration of VOC vapors into buildings or to control the level of VOCs in vapors beneath existing buildings. Similarly, vapor barriers (or similar technology) or sub-slab depressurization systems (or similar technology) will be used to control vapors in new buildings. In addition, under this remedy, minor amounts of treatment residuals (such as from activated carbon adsorption filters) might be

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generated depending on the concentration of VOCs in the vapor removed during sub-slab ventilation and whether the emissions require treatment.

- C. Groundwater monitoring will be conducted in areas where the potential for vapor intrusion is a concern and to ensure protection of adjoining drinking water aquifers. Vapor intrusion is a concern where Contaminated Groundwater exists within the top 5 feet of the groundwater table and within 30 feet of the ground surface or building. Such areas include, but are not limited to, the three parcels that are the initial focus of this remedial action (Chuck & Eddie's Salvage Yard, Radio Station, and the former Lori Corp.), the properties adjacent and south of Chuck & Eddie's, and the new residential neighborhood west of Chuck & Eddie's, identified as the "Highland Hills Subdivision". Compliance wells will be installed at appropriate locations to collect groundwater to evaluate long-term fluctuations in accordance with the monitoring requirements of the CT RSRs and in accordance with the most stringent of either the proposed or promulgated action levels for vapor intrusion (see Appendix B, Table L-1 of the 2006 ROD), and other federal requirements to ensure the protectiveness of the remedy in the future. If there is an exceedance of the CT RSR volatilization criteria or other information indicates there may be an unacceptable risk, an action plan with proposed actions and respective schedule for implementation will be prepared. All additional response actions will be subject to EPA approval.
- D. Operation, maintenance, and monitoring of engineering and institutional controls will be performed to ensure remedial measures are performing as intended and that the remedy remains protective in the future. Periodic inspections or other procedures and requirements would be performed to ensure compliance with the institutional controls and to ensure notification to EPA, the State, and the appropriate local governmental agencies if the institutional controls were not effective.
- E. Pre-Design Studies will be conducted at the former Lori Corp. property and if results indicate that the Old Southington Landfill is adversely impacting groundwater at the former Lori Corp. property, the former Lori Corp. property will be addressed consistent with the provisions of this section.
- F. Site-Wide five-year reviews and operation and maintenance will be performed to ensure the remedy continues to be protective of human health and the environment.

IV. PERFORMANCE STANDARDS

This section defines the Performance Standards for the final remedy. The Settling Defendants shall design, construct, operate, monitor, and maintain the remedy in compliance with Section L of the ROD; all applicable or relevant and appropriate requirements ("ARAR") cited in the ROD; all requirements of the Consent Decree; and this SOW.

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The Settling Defendants shall achieve the Performance Standards for the individual components of the remedy. If EPA, after review and comment by DEP, determine that the Performance Standards are no longer being attained, Settling Defendants shall take additional actions consistent with the terms of the Consent Decree.

As required under CERCLA Section 121(c), EPA will review the entire Site at least once every five years through its Five Year Review process. The first five year review was conducted in September 2005 for the 1994 ROD remedy. The next and all future Five Year Reviews will include evaluation of the entire Site for both the 1994 and the 2006 ROD remedies. The next Five Year Review will be completed by September 2010. As part of its evaluation, EPA will review environmental monitoring data and evaluate the effectiveness of institutional and engineering controls to determine whether the remedy is still protective of human health and the environment. Pursuant to Section VII of the Consent Decree, Settling Defendants shall conduct any studies and investigations as requested by EPA, in order to permit EPA to conduct these reviews. A Site-Wide Long Term Monitoring Plan will be developed under this SOW so that all site monitoring, including the cap effectiveness monitoring required by the 1998 CD and December 5, 1997 SOW, will be integrated for data assessment and reporting purposes. Cap effectiveness monitoring data from sampling conducted under the 1997 SOW and vapor intrusion monitoring data conducted under this SOW as well as any available data will be used during the site-wide Five-Year Reviews. By March 31, 2013, the PSDs will assemble and review all of the available data collected to date and identify data gaps and/or changes in the groundwater and/or vapor intrusion trends, and submit a report documenting the findings as well as proposing any new work tailored to address data gaps or changes. In order to do so, all reports submitted in support of regularly scheduled monitoring obligation need to include graphics and a discussion of short term and long term data trends. EPA will review the Settling Defendants' proposal and after review and comment by CT DEP, shall either approve or direct the Settling Defendants to conduct, in a timely manner, any additional studies necessary to address environmental concerns in order to incorporate such information into the Five-Year review process.

With respect to the final remedy, Settling Defendants shall address Contaminated Groundwater that results in unacceptable vapor intrusion risks for the properties including, but not limited to, Chuck & Eddie's Salvage Yard, located at 450 Old Turnpike Road in Southington and the Radio Station, located at 440 Old Turnpike Road and/or, if necessary, additional investigations conducted by the Settling Defendants, using the selected remedy, Alternative GW-2, which consists of Institutional Controls, Groundwater Monitoring, Building Ventilation (Sub-slab Depressurization), Vapor Barriers, and Operations & Maintenance. Monitoring for vapor intrusion may consist of soil vapor, subslab, and/or indoor air monitoring as appropriate in accordance with the 2006 ROD requirements

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A. Institutional Controls

The Settling Defendants shall implement institutional controls in the form of ELURs, as defined in the CT DEP RSRs on the Chuck & Eddie's Salvage Yard and the Radio Station, and other properties or portions of properties where the VOC concentrations in Contaminated Groundwater exceed the numerical limits in shallow groundwater listed in Table L-1 of Appendix B of the 2006 ROD or exceed the RSR Volatization Criteria for residential or commercial/industrial use as appropriate, unless additional evidence (e.g., soil gas and/or indoor air) supports a conclusion approved by EPA after reasonable opportunity for review and comment by CT DEP that risk to human health from shallow groundwater and/or soil vapors does not pose a significant risk to human health. Properties that meet these conditions will be included in the area designated as the institutional control zone ("ICZ"). Institutional controls shall prevent the use and/or construction of a residential, commercial, and/or industrial building over shallow groundwater that exceeds the appropriate CT RSR Volatization Criteria unless the Commissioner of CT DEP and EPA grant a release from such ICs/ELURs. The Settling Defendants will implement an institutional control monitoring program to ensure that the ELURs are maintained, monitored, and appropriately enforced, where necessary, on all relevant portions of the Site. Based on data collected to date, the two properties identified previously in this section pose the highest vapor intrusion concern to EPA and CT DEP and will be carefully reviewed for inclusion in the ICZ.

B. Vapor Intrusion Control Systems

The Settling Defendants shall design, install and maintain vapor intrusion control systems for existing and new buildings located on the Chuck & Eddie's Salvage Yard and the Radio Station, and other properties overlying shallow Contaminated Groundwater with VOC contamination that exceeds the appropriate chemical concentrations listed in Table L-1 of Appendix B of the 2006 ROD, unless additional evidence (e.g., soil vapor and/or indoor air) shows that such VOCs do not pose a significant risk to human health in accordance with the CT RSRs.

The Settling Defendants shall conduct RD/RA activities necessary to design, construct, operate, monitor, and maintain an effective vapor intrusion control system in compliance with Section L of the 2006 ROD and all applicable or relevant and appropriate ("ARAR") standards in the 2006 ROD.

C. Vapor Intrusion Monitoring

The Settling Defendants ("SDs") shall develop and submit to EPA for approval, a Vapor Intrusion Monitoring Plan ("VIMP") that will be used to evaluate all media potentially affected by landfill contamination to ensure that the overall (interim and final) site remedy is

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protective of human health and the environment. The VIMP shall incorporate and meet all of the ARARs, performance standards, data objectives, and criteria set forth in this SOW for the final remedy. Work shall include at a minimum:

1. A total of 11 groundwater monitoring wells will be installed to monitor the shallow groundwater aquifer for potential adverse impacts into buildings via vapor intrusion from Contaminated Groundwater. The approximate location of each of the 11 groundwater monitoring wells are identified on Figure 1 included as Attachment 1 of this SOW. In addition, existing monitoring well SDW-9A will be included as part of the vapor intrusion monitoring well network. These monitoring wells will be monitored in accordance with Section 22a-133k-3(f)(3) of the CT RSRs (four consecutive quarters). Groundwater monitoring will be performed at one additional monitoring location identified on Figure 1 specifically to confirm the depth of Contaminated Groundwater upgradient of the Highland Hills Subdivision, pursuant to the decision tree provided as Attachment 2 to this SOW.
2. Soil vapor under the existing building on the Radio Station property shall be sampled from the two existing vapor probes for four quarters in accordance with Section 22a-133k-3(f)(3) of the CT RSRs. This event will occur in the first year after approval of the RD Work Plan. To the extent that the results of the sampling indicate that soil vapor concentrations resulting from Contaminated Groundwater exceed the industrial/commercial soil vapor volatilization criteria identified in Appendix F of the CT RSRs, vapor mitigation of the existing Radio Station building will be addressed in accordance with Paragraph B of this Section.
3. Groundwater monitoring wells used for monitoring vapor intrusion shall be screened at the water table and located to evaluate the potential effects on the following properties or areas:
 - a. Chuck & Eddie's Salvage Yard;
 - b. the Radio Station;
 - c. In the vicinity of the former Lori Corp. for water levels only to ensure groundwater mounding continues west of the Old Southington Landfill;
 - d. property adjacent and south of the Chuck & Eddie's property;
 - e. upgradient of the Highland Hills subdivision; and/or
 - f. other properties that may be affected by vapor intrusion resulting from the migration of Contaminated Groundwater.
4. Monitoring wells will be constructed in accordance with the Project Operations Plan (see V.A.3) approved by EPA, after review and comment by CT DEP.
5. Groundwater samples will be analyzed for the compounds listed in the CT RSR groundwater volatilization criteria and in Table L-1 of Appendix B of the 2006 ROD.

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6. Following completion of work items IV.C.1 through 5 above, an action plan will be developed to address the Chuck & Eddie's Salvage Yard and the Radio Station, and properties, as necessary, if unacceptable vapor intrusion risks resulting from other Contaminated Groundwater contamination are identified. If the results of the vapor intrusion monitoring identify additional properties where vapor intrusion resulting from Contaminated Groundwater is indicated, the Settling Defendants shall prepare an action plan and conduct any subsequent investigation and remedial activities as approved by EPA.

D. GA Boundary Monitoring

A study of groundwater flow paths and bedrock elevations will be performed to demonstrate whether or not Contaminated Groundwater can migrate to and impact the GA groundwater area located south-west of OSL. This study will involve installation of hydraulic elevation monitoring points (pressure transducers) at locations shown on Figure 1, collection of groundwater elevations at new transducer locations and existing wells, installation of data loggers on pressure transducers and at selected existing wells, and drilling to confirm the depth to bedrock at locations shown on Figure 1, entitled, Proposed Sampling/Monitoring Locations. This process will follow the decision tree approach provided as Attachment 3 to this SOW.

E. Vapor Intrusion Control System Operations and Maintenance

The Settling Defendants shall develop and implement an Operations and Maintenance ("O&M") program to inspect, operate, and maintain the vapor intrusion control systems to ensure the protectiveness of the remedy (See IV.B). The O&M program will include: procedures for inspecting, operating, and maintaining the system components, a schedule for these activities; and reporting of the O&M activities.

F. Institutional Controls Monitoring

The Settling Defendants shall develop and implement a program to monitor compliance of the institutional controls (see IV.A). The Site and surrounding areas shall be inspected to verify that the requirements of the ELURs are being met and that the results are reported to EPA and the CT DEP. As part of the monitoring program, the Settling Defendants will also review permit applications filed with the Town to identify new potential construction that may occur on properties subject to the ELURs. The Settling Defendants shall establish a procedure to notify EPA, the state, and local authorities in the event that the institutional controls are not effective.

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G. Vapor Intrusion Control Monitoring

The Settling Defendants shall develop and implement a program to monitor the effectiveness of the vapor control systems to be installed in structures subject to vapor intrusion so to prevent exposure to volatile substances of concern at levels above applicable criteria (see IV.B).

V. **REMEDIAL DESIGN**

The Settling Defendants shall develop a final Remedial Design for the remedy described in the ROD and this SOW that meets the Performance Standards specified in Section IV of this SOW. Within 30 days after the lodging of the Consent Decree, the Settling Defendants shall submit to EPA for approval, the name and qualifications of a Remedial Design Contractor. Section V.A. describes the Settling Defendants' responsibilities for submitting deliverables during the Remedial Design. Section V.B. describes the Settling Defendants' responsibilities for conducting Remedial Design Project Meetings.

A. **Deliverables**

The Settling Defendants shall submit to EPA and CT DEP the required deliverables as stated herein for each of the Remedial Design activities. Except where expressly stated otherwise in this SOW, each deliverable shall be subject to review and approval or modification or disapproval by EPA, after a reasonable opportunity for review and comment by CT DEP, in accordance with Section XI of the Consent Decree, EPA Approval of Plans and Other Submissions. EPA will consider requests from the Settling Defendants to combine two or more of the deliverables described below into one or more deliverable.

1. **Design Progress Reports**

On the 10th working day of every month beginning in the month of EPA's approval of the Remedial Design Work Plan and until EPA approval of the Final Design, the Settling Defendants shall submit Design Progress Reports to the EPA and CT DEP in accordance with Section X of the Consent Decree, Reporting Requirements. The reports shall summarize all activities that have been conducted in the month preceding the Design Progress Report and those activities planned for the next month. The Design Progress Reports shall also identify the current percent design complete, any problems encountered and/or changes to the schedule, and shall summarize all the results of sampling and tests and all other data received by the Settling Defendants.

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2. **Remedial Design Work Plan**

Within 60 days after EPA approval of the Remedial Design Contractor, the Settling Defendants shall submit a Draft Remedial Design Work Plan with the SD's certification. The Work Plan shall describe the technical approach for completing the requirements of the Remedial Design and the Performance Standards of this SOW. Further, subsequent work plans may need to be submitted in the event that additional work is needed.

The Remedial Design Work Plan shall include the following components:

- a. Statement of the project goals;
- b. Detailed descriptions of each task including but not limited to (i.e., Long Term Monitoring Plan, Remedial Design, Remedial Action, and Operation & Maintenance);
- c. Proposed schedule identifying the tasks and deliverables,
- d. Project management approach;
- e. Key personnel in an organizational chart with written narrative of roles and responsibilities; and
- f. Discussion of the proposed development and implementation of the following items to comply with the Performance Standards:
 1. Institutional controls and monitoring;
 2. Vapor intrusion control systems including Operations and Maintenance and monitoring; and
 3. Proposed areas requiring ELURs.

The Remedial Design Work Plan and Project Operations Plan (see V.A.3 of this SOW) shall be consistent with Section VI of the Consent Decree (Performance of Work by the Performing Settling Defendants), and Section L of the ROD, this SOW, and the current version of the EPA's RD/RA guidance.

EPA and the CT DEP shall review the Work Plan, provide review comments, and resolve the comments with the Settling Defendants during a meeting or conference call. The Settling Defendants shall prepare and submit a Final Remedial Design Work Plan within 30 days after resolution of regulatory agency review comments.

3. **Remedial Design Project Operations Plan**

The Settling Defendants shall prepare and submit a Draft Remedial Design Project Operations Plan ("POP") for field activities that will support investigations to be performed during the Remedial Design and prior to the

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Remedial Action. Consistent with the provisions of Section I of this SOW, the Draft POP shall reflect all field activities that are to be conducted pursuant to this SOW, as well as field activities that are to be conducted pursuant to the 1998 CD and December 5, 1997 SOW, so that all Site monitoring activities are conducted embodied in one plan that is current with EPA and CTDEP regulatory standards, guidelines, and SOPs for sampling activities. The Draft POP shall be submitted within 30 days after resolution of the Draft Work Plan comments with EPA and the CT DEP. The Remedial Design POP shall be prepared in accordance with Attachment A of this SOW, and shall include, at a minimum, the following:

- a. Site Management Plan (“SMP”);
- b. Quality Assurance Project Plan (“QAPP”);
- c. Site-specific Health and Safety Plan (“HSP”);
- d. Community Relations Support Plan (“CRSP”);
- e. Field Sampling Plan (“FSP”), included in the QAPP; and
- f. LTMP for the 1994 ROD and Vapor Intrusion Monitoring Plan for the 2006 ROD.

EPA and the CT DEP will review the Remedial Design POP, provide review comments, and resolve the comments with the SDs during a meeting or conference call. The SDs will prepare and submit a Final Remedial Design POP within 30 days after resolution of regulatory agency review comments.

4. **Pre-Design Studies**

There is no need for “Pre-Design studies” at the former Lori Corp. property with respect to vapor intrusion as described in Part 2, Section L.1.B.1.5 of the 2006 ROD. The PSDs provided a report showing no hydraulic connection between the contaminated groundwater areas on the Former Lori Corp. site and groundwater from the Old Southington Landfill. EPA concurred with the findings and determined that the “Pre-Design studies” at the former Lori Corp. property are completed and fully satisfy that requirement in the ROD. If hydraulic conditions change in the future, additional studies may be warranted but would be conducted under a separate response action.

5. **Preliminary Design Submission**

Within 60 days after the Settling Defendants receive EPA approval, after opportunity for review and comment by CT DEP, of the Remedial Design Work Plan and the POP, the Settling Defendants shall initiate the pre-design

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studies and the design activities in accordance with the Remedial Design Work Plan and the schedules set forth therein.

As appropriate, the Preliminary Design components shall include the following elements:

- a. Draft design criteria – project description, design requirements, preliminary process flow diagrams (“PFDs”), and O&M provisions.
- b. Draft basis of design – summary of justification of design assumptions.
- c. Draft RA contracting strategy, permits plan, easement and access requirements, and P&IDs.
- d. Draft drawings and specifications.
- e. Draft RA schedule.
- f. Draft Institutional Control Plan - details how the Performance Standards pertaining to institutional controls will be met, provides the proposed ELURs, provides a schedule for the attainment of the Performance Standards, provides for the long-term enforcement and periodic monitoring of institutional controls, and reporting.
- g. Draft Vapor Intrusion Control Plan – details how the Performance Standards will be met pertaining to the control of VOCs originating from Contaminated Groundwater that affect an existing structure or may affect a new structure; includes the assumptions, calculations, specifications, and construction drawings, provides approach to demonstrate effectiveness; describes periodic monitoring of control system protectiveness; and reporting.
- h. Draft Contingency Plan - addresses the on-site construction workers and the local affected population in the event of an accident or emergency.
- i. Draft Performance Standards and ARARs Compliance Statement – Settling Defendants will prepare a statement that details how the Performance Standards and ARARs listed in the ROD shall be achieved and maintained, and a statement of all assumptions and all drawings and specifications necessary to support the analysis of compliance with all Performance Standards and ARARs. This

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statement shall identify each ARAR, specify the statute and citation of the ARAR, summarize the requirements of the ARAR, specify in detail all activities that will be conducted to comply with the ARAR, and specify in detail all activities that will be conducted to demonstrate compliance with the ARAR.

6. **Final Design Submission**

The Settling Defendants shall prepare and submit the Final Design within 90 days after resolution of the review comments for the Preliminary Design with EPA and the CT DEP for review and approval. All required revisions based on EPA and CT DEP comments for the Preliminary Design shall be incorporated. This design submittal shall address 100% of the total Remedial Design for each component of the Remedial Action including, but not limited to:

- a. Final design criteria;
- b. Final basis of design;
- c. Final RA contracting strategy, permits plan, easement and access requirements, and P&IDs;
- d. Final drawings and specifications – The complete set of final construction drawings, plans and specifications (general specifications, drawings, and schematics), consistent with the technical requirements of all ARARs and in reproducible format;
- e. Final RA schedule;
- f. Final Institutional Control Plan and execution and recording of any ELURs specific to the Remedial Design;
- g. Final Vapor Intrusion Control Plan;
- h. Final Contingency Plan;
- i. Draft Construction Quality Assurance Plan - a Plan that addresses, at a minimum, the following items:
 1. Responsibility and authority of all organization and key personnel involved in the remediation action construction.

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2. The Settling Defendants shall establish the minimum qualifications of the CQA Officer and supporting inspection personnel.
 3. The Settling Defendants shall establish the inspections, observations, and tests that will be required to monitor the construction and/or installation of the components of the Remedial Action, and verify compliance with health and safety procedures and environmental requirements.
 4. Checklists for the required tests and inspections.
 5. Sampling requirements (as appropriate).
 6. The Settling Defendants shall describe the reporting and documentation requirements for CQA activities. This shall include such items as daily summary reports and inspection data sheets.
 7. A process for notifying EPA and CT DEP and seeking approval for changes to the design.
- m. Draft Vapor Intrusion Control System Operations and Maintenance (“O&M”) Manual – details the information regarding the systems including (as appropriate):
1. Description of equipment and system operation.
 2. Description of normal operations and maintenance.
 3. Description of potential operational problems.
 4. Description of routine process monitoring and analysis.
 5. Operational safety plan.
 6. Recordkeeping and reporting requirements.
 7. System maintenance program including, at a minimum, a provision for inspection, continued maintenance and repair, if necessary, of system components.
 8. Post-closure care inspection schedules and provisions.

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- n. Draft Remedial Action Work Plan - This Work Plan shall include, at a minimum, a discussion of strategy and project delivery strategy, schedule for work, change order procedures, lines of and frequency of communications during the RA. It shall also include a description of all activities necessary to implement all components of the RA, in accordance with this SOW, the Consent Decree, and the 2006 ROD.
 - 1. Statement of the project goals.
 - 2. Detailed descriptions of each task (i.e., including but not limited to Remedial Action, Operations and Maintenance, or deliverable.)
 - 3. Updated schedule identifying the tasks and deliverables.
 - 4. Project management approach.
 - 5. Proposed key personnel and responsibilities.
 - 6. Discussion of the implementation of the following items to comply with the Performance Standards.
 - a. Institutional controls and monitoring; and
 - b. Vapor intrusion control systems including Operations and Maintenance and monitoring.

The Remedial Action Work Plan and Project Operations Plan (see V.A.2 and V.A.3 of this SOW) shall be consistent with Section VI of the Consent Decree (Performance of Work by the Performing Settling Defendants), and Section L of the ROD, this SOW, and EPA's RD/RA Handbook) (EPA 540/R-95-059, 1995).

- p. Draft Remedial Action POP – a POP, will be prepared in accordance with Attachment A of this SOW, to include and address activities and tasks to be performed during the Remedial Action, and has similar components as the Remedial Design POP. The Remedial Action POP can consist of a revised Remedial Design POP.

B. Design Project Meetings

The Settling Defendants and their Supervising Contractor shall meet with EPA and CT DEP during the design phase to discuss the status of the design, present the

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results of any investigations, and to discuss any issues associated with the development of design. These meetings shall occur on a monthly basis, or on a schedule approved by EPA. In addition, EPA may schedule meetings to discuss any interim design plans or any issues that arise during design. Conference calls may be substituted for meetings upon approval by EPA.

VI. **REMEDIAL ACTION**

The Settling Defendants shall implement the Final Design for the remedy, as described in the Record of Decision and this SOW that meets the applicable Performance Standards specified in Section IV of this SOW.

The Settling Defendants shall submit to EPA and CT DEP the required deliverables as stated herein for each of these Remedial Action activities. Except where expressly stated otherwise in this SOW, each deliverable shall be subject to review and approval or modification or disapproval by EPA, after a reasonable opportunity for review and comment by CT DEP, in accordance with Section XI of the Consent Decree, (EPA Approval of Plans and Other Submissions). EPA will consider requests from the Settling Defendants to combine two or more of the deliverables described below into one or more deliverable.

A. **Remedial Action Progress Reports**

On the 10th working day of each month during construction and every other month at other times, beginning with the submission of the Final Remedial Action Work Plan and until EPA approval of the Construction Completion Report, the Settling Defendants shall submit to EPA and CT DEP Remedial Action Progress Reports with Settling Defendant's Certification. The Remedial Action Progress Reports shall summarize all activities that have been conducted during each period and those planned for the next period. The Progress Reports shall also:

1. Identify the status of each component of remedy. If a component of the remedy has been completed since the last Progress Report, the Progress Report shall provide a brief summary and indicate when a Completion Report shall be submitted to EPA and CT DEP for review and approval.
2. Identify the percent of construction completed.
3. Identify any problems encountered and/or changes to the schedule.

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B. Final Remedial Action Work Plan

EPA and the CT DEP shall review the Draft Remedial Action Work Plan, provide review comments, and resolve the comments with the Settling Defendants during a meeting or conference call. The Settling Defendants shall prepare and submit a Final Remedial Action Work Plan within 30 days after resolution of regulatory agency review comments.

C. Final Remedial Action POP

EPA and the CT DEP shall review the Draft Remedial Action POP, provide review comments, and resolve the comments with the Settling Defendants during a meeting or conference call. The Settling Defendants shall prepare and submit a Final Remedial Action POP within 30 days after resolution of regulatory agency review comments.

The Final Remedial Design POP shall be prepared in support of all fieldwork to be conducted according to the approved Remedial Action Work Plan. The Final Remedial Design POP shall be consistent with Attachment A of this SOW.

D. Final Performance Standards and ARARs Compliance Statement

EPA and the CT DEP shall review the Draft Performance Standards and ARARs Compliance Statement, provide review comments, and resolve the comments with the Settling Defendants during a meeting or conference call. The Settling Defendants shall prepare and submit a Final Statement within 30 days after resolution of regulatory agency review comments.

E. Final Vapor Intrusion Control System Operations and Maintenance Manual

EPA and the CT DEP shall review the Draft Vapor Intrusion Control System Operations and Maintenance Manual, provide review comments, and resolve the comments with the Settling Defendants during a meeting or conference call. The Settling Defendants shall prepare and submit a Final O&M Manual within 30 days after resolution of regulatory agency review comments.

F. Pre-Construction Conference

Within 15 days of receiving EPA's approval or modification of the Final Remedial Action Work Plan, the Settling Defendants shall hold a Pre-construction Conference. The participants shall include all parties involved in the Remedial Action, including but not limited to the Settling Defendants and their representatives, EPA, and CT DEP.

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G. Remedial Action Construction

Within 30 days after the Pre-construction Conference, the Settling Defendants shall commence Remedial Action Construction in accordance with the EPA approved plans.

H. Meetings During Construction

During the construction period, the Settling Defendants and their construction contractor(s) shall meet monthly with EPA and CT DEP regarding the progress and details of construction. Conference calls may be substituted for meetings upon approval of EPA.

I. Completion Reports

Each Completion Report shall include a description and chronology of the activities completed, as-built drawings signed and stamped by a professional engineer, sufficient documentation that the remedy component meets the applicable Performance Standards, including sampling results and QA/QC documentation of these results, and certification that the work was performed consistent with the ROD, the Consent Decree, this SOW, the Remedial Design plans and specifications, and the Remedial Action Work Plan and POP.

J. Final Construction Inspection

Within 30 days after Settling Defendants conclude that the construction has been fully (100% complete) performed, the Settling Defendants shall schedule and conduct a Final Construction Inspection. This inspection shall include participants from all parties involved in the Remedial Action, including but not limited to the Settling Defendants and their contractors, EPA and CT DEP.

K. Construction Completion (Close-Out) Report

Upon completion of construction of the Remedial Action, the Settling Defendants shall submit a Construction Completion Report (entitled "Close-Out Report") to EPA for approval or modification, after reasonable opportunity for review and comment by CT DEP. The Close-Out Report can reference the Completion Reports for completed components of the remedy. The report shall be submitted within 45 days of the Final Construction Inspection. The report shall be consistent with then current EPA Superfund construction completion guidance and shall include, at a minimum, the following documentation:

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1. A summary of all tasks and activities actually used (in chronological order) during construction.
2. Tabulation of all analytical data and field notes prepared during the course of the Remedial Design and Remedial Action to document that materials used were as specified in the approved Final Remedial Design. Full copies of all results and notes shall be available and produced for EPA and CT DEP upon request.
3. QA/QC documentation of these results.
4. Presentation of these results in appropriate figures.
5. “As-built” drawings, signed and stamped by a professional engineer.
6. Documentation of the Final Construction Inspection, including description of the deficient construction items identified during the inspection and documentation of the final resolution of all deficient items.
7. Certification that the work was performed consistent with the ROD, the Consent Decree, this SOW, the design plans and specifications, and the Remedial Action POP.
8. A description, with appropriate photographs, maps and tables of the disposition of the Site (including areas and volumes of soil/sediment placement and disturbance).
9. Final, detailed cost breakdowns for each remedy component.
10. Conclusions regarding conformance of construction activities with the Performance Standards.
11. Schedule for remaining maintenance activities, and compliance monitoring including summary of the Operation and Maintenance Plan and Compliance Monitoring Plans, and discussion of any problems/concerns.

L. Demonstration of Compliance Report

At the completion of the period necessary to demonstrate compliance with the Performance Standards, the Settling Defendants shall submit to EPA for review and approval a Demonstration of Compliance Report. This report shall contain all

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information necessary to demonstrate compliance with Performance Standards. If EPA, after reasonable opportunity for review and comment by the CT DEP, determines that the Performance Standards have not been achieved, EPA will notify the Settling Defendants of its disapproval of the Demonstration of Compliance Report and the activities that must be undertaken by the Settling Defendants.

If EPA concludes, based on the initial or any subsequent Demonstration of Compliance Report, and after reasonable opportunity for review and comment by the CT DEP, that all Performance Standards have been achieved, EPA will issue its approval of such report.

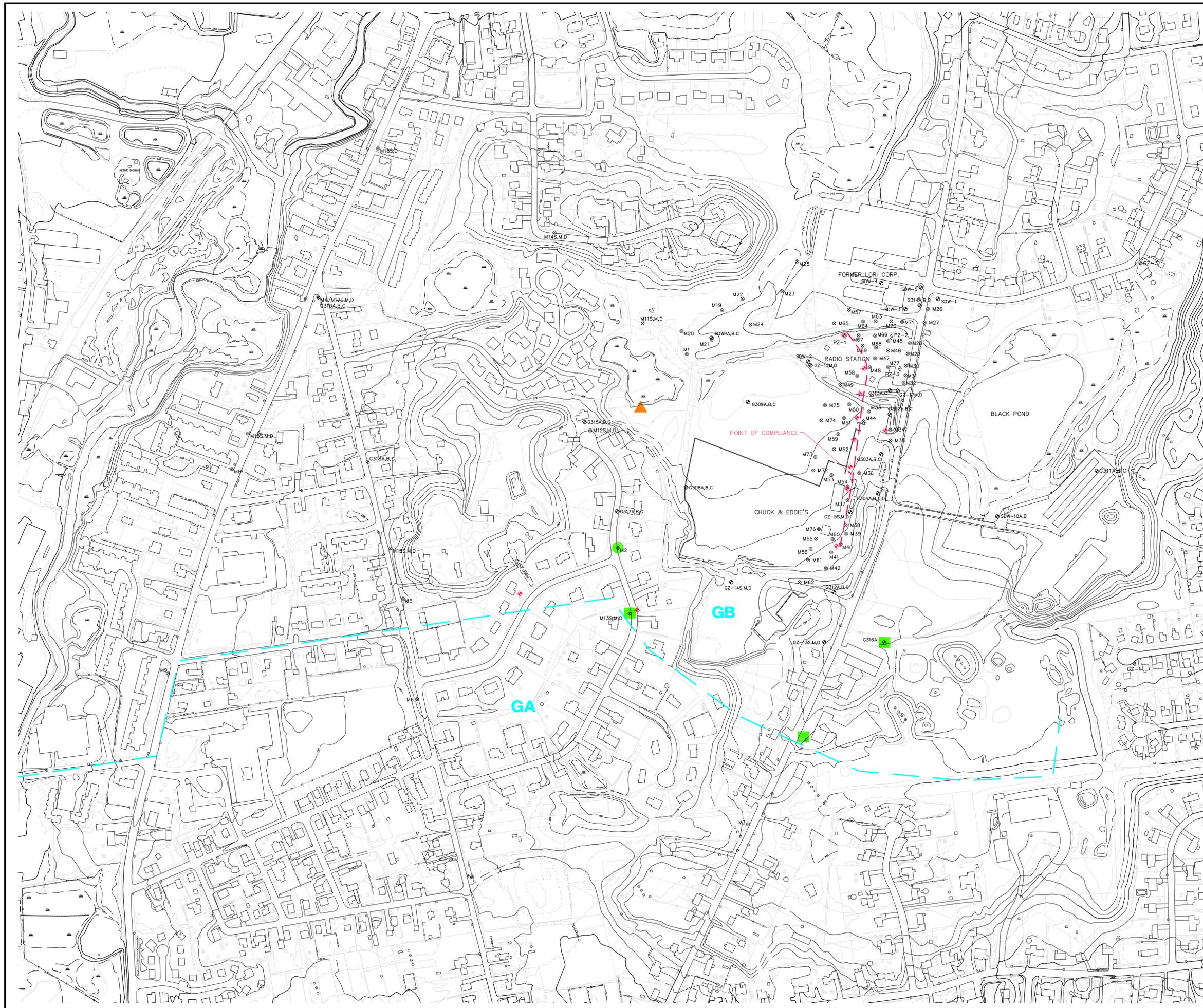
VII. SUBMISSIONS REQUIRING AGENCY APPROVAL

- A. All plans, deliverables and reports identified in the SOW for submittal to EPA and the CT DEP shall be delivered to EPA and CT DEP in accordance with the Consent Decree and this SOW.
- B. Any plan, deliverable, or report submitted to EPA and CT DEP for approval shall be printed using two-sided printing and marked "Draft" on each page and shall include, in a prominent location in the document, the following disclaimer: "Disclaimer: This document is a DRAFT document prepared by the Settling Defendants under a government Consent Decree. This document has not undergone formal review by the EPA and CT DEP. The opinions, findings, and conclusions, expressed are those of the author and not those of the U.S. Environmental Protection Agency and Connecticut Department of Environmental Protection."
- C. Approval of a plan, deliverable or report does not constitute approval of any model or assumption used by the Settling Defendants in such plan, deliverable or report.

Attachment 1 to OSL SOW

Figure 1

Proposed Sampling/Monitoring Locations



- LEGEND:**
- EXISTING MONITORING WELL LOCATION
 - ★ PROPOSED MONITORING WELL LOCATION FOR VAPOR INTRUSION COMPLIANCE
 - ⊗ PREVIOUS MICRO WELL LOCATION
 - ▲ SAMPLING LOCATION FOR HIGHLAND HILLS NEIGHBORHOOD
 - GA/GB BOUNDARY BEDROCK CONFIRMATION AND MONITORING LOCATION
 - GA/GB BOUNDARY BEDROCK CONFIRMATION LOCATION

MAP REFERENCE:
 SITE BACKGROUND OBTAINED ELECTRONICALLY FROM AERIAL PHOTOGRAMMETRY BY GEOMAPS INTERNATIONAL, JOB No. 05312, PHOTO DATE: DEC. 8, 2005, SCALE: 1" = 100', CONTOUR INTERVAL 5'

LOUREIRO ENGINEERING ASSOCIATES, INC. 100 NORTHWEST DRIVE • PLAINVILLE, CONNECTICUT 06062 An Employee Owned Company	
OLD SOUTHINGTON LANDFILL SUPERFUND SITE SOUTHINGTON, CONNECTICUT	PROPOSED SAMPLING/MONITORING LOCATIONS
SCALE: 1" = 200' DRAWN BY: J.R.W. DATE: 4/01/09	SCALE: 1" = 200' DRAWN BY: D.F. DATE: 4/01/09
SHEET NO. 1 NO. OF SHEETS 1	SHEET NO. 1 NO. OF SHEETS 1
G:\AUTOCAD\PROJECTS\05312\05312-PROPOSED-SAMPLES.DWG (Rev. 4/7/2009 8:12 AM) Printed: 4/7/2009 8:12 AM	

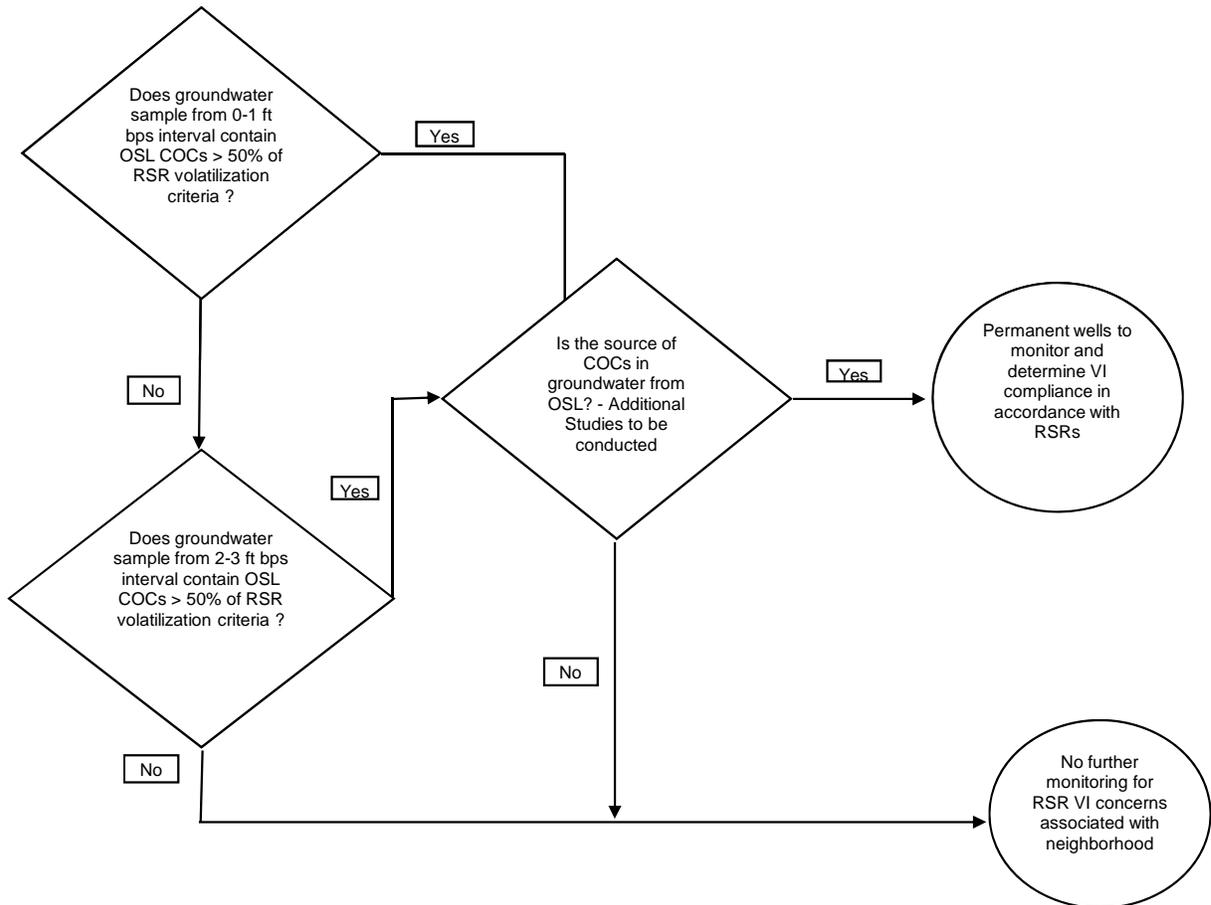
Attachment 2 to OSL SOW

Decision Tree: Highland Hills Subdivision Study

Attachment 2
Statement of Work
Old Southington Landfill Superfund Site
Southington, Connecticut

Objective: Confirm OSL plume depth at Highland Hills Subdivision

- 1) Develop work plan
- 2) Collect groundwater grab samples in one location across one foot intervals at sequential depths to 60 feet
 - Sample every five feet beginning at point of refusal to within 5 feet below estimated phreatic surface
 - Install temporary piezometer in borehole to measure phreatic surface once equilibrated
 - Install 2 temporary monitoring wells with 1-foot long sections of screen (0-1 and 2-3 feet below the phreatic surface [bps])
 - Develop and sample both temporary monitoring wells
 - Location from within 30 foot depth to water zone delineated by EPA; southwest of SDW-9 and east of homes near wetland
- 3) Analyze all samples for OSL COCs with RSR volatilization criteria
- 4) Assess data and prepare summary report



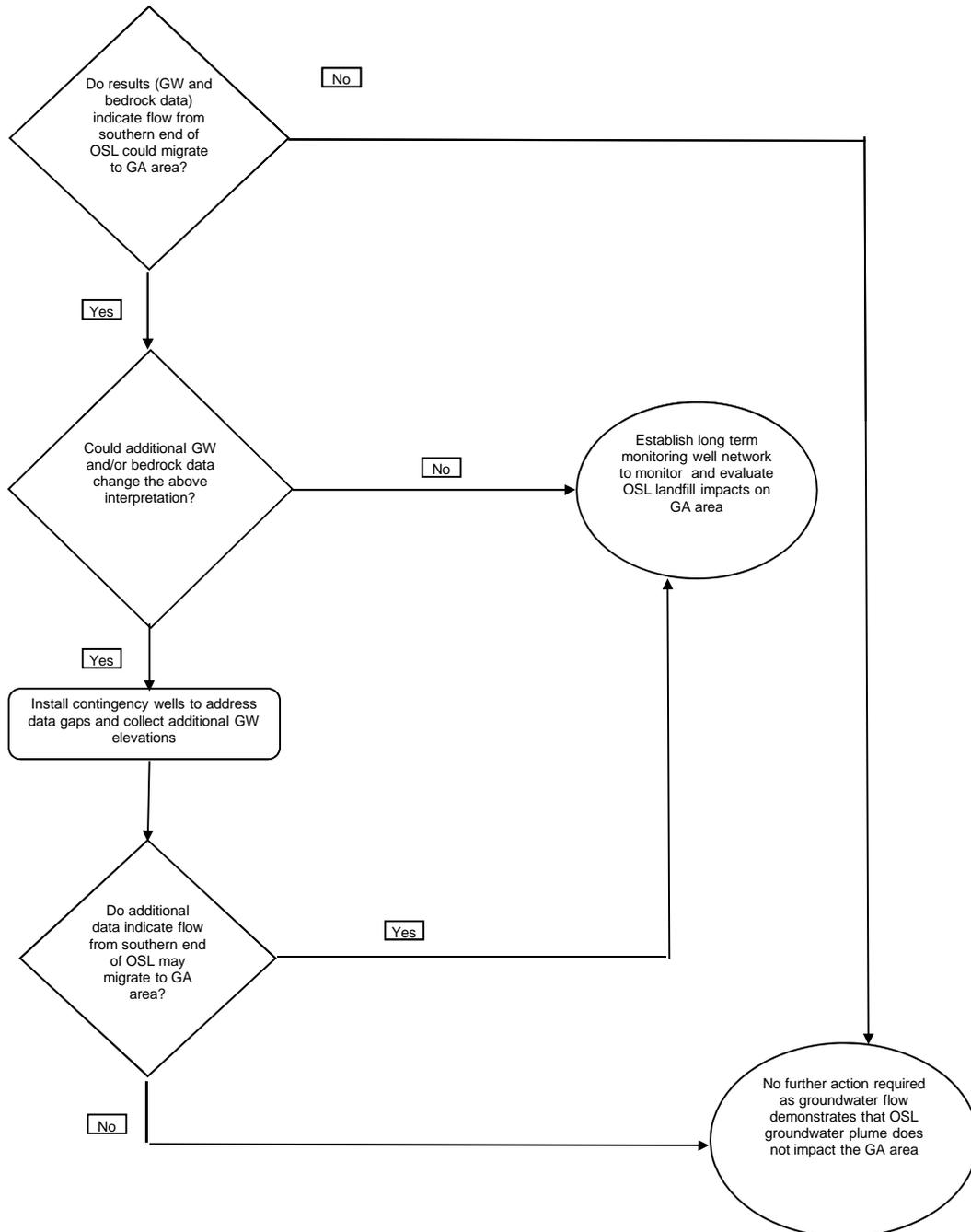
Attachment 3 to OSL SOW

Decision Tree: GA Boundary Hydrogeology Study

**Attachment 3
Statement of Work
Old Southington Landfill Superfund Site
Southington, Connecticut**

Objective: Provide a comprehensive hydraulic study to demonstrate that no groundwater originating from the southern end of OSL migrates into the GA area.

- 1) Develop work plan with contingency locations in case supplemental data are needed
- 2) Install 4 additional borings to top of bedrock. At 3 of 4 locations, install 3 pressure transducers (one in close proximity to the water table, one at an intermediate depth, and one on top of bedrock).
- 3) Collect comprehensive round of groundwater elevations for two quarters
- 4) Assess data and prepare summary report justifying appropriate monitoring locations for southern OSL plume boundary



Attachment 4 to OSL SOW

Project Operations Plan

ATTACHMENT 4
PROJECT OPERATIONS PLAN
REMEDIAL DESIGN/REMEDIAL ACTION STATEMENT OF WORK
OLD SOUTHTON LANDFILL SUPERFUND SITE
April 22, 2009

Before any field activities commence on the Site, Settling Defendants shall submit several site-specific plans to establish procedures to be followed by the Settling Defendants in performing field, laboratory, and analysis work. These site-specific plans include the:

- A. Site Management Plan,
- B. Quality Assurance Project Plan,
- C. Site-Specific Health and Safety Plan, and
- D. Community Relations Support Plan.

These plans shall be combined to form the Site Project Operations Plan (“POP”). The four components of the POP are described in A. through D. herein.

The format and scope of each Plan shall be modified as needed to describe the sampling, analyses, and other activities that are clarified as the Remedial Design/Remedial Action (“RD/RA”) progresses. The U. S. Environmental Protection Agency (“EPA”) may modify the scopes of these activities at any time during the RD/RA at the discretion of EPA in response to the evaluation of RD/RA results, changes in RD/RA requirements, and other developments or circumstances.

A. Site Management Plan (“SMP”)

The SMP shall describe how the Settling Defendants will manage the project to complete the Work required at the Site. The overall objective of the SMP is to provide EPA and the Connecticut Department of Environmental Protection (“CT DEP”) with a written understanding and commitment of how various project aspects such as access, security, contingency procedures, management responsibilities, waste disposal, budgeting, and data handling are being managed by the Settling Defendants. Specific objectives and provisions of the SMP shall include, but are not limited to the following:

1. Provide a map and a list of properties, the property owners, and addresses of owners to whose property access may be required.
2. Clearly indicate the exclusion zone, contamination reduction zone, and clean area for on-site activities, as appropriate.
3. Establish necessary procedures to arrange field activities and to ensure EPA and CT DEP are informed of access-related problems

and issues, and provide sample letters to request access from property owners.

4. Provide for the security of government and private property on the Site.
5. Prevent unauthorized entry to the Site, which might result in exposure of persons to potentially hazardous conditions.
6. Secure access agreements for the Site.
7. Establish the location of a field office for on-site activities.
8. Provide contingency and notification plans for potentially dangerous activities associated with the RD/RA.
9. Monitor airborne contaminants released by Site activities that may affect the local populations.
10. Communicate to EPA, CT DEP, and the public, the organization and management of the RD/RA, including key personnel and their responsibilities.
11. Provide a list of contractors and subcontractors of the Settling Defendants in the RD/RA and description of their activities and roles.
12. Provide for the proper disposal of materials used and wastes generated during the RD/RA (i.e., drill cuttings, extracted groundwater, protective clothing, disposable equipment). These provisions shall be consistent with the off-site disposal aspects of SARA, RCRA, and applicable state laws. The Settling Defendants, or their authorized representative, or another party acceptable to EPA and CT DEP shall be identified as the generator of wastes for the purpose of regulatory or policy compliance.

B. Quality Assurance Project Plan (“QAPP”)

Project activities to be performed during the RD/RA shall comply with the QAPP. The QAPP shall be consistent with Section VIII of the Consent Decree, Quality Assurance, Sampling, and Data Analysis. The QAPP describes the policy, organization, functional activities, and the quality assurance and quality control protocols necessary to achieve the data quality objectives dictated by the intended use of the data. It also includes the Field Sampling Plan (“FSP”) that provides guidance for all fieldwork by defining in detail the sampling and data-gathering

methods to be used on a project. Components required by these two plans are described below.

The QAPP shall be the framework of all anticipated field activities (i.e., sampling objectives, evaluation of existing data, standard operating procedures) and contain specific information on all field work (i.e., sampling locations and rationale, sample numbers and rationale, analyses of samples). The QAPP will be prepared in accordance with the Region I, EPA-New England Quality Assurance Project Plan Program Guidance (April 2005).

1. Assessment/Oversight - This element group details the oversight activities that will be conducted to ensure proper implementation of the project plan. It also describes a) the assessments that will be conducted to identify and correct problems; and b) minimum requirements for QA Reports to management and Final Project Reports.
2. Project Management and Objectives - This element group provides the purpose and background of the project and describes the project quality objectives. It also identifies the roles and responsibilities of project personnel, describes communication procedures, and details the proposed project schedule.
3. Data Validation and Usability - This element group details the review activities that will be performed to ensure that the collected data are scientifically defensible, of known quality, and can support project objectives. All environmental data collected by or for EPA must be reviewed and the limitations of those data determined prior to use.
4. Measurement/Data Acquisition - This element group describes the design and implementation of all measurement systems that will be used to collect data. It details sampling, data generation and documentation procedures. All quality control samples, including their frequency requirements, acceptance criteria, and corrective action procedures, associated with methods/procedures are documented. In addition, when previously collected data will be used, the acceptance criteria for those “secondary” data are described.

During the RD/RA, the QAPP shall be revised as necessary to cover each round of field or laboratory activities. The purpose of the QAPP is to ensure that sampling data collection activities will be comparable to and compatible with previous data collection activities performed at the Site while providing a mechanism for planning and approving field activities. The overall objectives of the QAPP are as follows:

1. to document specific objectives, procedures, and rationale for fieldwork and sample analytical work;
2. to provide a mechanism for planning and approving Site and laboratory activities;
3. to ensure that sampling and analysis activities are necessary and sufficient; and
4. to provide a common point of reference for all Settling Defendants to ensure the comparability and compatibility of all objectives and the sampling and analysis activities.

The following critical elements of the QAPP shall be described for each sample medium (i.e., ground water, surface water, soil, sediment, air, and biota) and for each sampling event:

1. sampling objectives (including but not limited to, engineering parameters, well yields, zone of influence, performance monitoring, demonstration of attainment, and five-year review);
2. data quality objectives, including data uses and the rationale for the selection of analytical levels and detection limits;
3. site background update, including an evaluation of the validity, sufficiency, and sensitivity of existing data;
4. sampling locations and rationale;
5. sampling procedures and rationale and references;
6. numbers of samples and justification;
7. numbers of field blanks, trip blanks, and duplicates;
8. sample media (i.e., ground water, surface water, soil, sediment, air, and buildings, facilities, and structures, including surfaces, structural materials, and residues);
9. sample equipment, containers, minimum sample quantities, sample preservation techniques, maximum holding times;
10. instrumentation and procedures for the calibration and use of portable air, soil-monitoring, or water-monitoring equipment to be used in the field;

11. chemical and physical parameters in the analysis of each sample;
12. chain-of-custody procedures must be clearly stated;
13. procedures to eliminate cross-contamination of samples (such as dedicated equipment);
14. sample types, including collection methods and if field and laboratory analyses will be conducted;
15. laboratory analytical procedures, equipment, and detection limits;
16. equipment decontamination procedures;
17. consistency with the other parts of the Work Plan(s) by having identical objectives, procedures, and justification, or by cross-reference;
18. analysis from each medium for the specific inorganic and organic analytes;
19. analysis of selected background and contaminated ground water samples; and
20. for any limited field investigation (field screening technique), provisions for the collection and laboratory analysis of parallel samples and for the quantitative correlation analysis in which screening results are compared with laboratory results.

The QAPP shall allow for notifying EPA, at a minimum, 3 weeks before field sampling or monitoring activities commence. The QAPP shall also allow split, replicate, or duplicate samples to be taken by EPA (or their contractor personnel) and by other Settling Defendants approved by EPA. At the request of EPA, the Settling Defendants shall provide these samples in appropriately pre-cleaned containers to the government representatives. Identical procedures shall be used to collect the Settling Defendants and the parallel split samples unless otherwise specified by EPA.

Several references should be used to develop the QAPP, as appropriate:

1. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (OSWER Directive 9355.3-01, EPA/540/G-89/004, October 1988);

2. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA Pub. SW-846, Third Edition, or most recent update);
3. EPA Requirements for Quality Assurance Plans, QA/R-5 (EPA/240/B-01/003) March 2001;
4. Region I, EPA-New England Quality Assurance Project Plan Program Guidance, April 2005;
5. Guidance for the Data Quality Objectives Process, QA/G-4 (EPA/600/R-96/055) August 2000;
6. Data Quality Objectives Decision Errors Feasibility Trials (DEFT) Software, QA/G-4D (EPA/240/B-01-007) September 2001);
7. Guidance for Preparing Standard Operating Procedures (SOPs), QA/G-6 (EPA/600/B-07/001) April 2007;
8. Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses, Revised December 1996;
9. Data Quality Assessment: A Reviewer's Guide QA/G-9R (EPA/240/B-06/002) February 2006;
10. Data Quality Assessment: Statistical Tools for Practitioners QA/G-9S (EPA/240/B-06/003) February 2006;
11. EPA Requirements for Quality Management Plans, QA/R-2 (EPA 240/B-01/002) March 2001; and
12. Guidance for Quality Assurance Project Plans, QA/G-5 (EPA/240/R-02/009) December 2002.

Information in a plan other than the QAPP may be cross-referenced clearly in the QAPP provided that all objectives, procedures, and rationales in the documents are consistent, and the reference material fulfills requirements of EPA QA/R-5 and EPA QA/G-5. Examples of how this cross reference might be accomplished can be found in the Guidance for the Data Quality Objectives Process, QA/G-4 (EPA/600/R-96/055) and the Data Quality Objectives Decision Errors Feasibility Trials (DEFT) Software, QA/G-4D (EPA/240/B-01/007). EPA-approved references, or equivalent, or alternative methods approved by EPA shall be used,

and their corresponding EPA-approved guidelines should be applied when they are available and applicable.

Laboratory QA/QC Procedures

The QA/QC procedures and SOPs for any laboratory (both fixed and mobile) used during the RD/RA shall be included in the Settling Defendants' QAPP. When this work is performed by a contractor to a private party, each laboratory performing chemical analyses shall meet the following requirements:

1. be certified or accredited by the State for environmental laboratories, if applicable;
2. be accredited by the National Environmental Laboratory Accreditation Conference (“NELAC”);
3. have a QAPP for the laboratory including all relevant analysis. This plan shall be referenced as part of the Settling Defendants’ QAPP.

Data Validation Procedures

The Settling Defendants are required to certify that a representative portion of the data has been validated by a person independent of the laboratory according to the Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses, Revised December 1996 (amended as necessary to account for the differences between the approved analytical methods for the project and the current Contract Laboratory Program Statements of Work (“CLP SOW”). A data validation reporting package as described in the guidelines cited above must be delivered at the request of the EPA project manager. Approved validation methods shall be contained in the QAPP.

The independent validator shall not be the laboratory conducting the analysis and should be a person with a working knowledge of or prior experience with EPA data validation procedures. The independent validator shall certify that the data has been validated, discrepancies have been resolved if possible, and the appropriate qualifiers have been provided.

Data Package Requirements.

The Settling Defendants must require and keep the complete data package and make it available to EPA on request in order for EPA to conduct an independent validation of the data. The complete data package shall consist of all results, the raw data, and all relevant QA/QC information. The forms contained in the data

validation functional guidelines must be utilized to report the data when applicable. Raw data includes the associated chromatograms and the instrument printouts with area and height peak results. The peaks in all standards and samples must be labeled. The concentration of all standards analyzed with the amount injected must be included. All laboratory tracking information must also be included in the data package. Components of an example data package shall include:

1. a summary of positive results and detection limits of non-detects with all raw data;
2. tabulate surrogate recoveries and QC limits from methods 3500 and 8000 in SW-846 and all validation and sample raw data;
3. tabulated matrix spike/matrix spike duplicate recoveries, relative percent differences, spike concentrations, and QC limits from methods 3500 and 8000 in SW-846 and all validation and sample raw data;
4. associated blanks (trip, equipment, and method with accompanying raw data for tests);
5. tabulated initial and continuing calibration results (concentrations, calibration factors or relative response factors and mean relative response factors, % differences and % relative standard deviations) with accompanying raw data;
6. tabulated retention time windows for each column;
7. a record of the daily analytical scheme (run logbook, instrument logbook), which includes samples, standards, and order of analysis;
8. the chain-of-custody for the sample shipment groups;
9. a narrative summary of method and any problems encountered during extraction or analysis;
10. tabulated sample weights, volumes, and percent solids used in each sample calculation;
11. example calculation for positive values and detection limits; and
12. SW-846 method 3500 and 8000 validation data for all tests.

The forms contained in current CLP SOW, or CLP SOW equivalent forms must be utilized to report the data when applicable. Raw data includes the associated chromatograms and the instrument printouts with area and height peak results. The peaks in all standards and samples must be labeled. The concentration of all standards analyzed with the amount injected must be included. All internal and external laboratory sample tracking information must be included in the data package.

C. Health and Safety Plan (“HSP”)

The objective of the site-specific HSP is to establish the procedures, personnel responsibilities and training necessary to protect the health and safety of all on-site personnel during the RD/RA. The plan shall provide procedures for routine but hazardous field activities and for unexpected Site emergencies.

The site-specific health and safety requirements and procedures in the HSP shall be updated based on an ongoing assessment of Site conditions, including the most current information on each medium. For each field task during the RD/RA, the HSP shall identify:

1. possible problems and hazards and their solutions;
2. environmental surveillance measures;
3. specifications for protective clothing;
4. the appropriate level of respiratory protection;
5. the rationale for selecting that level; and
6. criteria, procedures, and mechanisms for upgrading the level of protection and for suspending activity, if necessary.

The HSP shall also include the delineation of exclusion zones on a map and in the field. The HSP shall describe the on-site person responsible for implementing the HSP for the Settling Defendants representatives at the Site, protective equipment personnel decontamination procedures, and medical surveillance. The following documents and resources shall be consulted:

1. OSHA e-HASP2 Software – Version 2.0, March 2006
(www.osha.gov/dep/etools/ehasp/index.html);

2. Hazardous Waste Operations and Emergency Response (Department of Labor, Occupational Safety and Health Administration, (OSHA) 29 CFR Part 1910.120); and
3. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities: Appendix B (NIOSH/OSHA/EPA 1985).

OSHA regulations at 40 CFR 1910, which describe the routine emergency provisions of a site-specific HSP, and the OSHA e-HASP Software, shall be the primary references used by the Settling Defendants in developing and implementing the HSP.

The measures in the HSP shall be developed and implemented to ensure compliance with all applicable state and Federal occupational health and safety regulations. The HSP may be updated at the request of EPA during the course of the RD/RA, and as necessary.

D. Community Relations Support

The Settling Defendants shall provide community relations support to EPA. This support shall be at the request of EPA and may include:

1. participation in public informational or technical meetings, including the provision of presentations, logistical support, visual aids and equipment;
2. publication and copying of fact sheets or updates; and
3. assistance in placing EPA public notices in print.

The Settling Defendants shall continue ongoing communications and outreach efforts with the community under EPA guidance. EPA will conduct at least one community involvement activity each year during the design phase (public briefing and/or fact sheet) to explain progress with the design and advise community of any sampling or other activity at the site. The Settling Defendants will provide EPA with any respective necessary data and/or other technical documentation. Following approval of the RD, before construction begins, there will be a fact sheet and public meeting to provide information about the final engineering design prior to the initiation of any work. The community needs to be informed about the work, including but not limited to, work to be done, planned work, hours of work, traffic, and monitoring.

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APPENDIX D

DRAFT EASEMENT

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Appendix 1 to
Section 22a-133q-1 of the Regulations of Connecticut State Agencies
Form of Environmental Land Use Restriction for Commissioner's Approval

Instructions: Any environmental land use restriction pursuant to R.C.S.A. section 22a-133q-1 shall be in the following form. The appropriate information shall be inserted in the blanks shown, and the appropriate language shall be selected from the choices shown in brackets, or if none of the choices addresses the specific circumstance, substitute language shall be inserted.

DECLARATION OF ENVIRONMENTAL LAND USE RESTRICTION
AND GRANT OF EASEMENT

This Declaration of environmental land use restriction and Grant of Easement is made this day of , 1995, between ("the Grantor") and the Commissioner of Environmental Protection of the State of Connecticut ("the Grantee").

WITNESSETH:

WHEREAS, Grantor is the owner in fee simple of certain real property (the "Property") known as [Address/Location located in the Town of in County] [designated as Lot , Block on the tax map of the Town of in County], more particularly described on Exhibit A which is attached hereto and made a part hereof; and

WHEREAS, the Grantee has determined that the environmental land use restriction set forth below is consistent with regulations adopted by him pursuant to Section 22a-133k of the Connecticut General Statutes; and

WHEREAS, the Grantee has determined that this environmental land use restriction will effectively protect public health and the environment from the hazards of pollution; and

WHEREAS, the Grantee's written approval of this Environmental land use restriction is contained in the document attached hereto as Exhibit B (the "Decision Document") which is made a part hereof; and

WHEREAS, the property or portion thereof identified in the class A-2 survey ("the Subject Area") which survey is attached hereto as Exhibit C which is made a part hereof, contains pollutants and

WHEREAS, to prevent exposure to or migration of such pollutants and to abate hazards to human health and the environment, and in accordance with the Decision Document, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the Subject Area, and to grant this environmental land use restriction to the Grantee on the terms and conditions set forth below; and

WHEREAS, Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against Grantor and Grantor's successors and assigns;

NOW, THEREFORE, Grantor agrees as follows:

1. Purpose. In accordance with the Decision Document, the purpose of this Environmental land use restriction is to assure [that the Subject Area is not used for residential activities], [that ground water at the Subject Area is not utilized for drinking purposes], [that humans are not exposed to soils at the Subject Area polluted with substances in concentrations exceeding the direct exposure criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive], [that water does not infiltrate soils at the Subject Area polluted with substances in concentrations exceeding the pollutant mobility criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive] [that buildings are not constructed over soils or ground water at the Subject Area polluted with substances in concentrations exceeding the volatilization criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive].

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inclusive], [that the engineered control described in Exhibit D attached hereto is not disturbed and is properly maintained to prevent human exposure to soils at the Subject Area polluted with substances in concentrations exceeding the direct exposure criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive, and/or that water does not infiltrate soils at the Subject Area polluted with substances in concentrations exceeding the pollutant mobility criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive.]

2. **Restrictions Applicable to the Subject Area:** In furtherance of the purposes of this environmental land use restriction, Grantor shall assure that use, occupancy, and activity of and at the Subject Area are restricted as follows:

[A. Use. No residential use of the Subject Area shall be permitted.

B. Ground water. Ground water at the Subject Area shall not be used for drinking or other domestic purposes.

C. Disturbances. Soil at the Subject Area shall not be disturbed in any manner, including without limitation,

D. Construction. No building shall be constructed on the Subject Area.]

3. Except as provided in Paragraph 4 below, no action shall be taken, allowed, suffered, or omitted if such action or omission is reasonably likely to:

i. Create a risk of migration of pollutants or a potential hazard to human health or the environment; or

ii. Result in a disturbance of the structural integrity of any engineering controls designed or utilized at the Property to contain pollutants or limit human exposure to pollutants.

4. **Emergencies.** In the event of an emergency which presents a significant risk to human health or the environment, the application of Paragraph 3 above may be suspended, provided such risk cannot be abated without suspending such Paragraph and the Grantor:

i. Immediately notifies the Grantee of the emergency;

ii. Limits both the extent and duration of the suspension to the minimum reasonably necessary to adequately respond to the emergency;

iii. Implements all measures necessary to limit actual and potential present and future risk to human health and the environment resulting from such suspension; and

iv. Implements a plan approved in writing by the Grantee, on a schedule approved by the Grantee, to ensure that the Subject Area is remediated in accordance with R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive, or restored to its condition prior to such emergency.

5. **Release of Restriction; Alterations of Subject Area.** Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of any of the Subject Area inconsistent with this Environmental land use restriction unless the Grantor has first recorded the Grantee's written approval of such alteration upon the land records of [name of municipality where Subject Area is located]. The Grantee shall not approve any such alteration and shall not release the Property from the provisions of this environmental land use restriction unless the Grantor demonstrates to the Grantee's satisfaction that Grantor has remediated the Subject Area in accordance with R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive.

6. **Grant of Easement to the Grantee.** Grantor hereby grants and conveys to the Grantee, his agents, contractors, and employees, and to any person performing pollution remediation activities under the direction thereof, a non-exclusive easement (the "Easement") over the Subject Area and over such other parts of the Property as are necessary for access to the Subject Area or for carrying out any actions to abate a threat to human health or the environment associated with the Subject Area. Pursuant to this Easement, the Grantee, his agents, contractors, and employees, and any person performing pollution remediation activities under the direction thereof, may enter upon and inspect the Property and perform such investigations and actions as the Grantee deems necessary for any one or more of the following purposes:

i. Ensuring that use, occupancy, and activities of and at the Property are consistent with this

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environmental land use restriction;

ii. Ensuring that any remediation implemented complies with R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive;

iii. Performing any additional investigations or remediation necessary to protect human health and the environment;

[iv. Ensuring the structural integrity of any engineering controls described in this Environmental land use restriction and Grant of Easement and their continuing effectiveness in containing pollutants and limiting human exposure to pollutants.]

7. **Notice and Time of Entry onto Property.** Entry onto the Property by the Grantee pursuant to this Easement shall be upon reasonable notice and at reasonable times, provided that entry shall not be subject to these limitations if the Grantee determines that immediate entry is necessary to protect human health or the environment.

8. **Notice to Lessees and Other Holders of Interests in the Property.** Grantor, or any future holder of any interest in the property, shall cause any lease, grant, or other transfer of any interest in the Property to include a provision expressly requiring the lessee, grantee, or transferee to comply with this environmental land use restriction and Grant of Easement. The failure to include such provision shall not affect the validity or applicability to the Property of this environmental land use restriction and Grant of Easement.

9. **Persons Entitled to Enforce Restrictions.** The restrictions in this environmental land use restriction on use, occupancy, and activity of and at the Property shall be enforceable in accordance with section 22a-133p of the General Statutes.

10. **Severability and Termination.** If any court of competent jurisdiction determines that any provision of this environmental land use restriction or Grant of Easement is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court. In the event that the provision invalidated is of such nature that it cannot be so modified, the provision shall be deemed deleted from this instrument as though it had never been included herein. In either case, the remaining provisions of this instrument shall remain in full force and effect. Further, in either case, the Grantor shall submit a copy of this restriction and of the judgement of the Court to the Grantee in accordance with R.C.S.A. section 22a-133q-1(1). This environmental land use restriction shall be terminated if the Grantee provides notification pursuant to R.C.S.A. section 22a-133q-1(l).

11. **Binding Effect.** All of the terms, covenants and conditions of this environmental land use restriction and grant of easement shall run with the land and shall be binding on the Grantor, the Grantor's successors and assigns, and each owner and any other party entitled to possession or use of the Property during such period of ownership or possession.

12. **Terms Used Herein.** The definitions of terms used herein shall be the same as the definitions contained in sections 22a-133k-1 and 22a-133o-1 of the Regulations of Connecticut State Agencies as such sections existed on the date of execution of this environmental land use restriction..

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Appendix 2 to
Section 22a-133q-1 of the Regulations of Connecticut State Agencies
Form of Environmental Land Use Restriction for Licensed Environmental Professional's Approval

Instructions: Any environmental land use restriction pursuant to R.C.S.A. section 22a-133q-1 shall be in the following form. The appropriate information shall be inserted in the blanks shown, and the appropriate language shall be selected from the choices shown in brackets, or if none of the choices addresses the specific circumstance, substitute language shall be inserted.

**DECLARATION OF ENVIRONMENTAL LAND USE RESTRICTION
AND GRANT OF EASEMENT**

This Declaration of environmental land use restriction and Grant of Easement is made this day of , 1995, between ("the Grantor") and the Commissioner of Environmental Protection of the State of Connecticut ("the Grantee").

WITNESSETH:

WHEREAS, Grantor is the owner in fee simple of certain real property (the "Property") known as [Address/Location located in the Town of in County] [designated as Lot , Block on the tax map of the Town of in County], more particularly described on Exhibit A which is attached hereto and made a part hereof; and

WHEREAS, remediation of the Property has been conducted in accordance with Public Act 95-190; and

WHEREAS, the Licensed Environmental Professional whose signature appears below has determined that the environmental land use restriction set forth below is consistent with regulations adopted by the Commissioner of Environmental Protection pursuant to Section 22a-133k of the Connecticut General Statutes; and

WHEREAS, the Licensed Environmental Professional whose signature appears below has determined that this environmental land use restriction will effectively protect public health and the environment from the hazards of pollution; and

WHEREAS, the written approval of this Environmental land use restriction by the Licensed Environmental Professional whose signature appears below is contained in the document attached hereto as Exhibit B (the "Decision Document") which is made a part hereof; and

WHEREAS, the property or portion thereof identified in the class A-2 survey ("the Subject Area") which survey is attached hereto as Exhibit C which is made a part hereof, contains pollutants; and

WHEREAS, to prevent exposure to or migration of such pollutants and to abate hazards to human health and the environment, and in accordance with the Decision Document, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the Subject Area, and to grant this environmental land use restriction to the Grantee on the terms and conditions set forth below; and

WHEREAS, Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against Grantor and Grantor's successors and assigns;

NOW, THEREFORE, Grantor agrees as follows:

1. Purpose. In accordance with the Decision Document, the purpose of this Environmental land use restriction is to assure [that the Subject Area is not used for residential activities], [that ground

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water at the Subject Area is not utilized for drinking purposes], [that humans are not exposed to soils at the Subject Area polluted with substances in concentrations exceeding the direct exposure criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive], [that water does not infiltrate soils at the Subject Area polluted with substances in concentrations exceeding the pollutant mobility criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive] [that buildings are not constructed over soils or ground water at the Subject Area polluted with substances in concentrations exceeding the volatilization criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive], [that the engineered control described in Exhibit D attached hereto is not disturbed and is properly maintained to prevent human exposure to soils at the Subject Area polluted with substances in concentrations exceeding the direct exposure criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive, and/or that water does not infiltrate soils at the Subject Area polluted with substances in concentrations exceeding the pollutant mobility criteria established in R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive].

2. **Restrictions Applicable to the Subject Area:** In furtherance of the purposes of this environmental land use restriction, Grantor shall assure that use, occupancy, and activity of and at the Subject Area are restricted as follows:

- A. Use. No residential use of the Subject Area shall be permitted.
- B. Ground water. Ground water at the Subject Area shall not be used for drinking or other domestic purposes.
- C. Disturbances. Soil at the Subject Area shall not be disturbed in any manner, including without limitation,
- D. Construction. No building shall be constructed on the Subject Area.]

3. Except as provided in Paragraph 4 below, no action shall be taken, allowed, suffered, or omitted if such action or omission is reasonably likely to:

- i. Cause migration of pollutants or create a potential hazard to human health or the environment; or
- ii. Result in a disturbance of the structural integrity of any engineering controls or other structures designed or utilized at the Property to contain pollutants or limit human exposure to pollutants.

4. **Emergencies.** In the event of an emergency which presents a significant risk to human health or the environment, the application of Paragraph 3 above may be suspended, provided such risk cannot be abated without suspending such Paragraph and the Grantor:

- i. Immediately notifies the Grantee of the emergency;
- ii. Limits both the extent and duration of the suspension to the minimum reasonably necessary to adequately respond to the emergency;
- iii. Implements all measures necessary to limit actual and potential present and future risk to human health and the environment resulting from such suspension; and
- iv. Implements a plan approved in writing by the Grantee, on a schedule approved by the Grantee, to ensure that the Subject Area is remediated in accordance with R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive, or restored to its condition prior to such emergency.

5. **Release of Restriction; Alterations of Subject Area.** Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of any of the Subject Area inconsistent with this Environmental land use restriction unless the Grantor has first recorded the Grantee's written approval of such alteration upon the land records of [name of municipality where Subject Area is located]. The Grantee shall not approve any such alteration and shall not release the Property from the provisions of this environmental land use restriction unless the Grantor demonstrates to the Grantee's satisfaction that Grantor has remediated the Subject Area in accordance with R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive.

6. **Grant of Easement to the Grantee.** Grantor hereby grants and conveys to the Grantee, his agents, contractors, and employees, and to any person performing pollution remediation activities under the direction thereof, a non-exclusive easement (the "Easement") over the Subject Area and over such other parts of the Property as are necessary for access to the Subject Area or for completion

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out any actions to abate a threat to human health or the environment associated with the Subject Area. Pursuant to this Easement, the Grantee, his agents, contractors, and employees, and any person performing pollution remediation activities under the direction thereof, may enter upon and inspect the Property and perform such investigations and actions as the Grantee deems necessary for any one or more of the following purposes:

- I. Ensuring that use, occupancy, and activities of and at the Property are consistent with this environmental land use restriction;
- ii. Ensuring that any remediation implemented complies with R.C.S.A. sections 22a-133k-1 through 22a-133k-3, inclusive;
- iii. Performing any additional investigations or remediation necessary to protect human health and the environment;
- [iv. Ensuring the structural integrity of any engineering controls described in this Environmental land use restriction and Grant of Easement and their continuing effectiveness in containing pollutants and limiting human exposure to pollutants.]

7. **Notice and Time of Entry onto Property.** Entry onto the Property by the Grantee pursuant to this Easement shall be upon reasonable notice and at reasonable times, provided that entry shall not be subject to these limitations if the Grantee determines that immediate entry is necessary to protect human health or the environment.

8. **Notice to Lessees and Other Holders of Interests in the Property.** Grantor, or any future holder of any interest in the property, shall cause any lease, grant, or other transfer of any interest in the Property to include a provision expressly requiring the lessee, grantee, or transferee to comply with this environmental land use restriction and Grant of Easement. The failure to include such provision shall not affect the validity or applicability to the Property of this environmental land use restriction and Grant of Easement.

9. **Persons Entitled to Enforce Restrictions.** The restrictions in this environmental land use restriction on use, occupancy, and activity of and at the Property shall be enforceable in accordance with section 22a-133p of the General Statutes.

10. **Severability and Termination.** If any court of competent jurisdiction determines that any provision of this environmental land use restriction or Grant of Easement is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court. In the event that the provision invalidated is of such nature that it cannot be so modified, the provision shall be deemed deleted from this instrument as though it had never been included herein. In either case, the remaining provisions of this instrument shall remain in full force and effect. Further, in either case, the Grantor shall submit a copy of this restriction and of the judgement of the Court to the Grantee in accordance with R.C.S.A. section 22a-133q-1(1). This environmental land use restriction shall be terminated if the Grantee provides notification pursuant to R.C.S.A. section 22a-133q-1(l).

11. **Binding Effect.** All of the terms, covenants and conditions of this environmental land use restriction and grant of easement shall run with the land and shall be binding on the Grantor, the Grantor's successors and assigns, and each owner and any other party entitled to possession or use of the Property during such period of ownership or possession.

12. **Terms Used Herein.** The definitions of terms used herein shall be the same as the definitions contained in sections 22a-133k-1 and 22a-133o-1 of the Regulations of Connecticut State Agencies as such sections existed on the date of execution of this environmental land use restriction.

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APPENDIX E

TRUST AGREEMENT FOR THE 2009 OSL *DE MINIMIS* TRUST

TRUST AGREEMENT

2009 OSL Site *De Minimis* Trust

Effective as of this 27th day of May, 2009, the Old Southington Landfill Site Group, an unincorporated association of the Performing Parties (as hereinafter defined), (the "PRP Group"), having the member mailing addresses set forth in Paragraph 8 hereof, and R. Thomas Dorsey, having a mailing address of de maximis, inc., 450 Montbrook Lane, Knoxville, Tennessee 37919-5052, (the "Trustee") hereby agree as follows:

WHEREAS, the Old Southington Landfill Superfund Site ("Site") is a former municipal landfill located in Southington, Connecticut, and is now a federal Superfund Site;

WHEREAS, the U.S. Environmental Protection Agency ("EPA") and the State of Connecticut Department of Environmental Protection ("State") have incurred response costs in connection with the Site;

WHEREAS, certain potentially responsible parties ("PRPs") at the Site are entering into a Remedial Design/Remedial Action Consent Decree ("RD/RA Decree") with EPA providing for them to perform certain response actions at the Site pursuant to the RD/RA Decree ("Performing Parties").

WHEREAS, certain PRPs at the Site who do not intend to participate in the RD/RA Decree (the "*De Minimis* Eligible PRPs") wish to pay their allocated shares of response costs incurred and to be incurred in connection with the Site and to resolve certain liabilities to the United States, the State and the Performing Parties;

WHEREAS, the United States, the State and the *De Minimis* Eligible PRPs at the Site (the "*De Minimis* Parties") are entering into a settlement (the "*De Minimis* Settlement") pursuant to CERCLA Section 122(g), 42 U.S.C. §9622(g), which *De Minimis* Settlement, upon entry by the United States District Court for the District of Connecticut (the "Court"), will resolve the *De Minimis* Parties' responsibility for past and future response costs at the Site and their liability to the United States, the State and Performing Parties in connection with the Site to the extent of "Covered Matters" as set forth in the *De Minimis* Settlement;

WHEREAS, the proposed *De Minimis* Settlement will provide for: (1) the *De Minimis* Parties to send their settlement payments to a "qualified settlement fund" trust pending the U.S. District Court for the District of Connecticut's (the "Court") approval of the *De Minimis* Settlement, (2) distribution of the *De Minimis* Parties' payments to the United States, the State and Performing Parties, upon the Court's approval of the *De Minimis* Settlement.

NOW, THEREFORE, the PRP Group and the Trustee agree as follows:

1. Establishment of Trust. The Trustee promptly shall establish a segregated trust account, which shall be known as the "2009 OSL Site *De Minimis* Trust" ("Trust").

2. Declaration of Purpose. The Trust is established and shall be administered by the Trustee for the purpose of holding, investing and disbursing funds collected from the *De Minimis* Parties that enter into the *De Minimis* Settlement among the United States, the State and the *De Minimis* Parties regarding the Site, and to provide financial assurance for the Performance Guarantee pursuant to Paragraphs 45 through 50 of the RD/RA Decree. The United States, the State, and the PRP Group are express beneficiaries of this Trust.

3. Payments.

a. The Trustee shall have no authority or responsibility hereunder to collect any contributions to the Trust from any party and shall have no responsibility hereunder or otherwise with respect to the *De Minimis* Parties' compliance with the terms of the *De Minimis* Settlement.

b. The Trustee shall promptly deposit into the Trust all payments received from *De Minimis* Parties. The Trustee shall maintain a record of the name and address of each *De Minimis* Party making a payment together with the amount and date of the payment.

4. Principal, Interest and Expenses of Trust.

a. All monies deposited in the Trust or earned by the investment or reinvestment of such monies ("Trust Funds") shall remain in the Trust and may not be withdrawn by any person, except to make payments required by Paragraph 7 or to pay the Trustee's fees and expenses and the tax return preparation expenses and tax filing as provided in this paragraph and in Paragraphs 12 and 14.

b. The Trust Funds shall be used by the Trustee to pay taxes incurred by the Trust as well as any tax return preparation expenses, and tax filing fees. The remaining Trust Funds will remain in the Trust and may not be withdrawn by any person, except to make the refunds provided under Paragraph 6 or the payments provided under Paragraph 7.

c. The Trustee may deduct from the Trust Funds such fees and expenses of the Trustee as are described in the Schedule attached hereto, provided that a minimum balance of \$695,000 shall at all times be maintained in the Trust, unless such minimum amount is reduced pursuant to Paragraph 50 of the RD/RA Decree. Any such Trustee fees and expenses not deducted from the Trust Funds shall be billed to the PRP Group.

5. Investment of Trust Funds. The Trustee shall deposit and hold all Trust Funds in an account and shall invest such funds in Western Asset Municipal Money Market Fund (TFMX) unless otherwise directed in writing by the PRP Group. All earnings received from the investment of the Trust Funds shall be credited to, and shall become a part of, the Trust, (and any losses on such investments shall be debited to the Trust). The Trustee shall have no liability for any investment losses, including without limitation any market loss on any investment liquidated prior to maturity in order to make a payment required hereunder.

6. Refunds from the Trust. Promptly upon receipt by the Trustee of a notice from the PRP Group stating that (a) the United States and/or the State have elected not to enter into the *De Minimis* Settlement, and/or (b) the *De Minimis* Settlement has not been approved and entered

by the Court, and/or (c) a De Minimis Party has elected not to enter into the De Minimis Settlement, the Trustee shall refund all contributions previously made to the Trust by the De Minimis Parties or a De Minimis Party, as the case may be. Any such refund shall include the original principal amount of the payment and any earnings from the investment of such amounts, less accrued taxes and expenses paid.

7. Disbursements from the Trust.

a. Within thirty (30) days after receipt of a written notice from the PRP Group, the Trustee shall disburse the Trust Funds in accordance with the instructions of the PRP Group; provided, that at no time shall the Trustee disburse the Trust Funds to the point that the balance of the remaining Trust Funds is less than \$695,000, unless such amount is reduced in accordance with Paragraph 50 of RD/RA Decree. The remaining Trust Funds, as described above, in the amount of \$695,000 plus accumulated interest thereon, shall be kept in the Trust as financial assurance for the Performance Guarantee as set forth in Paragraphs 45 through 50 of the RD/RA Decree, to be invested as described above; provided, however, that the Performing Parties have entered into the RD/RA Consent Decree with the United States providing for the performance of the remedy regarding the Site, failing which, in the event of a Work Takeover by EPA pursuant to Paragraph 103 of the RD/RA Decree, \$695,000 of the remaining Trust Funds shall be disbursed at the direction of the United States pursuant to Paragraph 49 of the RD/RA Decree.

b. All payments under this Paragraph (1) shall be made by check, shall be accompanied by a transmittal letter and shall be delivered to the payee as provided in Paragraph 8, or (2) shall be made to the payee in accordance with wiring instructions provide by the PRP Group.

c. If in accordance with Paragraph 50(c) of the RD/RA Decree, the Performing Parties receive notice from EPA pursuant to Paragraph 51 of the RD/RA Decree that the work has been fully and finally completed, upon written notice of the same by the PRP Group to the Trustee, the Trustee shall distribute the balance of the Trust Funds to the PRP Group in accordance with written instructions from the PRP Group.

8. Notices. All notices, demands, and requests given or required to be given hereunder shall be deemed given if delivered by hand, as evidenced by a signed receipt; delivered by a recognized overnight courier or by express mail, as evidenced by an appropriate receipt; or mailed by registered or certified United States mail, postage prepaid, return receipt requested, and shall be addressed as follows:

As to the PRP Group:

Town of Southington:

Martin T. Booher, Esq.
Dewey & LeBoeuf LLP
Goodwin Square
225 Asylum Street

Hartford, CT 06103
Telephone: (860) 293-3733
Cell: (860) 490-7414
Facsimile: (860) 241-1333
E-mail: mbooyer@dl.com

United Technologies Corporation:

David Platt, Esq.
Murtha Cullina LLP
CityPlace, 29th Floor
185 Asylum Street
Hartford, Connecticut 06103
Telephone: (860) 240-6062
Cell: (860) 463-6584
Facsimile: (860) 240-6150
E-mail: dplatt@murthalaw.com

and to:

Mr. David G. Clymer
United Technologies Corporation - Remediation Group
1 Financial Plaza, M/S 503
Hartford, CT 06101
Telephone: (860) 728-6265
Cell: (860) 930-4254
Facsimile: (860) 353-4152
E-mail: david.clymer@utc.com

Kraft Foods Global Inc.

Christopher P. Davis, Esq.
Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109
Telephone: (617) 570-1354
Cell: (978) 846-2500
Facsimile: (617) 227-8591
E-mail: cdavis@goodwinprocter.com

GenCorp Inc.

William E. Hvidsten, Esq.
GenCorp Inc.
Senior Counsel - Environmental
Dept. 106

P.O. Box 13222
Sacramento, California 95813-6000
[Note: if by hand or overnight delivery:
Highway 50 and Aerojet Road
Rancho Cordora, California 95742]
Telephone: (916) 351-8524
Cell: (916) 717-0172
Facsimile: (916) 355-3603
E-mail: William.Hvidsten@Aerojet.com

Shell Oil Company:

Kim Lesniak, Esq.
Senior Legal Counsel
Shell Oil Company
One Shell Plaza
910 Louisiana Street
Houston, TX 77002
Telephone: (713) 241-5403
Facsimile: (713) 241-4081
E-mail: kim.lesniak@shell.com

and to:

Mr. George Landreth
Remediation Manager - Health, Safety & Environment
Shell Oil Company
Corporate Affairs
PO Box 2463
Houston, Texas 77252-2463
Telephone: (713) 241-5400
Facsimile: (713) 241-7373
E-mail: george.landreth@Shell.Com

As to the Trustee:

R. Thomas Dorsey
de maximis, inc.
450 Montbrook Lane
Knoxville, Tennessee 37919-5052
Telephone: (865) 691-5052
Facsimile: (865) 691-9835
E-mail: tom@demaximis.com

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
Re: DOJ Case No. 90-11-2-420-5

and to:

Chief, Environmental Defense Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 23986
Washington, D.C. 20026-3986
Re: DOJ Case No. 90-11-2-420-5

and to:

James T. Owens III, Director
Office of Site Remediation & Restoration
U.S. Environmental Protection Agency Region 1
One Congress Street, Suite 1100 (HIO)
Boston, Massachusetts 02114-2023

As to EPA:

Almerinda Silva
EPA Project Coordinator
U.S. Environmental Protection Agency Region 1
One Congress Street, Suite 1100 (HBT)
Boston, Massachusetts 02114-2023

and to:

U.S. Environmental Protection Agency
Cincinnati Financial Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

As to the State:

John Looney, Assistant Attorney General
Lori D. DiBella, Assistant Attorney General
Office of the Attorney General

55 Elm Street
Hartford, Connecticut 06106

and to:

Gennady Shteynberg, Project Coordinator
State of Connecticut
Department of Environmental Protection
79 Elm Street
Hartford, Connecticut 06106

9. Concerning the Trustee. The Trustee shall act as a trustee only and not personally; and in respect of any contract, obligation or liability made or incurred by the Trustee in good faith, all persons shall look solely to the assets of the Trust and not to the Trustee personally. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, including in following instructions provided pursuant to the provisions of this Trust Agreement with respect to the payment of monies hereunder. The Trust shall indemnify and hold harmless the Trustee from and against any personal liability by reason of any action or conduct in its official capacity, made in good faith. The Trustee (a) shall not be responsible for the *De Minimis* Settlement, or for determining or compelling compliance therewith, and shall not otherwise be bound thereby; (b) shall be obligated only for the performance of such duties as are expressly and specifically set forth in this Trust Agreement on its part to be performed, and no implied duties or obligations of any kind shall be read into this Trust Agreement against or on the part of the Trustee; (c) may consult counsel satisfactory to it, including in-house counsel, and the opinion or advice of such counsel in any instance shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with the opinion or advice of such counsel. In no event shall the Trustee be liable for indirect, punitive, special or consequential damage or loss (including but not limited to lost profits) whatsoever, even if the Trustee has been informed of the likelihood of such loss or damage and regardless of the form of action.

10. Disputes. In the event a dispute of any kind arises in connection with this Trust Agreement (including any dispute concerning indemnification of the Trustee), the Trustee may, in his/her sole discretion, elect to commence an interpleader action and pay all or any portion of the Trust Funds to the Court and provide a complete accounting of all monies paid into the Trust or paid out of the Trust by the Trustee. In the event of such payment, it is understood that the Trustee will have no further obligation to the *De Minimis* Parties, the State, and the United States and/or the PRP Group with respect to the amount so paid.

11. Inalienability of Interests of Beneficiaries. The interest of each beneficiary in the income or principal of the Trust hereunder shall be free from the control or interference of any creditor and shall not be subject to assignment, attachment, anticipation or alienation.

12. Tax Treatment. It is intended that this Trust be a Qualified Settlement Fund under Internal Revenue Code Section 468B and Reg. 1.468(B) and taxable as a so-called complex trust to which Internal Revenue Code Sections 661, 662 and 663 apply and not as a partnership,

corporation or grantor trust, that is, a trust whose property is deemed to be owned by one or more grantors or other persons pursuant to one or more of the Internal Revenue Code Sections 671 through 678. The Trustee (or a tax administrator engaged by the Trustee at the expense of the Trust) shall file tax returns for the Trust on the assumption that it is a complex trust, unless and until it is determined or the Trustee otherwise has reason to believe the Trust is other than a complex trust. In the event this Trust is determined, or is in the sole judgment of the Trustee at risk of being determined, to be other than a trust which is taxable as such a complex trust and it is prudent to reorganize the Trust so that it shall be such a complex trust, then the Trustee is authorized to execute such amendment to this Trust Agreement, restatements of this Trust Agreement or new trust agreement, instruments of assignment, plans of reorganization and other documents as are appropriate to enable the Trust or a successor to the assets of the Trust to be a trust which is taxable as such a complex trust; provided always, in no event shall the effect of any such reorganization or other action be to change the purposes hereof, divert the assets of this Trust otherwise than for its original purposes set forth herein or enlarge the powers or responsibilities of the Trustee.

13. Accounting. The Trustee shall maintain records of all payments received by the Trustee, and all payments made by the Trustee, as well as the amount of any interest and/or income earned on the Trust Funds, and the amount of any taxes, fees and expenses paid by the Trustee. The Trustee shall issue quarterly accounting statements to the PRP Group, United States, EPA and the State until the Trust is terminated, which accounting statements shall be prepared in accordance with generally accepted accounting procedures.

14. Trustee Compensation. The Trustee shall receive compensation for its services as a Trustee under this Trust Agreement pursuant to the Fee Schedule attached hereto. The Fee Schedule shall be binding upon the Trustee and the PRP Group, and any change to the Fee Schedule shall become effective only upon the written approval of the PRP Group and the Trustee. The PRP Group shall be responsible for the Trustee's compensation.

15. Appointment of Successor Trustee.

a. The Trustee may resign at any time by delivering his/her resignation, in writing, to the United States, such resignation to take effect upon the appointment of a successor Trustee.

b. The PRP Group may remove the Trustee at any time, by delivering notice of such removal in writing to the Trustee, such removal to take effect ten days thereafter, or on such later date that may be specified in the notice.

c. Any vacancy in the office of the Trustee created by bankruptcy, insolvency, death, disability, resignation, removal or succession, as provided herein, shall be filled by an appointment in writing of a successor Trustee.

d. Any successor Trustee shall be appointed by the PRP Group, with approval by EPA.

e. Acceptance of appointment as a successor Trustee shall be in writing and shall be mailed to the PRP Group as provided in Paragraph 8.

f. A successor trustee shall have all of the rights, powers, duties, authority and privileges as if initially named as a Trustee hereunder.

g. A copy of each instrument of resignation, removal, appointment and acceptance of appointment shall be attached to an executed counterpart of this Trust Agreement in the custody of the PRP Group and a copy shall be furnished to the United States.

16. Choice of Law. This Trust Agreement shall be administered, construed, and enforced according to the laws of the State of Connecticut, except to the extent that Federal law shall apply to questions arising under CERCLA or the National Contingency Plan, including any amendment thereto.

17. Consent to Jurisdiction and Services. The Trustee absolutely and irrevocably consents and submits to the jurisdiction of the courts of the State of Connecticut and of any Federal court located in said State in connection with any actions, proceedings or disputes arising out of or relating to this Trust Agreement. In any such action, proceeding or dispute, the Trustee hereby absolutely and irrevocably waives personal service of any summons, complaint, declaration or other process provided that the service thereof is made by certified or registered mail directed to the Trustee at its address in accordance with Paragraph 8.

18. Termination. This Trust Agreement will terminate upon the disbursement of all of the Trust Funds in accordance with the provisions of Paragraph 7.

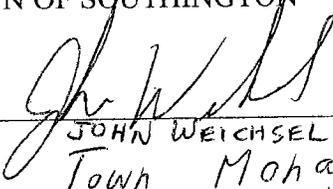
19. Modifications. This Trust Agreement may not be altered or modified without the express written consent of the United States and the PRP Group.

20. Reproduction of Documents. This Trust Agreement and all documents relating hereto, including, without limitation, (a) consents, waivers and modifications which may hereafter be executed, and (b) certificates and other information previously or hereafter furnished, may be reproduced by any means. Any such reproduction shall be admissible in evidence as the original itself in any judicial or administrative proceeding, whether or not the original is in existence and whether or not such reproduction was made by the Trustee in the regular course of business, and any enlargement, facsimile or further reproduction of such reproduction shall likewise be admissible in evidence.

21. Counterparts. This Trust Agreement may be executed in separate counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Trustee hereunder has caused this Declaration to be executed as of the day and year first written above.

TOWN OF SOUTHLINGTON


By: _____
Its: JOHN WEICHSEL
Town Manager

UNITED TECHNOLOGIES CORPORATION

By:
Its:

KRAFT FOODS GLOBAL INC.

By:
Its:

GENCORP INC.

By:
Its:

SHELL OIL COMPANY

By:
Its:

IN WITNESS WHEREOF, the Trustee hereunder has caused this Declaration to be executed as of the day and year first written above.

TOWN OF SOUTHTON

By:
Its:

UNITED TECHNOLOGIES CORPORATION

W. F. Leikin

By: William F. Leikin
Its: Assistant General Counsel

KRAFT FOODS GLOBAL INC.

By:
Its:

GENCORP INC.

By:
Its:

SHELL OIL COMPANY

By:
Its:

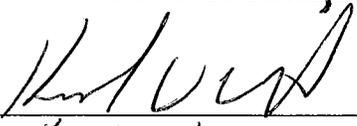
IN WITNESS WHEREOF, the Trustee hereunder has caused this Declaration to be executed as of the day and year first written above.

TOWN OF SOUTHTON

By:
Its:

UNITED TECHNOLOGIES CORPORATION

By:
Its:

KRAFT FOODS GLOBAL, INC. (for itself and on behalf of Rexall Chemical, Sundown Vitamins and Kraft General Foods)


By: Ken Wengert
Its: Director, Environmental & Safety

GENCORP INC.

By:
Its:

SHELL OIL COMPANY

By:
Its:

IN WITNESS WHEREOF, the Trustee hereunder has caused this Declaration to be executed as of the day and year first written above.

TOWN OF SOUTHBINGTON

By:
Its:

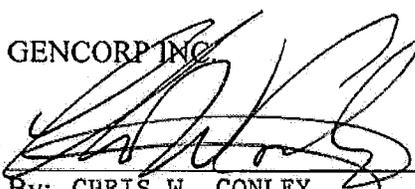
UNITED TECHNOLOGIES CORPORATION

By:
Its:

KRAFT FOODS GLOBAL INC.

By:
Its:

GENCORP INC



By: CHRIS W. CONLEY
Its: Vice President
Environmental, Health & Safety

SHELL OIL COMPANY

By:
Its:

IN WITNESS WHEREOF, the Trustee hereunder has caused this Declaration to be executed as of the day and year first written above.

TOWN OF SOUTHTON

By:
Its:

UNITED TECHNOLOGIES CORPORATION

By:
Its:

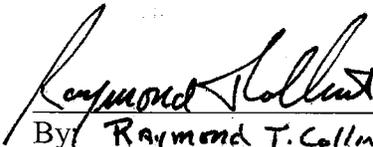
KRAFT FOODS GLOBAL INC.

By:
Its:

GENCORP INC.

By:
Its:

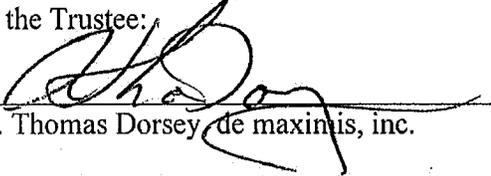
SHELL OIL COMPANY



By: Raymond T. Collins
Its: General Manager OEB, Shell Chemical Co.

2009 OSL Site De Minimis Trust Agreement

WITNESS the execution hereof by the Trustee:

By:  , Trustee
R. Thomas Dorsey, de maximis, inc.

Name of Signatory: R. Thomas Dorsey

Title of Signatory: CFO, de maximis, inc

Telephone Number: 865-691-5052

Facsimile Number: 865-691-9835

Email Address: Tom@demaximis.com

OSL SITE *DE MINIMIS* SETTLEMENT TRUST

SCHEDULE OF FEES

[Insert schedule]