

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF KENTUCKY  
PADUCAH DIVISION

UNITED STATES OF AMERICA and	)	
THE COMMONWEALTH OF KENTUCKY,	)	
	)	
Plaintiffs,	)	
	)	
	)	
	)	
v.	)	Civil Action No.
	)	
	)	
WESTLAKE VINYLs, INC.	)	
AND WESTLAKE PVC CORPORATION,	)	
	)	
Defendants.	)	

CONSENT DECREE

WHEREAS, Plaintiff, the United States of America ("the United States"), on behalf of the United States Environmental Protection Agency ("EPA"), has filed a civil action against Westlake Vinyls, Inc. and Westlake PVC Corporation (collectively "Westlake" or "Defendants") for civil penalties and injunctive relief based on alleged violations of the Clean Air Act ("CAA"), 42 U.S.C. § 7401 et seq., as well as federal regulations promulgated thereunder, including the Hazardous Organic National Emission Standards for Hazardous Air Pollutants (the "HON"), 40 C.F.R. Part 63, Subparts F, G, and H, and the Air Implementation Plan for the Commonwealth of Kentucky approved by EPA pursuant to the CAA (the "Kentucky SIP"); the Clean Water Act (the "CWA"), 33 U.S.C. § 1251 et seq., and applicable laws and regulations implementing the CWA; the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 et seq., 40 C.F.R.

Parts 260-273, and 279 and applicable regulations implementing RCRA; Sections 103(a) and 109(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, ("CERCLA"), 42 U.S.C. § 9603(a) and § 9609(c), and implementing regulations set forth at 40 C.F.R. Part 302; and Sections 304, 313 and 325(b)(3) of the Emergency Planning and Community Right to Know Act of 1986 ("EPCRA"), 42 U.S.C. §§ 11004, 11013 and 1045(b)(3);

WHEREAS, the Commonwealth of Kentucky ("Commonwealth"), on behalf of the Kentucky Department of Environmental Protection, has commenced a civil action against Defendants for civil penalties and injunctive relief based on alleged violations of the CAA and Kentucky air regulations including the Kentucky SIP;

WHEREAS, the complaints filed by the United States and the Commonwealth relate to a chemical manufacturing plant owned and operated by Westlake Vinyls, Inc. in Calvert City, Kentucky (the "Vinyls Plant") and a polyvinyl chloride manufacturing plant owned and operated by Westlake PVC Corporation in Calvert City, Kentucky (the "PVC Plant"), together ("Westlake Facilities" or "Facilities");

WHEREAS, the purpose of this Consent Decree is to ensure compliance with applicable environmental laws and regulations and resolve alleged violations at the Westlake Facilities;

WHEREAS, EPA and the Commonwealth conducted a multimedia inspection of the Westlake facilities on March 5-13, 2002, June 10-13, 2002, and February 23-26, 2004, pursuant to the EPA National Vinyl Chloride Initiative for compliance with RCRA, CAA, CWA, EPCRA, and CERCLA. As a result of those inspections, alleged violations were noted and set forth in a Notice of Violation (the "NOV");

WHEREAS, the Commonwealth concurred in the United States' resolution of the RCRA violations identified during the multimedia inspection, and the Commonwealth has not issued a Notice of Violation for any RCRA violations to Westlake. The Commonwealth is therefore not taking part in any of the provisions of this Consent Decree relating to the remedial measures to address the RCRA violations. Furthermore, the Commonwealth will not take any separate action against Westlake with regards to the RCRA violations identified in the Complaint filed by the United States;

WHEREAS, by agreeing to entry of this Consent Decree, Westlake makes no admission of law or fact with respect to the allegations in the Complaint and denies any non-compliance or violation of any law or regulation identified therein. For the purpose of avoiding litigation among the parties, however, Westlake agrees to the requirements of this Consent Decree;

WHEREAS, Westlake has waived all applicable federal or state requirements of statutory notice of the alleged violations;

WHEREAS, Westlake has voluntarily completed emission reduction projects that have achieved substantial reductions in emissions;

WHEREAS, 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 will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law and with the consent of the Parties, IT IS HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

## I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties, pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 3008(a) of RCRA, 42 U.S.C. § 6928; Section 325(c)(4) of EPCRA, 42 U.S.C. § 11045(b)(3), (c)(4); Sections 309 (b) and (d) and 311(b) of the CWA, 33 U.S.C. §§ 1319(b) & (d) and 1321(b); Sections 103(a) and 113(b) of CERCLA, 42 U.S.C. §§ 9603(a) and 9613(b); and 28 U.S.C. §§ 1331, 1345, and 1355. This Court has supplemental jurisdiction under 28 U.S.C. § 1367, over the claims asserted by the Commonwealth of Kentucky.

2. Venue is proper in the Western District of Kentucky pursuant to 28 U.S.C. §§ 1331, 1345, 1355, 1395(a), and 1391(b) and (c), 42 U.S.C. § 7413(b), 42 U.S.C. § 6928(a) and (g), 33 U.S.C. §§ 1319(b) and 1321(b), 42 U.S.C. §§ 9609(c) and 9613(b), and 42 U.S.C. § 11045(c) (3). The Defendants reside in the District and the claims arose in the District.

3. Pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 3008(a)(2) of RCRA, 42 U.S.C. § 6928(a)(2); and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), notice of the commencement of this action has been given to the Commonwealth.

4. The Complaints, as defined herein, state claims upon which relief may be granted against Westlake.

5. Westlake consents to and shall not challenge entry of this Consent Decree, nor shall Westlake challenge this Court's jurisdiction to enter, enforce, modify, or terminate this Consent Decree.

## II. APPLICABILITY

6. The obligations of this Consent Decree apply to and are binding upon the United

States, the Commonwealth and upon Westlake and any successors, assigns, or other entities or persons otherwise bound by law. Unless a particular provision of this Consent Decree expressly only imposes obligations on Westlake Vinyls, Inc. alone or Westlake PVC Corporation alone, the obligations under this Consent Decree are joint and several.

7. No transfer of ownership or operation of any of the Facilities subject to this Consent Decree, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Westlake of its obligation to ensure that the terms of the Consent Decree are implemented. Before such transfer, if possible, but no later than the closing date of such sale or transfer, Westlake shall provide a copy of this Consent Decree to the proposed transferee and shall provide thirty (30) days written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region 4, EPA Headquarters, the Commonwealth of Kentucky, and the United States Department of Justice, in accordance with this Consent Decree. Any attempt to transfer ownership or operation of either of Westlake Facilities without complying with this Paragraph constitutes a violation of this Consent Decree. To the extent that the cooperation, permission or access from any other property owner, including Air Products and Chemicals, Inc., is necessary for the performance of any obligations of Westlake under this Consent Decree, Westlake shall obtain any such cooperation, permission or access prior to execution of this Consent Decree. In the event that Westlake becomes aware that it is necessary for Westlake to obtain the cooperation, permission or access from any other property owner as Westlake is performing the obligations under this Consent Decree, Westlake shall obtain any such cooperation, permission or access prior to the execution of this Consent Decree in compliance with Section IX (Access).

8. Westlake shall make available a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as to any contractor, other than contractors that only supply materials or equipment, retained to perform work required under this Consent Decree. Westlake shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

9. In any action to enforce this Consent Decree, Westlake shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree, unless such failure constitutes a Force Majeure event as defined by this Consent Decree.

### III. DEFINITIONS

10. Except as otherwise provided in this Consent Decree, definitions for the terms presented herein shall be incorporated from the CAA, RCRA, EPCRA, CERCLA, and CWA, and their corresponding regulations. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

"Air Products" shall mean Air Products and Chemicals, Inc., the owner of a chemical manufacturing facility in Calvert City, Kentucky adjacent to the PVC Plant and the owner of the property on which the PVC Plant is operated.

"CA&O Plant" shall mean the ethylene and chlorine processing area of the Vinyls Plant.

"Consent Decree" shall mean this Decree and the appendices attached hereto. In the event of conflict between this Decree and any appendix, this Decree shall control.

"Corrective Measures" or "CM" shall mean those measures or actions necessary to

control, prevent, or mitigate the release or potential release of hazardous waste or hazardous constituents into the environment. The activities required for a CM are detailed in the CM Scope of Work included as Appendix A.

"Corrective Measures Implementation" or "CMI" shall mean those activities necessary to initiate, complete, monitor, and maintain the remedies the EPA may select to protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment. The activities required for the CMI are detailed in the CMI Scope of Work included as Appendix B.

"Corrective Measures Study" or "CMS" shall mean the investigation and evaluation of potential remedies, which will protect human health and/or the environment from the release of hazardous wastes, or hazardous constituents, into the environment from Lifts 4, 7, 8, and/or 9 as set forth herein. The activities required for the CMS are detailed in the CMS Scope of Work included as Appendix C.

"Data Quality Objectives" shall mean the qualitative or quantitative statements, the application of which is designed to ensure that data of known and appropriate quality are obtained.

"Day" shall mean a calendar day unless expressly stated to be a working day.

"Defendants" or "Westlake" shall mean Westlake Vinyls, Inc. and Westlake PVC Corporation.

"EDC" shall mean ethylene dichloride.

"Effective Date" shall mean the date of entry of this Consent Decree by the Court.

"EPA" shall mean the United States Environmental Protection Agency and any of its

successor departments or agencies.

"Facilities" shall mean the PVC Plant and the Vinyls Plant.

"Hazardous Constituents" shall mean those constituents listed in Appendix VIII to 40 C.F.R. Part 261 or any constituent identified in Appendix IX to 40 C.F.R. Part 264.

"Hazardous Waste" shall mean hazardous waste as defined in Section 1004(5) of RCRA or 40 C.F.R. § 260.10. This term includes hazardous constituents as defined above.

"HON" shall mean the Hazardous Organic NESHAP codified at 40 C.F.R. § 63, Subparts F, G, and H.

"Interest" shall mean the statutory rate applicable to judgments, 28 U.S.C. § 1961.

"Interim measures" or "IM" shall mean those actions, which can be initiated in advance of implementation of the final corrective action for a facility, to achieve the goal of stabilization. Interim Measures initiate cleanup at a facility and control or eliminate the release of hazardous wastes or hazardous constituents at or from the facility. Interim measures may be sufficient to constitute corrective measures. The activities required for the IM are detailed in the IM Scope of Work included as Appendix D.

"Kentucky" or "Commonwealth" shall mean the Commonwealth of Kentucky.

"Kentucky Complaint" shall mean the complaint filed by the Commonwealth of Kentucky in connection with its motion to intervene in the civil action filed by the United States.

"Kentucky Cabinet" shall mean the Commonwealth of Kentucky's Energy and Environment Cabinet.

"KDEP" shall mean Kentucky Department for Environmental Protection, a Department of the Kentucky Cabinet, including its divisions.



"KDAQ" shall mean the Kentucky Division for Air Quality, a division of KYDEP.

"Kentucky SIP" shall mean the State Implementation Plan for the Commonwealth of Kentucky approved by EPA pursuant to the CAA.

"LDAR" shall mean the Leak Detection and Repair requirements set forth in 40 C.F.R. §§ 61 and 63.

"NOV" shall mean the Notice of Violation in connection with EPA's multimedia inspections of the Westlake facilities on March 5-13, 2002, June 10-13, 2002, and February 23-26, 2004, pursuant to the EPA National Vinyl Chloride Initiative for compliance with RCRA, CAA, CWA, EPCRA, and CERCLA.

"NPDES Permit" shall mean the National Pollutant Discharge Elimination System (NPDES) permit number KY0003484, issued pursuant to the CWA for discharges from Westlake Vinyls Plant, as it may from time to time be amended or renewed.

"Oxy Incinerator" shall mean the incinerator that receives emissions from the oxychlorination reactors (also known as the absorber vent) and the product column at the Vinyls Plant.

"Oxy Absorber" shall mean the system that processes the vent streams from the A Oxychlorination Reactor, the B Oxychlorination Reactor, the No. 4 Oxychlorination Reactor and the Catoxid Reactor to recover EDC contained in the vent streams at the Vinyls Plant.

"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 Commonwealth of Kentucky, and Defendants.

"Primary Incinerator" shall mean the incinerator that receives and treats vent streams from

the majority of the continuous process vents at the VCM Plant.

"PVC Plant" shall mean the polyvinyl chloride plant operated by Westlake PVC Corporation in Calvert City, Kentucky on property that is owned by Air Products, and is more fully described in Appendix E.

"Receptors" shall mean those humans, animals or plants and their habitats, which are or may be affected by releases of hazardous waste or hazardous constituents from or at the PVC Plant.

"RCRA Facility Investigation" or "RFI" shall mean the investigation and characterization of the source(s) of contamination and the nature, extent, direction, rate, movement, and concentration of the source(s) of contamination and releases of hazardous waste, including hazardous constituents that have been or are likely to be released into the environment from a facility. The activities required for the RFI are detailed in the RFI Scope of Work included as Appendix F.

"RCRA Corrective Measures Work" shall mean the work activities set forth in each CMS Report, including any necessary long term work, such as operation and maintenance and monitoring, any "Interim Measures/Stabilization" that may be required, the "Corrective Measures Implementation" under Section V (Compliance) including as required by the Scope of Works in Appendices A-I to perform the Corrective Measures and any Additional Work.

"Roll-off container" shall mean the waste containers that are located or used in connection with disposal of solid wastes containing benzene from the cracking furnaces in the Ethylene Plant and the Ethylene Wastewater Treatment system.

"Scope of Work" or "SOW" shall mean the outline or statement of work that Westlake

must use to develop all Workplans and reports required by this Consent Decree as set forth in this Consent Decree and its Appendices. All SOW Appendices and modifications or amendments thereto whether approved by EPA before the date of this Consent Decree, or approved by the Commonwealth on and after the date of this Consent Decree, shall be incorporated into this Consent Decree and shall be an enforceable part of this Consent Decree.

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

"Solid Waste Management Unit" or "SWMU" shall mean any discernible unit at which solid wastes have been placed at any time irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area where solid wastes have been routinely and systematically released.

"SPCC Plans" shall mean the Spill Prevention, Control and Countermeasures Plans for Westlake PVC and Westlake Vinyls Plants in effect as of the date of lodging of this Consent Decree.

"SSMP" shall mean the Startup, Shutdown, and Malfunction Plan described in 40 C.F.R. § 63.6(e)(3) and incorporated into the HON.

"United States" shall mean the United States of America, acting on behalf of EPA.

"United States Complaint" shall mean the complaint filed by the United States, on behalf of EPA.

"United States and Kentucky Complaints" or "Complaints" shall mean the joint complaint filed by both the United States and the Commonwealth of Kentucky, or the complaints of each if filed separately.

"Vinyls Plant" or "VCM Plant" shall mean the vinyl chloride monomer processing plant

that is part of Westlake Vinyls, Inc., and which produces vinyl chloride monomer by thermal decomposition of 1,2 dichloroethane. The Vinyls Plant is divided into two basic plants: (1) the "EDC/VCM Units," where ethylene dichloride ("EDC") and vinyl chloride monomer ("VCM") are manufactured and (2) the "CA&O Plant," which is subdivided into the "Ethylene Plant" and the "Chlorine Plant."

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

"Workplan" shall mean the detailed plans prepared by Westlake to satisfy the requirements of the corresponding Scope of Work. The requirements for each Workplan are set forth in the Consent Decree and presented in Appendices A, B, C, D, E, F, G, H, and I.

#### IV. CIVIL PENALTY

11. Within thirty (30) days after the Effective Date of this Consent Decree, Westlake shall pay the total sum of \$800,000.00 as a civil penalty to the United States and the Commonwealth, as set forth below.

12. Westlake shall pay \$687,500.00 of the civil penalty to the United States, together with interest accruing from the date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961 as of the date of lodging by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions to be provided to Westlake, following lodging of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney's Office for the Western District of Kentucky. At the time of payment,

Westlake shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States, et al. v. Westlake Vinyls, et al., and shall reference the civil action number and DOJ case number 90-5-2-1-08097 to the United States in accordance with the Notices Section of this Consent Decree; by email to [acctsreceivable.CINWD@epa.gov](mailto:acctsreceivable.CINWD@epa.gov); and to:

EPA Cincinnati Finance Office  
26 Martin Luther King Drive  
Cincinnati, Ohio 45268

13. Westlake shall pay \$12,500.00 of the civil penalty pursuant to instructions received from the United States to the Oil Spill Liability Trust Fund pursuant to 33 U.S.C. § 1321(s), 4304 of Pub. L. No. 101-380, and 26 U.S.C. § 9509(b)(8). At the time of payment, Westlake shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States, et al. v. Westlake Vinyls, et al., and shall reference the civil action number and DOJ case number 90-5-2-1-08097 to the United States in accordance with Notices Section of this Consent Decree; by email to [acctsreceivable.CINWD@epa.gov](mailto:acctsreceivable.CINWD@epa.gov); and to:

EPA Cincinnati Finance Office  
26 Martin Luther King Drive  
Cincinnati, Ohio 45268

and to the United States and the Coast Guard.

14. Within thirty (30) days after the Effective Date, Westlake shall pay the sum of \$100,000.00 as a civil penalty to the Commonwealth, together with interest accruing from the

date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961 as of the date of lodging. Such payment shall be made by cashier's check, certified check, or money order, made payable to the Kentucky State Treasurer, and sent to: Director, Division of Enforcement, 300 Fair Oaks, Frankfort, Kentucky 40601, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States, et. al. v. Westlake Vinyls, et. al. and shall reference the civil action number of the Consent Decree.

15. Westlake shall not deduct any civil penalty paid under this Section in calculating its federal or state income tax.

#### V. COMPLIANCE REQUIREMENTS

16. Approval of Deliverables. All documents required to be submitted for approval under this Consent Decree shall be submitted to EPA and the Commonwealth pursuant to the Notices Section of this Consent Decree. After review of any Workplan, report, or other item that is required to be submitted pursuant to this Consent Decree to EPA for approval, EPA, after consultation with the Commonwealth, where appropriate, shall in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission.

17. If the submission is approved pursuant to the above paragraph, Westlake shall take all actions required by the Workplan, report, or other document, in accordance with the schedules and requirements of the Workplan, report, or other document, as approved. If the submission is conditionally approved or approved only in part pursuant to the above paragraph, Westlake shall, upon written direction of EPA, after consultation with the Commonwealth where

appropriate, take all actions required by the approved Workplan, report, or other item that EPA, after consultation with the Commonwealth where appropriate, determines are technically severable from any disapproved portions, subject to Westlake's right to dispute only the specified conditions or the disapproved portions, under the Dispute Resolution provisions of this Consent Decree.

18. If the submission is disapproved in whole or in part, Westlake shall, within forty-five (45) days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the Workplan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Westlake shall proceed in accordance with the preceding Paragraph.

19. Any stipulated penalties applicable to the original submission, as provided in the Stipulated Penalties provisions of this Consent Decree, shall accrue during the forty-five (45) day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that if the original submission was so deficient as to constitute a material breach of Westlake's obligations under this Consent Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission. Any determination by EPA that a resubmission is materially deficient is subject to Westlake's right to initiate dispute resolution under the Dispute Resolution provisions of this Consent Decree.

20. If a resubmitted Workplan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA, after consultation with the Commonwealth where appropriate, may again require Westlake to correct any deficiencies, in accordance with the preceding Paragraphs,

or may itself correct any deficiencies, subject to Westlake's right to initiate dispute resolution under the Dispute Resolution provisions of this Consent Decree and the right of EPA and the Commonwealth to seek stipulated penalties as provided in the preceding Paragraphs.

21. Westlake's failure to complete or implement the requirements of Section V (Compliance Requirements) of this Consent Decree which are identified in Section X shall be subject to stipulated penalties pursuant to Section X (Stipulated Penalties) of this Consent Decree.

22. Compliance with Permits. Where any compliance obligation under this Section requires Westlake to obtain a federal, state, or local permit or approval, Westlake shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Westlake may seek relief under the Force Majeure Provisions of this Consent Decree for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Westlake has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

23. Proposed Contractor/Consultant. All work performed under RCRA, 42 U.S.C. § 6901 et seq., pursuant to this Consent Decree shall be under the direction and supervision of a professional engineer, hydrologist, geologist, or environmental scientist, with expertise in hazardous waste cleanup. Westlake's contractor or consultant shall have the technical expertise sufficient to adequately perform all aspects of the work for which it is responsible. Within fourteen (14) days of the Effective Date, Westlake shall notify EPA and the Commonwealth as required in Notices Section of this Consent Decree in writing of the name, title, and



qualifications of the engineer, hydrologist, geologist, or environmental scientist and of any contractors or consultants and their personnel to be used in carrying out the terms of this Consent Decree. EPA reserves the right to disapprove Westlake's contractor and/or consultant. If EPA disapproves a contractor or consultant, then Westlake must, within forty-five (45) days of receipt from EPA of written notice of disapproval, notify EPA, in writing, of the name, title, and qualifications of any replacement.

24. Additional Work. For all work performed pursuant to the RCRA Injunctive Relief provisions of this Consent Decree, EPA may determine, or Westlake may propose that certain tasks, including investigatory work, engineering evaluation, or procedure/methodology modifications, are necessary in addition to or in lieu of the tasks included in any EPA-approved Workplan, when such additional work is necessary to meet the requirements in the Consent Decree. EPA may determine that Westlake shall perform the additional work and EPA will specify in writing the basis for its determination that the additional work is necessary. Within sixty (60) days after the receipt of such determination, Westlake shall have the opportunity to meet or confer with EPA to discuss the additional work. If required by EPA, Westlake shall submit for EPA approval a Workplan for the additional work. Such Workplan shall be submitted within sixty (60) days of receipt of EPA's determination that additional work is necessary, or according to an alternative schedule established by EPA. Upon approval of a Workplan, Westlake shall implement it in accordance with the schedule and provisions contained therein. Any determination by EPA under this Paragraph shall be subject to review under the Dispute Resolution provisions of this Consent Decree.

CLEAN AIR ACT INJUNCTIVE RELIEF

25. Benzene Waste Operations NESAH

a. Westlake Vinyls Plant Revised Benzene Reports. Within ninety (90) days after the Effective Date of this Consent Decree, Westlake shall review the most recent Total Annual Benzene (TAB) report submitted by the Vinyls Plant to EPA and the Commonwealth to determine if the TAB report is in compliance with the Benzene Waste Operations NESHAP, including the 6 Mg per year compliance option. Westlake shall submit its findings in a Benzene Waste Operations NESHAP Compliance Review and Verification Report ("BWON Compliance Review and Verification Report") for EPA review and approval pursuant to this Consent Decree. The BWON Compliance Review and Verification Report shall include the information set forth below. Westlake's BWON Compliance Review and Verification Report shall be deemed a TAB report for purposes of 40 C.F.R. Part 61 Subpart FF reporting to EPA

b. BWON Compliance Review and Verification Report shall include, but not be limited to, the following information:

1. an identification of each waste stream that is required to be included in the Vinyls Plant's TAB report (e.g., tank water draws, other sample wastes, maintenance wastes, and turnaround wastes);
2. a review and identification of the calculations and/or measurements used to determine the flows of each waste stream for the purpose of ensuring the accuracy of the annual waste quantity for each waste stream;
3. an identification of the benzene concentration in each waste stream, including sampling for benzene concentration at no less than five (5) waste streams

performed according to the requirements of 40 C.F.R. § 61.355(c)(1) and (3);

4. an identification of whether or not the stream is controlled consistent with the requirements of 40 C.F.R. Part 61 Subpart FF; and

5. an identification of any existing noncompliance with the requirements of 40 C.F.R. Part 61 Subpart FF.

26.. Leak Detection and Elimination Plans Within thirty (30) days after the Effective Date, Westlake shall submit to EPA and the Commonwealth for review revised Leak Detection and Elimination Plans for the PVC Plant and for the Vinyls Plant. Each Leak Detection and Elimination Plan will consist of two sections, an Leak Detection Plan and an Area Monitoring Plan, which include the changes listed below.

a. PVC Plant

1. Leak Detection Plan. Westlake shall implement and comply with all the provisions of 40 C.F.R. Part 61 Subpart V for all required components in vinyl chloride service in the PVC Plant, the leak detection plan shall include, but not limited to, the following:

i. a description of the procedure for maintaining an accurate inventory of each of the components listed in 40 C.F.R. Part 61 Subpart V that are in vinyl chloride service;

ii. an inventory of all unsafe-to-monitor components in vinyl chloride service, with an explanation as to why they are unsafe-to-monitor and a written plan to monitor the components, or a statement that there are no such components;

iii. an inventory of all difficult-to-monitor components in vinyl chloride service, with an explanation as to why the components are difficult-to-monitor and a

written plan for monitoring the components, or a statement that there are no such components;

iv. an inventory of all pumps equipped with a dual mechanical seal system, and a description of how the barrier fluid system meets the requirements of 40 C.F.R. Part 61 Subpart V; and

v. a description of the procedure to ensure that as components are added to or removed from vinyl chloride service, Westlake shall amend the inventory of components accordingly, and retain records of such changes for five (5) years; and

2. Area Monitoring Plan. Westlake shall describe the vinyl chloride monitoring system for the PVC Plant in accordance with the vinyl chloride NESHAP, 40 C.F.R. § 61.65(b)(8)(i).

i. Within thirty (30) days of EPA's approval of the Area Monitoring Plans, Westlake shall operate and maintain the area monitors for vinyl chloride at the PVC Plant pursuant to the Area Monitoring Plans, as required under the vinyl chloride NESHAP, 40 C.F.R. Part 61 Subpart F, and shall maintain records of the monitoring as required by 40 C.F.R. § 61.65(b)(8)(i). The Area Monitoring Plan (which may be modified upon EPA approval) shall include a requirement that a leak detection technician use a hand held device to identify the leak location if an area monitor point:

a. has three consecutive readings above 5 ppm or one reading above 10 ppm on any area monitoring point, except for the area monitoring points located in the PVC Reactor Building (as of the Effective Date there are 21 such monitoring points); or

b. has three consecutive readings above 10 ppm or one

reading above 15 ppm on the area monitoring points associated with the PVC Reactor Building:

The 21 monitoring points for the PVC Reactor Building are: 6-4, 3-5, 6-2, 4-4, 3-4, 6-9, 3-6, and 4-6 located in the Reactor Building Third Floor, and 6-3, 4-2, 3-3, 6-1, 3-2, 4-3, 6-11, 3-1 located in the Reactor Building Second Floor; 3-7 in the Booster Compressor area; 6-5 and 6-6 in the Blowdown Tank Area Top Floor; and 6-7 and 6-8 in the Blowdown Tank Area Bottom Floor .

ii. Westlake shall review the monitoring records developed pursuant to subparagraph above at least one time per shift, and when an area monitoring alarm is sounded. The purpose of such review is to enable Westlake to detect releases from the process equipment at the PVC Plant, and to ensure that an employee is deployed to begin monitoring for the leak(s) in the process area within fifteen (15) minutes after an area monitor point has three consecutive readings above the specified threshold or one reading above the specified threshold, and to ensure that an attempt to repair all leaks in the process area is begun within sixty (60) minutes after identifying the source of the release (provided that the required repairs do not constitute a safety hazard), so as to prevent continuing releases from the process equipment. Westlake shall document its review of the monitoring records, the equipment repaired in response to such review, and the time period in which the repairs were made ("Monitoring Review Documentation"). Westlake shall incorporate this monitoring process into its LDAR program and maintain the Monitoring Review Documentation for the period of time required by the Leak Detection and Elimination Plan.

b. Vinyls Plant

1. Leak Detection Plan. Westlake shall implement and comply with all the requirements of 40 C.F.R. Part 63 Subpart H or Subpart UU, as applicable, for all

components in organic hazardous air pollutant (HAP) service, the leak detection plan should include, but not limited to, the following:

- i. a description of the procedure for maintaining an accurate inventory of each of the components listed in 40 C.F.R. Part 63 Subpart H, or Subpart UU, as applicable that are in organic HAP service;
- ii. an inventory of all the unsafe-to-monitor components in organic HAP service, with an explanation as to why they are unsafe-to-monitor and a written plan to monitor the components, or a statement that there are no such components;
- iii. an inventory of all the difficult-to-monitor components in organic HAP service, with an explanation as to why the components are difficult-to-monitor and a written plan for monitoring the components, or a statement that there are no such components;
- iv. an inventory of all pumps equipped with a dual mechanical seal system, and a description of how the barrier fluid system meets the requirements of 40 C.F.R. Part 63 Subpart H or Subpart UU, as applicable; and
- v. a description of the procedure to ensure that as components are added to or removed from organic HAP service, Westlake shall amend the inventory of components accordingly, and retain records of such changes for five (5) years.

2. Area Monitoring Plan. Westlake shall describe the vinyl chloride monitoring system for the Vinyls Plant in accordance with the vinyl chloride NESHAP, 40 C.F.R. § 61.65(b)(8)(i).

- i. Within thirty (30) days of EPA's approval of the Area Monitoring Plans, Westlake shall operate and maintain the area monitors for vinyl chloride at the

Vinyls Plant pursuant to the Area Monitoring Plans, as required under the vinyl chloride NESHAP, 40 C.F.R. Part 61 Subpart F, and shall maintain records of the monitoring as required by 40 C.F.R. § 61.65(b)(8)(i). The Area Monitoring Plan shall include a requirement that a leak detection operator use a hand held device to identify the leak location if an area monitor point: has three consecutive readings above 5 ppm or one reading above 10 ppm. However Westlake may specify more stringent limits, lower limits, of three consecutive readings less than 5 ppm and one reading less than 10 ppm for certain process areas.

ii. Westlake shall review the monitoring records developed pursuant to subparagraph above at least one time per shift, and when an area monitoring alarm is sounded. The purpose of such review is to enable Westlake to detect releases from the process equipment at the Vinyls Plant, and to ensure that an employee is deployed to begin monitoring for the leak(s) in the process area within fifteen (15) minutes after an area monitor point has three consecutive readings above the specified threshold or one reading above the specified threshold, and to ensure that an attempt to repair all leaks in the process area is begun within sixty (60) minutes after identifying the source of the release (provided that the required repairs do not constitute a safety hazard), so as to prevent continuing releases from the process equipment. Westlake shall document its review of the monitoring records, the equipment repaired in response to such review, and the time period in which the repairs were made ("Monitoring Review Documentation"). Westlake shall incorporate this monitoring process into its LDAR program and maintain the Monitoring Review Documentation for the period of time required by the Leak Detection and Elimination Plan.

27. Enhanced LDAR Program at Westlake's Vinyl Plant and PVC Plant

For a period of three (3) years after the Effective Date, Westlake shall implement the enhanced LDAR program set forth below, unless other permit(s) or federal, state or local laws or regulations require Westlake to meet more stringent standards, including more frequent monitoring, at the Vinyls Plant and the PVC Plant. If more frequent monitoring is required by federal, state, or local regulations, Westlake shall comply with such obligations.

a. Written Enhanced LDAR Program. Within one hundred eighty (180) days after the Effective Date, Westlake shall submit to EPA and the Commonwealth for review and approval, pursuant to this Consent Decree, a written enhanced LDAR program for the Vinyls Plant and for the PVC Plant. Within thirty (30) days of EPA approval, Westlake shall implement the approved enhanced LDAR program. The written program shall include at a minimum:

1. an identification of all equipment at the PVC Plant that is in vinyl chloride service as required by 40 C.F.R. Part 61 Subpart V, and all equipment at the Vinyls Plant that is in organic HAP service required by 40 C.F.R. Part 63 Subpart H or Subpart UU, as applicable;
2. a set of leak rate goals that will be a target for achievement on each such equipment;
3. procedures for identifying leaking equipment within process units;
4. procedures for repairing and keeping track of leaking equipment;
5. procedures for identifying and including new equipment in the enhanced LDAR program; and
6. a designation of the personnel (employees or contractors) who will



perform the enhanced LDAR monitoring (referred to as the LDAR Personnel) and a designation of Westlake management personnel who will be responsible for overseeing the employees or contractors who will implement the enhanced LDAR program (referred to as the LDAR Manager(s)).

b. Training of Westlake Vinyls Plant and PVC Plant LDAR Personnel.

Within thirty (30) days of EPA's approval of the written enhanced LDAR program as outlined above and for the effective period of the enhanced LDAR program, those individuals identified as the LDAR Personnel and the LDAR Manager(s) shall undergo training sufficient to ensure compliance with the terms of the enhanced LDAR program. Thereafter, these individuals shall take annual LDAR training. All such training shall be documented by Westlake. For all other operations and maintenance personnel, including newly hired employees at the Facilities, Westlake shall provide and require completion of a LDAR training program that includes instruction on aspects of LDAR that are relevant to each person's duties within sixty (60) days of EPA's approval of the written enhanced LDAR program as outlined above. Westlake shall require all operations and maintenance personnel to take a LDAR "Refresher" training course annually. All training described in this subparagraph shall be documented by Westlake.

c. Monitoring Procedures: Method 21. Westlake shall use EPA Reference Method 21 for all enhanced LDAR monitoring at the PVC Plant and the Vinyls Plant as set forth below:

1. Westlake shall monitor all pumps regulated under 40 C.F.R. Part 63 at the Vinyls Plant and under 40 CFR Part 61 at the PVC Plant on a monthly basis; and
2. Westlake shall monitor all valves regulated under 40 C.F.R. Part

63 at the Vinyls Plant on a quarterly basis, and shall monitor all valves regulated under 40 C.F.R. Part 61 Subpart V at the PVC Plant on a quarterly basis.

d. Technician Review of LDAR Monitoring Data at the Vinyls Plant and PVC Plant. Within thirty (30) days of EPA's approval of the written enhanced LDAR program as outlined above, Westlake shall develop and implement a procedure that requires the technician who performed the Method 21 sampling required by the above subparagraph to review the recorded sampling data for any obvious inconsistencies between what the technician observed during the sampling and what is actually recorded before submitting the data to Westlake's LDAR Manager.

e. Staff Notification to Management of Leaks at the Vinyls Plant and the PVC Plant. Within thirty (30) days of EPA's approval of the written enhanced LDAR program as outlined above, Westlake shall implement a system whereby designated LDAR Personnel will be required to provide the designated Unit Supervisor at the PVC Plant and the Vinyls Plant with a report of all leaks during quarterly monitoring required by 40 C.F.R. Part 61 or Part 63.

f. Repairs. Westlake shall identify and report any "leak" for the listed valves and pumps during each relevant period as follows, with the understanding that the term "leak" shall mean the definition set forth in the applicable regulations unless otherwise defined in this Consent Decree:

1. valves at the EDC/VCM Unit at the Vinyls Plant that have a reading of greater than 200 ppm;
2. valves at the CA&O Ethylene Unit at the Vinyls Plant that have a reading of greater than 200 ppm;

3. valves at the PVC Plant that have a reading of greater than 500 ppm; and

4. pumps at the Vinyls Plant's CA&O Ethylene Unit, EDC/VCM Unit, and at the PVC Plant that have a reading greater than 500 ppm.

g. Westlake shall make a first attempt to repair the leaking valves and pumps that meet the above criteria within five (5) calendar days of identification of each. Within fifteen (15) days of identifying each leaking valve or pump that meets the above criteria, Westlake shall make final repairs to the leaks or place the component on the delay of repair list. Further, Westlake shall, remonitor all valves and pumps within sixty (60) minutes after final repairs to ensure the pumps and valves have been repaired and are no longer leaking.

h. Delay of Repair List. Before a staff level employee may place equipment on the delay for repair list, Westlake shall require a designated LDAR Manager to confirm that the valve or pump is eligible for inclusion on the delay of repair list by placing his/her initials on the list beside the valve or pump that is named on the delay for repair list. The designated LDAR Manager shall ensure that any valve or pump that is placed on the delay of repair list is placed in Westlake's regular LDAR monitoring. For valves, other than control valves, that are leaking at a rate of 500 ppm or greater, and which cannot be repaired using other techniques, Westlake shall use the "drill and tap" repair method for the leaking valve, before placing the valve on the delay of repair list, unless Westlake can demonstrate that there is a safety, mechanical, or major environmental concern posed by repairing the leak in that manner. If such valves are not repaired within fifteen (15) days by other means, Westlake shall make the first "drill and tap" repair attempt within fifteen (15) days after the leak was identified, and shall have thirty (30) days after

the leak was identified to complete the repair attempts. After two unsuccessful attempts to repair a leaking valve through the "drill and tap" method, Westlake may place the leaking valve on its delay of repair list.

i. Chronic Leakers. Westlake, shall replace, repack, or perform similarly effective repairs on all "chronic leaker" non control valves during the next process unit turnaround after the effective date of the Consent Decree. A component shall be classified as a "chronic leaker" if it leaks above 500 ppm twice in any consecutive four quarters, unless the component has not leaked in the twelve (12) consecutive quarters prior to the relevant process unit turnaround.

j. Valve Replacement. Westlake shall, during the next process unit turnaround after the effective date of the Consent Decree, replace all valves, other than control valves, that leak above the applicable leak threshold for any consecutive four (4) quarters, unless the component has not leaked in the twelve (12) consecutive quarters prior to the relevant process unit turnaround or unless it is specified on the delay of repair list described above.

k. Electronic Recordkeeping. Within thirty (30) days after the Effective Date of this Consent Decree, Westlake shall establish and maintain electronic database(s) for storing and reporting all LDAR data, and shall use electronic data loggers or otherwise assure that the data is logged into an electronic format to record all monitoring information. All monitoring and repair information shall be maintained in an electronic format until at least two years following termination of the Consent Decree. The data shall be compatible with MS Excel or Access.

l. Reports. In addition to submitting to EPA and the Commonwealth the report that is required by 40 C.F.R. §§ 63.182 and 63.1110, Westlake shall submit to EPA and

the Commonwealth quarterly progress reports detailing the implementation of the requirements of this written enhanced LDAR program. Quarterly reports shall begin within fifteen (15) days of the last quarter after the Effective Date of the Consent Decree and shall be submitted within fifteen (15) days of the end of each quarter thereafter. Westlake shall include in the reports:

1. a list of the process units monitored during the quarter;
2. the number of valves and pumps monitored in each process unit;
3. the number of valves and pumps found leaking;
4. the number of components not fixed within thirty (30) days or placed on the delay of repair list;
5. the number of first repair attempts not completed within the applicable deadline;
6. the number of difficult to monitor pieces of equipment monitored;
7. the number of drill and tap repair attempts not completed as required herein;
8. the number of chronic leaker valves not repaired;
9. a list of all equipment currently on the delay of repair list and the date each component was placed on the list;
10. certification of the implementation of procedures for review of data generated by LDAR technician that includes:
  - i. certification of the implementation of monitoring pursuant to Consent Decree leak definition levels and frequencies; and
  - ii. certification of the implementation of the delay of repair

and chronic leaker procedures.

m. Adding New Valves and Pumps. Within ninety (90) days after the Effective Date, Westlake shall establish a tracking program for maintenance records at both the PVC Plant and the Vinyls Plant (e.g., a Management of Change Program) to ensure that valves and pumps added to its facilities during maintenance and construction are integrated into the written enhanced LDAR program. Westlake shall incorporate these tracking systems into the LDAR Plan for each of the Facilities.

28. Enhanced Daily Monitoring of Cooling Towers and Repairing Leaks at Westlake Vinyls Plant. Within sixty (60) days of the Effective Date, Westlake shall begin to conduct enhanced daily monitoring of the cooling towers. The enhanced daily monitoring shall be conducted on the following four (4) cooling towers in the EDC/VCM Units in the Vinyls Plant: (1) the No. 3 Cooling Tower at the Energy & Environmental Plant (EPN 052); (2) the South Synthesis Cooling Tower at the Monomers Plant (EPN 457); (3) the East Cracking Cooling Tower at the Monomers Plant (EPN 458); and (4) the South Cracking Cooling Tower at the Monomers Plant (EPN 459).

a. Within sixty (60) days of the Effective Date, Westlake shall submit a protocol for conducting enhanced daily monitoring for the cooling towers to EPA and the Commonwealth. The protocol shall provide the following information:

1. detailed description of each cooling tower sampling location and block flow diagram identifying each location;

2. a copy of the daily monitoring log sheet that will be used to maintain the monitoring records. The log sheet shall have the following information:

- i. date, time and the location of each sample taken;
- ii. sample identification log-in numbers;
- iii. date, time and sample ID that the sample was analyzed and the method used;
- iv. the EDC and VC concentration results for each sample;
- v. the individual's initials who took and/or analyzed the sample; and
- vi. if a leak is detected, then Westlake shall record the quantified release and the type of pollutant.

3. A discussion of leaks.

- i. provide a leak definition for ethylene dichloride (EDC) or Vinyl chloride (VC).
- ii. upon confirmation of detected levels of VC or EDC, laboratory personnel shall communicate the information immediately to the Environmental Department and the production supervisor for the relevant cooling tower.
- iii. for leak determinations, Westlake shall assume that the concentration of EDC and VC in the supply is zero.
- iv. the laboratory shall also enter all sampling and analysis results into a database.
- v. Westlake shall repair all leaks in the cooling water system pursuant to 40 CFR Sec. 63.104(d)(1) within thirty (30) days after identifying a leak through the daily enhanced monitoring, and shall document the location of all leaks and repairs made.

b. Westlake shall perform the enhanced daily monitoring for a period of three (3) years from the Effective Date pursuant to an EPA approved method set forth in 40 CFR Part 136, Appendix A. Westlake shall also continue to perform its normal quarterly monitoring pursuant to 40 CFR Sec. 63.104.

29. Monitoring of Roll-Off Containers at Westlake Vinyls Plant. Westlake shall monitor air emissions from its roll-off containers semi-annually for a period of three (3) years commencing within thirty (30) days after the Effective Date. Westlake shall use the monitoring form attached hereto as Appendix H to record the monitoring results.

30. HON Notice of Compliance Status at Westlake Vinyls Plant. Within thirty (30) days after the Effective Date, Westlake shall update its Notice of Compliance Status, which shall include, but not limited to, the wastewater and heat exchange provisions of the HON, as they apply to the Vinyls Plant, and provide a copy to EPA and the Commonwealth.

31. New Source Review at the PVC Plant and the Vinyls Plant. As long as the PVC Plant and the Vinyls Plant are under Westlake's common control, Westlake shall not contest administratively or judicially a finding by the Commonwealth or any other permitting authority under the CAA that the Vinyls Plant and the PVC Plant are a "single source" for purposes of New Source Review ("NSR") and Prevention of Significant Deterioration ("PSD") permitting under the CAA or the Kentucky SIP. This provision applies only to any permit applications pending as of the lodging of this Consent Decree or submitted thereafter for purposes of NSR/PSD applicability determinations under the CAA.

32. Vinyls Plant SSMP Revision. Within thirty (30) days after the Effective Date, Westlake shall revise its SSMP, as defined herein, for the Vinyls Plant consistent with the criteria



set forth in 40 C.F.R. § 63.6(e)(3) and incorporated into the HON.

33. Planned and Unplanned Oxy Incinerator Outages. Westlake has identified the Oxy Absorber as a recovery device which is used to comply with the requirements of 40 C.F.R. § 63.113(a). Westlake has demonstrated that the Oxy Absorber Vent meets the HON definition of a Group 2 process vent, as long as the Oxy Absorber operating parameters are monitored and maintained pursuant to 40 C.F.R. § 63.114(a), at the levels established during the Group 2 process vent demonstration. During all Oxy Incinerator outages occurring during the effective period of this Paragraph, Westlake shall maintain the Oxy Absorber Vent as a HON Group 2 process vent. For a period of three (3) years commencing on the Effective Date of this Consent Decree, Westlake shall comply with the following requirements:

a. Planned Oxy Incinerator Outages.

1. During all planned Oxy Incinerator outages, the Oxy Absorber shall remain in operation unless the Oxy Absorber experiences a malfunction, as defined in 40 C.F.R. Part 63, during the planned Oxy Incinerator outage. During all planned Oxy Incinerator outages, Westlake shall maintain the Oxy Absorber Vent as a HON Group 2 process vent, and divert at least 40 percent, and more, if practicable, (determined on a three hour rolling average) by volume of the Oxy Absorber Vent flow to the Primary Incinerator until the Oxy Incinerator is restarted. To verify that at least 40 percent by volume of the Oxy Absorber Vent flow rate is diverted to the Primary Incinerator, Westlake shall continuously monitor and record the total volumetric flow rate exiting the Oxy Absorber Vent; continuously monitor and record the volumetric flow rate that is diverted from the Oxy Incinerator to the Primary Incinerator; and determine the average volumetric flow rate for each consecutive sixty (60) minute period

beginning at the time the Oxy Absorber Vent begins to be transitioned to the Primary Incinerator.

2. Westlake's failure to divert at least 40 percent by volume on average during each rolling three hour period while the Oxy Incinerator is down during a planned outage shall be considered a violation of the Consent Decree unless the Primary Incinerator or the Oxy Absorber Vent experiences a malfunction, as defined in 40 C.F.R. Part 63, during the planned Oxy Incinerator outage. In the event that there is a simultaneous malfunction of the Primary Incinerator or the Oxy Absorber Vent during the planned Oxy Incinerator outage, Westlake shall comply with all applicable requirements of 40 C.F.R. Part 63, Subparts A, F, G, and H, including the implementation of measures to prevent or minimize excess emissions to the extent practical minimize emissions as set forth in 40 C.F.R. § 63.102.

3. Sixty (60) days, or as soon as practicable, prior to any planned Oxy Incinerator outage, Westlake shall submit to EPA and the Commonwealth written notification of the planned outage. The notification should include the duration of the planned outage and the purpose for the planned outage.

b. Unplanned Oxy Incinerator Outages.

1. In order to minimize possible Primary Incinerator process upsets/trips during unplanned Oxy Incinerator outages, Westlake shall maintain the Oxy Absorber Vent as a HON Group 2 process vent. Westlake shall be allowed a transition period during the unplanned Oxy Incinerator Outage not to exceed a sixty (60) minutes. During this initial sixty (60) minute transition period, Westlake must transfer as much as practicable of the Oxy Absorber Vent flow into the Primary Incinerator during the transition period. After the sixty (60) minute transition period, Westlake shall divert at least 40 percent flow by volume

(determined on a three hour rolling average), and more, if it is practicable, of the Oxy Absorber Vent flow to the Primary Incinerator until the Oxy Incinerator is restarted. If the unplanned outage is less than three (3) hours in duration, then Westlake shall maintain the 40 percent flow by volume diversion based on a thirty (30) minute average. To verify that at least 40 percent by volume of the Oxy Absorber Vent flow rate is diverted to the Primary Incinerator, Westlake shall: continuously monitor and record the total volumetric flow rate exiting the Oxy Absorber Vent; continuously monitor and record the volumetric flow rate that is diverted from the Oxy Incinerator to the Primary Incinerator; determine the average volumetric flow rate for each consecutive 60 minute period, following the sixty (60) minute transition period, at the time of the Oxy Incinerator shutdown; and use the sixty (60) minute average data as calculated above to determine the three hour rolling average.

2. In the event that there is a simultaneous malfunction of the Primary Incinerator and the Oxy Incinerator or the Oxy Absorber Vent, Westlake shall comply with all applicable requirements of 40 C.F.R. Part 63 Subparts A, F, G, and H, including the implementation of measures to prevent or minimize excess emissions to the extent practical minimize emissions as set forth in 40 C.F.R. § 63.102. If the Oxy Incinerator is still down when the Primary Incinerator is restarted, Westlake shall transfer as much as practicable of the Oxy Absorber Vent flow into the Primary Incinerator. Within sixty (60) minutes after the Primary Incinerator is restarted, Westlake shall divert at least 40 percent flow by volume (determined on a three hour rolling average), and more, if it is practicable, of the Oxy Absorber Vent flow to the Primary Incinerator until the Oxy Incinerator is restarted.

3. In the event that there is a simultaneous unplanned outage of the

Primary Incinerator, the Oxy Incinerator, and the Oxy Absorber Westlake shall comply with all applicable requirements of 40 C.F.R. Part 63, Subparts A, F, G, and H, including the implementation of measures to prevent or minimize excess emissions to the extent practical minimize emissions as set forth in 40 C.F.R. § 63.102.

4. Within sixty (60) days of any unplanned Oxy Incinerator outage occurring within three (3) years of the Effective Date of this Consent Decree, Westlake shall perform an evaluation of the unplanned outage. Westlake shall document the evaluation conducted, the determination made, and the corrective action taken. Where a maintenance related cause is identified, Westlake shall implement a preventative maintenance program to prevent another unplanned outage from the same cause. Within ten (10) days of identifying the cause of the unplanned outage, Westlake shall submit a report of the evaluation conducted, the determination made of the cause of the unplanned outage, the corrective action taken, the duration of the unplanned outage, and any preventative maintenance implemented to EPA and the Commonwealth. If a cause cannot be identified, then Westlake shall report all the information available. However, if additional information concerning the unplanned outage becomes available after the initial report has been submitted, Westlake shall submit the supplemental information. If an unplanned outage recurs from the same cause, and is above the reportable quantity, Westlake shall perform a root cause analysis. In situations where preventative maintenance can be identified to reduce or eliminate the recurrence of the unplanned outage, within ten (10) days of preparing the report of the preventative maintenance implemented, Westlake shall incorporate into the SSMP the evaluation and determination or root cause analysis and the preventative maintenance steps taken by Westlake.

### RCRA INJUNCTIVE RELIEF AT THE PVC PLANT

34. Sampling and Integrity Workplan and Report for Lift Stations 4, 7, and 9 at the PVC Plant. Within sixty (60) days after EPA's approval of Westlake's contractor/consultant pursuant to this Consent Decree, Westlake shall submit to EPA for review and approval, a Sampling and Integrity Workplan for Lift Station Nos. 4, 7, and 9 (Lifts 4, 7, 9) at the PVC Plant that shall include the following to the extent it is available:

a. A detailed history of the usage of Lifts 4, 7, and 9 by Westlake from the date on which each Lift was constructed through the lodging of this Consent Decree, including, but not limited to, the types of materials managed in each Lift, the source of those materials and the areas to which those materials were discharged;

b. A technical description explaining how Lifts 4, 7, and 9 were constructed, including all maps, diagrams, as-built drawings, and other construction documents detailing how the Lifts were constructed;

c. A description of all hazardous waste and/or hazardous constituents managed in Lifts 4, 7, and 9 and the dates on which the hazardous waste and/or hazardous constituents were, or may have been, managed in each Lift;

d. A description of the sampling and analysis to evaluate releases (e.g., soil, surface water, groundwater, and sediment), potential releases, release pathways, and receptors, associated with each Lift;

e. A description of the sampling and analysis, or other method, to evaluate background levels associated with each medium (e.g. soil, surface water, groundwater,

sediment).

f. Procedures that Westlake will follow to sample all streams exiting the PVC Plant in route to the neighboring Air Products Plant;

g. Procedures that Westlake will follow to evaluate the structural integrity of Lifts 4, 7, and 9 to ensure that each is not leaking or that leaking is not imminent; and

h. A schedule for initiation and completion of the work required pursuant to the Sampling and Integrity Workplan.

35. All sampling conducted by Westlake shall conform to applicable provisions of EPA's Requirements for Quality Assurance set forth in Section VII (Quality Assurance) of this Consent Decree.

36. Within thirty (30) days of Westlake's receipt of approval from EPA of the Sampling and Integrity Workplan, Westlake shall implement the Sampling and Integrity Workplan in accordance with the schedule contained therein.

37. In accordance with the schedule contained in the Sampling and Integrity Workplan, Westlake shall submit to EPA for review and approval, a report setting forth the results from the implementation of the Sampling and Integrity Workplan ("Sampling and Integrity Report"). The Sampling and Integrity Report shall include, but not be limited to, the following:

a. A summary of all sampling conducted by Westlake as required by the Sampling and Integrity Workplan, including maps drawn to scale and/or aerial GPS maps that identify all sampling locations for soil, sediment, groundwater, and surface water, as well as the analytical results for each sample taken at each sampling location;

- b. An evaluation of the analytical results for each Lift, to include:
  - i. a summary of concentrations found in relation to EPA Regional Screening Levels (available at [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/Generic\\_Tables/index.htm](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm)); and EPA ecological screening values (available at <http://epa.gov/region4/waste/ots/ecolbul.htm#ecoscreen>);
  - ii. identification of pollution migration pathways (soil, sediment, surface water, groundwater, air, subsurface gas); and
  - iii. identification of potential/actual receptors (human and ecological);
- c. A recommendation for: no further action (NFA); interim measures (IM); a RCRA Facility Investigation (RFI); or the collection of additional confirmatory sampling data to make a NFA/IM/RFI determination for each Lift based on the evaluation of the analytical results for each Lift;
- d. A certified report from a licensed professional engineer (P.E.) stating the current structural integrity of the Lifts, the expected lifetime of the Lifts to function as designed, and a recommendation of the future structural integrity assessment that shall be conducted on the Lifts to assess whether each Lift continues to be fit to withstand the service conditions safely and is reliable;
- e. Proposed repairs or other actions that are necessary based upon the the current structural integrity of the Lifts, including a proposed schedule for making the proposed repairs or conducting any other actions identified; and
- f. All documents or information that Westlake relied upon to propose such

repairs or other actions in Paragraph (e) above.

38. Interim Measures (IM) Stabilization at the PVC Plant for Lifts 4, 7, 8, and 9.

a. In the event that Westlake identifies an immediate threat to human health and/or the environment emanating from Lifts 4, 7, 8, and 9 at the PVC Plant during the performance of the requirements set forth in this Consent Decree that is not already being addressed under another state or federal program such as RCRA or CERCLA, or discovers previously unidentified and unreported pre-existing releases of hazardous waste above established reportable quantity thresholds emanating from Lifts 4, 7, 8, and 9 at the PVC Plant during the performance of the requirements set forth in this Consent Decree, Westlake shall notify EPA as provided in the Notices Section of this Consent Decree orally within forty-eight (48) hours of discovery and in writing within three (3) working days of such discovery summarizing the immediacy and/or magnitude of the releases and potential threat(s) to human health and/or the environment. Within thirty (30) days of notifying EPA, Westlake shall submit to EPA for approval an Interim Measures Stabilization Workplan (IM Workplan) for activities required to mitigate the immediate threat to human health and/or the environment in accordance with the IM Scope of Work (Appendix D). If EPA determines that immediate action is required, EPA may orally authorize Westlake to act prior to EPA's receipt of the IM Workplan. Westlake may also implement a conditional or final remedy as an Interim Measure to address human exposure and groundwater migration.

b. If EPA identifies an immediate threat to human health and/or the environment emanating from Lifts 4, 7, 8, and 9 at the PVC Plant during the performance of the requirements set forth in this Consent Decree that is not already being addressed under another



state or federal program such as RCRA or CERCLA, EPA will notify Westlake in writing. Within thirty (30) days of receiving EPA's written notification, Westlake shall submit to EPA for approval an IM Workplan in accordance with the IM Scope of Work (Appendix D), which identifies interim measures which will mitigate the threat. If EPA determines that immediate action is required, EPA may orally require Westlake to act prior to Westlake's receipt of EPA's written notification.

c. All IM Workplans shall ensure that the measures are designed to mitigate immediate threat(s) to human health and/or the environment, and should be consistent with the objectives of, and contribute to the performance of the appropriate long term remedy, which may be required at the PVC Plant.

d. In accordance with Appendix D herein, an IM Workplan shall include the following sections:

- i. Interim Measures Objectives;
- ii. Health and Safety Plan;
- iii. Data Collection Quality Assurance Plan;
- iv. Data Management Plan;
- v. Groundwater Assessment Plan; and
- vi. Community Relations Plan.

39. RCRA Facility Investigation (RFI). In the event that EPA makes a determination based upon the Sampling and Integrity Report that an RFI is necessary for Lifts 4, 7, and/or 9, Westlake shall submit, within ninety (90) days of EPA's determination that an RFI is necessary, a Workplan for an RFI for Lifts 4, 7 and/or 9 to accurately characterize the nature, extent,

direction, rate, movement, and concentration of any release of hazardous waste and/or hazardous constituents at or from the Lift(s) from which the release has occurred, necessary to determine potential risks to human health and the environment and to support development and implementation of Corrective Measures should they prove necessary. The RFI Workplan for Lifts 4, 7, and/or 9 shall comply with Appendix F, and EPA shall notify Westlake in writing of EPA's approval/disapproval, or modification of the RFI Workplan, in accordance with this Consent Decree.

40. Lift Station # 8. Within ninety (90) days after EPA's approval of Westlake's contractor/consultant pursuant to this Consent Decree, Westlake shall submit to EPA for review and approval an RFI Workplan for Lift 8 (RFI Workplan for Lift 8) to accurately characterize the nature, extent, direction, rate, movement, and concentration of any release of hazardous waste and/or hazardous constituents at or from Lift 8, necessary to determine potential risks to human health and the environment and to support development and implementation of Corrective Measures should they prove necessary. The RFI Workplan for Lift 8 shall comply with Appendix F, and EPA shall notify Westlake in writing of EPA's approval/disapproval, or modification in accordance with this Consent Decree.

41. RFI Workplan(s) for Lifts 4, 7 and/or 9 and 8. Any RFI Workplan developed pursuant to this Consent Decree shall be designed to define the presence, magnitude, extent, direction, and rate of movement of any hazardous waste and/or hazardous constituents within and beyond the PVC Plant boundary which have been or are being released from the Lifts. The RFI Workplan shall document the procedures to be used to conduct those investigations necessary to:

- a Characterize the sources(s) of contamination;

b. Determine the nature, extent and the rate of movement of hazardous waste and/or hazardous constituents;

c. Determine the possible routes of migration of hazardous waste and/or hazardous constituents on and off the PVC Plant, including characterization of the geology and hydrology of the PVC Plant, which delineates possible routes of migration;

d. Determine the extent and potential for migration of hazardous waste and/or hazardous constituents through each of the environmental media;

e. Identify actual or potential receptors; and

f. Develop alternative options from which EPA will select Corrective Measures to remediate the observed and potential contamination. The RFI Workplan shall include a specific schedule for implementation of all activities described in the RFI Workplan.

42. In accordance with the provisions of Appendix F, an RFI Workplan developed pursuant to this Consent Decree shall include the following sections:

a. Project Management Plan, which includes a schedule for implementation of the Workplan, including the preparation and submission of preliminary and final Reports to EPA;

b. Data Collection Quality Assurance;

c. Data Management; and

d. Public Involvement Plan.

43. If an RFI Workplan is required for Lifts 4, 7, and/or 9, Westlake may submit a RFI Workplan that includes one or more Lifts in a single Workplan, or Westlake may submit to EPA an RFI Workplan for each Lift. For Lift 8, Westlake shall submit an RFI Workplan that

only addresses Lift 8.

44. Health and Safety Plan. Contemporaneous with Westlake's submission of an RFI Workplan for Lift 8 to EPA, Westlake shall submit to EPA a Health and Safety Plan in accordance with Appendix I of this Consent Decree. If Westlake is required to submit Workplans for both an IM and for the RFI Workplan for Lift 8, Westlake may submit a single Health and Safety Plan that addresses the combined IM and RFI activities. If Westlake is subsequently required to submit an RFI Workplan for Lifts 4, 7, and/or 9, Westlake may amend the existing Health and Safety Plan to address the additional RFI activities for each Lift.

45. Public Involvement Plan. Westlake shall submit to EPA a Public Involvement Plan as part of each RFI Workplan. The Public Involvement Plan shall, at a minimum, include an assessment of community concerns, development of a Fact Sheet, and development of a mailing list. The Fact Sheet shall summarize the current or proposed corrective action activities and shall be updated, as necessary. All fact sheets should be reviewed by EPA prior to public distribution. Westlake shall maintain an easily accessible repository (such as a town hall or public library) of information, including the Consent Decree, approved Workplan(s), and report(s).

46. Implementation of RFI Workplan(s). Westlake shall begin implementation of each RFI Workplan(s) submitted to EPA within thirty (30) days of EPA's approval of each RFI Workplan.

47. RFI Report(s). Westlake shall submit a RFI Report to EPA for approval in accordance with each EPA approved RFI Workplan schedule. EPA will review the RFI Report for each Lift and notify Westlake in writing of EPA's approval/disapproval, or modification in

accordance with this Consent Decree.

48. CMS Workplan(s). Within one hundred twenty (120) days of EPA's approval of RFI Report(s) and if Corrective Measures have been determined to be appropriate, Westlake shall submit a Corrective Measures Study (CMS) Workplan(s) to EPA that addresses the Lifts for which Corrective Measures are appropriate. Each CMS Workplan shall be developed in a manner consistent with the CMS Scope of Work contained in Appendix C to this Consent Decree. EPA will review each CMS Workplan and notify Westlake in writing of EPA's approval/disapproval, or modification in accordance with this Consent Decree. Westlake shall begin implementing each CMS Workplan(s) within thirty (30) days of EPA's approval of each CMS Workplan.

a. Each CMS Workplan submitted to EPA shall provide, at a minimum, the following information:

- i. A description of the general approach to the CMS and potential receptors;
- ii. A statement of the overall objectives of the study;
- iii. The specific plans for evaluating remedies to ensure compliance with the appropriate media cleanup standards at the point of compliance;
- iv. The proposed format for the presentation of information;
- v. A justification for each corrective measure that Westlake proposes to study to achieve the appropriate media cleanup standards;
- vi. A description of the methodology for developing and evaluating potential corrective measures;

vii. Identify any innovative technologies that may be used for the containment, treatment, and/or disposal; and

viii. Project Schedule.

b. Westlake shall conduct treatability studies for all potential corrective measures that involve treatment except where Westlake can demonstrate to EPA's satisfaction that they are not needed. Each CMS Workplan shall include a summary of the proposed treatability study and conceptual design, and a schedule for submittal of the treatability study Workplan or Westlake's justification for not proposing a treatability study.

49. Concurrently with the submission of each CMS Workplan, Westlake shall submit to EPA, a Health and Safety Plan in accordance with Appendix I. If Health and Safety Plans are required for RFI(s), and CMS(s), Westlake may submit a revised Health and Safety Plan that addresses the PVC Plant's situation following the IM and RFI activities.

50. Implementation of CMS Workplan(s). Westlake shall begin implementation of each CMS Workplan(s) submitted to EPA within thirty (30) days of EPA's approval of each CMS Workplan.

51. CMS Report(s). Westlake shall submit each CMS Report to EPA for approval in accordance with the EPA approved CMS Workplan schedule. Each CMS Report shall contain, at a minimum, the following information for each corrective measure studied:

- a. An evaluation of any treatability studies performed;
- b. An evaluation of the overall protectiveness of human health and the environment;
- c. An evaluation of the ability to attain the appropriate media cleanup

standards at the points of compliance;

- d. An evaluation of the ability to control the sources of the releases;
- e. An estimate and analysis of quantity, volume, and/or toxicity of the waste generated, including, but not limited to, contaminated soil, sludge, and groundwater;
- f. An evaluation of methods to minimize the volume, toxicity, and/or mobility of waste to be generated;
- g. An assessment of how institutional and legal requirements including federal, state, or local environmental or public health standards, regulations, and/or ordinances will affect the design, operation, and timing of each corrective action alternative;
- h. An assessment of short-term and long-term reliability and effectiveness, including, but not limited to, the methodology used to estimate short-term and long-term reduction of toxicity, mobility, or volume of waste and the resulting estimate;
- i. An evaluation of the ease of implementation;
- j. An estimate of the cost, including capital and annual operation and maintenance costs; and
- k. A recommendation as to which corrective measures, in Westlake's opinion, are the most appropriate and the rationale for such recommendations.

52. Westlake shall submit a CMS Report to EPA in accordance with the EPA approved CMS Workplan(s) schedule. EPA shall review each CMS Report and notify Westlake of EPA's approval, disapproval or modification, modification as provided in this Consent Decree.

53. The Administrative Record supporting the selection of the Corrective Measures will be available for public review at United States Environmental Protection Agency, Region 4

61 Forsyth Street Atlanta, Georgia 30303.

54. EPA will provide the public with an opportunity to submit written and/or oral comments and an opportunity for a public meeting regarding EPA's proposed cleanup standards and remedy for the PVC Plant.

55. Following the public comment period, EPA will notify Westlake of which Corrective Measures are selected, if any. If the corrective measure recommended in each CMS Report is not the Corrective Measures selected by EPA after consideration of public comments, EPA will inform Westlake in writing of the reasons for such decision and Westlake shall modify the CMS Report(s) as directed to do so by EPA.

56. Corrective Measures Implementation (CMI). Within one hundred twenty (120) days of Westlake's receipt of notification by EPA of the selection of the Corrective Measures, based upon each CMS Report, Westlake shall submit to EPA, a Corrective Measures Implementation Workplan ("CMI Workplan"). Each CMI Workplan shall be developed in a manner consistent with the CMI Scope of Work incorporated herein and contained in Appendix B of this Consent Decree. EPA will review each CMI Workplan and notify Westlake in writing of EPA's approval/disapproval, or modification in accordance with this Consent Decree.

a. Each CMI Workplan shall be designed to facilitate the design, construction, operation, maintenance, and monitoring of Corrective Measures at the PVC Plant for each specific RFI Report. In accordance with Appendix B herein, each CMI Workplan shall also include the following sections:

- i. Program Management;
- ii. Public Involvement Plan;



- iii. Design Plans and Specifications;
- iv. Operation and Maintenance;
- v. Cost Estimate;
- vi. Project Schedule;
- vii. Construction Quality Assurance;
- viii. Data Collection Quality Assurance; and
- ix. Data Management.

57. Concurrent with the submission of each CMI Workplan, Westlake shall submit to EPA a CMI Health and Safety Plan in accordance with Appendix I of this Consent Decree.

58. Westlake shall fully implement each CMI Workplan as approved by EPA and according to the approved CMI Workplan and Schedule.

59. The corrective action conditions of this Consent Decree apply to all previously unaddressed releases, discharges, or disposals of hazardous waste or hazardous constituents, except for releases that are being addressed under another state or federal program such as RCRA or CERCLA, from Lifts 4, 7, 8, or 9 that are discovered during the course of groundwater monitoring or field investigations conducted as part of this Consent Decree. "Discovery" or "discovered" means that Westlake or EPA physically observes evidence or receives information which suggests the presence of an unaddressed release, discharge or disposal of hazardous constituents to the environment. Westlake shall notify EPA in writing within fifteen (15) calendar days of its discovery of any unaddressed release, discharge or disposal of hazardous waste or hazardous constituents to the environment. The notification shall include, at a minimum, the location of the release, discharge or disposal, and all available information

pertaining to the nature and magnitude of the release, discharge or disposal. EPA may require that Westlake conduct further assessment (i.e., Confirmatory Sampling) pursuant to this Consent Decree, to determine the status of the suspected release, discharge or disposal. Confirmatory Sampling will not be required under this paragraph if the release, discharge or disposal is being addressed by another state or federal program such as RCRA or CERCLA.

60. Estimated Cost of the RCRA Corrective Measures Work. In the event that Corrective Measures are required with regard to Lifts 4, 7, 9 and/ or 8, within thirty (30) days after EPA selects the of Corrective Measures to be implemented for Lifts 4, 7, 9 and/or 8, Westlake shall submit to EPA for review and approval, a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the Corrective Measures for Lifts 4, 7, 9, and/or 8 (hereinafter, the "Estimated Cost of the RCRA Corrective Measures Work"). The Estimated Cost of the RCRA Corrective Measures Work shall account for the total cost of the covered work activities as set forth in each CMS Report, including any necessary long term costs, such as operation and maintenance costs and monitoring costs, any "Interim Measures/Stabilization" that may be required, the "Corrective Measures Implementation", any Additional Work as described herein and as required by the Scopes of Work in Appendices A-I to perform the Corrective Measures. A third party is a party who (i) is neither a parent nor a subsidiary of Westlake and (ii) does not share a common parent or subsidiary with Westlake. The cost estimates shall not incorporate any salvage value that may be realized from the sale of wastes, facility structures or equipment, land or other assets associated with the facility.

61. Westlake shall annually adjust the Estimated Cost of the RCRA Corrective Measures Work for inflation within thirty (30) days after the close of Westlake's fiscal year until

the work required by the CMS Report is completed. In addition, Westlake shall adjust the Estimated Cost of the RCRA Corrective Measures Work if EPA determines that any additional work is required, or if any other condition increases the cost of the obligations to be performed under this Consent Decree.

62. Westlake shall submit each adjusted Estimated Cost of the RCRA Corrective Measures Work to EPA for review. EPA will review each cost estimate and notify Westlake in writing of EPA's approval, disapproval, or modification of the cost estimate.

63. Assurances of Financial Responsibility for Completing the RCRA Corrective Measures Work. Concurrently with the submission of each Estimated Cost of the RCRA Corrective Measures Work, Westlake shall submit draft financial assurance instruments and related documents to EPA, for EPA's review and approval as set forth herein. Within ten (10) days after EPA's approval of both the initial Estimated Cost of the RCRA Corrective Measures Work, and the form of the draft financial assurance instruments, Westlake shall execute or otherwise finalize all instruments or other documents required in the Consent Decree to make the selected financial assurance legally binding in a form substantially identical to the financial assurance documents reviewed and approved by EPA. Westlake shall submit all executed and/or otherwise finalized instruments or other documents to EPA within thirty (30) days after EPA's approval of the initial Estimated Cost of the RCRA Corrective Measures Work and the draft financial assurance instruments.

64. In order to secure the full and final completion of the work in accordance with this Consent Decree, Westlake shall establish and maintain financial assurance for the benefit of the EPA in the amount of the most recent Estimated Cost of the Work. Westlake may use one or

more of the financial assurance forms generally described in Paragraphs a - f below. Any and all financial assurance instruments provided pursuant to this Consent Decree shall be satisfactory in form and substance as determined by EPA. The financial assurance forms shall generally follow the wording of the forms as set forth in 40 C.F.R. § 264.151 with appropriate modifications to reflect the work to be conducted under this Consent Decree. Westlake shall have the discretion of determining which financial assurance mechanism set forth below that it will follow.

a. A trust fund established for the benefit of EPA, administered by a trustee who has the authority to act as a trustee under Federal or State law and whose trust operations are regulated and examined by a Federal or State agency, and that is acceptable in all respects to the EPA. The trust agreement shall provide that the trustee shall make payments from the fund as the EPA Region 4 Regional Administrator shall direct in writing (1) to reimburse Westlake from the fund for expenditures made by Westlake for RCRA Corrective Measures Work performed in accordance with this Consent Decree, or (2) to pay any other person whom the Region 4 Regional Administrator determines has performed or will perform the RCRA Corrective Measures Work in accordance with this Consent Decree. The trust agreement shall further provide that the trustee shall not refund to the grantor any amounts from the fund unless and until EPA has advised the trustee that the RCRA Corrective Measures Work under this Consent Decree has been successfully completed.

b. A surety bond unconditionally guaranteeing performance of the RCRA Corrective Measures Work in accordance with this Consent Decree, or guaranteeing payment at the direction of Region 4 Regional Administrator into a standby trust fund that meets the requirements of the trust fund herein. The surety company issuing the bond shall, at a minimum,

be among those listed as acceptable sureties on Federal Bonds as set forth in Circular 570 of U.S. Department of the Treasury.

c. An irrevocable letter of credit, payable at the direction of the Region 4 Regional Administrator, into a standby trust fund that meets the requirements of the trust fund in Paragraph a above. The letter of credit shall be issued by a financial institution (i) that has the authority to issue letters of credit, and (ii) whose letter-of-credit operations are regulated and examined by a Federal or State agency.

d. A policy of insurance that (i) provides EPA with beneficiary rights acceptable to EPA; and (ii) is issued by an insurance carrier that (a) has the authority to issue insurance policies in the applicable jurisdiction(s), and (b) whose insurance operations are regulated and examined by a Federal or State agency. The insurance policy shall be issued for a face amount at least equal to the current Estimated Cost of the RCRA Corrective Measures Work to be performed under this Consent Decree, except where costs not covered by the insurance policy are covered by another financial assurance instrument, as permitted herein. The policy shall provide that the insurer shall make payments as the Region 4 Regional Administrator shall direct in writing (i) to reimburse Westlake for expenditures made by Westlake for RCRA Corrective Measures Work performed in accordance with this Consent Decree, or (ii) to pay any other person whom the Region 4 Regional Administrator determines has performed or will perform the RCRA Corrective Measures Work in accordance with this Consent Decree, up to an amount equal to the face amount of the policy. The policy shall also provide that it may not be canceled, terminated or non-renewed and the policy shall remain in full force and effect in the event that (i) Westlake is named as a debtor in a voluntary or involuntary proceeding under Title

11 (Bankruptcy), U.S. Code; or (ii) EPA notifies the insurer of Westlake's failure to perform, under of this section.

e. A corporate guarantee, executed in favor of the EPA by one or more of the following: (i) a direct or indirect parent company, or (ii) a company that has a "substantial business relationship" with Westlake (as defined in 40 C.F.R. § 264.141(h)), to perform the RCRA Corrective Measures Work in accordance with this Consent Decree or to establish a trust fund as permitted by Paragraph a above; provided, however, that any company providing such a guarantee shall demonstrate to the satisfaction of the EPA that it satisfies the financial test requirements of 40 C.F.R. § 264.143(f) with respect to the Estimated Cost of the RCRA Corrective Measures Work that it proposes to guarantee; or

f. A demonstration by Westlake that Westlake meets the financial test criteria of 40 C.F.R. § 264.143(f) with respect to the Estimated Cost of the RCRA Corrective Measures Work, provided that all other requirements of 40 C.F.R. § 264.143(f) are satisfied.

65. If Westlake seeks to establish financial assurance by using a surety bond, a letter of credit, or a corporate guarantee, Westlake shall at the same time establish, and thereafter maintain, a standby trust fund, which meets the requirements relating thereto above, into which funds from the other financial assurance instrument can be deposited, if the financial assurance provider is directed to do so by EPA.

66. Westlake shall submit all financial assurance instruments and related required documents by certified mail to the EPA Region 4 Superfund/RCRA Records Management Officer, with copies to the Regional Financial Assurance Officer:

Debbie Jourdan  
EPA Region 4 Superfund/RCRA Records Management Officer  
Region 4 Superfund Division, 11th Floor  
United States Environmental Protection Agency  
61 Forsyth Street, S.W.  
Atlanta, GA 30303

Bob Stewart  
EPA Regional Financial Assurance Officer  
Region 4 RCRA Division-ROEC Branch, 10th Floor  
United States Environmental Protection Agency  
61 Forsyth Street, S.W.  
Atlanta, GA 30303

67. If at any time during the effective period of this Consent Decree Westlake provides financial assurance for completion of the RCRA Corrective Measures Work by means of a corporate guarantee or financial test, Westlake 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) initial submission of required financial reports and statements from the guarantors' chief financial officer and independent certified public accountant; (ii) annual re-submission of such reports and statements within ninety (90) days after the close of each of the guarantors' fiscal years; and (iii) notification of EPA within ninety (90) days after the close of any of the guarantors' fiscal years in which any such guarantor no longer satisfies the financial test requirements set forth at 40 C.F.R. Part 264.143(f)(1). Westlake further agrees that if Westlake provides financial assurance by means of a corporate guarantee or financial test, EPA may request additional information (including financial statements and accountant's reports) from Westlake or corporate guarantor at any time.

68. For purposes of the corporate guarantee or the financial test described

above, references in 40 C.F.R. § 264.143(f) to "the sum of current closure and post-closure costs and the current plugging and abandonment cost estimates" shall mean the sum of all environmental remediation obligations (including obligations under CERCLA, RCRA, UIC, TSCA and any other state or tribal environmental obligation) at the PVC Plant guaranteed by such company or for which such company is otherwise financially obligated in addition to the cost of the RCRA Corrective Measures Work to be performed in accordance with this Consent Decree.

69. Westlake may combine more than one mechanism to demonstrate financial assurance for the RCRA Corrective Measures Work to be performed in accordance with this Consent Decree, except that surety bonds guaranteeing performance, financial tests and corporate guarantees may not be combined with other instruments.

70. If at any time EPA determines that a financial assurance instrument provided pursuant to this Section is inadequate, or no longer satisfies the requirements set forth or incorporated by reference in the Section, whether due to an increase in the estimated cost of completing the RCRA Corrective Measures Work or for any other reason, EPA shall so notify Westlake in writing. If at any time Westlake becomes aware of information indicating that any financial assurance instrument provided pursuant to this Section is inadequate or no longer satisfies the requirements set forth or incorporated by reference in the Section, whether due to an increase in the estimated cost of completing the RCRA Corrective Measures Work or for any other reason, then Westlake shall notify EPA in writing of such information within thirty (30) days. Within thirty (30) days of receipt of notice of EPA's determination, or within thirty (30) days of Westlake's becoming aware of such information, as the case may be, Westlake shall



obtain and present to EPA for approval a proposal for a revised or alternative form of financial assurance above that satisfies all requirements set forth or incorporated by reference in this Section. In seeking approval for a revised or alternative form of financial assurance, Westlake shall follow the procedures set forth below in Paragraph 74.

71. Westlake's inability or failure to establish or maintain financial assurance for completion of the RCRA Corrective Measures Work shall in no way excuse performance of any other requirements of this Consent Decree, including, without limitation, the obligation of Westlake to complete the RCRA Corrective Measures Work in strict accordance with the terms of this Consent Decree.

72. Any and all financial assurance instruments provided pursuant to this Consent Decree shall be automatically renewed at the time of their expiration unless the financial assurance provider has notified both Westlake and the Regional Financial Assurance Officer at least one hundred and twenty (120) days prior to expiration, cancellation or termination of the instrument of a decision to cancel, terminate or not renew a financial assurance instrument. Under the terms of the financial assurance instrument, the one hundred and twenty (120) days shall begin to run on the date of receipt of the notice by both the Regional Financial Assurance Officer and Westlake. Furthermore, if Westlake has failed to provide alternate financial assurance and obtain written approval for such alternate financial assurance within ninety (90) days following receipt of such notice by both Westlake and the Regional Financial Assurance Officer, then the Regional Financial Assurance Officer may so notify the financial assurance provider in writing prior to the expiration of the instrument, and the financial assurance provider shall immediately deposit into the standby trust fund, or a newly created trust fund approved by

EPA, the remaining funds obligated under the financial assurance instrument for the performance of the RCRA Corrective Measures Work in accordance with this Consent Decree.

73. Performance Failure.

a. In the event that EPA determines that Westlake (i) has ceased implementation of any portion of the RCRA Corrective Measures Work, (ii) is significantly or repeatedly deficient or late in its performance of the RCRA Corrective Measures Work, or (iii) is implementing the RCRA Corrective Measures Work in a manner that may cause an endangerment to human health or the environment, EPA may issue a written notice ("Performance Failure Notice") to both Westlake and the financial assurance provider of Westlake's failure to perform. The notice issued by EPA will specify the grounds upon which such a notice was issued and will provide Westlake with a period of ten (10) days within which to remedy the circumstances giving rise to the issuance of such notice.

b. Failure by Westlake to remedy the relevant Performance Failure to EPA's satisfaction before the expiration of the ten-day notice period specified herein shall trigger EPA's right to have immediate access to and benefit of the financial assurance provided pursuant to this Consent Decree. EPA may at any time thereafter direct the financial assurance provider to immediately (i) deposit into the standby trust fund, or a newly created trust fund approved by EPA, the remaining funds obligated under the financial assurance instrument (ii) or arrange for performance of the RCRA Corrective Measures Work in accordance with this Consent Decree.

c. If EPA has determined that any of the circumstances described above relating to a performance failure have occurred, and if EPA is nevertheless unable after reasonable efforts to secure the payment of funds or performance of the RCRA Corrective

Measures Work in accordance with this Consent Decree from the financial assurance provider pursuant to this Consent Decree, then, upon receiving written notice from EPA, Westlake shall within ten (10) days thereafter deposit into the standby trust fund, or a newly created trust fund approved by EPA, in immediately available funds and without setoff, counterclaim, or condition of any kind, a cash amount equal to the estimated cost of the remaining RCRA Corrective Measures Work to be performed in accordance with this Consent Decree as of such date, as determined by EPA.

d. Westlake may invoke the procedures set forth in the Dispute Resolution provisions of this Consent Decree to dispute EPA's determination that any of the circumstances concerning performance failure. Invoking the dispute resolution provisions shall not excuse, toll or suspend the obligation of the financial assurance provider to fund the trust fund or perform the RCRA Corrective Measures Work. Furthermore, notwithstanding Westlake's invocation of such dispute resolution procedures, and during the pendency of any such dispute, EPA may in its sole discretion direct the trustee of such trust fund to make payments from the trust fund to any person that has performed the RCRA Corrective Measures Work in accordance with this Consent Decree until the earlier of (i) the date that Westlake remedies, to EPA's satisfaction, the circumstances giving rise to EPA's issuance of the relevant Performance Failure Notice or (ii) the date that a final decision is rendered in accordance with the Dispute Resolution provisions of this Consent Decree that Westlake has not failed to perform the RCRA Corrective Measures Work in accordance with this Consent Decree.

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

a. Reduction of Amount of Financial Assurance. If Westlake believes that the estimated cost to complete the remaining RCRA Corrective Measures Work has diminished below the amount covered by the existing financial assurance provided under this Consent Decree, Westlake may, at the same time that Westlake submits the annual cost adjustment, or at any other time agreed to by EPA, submit a written proposal to EPA to reduce the amount of the financial assurance provided under this Section so that the amount of the financial assurance is equal to the estimated cost of the remaining RCRA Corrective Measures Work to be performed. The written proposal shall specify, at a minimum, the cost of the remaining RCRA Corrective Measures Work to be performed and the basis upon which such cost was calculated. In seeking approval of a revised financial assurance amount, Westlake shall follow the procedures set forth herein. If EPA decides to accept such a proposal, EPA shall notify Westlake of its decision in writing. After receiving EPA's written decision, Westlake may reduce the amount of the financial assurance only in accordance with and to the extent permitted by such written decision. In the event of a dispute, Westlake may reduce the amount of the financial assurance required hereunder only in accordance with the final EPA decision resolving such dispute. No change to the form or terms of any financial assurance provided under this Section, other than a reduction in amount, is authorized except as provided in below.

b. Change of Form of Financial Assurance.

(i) If Westlake desires to change the form or terms of financial assurance, Westlake may, at the same time that Westlake submits the annual cost adjustment, or at any other time agreed to by EPA, submit a written proposal to EPA to change the form of financial assurance. The submission of such proposed revised or alternative form of financial

assurance shall be as provided below. The decision whether to approve a proposal shall be made in EPA's sole and unreviewable discretion and such decision shall not be subject to challenge by Westlake pursuant to the Dispute Resolution provisions of this Consent Decree or in any other forum.

(ii) A written proposal for a revised or alternative form of financial assurance shall specify, at a minimum, the cost of the remaining RCRA Corrective Measures Work to be performed, the basis upon which such cost was calculated, and the proposed revised form of financial assurance, including all proposed instruments or other documents required in order to make the proposed financial assurance legally binding. The proposed revised or alternative form of financial assurance shall satisfy all requirements set forth or incorporated by reference in this Section. EPA shall notify Westlake in writing of its decision to accept or reject a revised or alternative form of financial assurance submitted pursuant to this paragraph. Within ten (10) days after receiving a written decision approving the proposed revised or alternative financial assurance, Westlake shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding in a form substantially identical to the documents submitted to EPA as part of the proposal, and such financial assurance shall be fully effective. Westlake shall submit all executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding to the EPA Region 4 Superfund/RCRA Records Management Officer within thirty (30) days of receiving a written decision approving the proposed revised or alternative financial assurance, with a copy to the Regional Financial Assurance Officer and the EPA as set forth in the Notices Section of this Consent Decree. EPA shall release, cancel or

terminate the prior existing financial assurance instruments only after Westlake has submitted all executed and/or otherwise finalized new financial assurance instruments or other required documents to EPA.

c. Release of Financial Assurance. Upon completion of the work required by the RCRA Injunctive Relief at the PVC Plant Section of this CD, Westlake may submit a written request to the EPA Region 4 Regional Administrator, with a copy to the Region 4 Financial Assurance Officer, that EPA release Westlake from the requirement to maintain financial assurance. In the event that a decision is made to release Westlake from the requirement, the EPA Region 4 Regional Administrator shall notify both Westlake and the provider(s) of the financial assurance that Westlake is released from all financial assurance obligations under this Consent Decree. Westlake shall not release, cancel or terminate any financial assurance provided pursuant to this Section except as provided herein. In the event of a dispute, Westlake may release, cancel, or terminate the financial assurance required hereunder only in accordance with a final administrative or judicial decision resolving such dispute.

#### EPCRA/CERCLA INJUNCTIVE RELIEF AT VINYL PLANT

75. Within ninety (90) days after the Effective Date, Westlake shall review its training procedures to ensure that all personnel are adequately trained to ensure compliance with EPCRA Section 313, CERCLA Section 103, and EPCRA Section 104. Westlake shall establish a standard operating procedure in the training procedures to ensure that all employees are trained in the areas stated above upon employment with Westlake. Within sixty (60) days after the Effective Date, Westlake shall modify the Spill/Release Reporting Policy applicable to the Vinyls Plant to incorporate the following provisions on the Emission Event Form: (a) for the

dates and times that the following entities are orally notified of an emergency release: The National Response Center ("NRC"); The State Emergency Response Commission ("SERC"); and The Marshall County Local Emergency Planning Committee ("LEPC"); (b) for the telephone numbers and name of the individual contacted at the NRC, SERC, and LEPC; (c) the dates that written follow up reports are sent to the SERC and the LEPC..

#### CLEAN WATER ACT INJUNCTIVE RELIEF AT VINYL PLANT

76. Within ninety (90) days after the Effective Date, Westlake shall review and, if necessary, revise its Spill Prevention Control and Countermeasure ("SPCC") Plans to comply with the applicable provisions of 40 C.F.R. Part 112, as amended. The SPCC Plans shall be certified by a professional engineer.

77. Westlake shall comply with the revised SPCC Plans. The SPCC Plans shall include all regulated tanks added to the Vinyls Plant and the PVC Plant since the SPCC Plans were first issued. A copy of the certified SPCC Plans shall be submitted to EPA for approval pursuant to this Consent Decree no later than thirty (30) days after it has been certified.

#### VI. REPORTING REQUIREMENTS

78. Westlake shall submit to EPA and the Commonwealth the following reports:

a. Within thirty (30) days after the end of each calendar-year quarter (i.e., by April 30, July 30, October 30, and January 30) after the Effective Date, until termination of this Consent Decree, Westlake shall submit a quarterly report related to the implementation of this Consent Decree for the preceding quarter that shall include, but not be limited to, the status of any construction or compliance measures; completion of milestones; problems encountered or anticipated, together with implemented or proposed solutions; status of permit applications

submitted pursuant to this Consent Decree; operation and maintenance; and reports submitted pursuant to this Consent Decree to state agencies except that Westlake shall not be required to submit any such reports to the Commonwealth regarding the RCRA injunctive relief required by this Consent Decree.

b. If Westlake violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Westlake shall notify the United States and the Commonwealth of such violation and its likely duration, in writing, within ten (10) working days of the day Westlake first becomes aware of the violation, except that Westlake shall not be required to submit any such reports to the Commonwealth regarding the RCRA injunctive relief required by this Consent Decree. In the notification, Westlake shall provide the United States and the Commonwealth with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Westlake shall so state in the report. Westlake shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) days of the day Westlake becomes aware of the cause of the violation. Nothing herein relieves Westlake of its obligation to provide the notice required by the Force Majeure Provisions of this Consent Decree.

79. Whenever any violation of this Consent Decree or any other event affecting Westlake's performance under this Consent Decree, or the performance of either of the Facilities, may pose an immediate threat to the public health or welfare or the environment, Westlake shall notify EPA and the Commonwealth orally or by electronic or facsimile transmission as soon as possible, but no later than twenty-four (24) hours after Westlake first knew of, or should have



known of, the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph. All reports shall be submitted to the persons designated in the Section of this Consent Decree dealing with Notices. Except in cases of an emergency or if notification would be impractical, each report submitted by Westlake under this Section shall be signed by a responsible corporate official of Westlake and include the following certification:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all Appendices and that this document and its Appendices were prepared either by me personally or under my direction or supervision in a manner designed to ensure that qualified and knowledgeable personnel properly gather and present the information contained therein. I further certify, based on my personal knowledge or on my inquiry of those individuals immediately responsible for obtaining the information, that to the best of my knowledge and belief the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowingly and willfully submitting a materially false statement.

80. The reporting requirements of this Consent Decree do not relieve Westlake of any reporting obligations required by the CAA, RCRA, EPCRA, CERCLA, and CWA, or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

81. Any report or other document submitted by Westlake pursuant to this Consent Decree which makes any representation concerning Westlake's compliance or noncompliance with any requirement of this Consent Decree shall be certified by a responsible corporate official of Westlake or a duly authorized representative as set forth herein. A responsible corporate official means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.

82. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

#### VII. QUALITY ASSURANCE

83. Westlake shall follow EPA guidance for sampling and analysis. Quality assurance project plan guidance is available at [www.epa.gov/quality/qapps.html](http://www.epa.gov/quality/qapps.html). Workplans shall contain quality assurance/quality control and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the approved Workplans must be approved by EPA prior to implementation; must be documented, including reasons for the deviations; and must be reported in the applicable report (e.g., RFI).

84. The name(s), addresses, and telephone numbers of the analytical laboratories Westlake proposes to use must be specified in the applicable Workplan(s).

85. All Workplans required under this Consent Decree shall include Data Quality Objectives for each data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use(s).

86. Westlake shall monitor to ensure that high quality data is obtained by its consultant or contract laboratories. Westlake shall ensure that laboratories used by Westlake for analysis perform such analysis according to the latest approved edition of "Test Methods for Evaluating Solid Waste, (SW-846)," or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Westlake shall specify all such protocols in the applicable Workplan (e.g., RFI). EPA may reject any data that does not meet the requirements of the approved Workplan or EPA analytical methods and may require resampling and additional

analysis. For data validation purposes, EPA may request a data package for up to 10% of samples in a particular medium, consisting of five (5) sections: case narrative; chain-of-custody documentation; summary of results for environmental samples (including quantization limits); summary of quality assurance/quality control results; and raw data. This information is in EPA's September 2006 "Laboratory Documentation Requirements for Data Validation".

87. Westlake shall ensure that laboratories it uses for sample analysis participate in a quality assurance/quality control program equivalent to that which is followed by EPA. EPA may conduct a performance and quality assurance/quality control audit of the laboratories chosen by Westlake before, during, or after sample analysis. Upon request by EPA, Westlake shall have its laboratory perform analysis of samples provided by EPA to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control, resampling and additional analysis may be required.

#### VIII. SAMPLING AND DATA/DOCUMENT AVAILABILITY

88. Westlake shall submit to EPA upon request the results of all sampling and/or tests or other data generated by divisions, agents, consultants, or contractors pursuant to this Consent Decree.

89. Westlake shall notify EPA in writing at least ten (10) days before engaging in any field activities, such as well drilling, installation of equipment, or sampling. If Westlake believes it must commence emergency field activities without delay, Westlake may seek emergency telephone authorization from the EPA contact as set forth in the Notices Section of this Consent Decree, if the EPA contact is unavailable, Westlake may obtain approval from his/her Section Chief, to commence such activities immediately. At the request of EPA, Westlake shall provide

or allow EPA or its authorized representative to take split or duplicate samples of all samples collected by Westlake pursuant to this Consent Decree. Similarly, at the request of Westlake, EPA shall allow Westlake or its authorized representative(s) to take split or duplicate samples of all samples collected by EPA under this Consent Decree.

90. Westlake may assert a business confidentiality claim covering all or part of any information submitted to EPA pursuant to this Consent Decree. Any assertion of confidentiality must be accompanied by information that satisfies the items listed in 40 C.F.R. § 2.204(e)(4) or such claim shall be deemed waived. Information determined by EPA to be confidential shall be disclosed only to the extent permitted by 40 C.F.R. Part 2. If no such confidentiality claim accompanies the information when it is submitted to EPA, the information may be made available to the public by EPA without further notice to Westlake. Westlake agrees not to assert any confidentiality claim with regard to any physical or analytical data.

#### IX. ACCESS

91. EPA, its contractors, employees, and/or any EPA representatives are authorized to enter and freely move about the facility pursuant to this Consent Decree for the purposes of, inter alia: interviewing facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facilities; reviewing the progress of Westlake in carrying out the terms of this Consent Decree; conducting such tests, sampling, or monitoring as EPA deems necessary; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to EPA by Westlake. Westlake agrees to provide EPA and its representatives access at all reasonable times to the Facilities and to any other property to which access is required for implementation of this Consent Decree. Westlake shall permit such persons to

inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Consent Decree and that are within the possession or under the control of Westlake or its contractors or consultants.

92. To the extent that work being performed at the PVC Plant pursuant to this Consent Decree must be done beyond the PVC Plant's property boundary, Westlake shall use its best efforts to obtain access agreements necessary to complete work required by this Consent Decree from the present owner(s) of such property within sixty (60) days of approval of any Workplan for which access is required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Westlake to the present owner(s) of such property requesting access agreement(s) to permit Westlake, EPA, and its authorized representatives to access such property, and the payment of reasonable sums of money in consideration of granting access. Any such access agreement shall provide for access by EPA and its representatives. Westlake shall ensure that EPA's Project Coordinator has a copy of any access agreement(s). In the event that agreements for access are not obtained within thirty (30) days of approval of any Workplan for which access is required, or of the date that the need for access became known to Westlake, Westlake shall notify EPA in writing within fourteen (14) days thereafter of both the efforts undertaken to obtain access and the failure to obtain such agreements. EPA may, at its discretion, assist Westlake in obtaining access. In the event EPA obtains access, Westlake shall undertake EPA-approved work on such property.

93. Nothing in this section limits or otherwise affects EPA's right of access and entry pursuant to applicable law, including RCRA, CERCLA, CAA, EPCRA, and CWA.

94. Nothing herein shall be construed to limit or otherwise affect Westlake's liability

and obligation to perform Corrective Measures at the PVC Plant including Corrective Measures beyond the PVC Plant's boundary, except for lack of access, provided that Westlake has met its obligation of utilizing best efforts to obtain access.

#### X. STIPULATED PENALTIES

95. Unless there has been a written modification by EPA of a compliance date, a written modification by EPA of an approved Workplan condition, or excusable delay as defined in the Force Majeure Provisions of this Consent Decree, if Westlake fails to comply with any term or condition of this Consent Decree and its Appendices set forth below, in the time or manner specified, Westlake shall be liable for Stipulated Penalties to the United States and to the Commonwealth (with the exception of terms or conditions of the RCRA injunctive relief), as stated below, upon written demand.

a. Westlake shall pay stipulated penalties per day per violation as set forth below:

<u>Time Frame</u>	<u>Amount</u>
1 - 14 days:	\$2,000 per day
15 - 30 days:	\$3,000 per day
Each day Thereafter:	\$5,000 per day

for failure to comply with the terms and conditions of this Consent Decree as follows:

- i. failure to pay the civil penalties and any accrued interest pursuant to this Consent Decree;
- ii. failure to submit a Workplan Corrective Measures (CM) Report(s),

Corrective Measure Implementation (CMI) Report(s), Corrective Measures Study (CMS) Report(s), Interim Measures (IM) Report, and RCRA Facility Investigation (RFI) Report to EPA on schedule and in accordance with all terms of the Consent Decree;

- iii. failure to submit progress reports on schedule;
- iv. failure to implement the LDAR program as set forth in the schedule;
- v. failure to divert at least 40 percent by volume of the Oxy Absorber Vent flow rate to the Primary Incinerator during a planned Oxy Incinerator outage unless the Primary Incinerator experiences an unplanned outage during the planned Oxy Incinerator outage;
- vi. failure to notify EPA of immediate threats to human health and the environment emanating from Lifts 4, 7, 8, and 9 at the PVC Plant during the performance of the requirements set forth in this Consent Decree that are not already being addressed under another state or federal program such as RCRA or CERCLA;
- vii. failure to notify EPA and the Commonwealth in writing, as required in the Notices Section of this Consent Decree, of the name, title, and qualifications of the engineer, hydrologist, geologist, or environmental scientist and of any contractors or consultants and their personnel to be used in carrying out the terms of this Consent Decree;
- viii. failure to notify EPA prior to initiating field work during the RCRA investigation at the PVC Plant specified in Paragraphs 32 through 69 of this Consent Decree;
- ix. failure to preserve records as required in the Consent Decree; and
- x. failure to provide written notice to any successor in interest prior to

transfer of ownership or operation of the Facilities.

b. Westlake shall be liable for stipulated penalties per day per violation as set forth below:

<u>Time Frame</u>	<u>Amount</u>
1 - 14 days:	\$500 per day
15 - 30 days:	\$1,000 per day
Each day Thereafter:	\$2,500 per day

for failure to comply with the terms and conditions of this Consent Decree as follows:

- i. failure to complete and submit any other written submittals not referred to above; and
- ii. failure to comply with any other provisions of this Consent Decree.

96. Westlake shall pay Stipulated Penalties to the Commonwealth, as directed by the Commonwealth. If so directed, Westlake shall pay Stipulated Penalties owing to the United States by EFT in accordance with provisions for paying the civil penalty set forth herein, but if no direction is made in the demand, Westlake may pay by certified or cashier's check in the amount due, payable to the "U.S. Department of Justice," referencing DOJ No. 90-5-2-1-08097, and delivered to the office of the United States Attorney, Western District of Kentucky, Attention: Financial Litigation Unit.

97. All such checks shall reference the name of the Facilities, Westlake's name and address, and the EPA docket number of this action. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to the EPA Project Coordinator.



98. Stipulated Penalties under this Section shall begin to accrue on the day after performance is due or on the day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated Penalties shall accrue simultaneously for separate violations of this Consent Decree. Westlake shall pay any Stipulated Penalty within thirty (30) days of receiving the demand of the United States or the demand of the Commonwealth, as applicable. The United States, or the Commonwealth, or both, may seek Stipulated Penalties under this Section, except that only the United States may seek stipulated penalties for violations of the RCRA injunctive relief set forth in this Consent Decree. Where both sovereigns seek Stipulated Penalties for the same violation of this Consent Decree, Westlake shall pay fifty (50) percent to the United States and fifty (50) percent to the Commonwealth. Where only one sovereign demands Stipulated Penalties for a violation, it shall make that demand on its own behalf, and Westlake shall pay the full amount of the Stipulated Penalties due for the violation to that sovereign.

99. The United States or the Commonwealth may, in the unreviewable exercise of their discretion, reduce or waive Stipulated Penalties otherwise due that sovereign under this Consent Decree. The determination by one sovereign not to seek Stipulated Penalties, or subsequently to waive or reduce the amount it seeks, shall not preclude the other sovereign from seeking the full amount of Stipulated Penalties owing.

100. Stipulated Penalties shall continue to accrue as provided herein, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA or the Commonwealth that is not appealed to the Court, Westlake shall pay accrued penalties

determined to be owing, together with interest, to the United States or the Commonwealth within thirty (30) days of the effective date of the agreement or the receipt of EPA's or the Commonwealth's decision under this Consent Decree. Such settlement of a dispute may include a provision that waives or reduces any Stipulated Penalties that might otherwise be due.

b. If the dispute is appealed to the Court and the United States or the Commonwealth prevails in whole or in part, Westlake shall pay all accrued penalties determined by the Court to owe, together with interest, within sixty (60) days of receiving the final appellate court decision.

101. If so directed, Westlake shall pay all stipulated penalties to the United States, by FedWire Electronic Funds Transfer ("EFT") to the U.S. Department of Justice in accordance with written instructions to be provided to Westlake by the Financial Litigation Unit of the U.S. Attorney's Office for the Western District of Kentucky. At the time of payment, Westlake shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for a stipulated penalty owed pursuant to the Consent Decree in United States, et al. v. Westlake Vinyls, et al., and shall reference the civil action number and DOJ case number # 90-5-2-1-08097 to the United States in accordance with Notices Section of this Consent Decree; by email to [acctsreceivable.CINWD@epa.gov](mailto:acctsreceivable.CINWD@epa.gov); and to:

EPA Cincinnati Finance Office  
26 Martin Luther King Drive  
Cincinnati, Ohio 45268

102. Westlake shall not deduct Stipulated Penalties paid under this Section in calculating its federal or state income tax.

103. If Westlake fails to pay Stipulated Penalties according to the terms of this Consent

Decree, Westlake shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due.

104. Subject to the provisions of Section XIV (Effect of Settlement/Reservation of Rights) of this Consent Decree, the Stipulated Penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States or the Commonwealth for Westlake's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of relevant statutory or regulatory requirements, Westlake shall be allowed a credit, for any Stipulated Penalties paid, against any statutory penalties imposed for such violation.

#### XI. FORCE MAJEURE

105. A "force majeure event" is any event beyond the control of Westlake, its contractors, or any entity controlled by Westlake that delays the performance of any obligation under this Consent Decree despite Westlake's best efforts to fulfill the obligation. "Best efforts" includes attempting to anticipate any potential force majeure event and addressing the effects of any such event (a) as it is occurring and (b) after it has occurred, to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include Westlake's financial inability to perform any obligation under this Consent Decree.

106. Westlake shall provide notice orally or by electronic or facsimile transmission as soon as possible, but not later than seventy-two (72) hours after the time Westlake first knew of, or by the exercise of due diligence, should have known of, a claimed force majeure event. Westlake shall also provide written notice, as provided in the Notices Section of this Consent Decree, within ten (10) days of the time Westlake first knew of, or by the exercise of due

diligence, should have known of, the event. The notice shall state the anticipated duration of any delay; its cause(s); Westlake's past and proposed actions to prevent or minimize any delay; a schedule for carrying out those actions; and Westlake's rationale for attributing any delay to a force majeure event. Failure to provide notice as required by this Paragraph shall preclude Westlake from asserting any claim of force majeure.

107. If the United States, after consultation with the Commonwealth, agrees that a force majeure event has occurred, the time for Westlake to perform the affected requirements will be extended for the time necessary to complete those obligations, and no Stipulated Penalties shall be due as a result of the Force Majeure event. An extension of time to perform the obligations affected by a force majeure event shall not, by itself, extend the time to perform any other obligation. The appropriate modification shall be made pursuant to the Modification Section of this Consent Decree.

108. If the United States does not agree that a force majeure event has occurred, or does not agree to the extension of time sought by Westlake, the United States' position shall be binding, unless Westlake invokes Dispute Resolution under the Dispute Resolution provisions of this Consent Decree. In any such dispute, Westlake bears the burden of proving, by a preponderance of the evidence, that each claimed force majeure event is a force majeure event, that Westlake gave the required notice that the force majeure event caused any delay Westlake claims was attributable to that event, and that Westlake exercised best efforts to prevent or minimize any delay caused by the event.

## XII. DISPUTE RESOLUTION

109. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Westlake's failure to seek resolution of a dispute under this Section shall preclude Westlake from raising any such issue as a defense to an action by the United States or to enforce any obligation of Westlake arising under this Decree.

110. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Westlake sends the United States and the Commonwealth a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed thirty (30) days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States, after consultation with the Commonwealth, shall be considered binding unless, within twenty (20) days after the conclusion of the informal negotiation period, Westlake invokes formal dispute resolution procedures as set forth below.

111. Formal Dispute Resolution. Westlake shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the Commonwealth a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting Westlake's position and any supporting documentation relied upon by Westlake.

112. The United States, after consultation with the Commonwealth, shall serve its

Statement of Position within forty-five (45) days of receipt of Westlake's Statement of Position. The United States' Statement of Position shall include, but may not necessarily be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Westlake, unless Westlake files a motion for judicial review of the dispute in accordance with the following Paragraph.

113. Westlake may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with the Notice provisions of this Consent Decree, a motion requesting judicial resolution of the dispute. The motion must be filed within twenty days (20) days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Westlake's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for Consent Decree implementation of the Consent Decree.

114. The United States shall respond to Westlake's motion within the time period allowed by the Local Rules of this Court. Westlake may file a reply memorandum, to the extent permitted by the Local Rules.

115. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree; and all other disputes that are accorded review on

the administrative record under applicable principles of administrative law, Westlake shall have the burden of demonstrating, based on the administrative record, that the position of the United States is arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute, Westlake shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the objectives of the Consent Decree.

116. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Westlake under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated Penalties with respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided above. If Westlake does not prevail on the disputed issue, Stipulated Penalties shall be assessed and paid as provided under this Consent Decree or as determined by the Court.

### XIII. INFORMATION COLLECTION AND RETENTION

117. Westlake shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relates in any manner to Westlake's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, the United States or the Commonwealth may request copies of any documents, records, or other information required

to be maintained under this Paragraph. The obligation to retain and preserve such information shall continue until sixty (60) days after the termination of this Consent Decree

118. At the conclusion of the information-retention period provided in the preceding Paragraph, Westlake shall notify the United States and the Commonwealth at least ninety (90) days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the Commonwealth, Westlake shall deliver any such documents, records, or other information to EPA or the Commonwealth. Westlake may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Westlake asserts such a privilege, it shall provide 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 each 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 Westlake. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege. Westlake further agrees that within thirty (30) days of retaining or employing any agent, consultant, or contractor for the purpose of carrying out the terms of this Consent Decree, Westlake will enter into an agreement with any such agents, consultants, or contractors whereby such agents, consultants, and/or contractors will be required to provide Westlake a copy of all documents produced. All documents required to be retained under the terms of this Consent Decree shall be stored by Westlake at the Facilities so that the documents are available upon request by EPA or its representatives.



119. Westlake may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Westlake seeks to protect as CBI, Westlake shall follow the procedures set forth in 40 C.F.R. Part 2.

120. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the Commonwealth pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Westlake to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

#### XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

121. This Consent Decree resolves the civil claims of the United States and the Commonwealth for the CWA, CAA, CERCLA, and EPCRA violations alleged in the Complaints filed in this action and the NOV through the date of lodging. The United States also covenants not to sue or take administrative action under Section 3008(a) and (h) of RCRA, 42 U.S.C. § 6928(a) and (h), for performance of the Injunctive Relief at the PVC Plant as set forth in Paragraphs 34 through 74 of this Consent Decree. This covenant not to sue is expressly conditioned upon satisfactory performance of the requirements set forth therein. The United States and the Commonwealth reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated herein. Except as provided in this Paragraph, this Consent Decree shall not be construed to limit the rights of the United States or the Commonwealth to obtain penalties or injunctive relief under CAA, RCRA, EPCRA, CERCLA, or CWA or their implementing regulations, or to pursue cost recovery claims under

CERCLA, or under other federal or state laws, regulations, or permit conditions. The United States and the Commonwealth reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. The United States and the Commonwealth further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, the Facilities, whether related to the violations addressed in this Consent Decree or otherwise.

122. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Westlake is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Westlake's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, nor shall approval of any submission made by Westlake under this Consent Decree constitute a warranty that implementation by Westlake of the approved submission will result in compliance with the provisions of the CAA, RCRA, EPCRA, CERCLA, or CWA, or with any other provisions of federal, State, or local laws, regulations, or permits. The United States and the Commonwealth do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Westlake's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CAA, RCRA, EPCRA, CERCLA, or CWA, or with any other provisions of federal, state, or local laws, regulations, or permits.

123. This Consent Decree does not limit or affect the rights of Westlake or of the United States or the Commonwealth against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Westlake,

except as otherwise provided by law.

124. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

125. The rights reserved to the United States include the right to disapprove work that Westlake has performed pursuant to this Consent Decree. Any such disapproval shall be subject to the Dispute Resolution provision of this Consent Decree.

#### XV. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

126. Westlake agrees to indemnify and save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising solely from or on account of acts or omissions of Westlake or its officers, employees, agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Consent Decree. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Westlake or the United States under their various contracts. Westlake shall not be responsible for indemnifying the EPA for claims or causes of action solely from or on account of acts or omissions of EPA.

#### XVI. COSTS

127. The Parties shall bear their own costs of this action.

#### XVII. NOTICES

128. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

To the United States:

Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
Box 7611  
Ben Franklin Station  
Washington, D.C. 20044-7611  
Re: DOJ No. 90-5-2-1-08097

if by regular mail or post office express mail, and to

Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
601 D Street, N.W., 2nd floor  
Washington, D.C. 20004  
Re: DOJ No. 90-5-2-1-08097

if by private overnight mail service.  
and

To EPA:  
Ronald J. Mikulak  
Office of Environmental Accountability  
U.S. Environmental Protection Agency, Region 4  
61 Forsyth Street, S.W.  
Atlanta, GA 30303-8960

Bruce Fergusson  
Office of Civil Enforcement  
Mail Code 2248A  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

To the Commonwealth of Kentucky:

AIR  
Paducah Regional Office  
Division for Air Quality  
130 Eagle Nest Drive  
Paducah, Kentucky 42003

Director, Air Quality Division  
Air Quality Division  
200 Fair Oaks Lane  
Frankfort, Kentucky 40601

To Westlake:

Westlake Vinyls, Inc.  
Vice President Vinyls  
2801 Post Oak Boulevard  
Suite 600  
Houston, TX 77056

129. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

130. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

#### XVIII. EFFECTIVE DATE

131. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court.

#### XIX. RETENTION OF JURISDICTION

132. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Consent Decree, modifying this Consent Decree or effectuating or enforcing compliance with the terms of this Consent Decree.

#### XX. MODIFICATION

133. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to any

term of this Consent Decree, it shall be effective only upon approval by the Court. The terms contained in the Appendices of this Consent Decree may be modified upon written agreement of the Parties without Court approval, unless any such modification effects a material change to the terms of this Consent Decree or materially affects Westlake's ability to meet the requirements or objectives of this Consent Decree.

#### XXI. TERMINATION

134. After Westlake has complied with all requirements of this Consent Decree, including those relating to Section V (Compliance Requirements), and has paid the civil penalty and any accrued Stipulated Penalties as required by this Consent Decree, Westlake may serve upon the United States and the Commonwealth a Request for Termination, stating that Westlake has satisfied those requirements, together with all necessary supporting documentation.

135. Following receipt by the United States and the Commonwealth of Westlake's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Westlake has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the Commonwealth, agrees that the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Consent Decree.

136. If the United States, after consultation with the Commonwealth, does not agree that the Consent Decree may be terminated, Westlake may invoke Dispute Resolution under the Dispute Resolution provisions of this Consent Decree. However, Westlake shall not seek Dispute Resolution of any dispute regarding termination, under the Dispute Resolution provisions of this Consent Decree, until sixty (60) days after service of its Request for

Termination.

137. After Westlake has complied with any discrete portion of this Consent Decree, including those relating to the subsections of Section V (e.g., Clean Air Act Injunctive Relief, RCRA Injunctive Relief at the PVC Plant, EPCRA/CERCLA Injunctive Relief at Vinyls Plant, and Clean Water Act Injunctive Relief at Vinyls Plant), and has paid the civil penalty and any accrued Stipulated Penalties as required by this Consent Decree, Westlake may serve upon the United States and the Commonwealth a Request for Partial Termination, stating that Westlake has satisfied those requirements, together with all necessary supporting documentation.

138. Following receipt by the United States and the Commonwealth of Westlake's Request for Partial Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Westlake has satisfactorily complied with the requirements for partial termination of this Consent Decree. If the United States, after consultation with the Commonwealth, agrees that a portion of the Consent Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating a portion of the Consent Decree.

139. If the United States, after consultation with the Commonwealth, does not agree that a portion of the Consent Decree may be terminated, Westlake may invoke Dispute Resolution under the Dispute Resolution provisions of this Consent Decree. However, Westlake shall not seek Dispute Resolution of any dispute regarding partial termination, under the Dispute Resolution provisions of this Consent Decree, until sixty (60) days after service of its Request for Partial Termination.

## XXII. PUBLIC PARTICIPATION FOR CONSENT DECREE

140. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with 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 indicating that the Consent Decree is inappropriate, improper, or inadequate. Westlake consents to entry of this Consent Decree without further notice.

#### XXIII. SIGNATORIES/SERVICE

141. Each undersigned representative of each party to this Consent Decree 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 the Party he or she represents to this document.

142. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

143. Westlake agrees not to oppose entry of this Consent Decree by the Court or to challenge any provision of the Consent Decree, unless the United States has notified Westlake in writing that it no longer supports entry of the Consent Decree.

144. Westlake agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

#### XXIV. INTEGRATION

145. This Consent Decree and any Appendix (including any SOW) referenced herein constitute the final, complete, and exclusive agreement and understanding among the Parties with



respect to the settlement embodied in the Consent Decree and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than the appendices, which are attached to and incorporated in this Consent Decree, and deliverables submitted and approved pursuant to this Consent Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Consent Decree or the settlement it represents, nor shall it be used in construing the terms of this Consent Decree.

#### XXV. IDENTIFICATION OF APPENDICES

146. Appendix A is the Corrective Measures (CM) Scope of Work. Appendix B is the Corrective Measure Implementation (CMI) Scope of Work. Appendix C is the Corrective Measures Study (CMS) Scope of Work. Appendix D is the Interim Measures (IM) Scope of Work. Appendix E is the Description of PVC Plant. Appendix F is the RCRA Facility Investigation (RFI) Scope of Work. Appendix G is the Form for Monitoring Roll Off Containers. Appendix H is the Health and Safety Plan Scope of Work.

#### XXVI. FINAL JUDGMENT

147. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the Commonwealth, and Westlake. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Rules 54 and 58 of the Federal Rules of Civil Procedure.

IT IS SO ORDERED this \_\_\_ day of \_\_\_\_\_, 2010.

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UNITED STATES DISTRICT JUDGE

THE UNITED STATES

Dated: 8/31/10

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ELLEN M. MAHAN  
Deputy Section Chief  
Environmental Enforcement Section  
United States Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611

Dated: 8/31/10

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JAMES R. MacAYEAL  
Trial Attorney  
Environmental Enforcement Section  
Environment & Natural Resources  
Division  
United States Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611

Dated: June 15, 2010

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A. Stanley Meiburg  
Acting Regional Administrator  
United States Environmental  
Protection Agency, Region 4  
61 Forsyth Street  
Atlanta, Georgia 30303

**OF COUNSEL:**

**TERESA MANN**  
Assistant Regional Counsel  
Office of Environmental Accountability  
United States Environmental Protection Agency,  
Region 4  
61 Forsyth Street  
Atlanta, Georgia 30303

WESTLAKE VINYL, INC. and  
WESTLAKE PVC CORPORATION

Dated: 5/25/10

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Vice President  
2801 Post Oak Boulevard  
Suite 600  
Houston, TX 77056

COMMONWEALTH OF KENTUCKY

Dated: 7/23/10

\_\_\_\_\_  
Dr. Leonard K. Peters, Secretary  
Energy and Environment Cabinet  
500 Mero Street  
12<sup>th</sup> Floor, Capital Plaza Tower  
Frankfort, Kentucky 40601

Dated: 7.23.10

\_\_\_\_\_  
C. Michael Haines, General Counsel  
Energy and Environment Cabinet  
Office of General Counsel  
2 Hudson Hollow Road  
Frankfort, Kentucky 40601

**Appendix A**  
**Corrective Measures (CM) Scope of Work**

**Purpose**

The purpose of the Corrective Measures Study (CMS) portion of the RCRA corrective action process is to identify and evaluate potential remedial alternatives for the releases that have been identified at a facility.

**Scope**

A Corrective Measures Study Workplan and Corrective Measures Study Report are required elements of the CMS. The CMS consists of the following components:

Section I: Corrective Measures Study Workplan

Section II: Corrective Measures Study Report

A. Introduction /Purpose

B. Description of Current Conditions

C. Corrective Action Objectives

D. Identification, Screening and Development of Corrective Measure

Alternatives

E. Evaluation of A Final Corrective Measure Alternative

F. Recommendation by a Westlake for a Final Corrective Measure

Alternative

G. Public Involvement Plan

Section III: Progress Reports

Section IV: Proposed Schedule

## **Section I: Corrective Measures Study Workplan**

The Corrective Measures Study (CMS) Workplan shall include the following elements:

- A. A site-specific description of the overall purpose of the Corrective Measure Study;
- B. A description of the corrective measure objectives, including proposed target media cleanup standards (e.g., promulgated federal and state standards, risk derived standards) and points of compliance or a description of how a risk assessment will be performed (e.g., guidance documents);
- C. A description of the specific corrective measure technologies and/or corrective measure alternatives, which will be studied;
- D. A description of the general approach to investigating and evaluating potential corrective measures;
- E. A detailed description of any proposed pilot, laboratory and/or bench scale studies;
- F. A proposed outline for the CMS Report including a description of how information will be presented; and
- G. A description of overall project management including overall approach, levels of authority (include organization chart), lines of communication, project schedules, budget, personnel, and a description of qualifications for personnel directing or performing the work.

## **Section II: Corrective Measures Study Report**

The Corrective Measures Study (CMS) Report shall include the following elements:

**A. Introduction/Purpose:** Westlake shall describe the purpose of the document and provide a summary description of the project.

**B. Description of Current Conditions:** Westlake shall include a brief summary/discussion of any new information that has been discovered since the RFI current conditions report was finalized. This discussion should concentrate on those issues, which could significantly affect the evaluation and selection of the corrective measures alternative(s).

**C. Media Cleanup Standards:** Westlake may propose media cleanup standards. The standards must be based on promulgated federal and state standards, risk derived standards, all data and information gathered during the corrective action process (e.g., from interim measures, RCRA Facility Investigation, etc.), and/or other applicable guidance documents. If no other guidance exists for a given contaminant and media, Westlake shall propose and justify a media cleanup standard.

**D. Identification, Screening, and Development of Corrective Measure Alternatives**

i. **Identification:** List and briefly describe potentially applicable technologies for each affected media that may be used to achieve the corrective action objectives. Westlake should consider including a table that summarizes the available technologies. Depending on the site-specific situation, the EPA may require Westlake to consider additional technologies. Westlake should consider innovative treatment



technologies, especially in situations where there are a limited number of applicable corrective measure technologies. Innovative technologies are defined as those technologies utilized for remediation other than incineration, solidification/stabilization, and pumping with conventional treatment for contaminated groundwater [see Appendix C]. Innovative treatment technologies may require extra effort to gather information, to analyze options, and to adapt the technology to the site-specific situation. Treatability studies and on-site pilot scale studies may be necessary for evaluating innovative treatment technologies.

ii. Screening: When Westlake is required to, or chooses to, evaluate a number of corrective measures technologies, Westlake will evaluate the technology limitations to show why certain corrective measures technologies may prove unfeasible to implement given existing waste and site-specific conditions. Likewise, if only one corrective measure alternative is being analyzed, Westlake must indicate any technological limitations given waste and site-specific conditions at the facility for which it is being considered. Respondent should consider including a table that summarizes these findings.

iii. Corrective Measure Development: As required by the EPA, Westlake shall assemble the technologies that pass the screening step into specific alternatives that have potential to meet the corrective action objectives for each media. Options for addressing less complex sites could be relatively straight-forward and may only require evaluation of a single or limited number of alternatives. Each alternative may consist of an individual technology or a combination of technologies used in sequence (i.e., treatment train). Depending on the site specific situation, different

alternatives may be considered for separate areas of the facility. List and briefly describe each corrective measure alternative.

**E. Evaluation of a Final Corrective Measure Alternative.**

For each remedy, which warrants a more detailed evaluation, including those situations when only one remedy is being proposed, Westlake shall provide detailed documentation of how the potential remedy will comply with each of the standards listed below. These standards reflect the major technical components of remedies including cleanup of releases, source control and management of wastes that are generated by remedial activities. The specific standards are provided below.

- i. Protect human health and the environment.
- ii. Attain media cleanup standards set by the EPA.
- iii. Control the source of releases so as to reduce or eliminate, to the extent practicable, further releases that may pose a threat to human health and the environment.
- iv. Comply with any applicable standards for management of wastes.
- v. Other Factors.

In evaluating the selected alternative or alternatives Westlake shall prepare and submit information that documents that the specific remedy will meet the standards listed above. The following guidance should be used in completing this evaluation. This guidance provides examples of the types of information that would be supportive; the EPA may require additional information.

- i. Protect Human Health and the Environment. Corrective action remedies must be protective of human health and the environment. Remedies may

include those measures that are needed to be protective, but are not directly related to media cleanup, source control, or management of wastes. An example would be a requirement to provide alternative drinking water supplies in order to prevent exposures to releases from an aquifer used for drinking water purposes. Another example would be a requirement for the construction of barriers or for other controls to prevent harm arising from direct contact with waste management units. Therefore, Westlake shall include a discussion on what types of short term remedies are appropriate for the particular facility in order to meet this standard. This information should be provided in addition to a discussion of how the other corrective measure alternatives meet this standard.

ii. Attain Media Cleanup Standards Set by the EPA Remedies will be required to attain media cleanup standards set by the EPA which may be derived from existing state or federal regulations (e.g., groundwater standards) or other standards. The media cleanup standards for a remedy will often play a large role in determining the extent of and technical approaches to the remedy. In some cases, certain technical aspects of the remedy, such as the practical capabilities of remedial technologies, may influence to some degree the media cleanup standards that are established. As part of the necessary information for satisfying this requirement, Westlake shall address whether the potential remedy will achieve the preliminary remediation objective as identified by the EPA as well as other, alternative remediation objectives that may be proposed by Westlake. Westlake shall also include an estimate of the time frame necessary for each alternative to meet these standards.

iii. Control the Sources of Releases. A critical objective of any remedy must be to stop further environmental degradation by controlling or eliminating

further releases that may pose a threat to human health and the environment. Unless source control measures are taken, efforts to clean up releases may be ineffective or, at best, will essentially involve a perpetual cleanup. Therefore, an effective source control program is essential to ensure the long-term effectiveness and protectiveness of the corrective action program. The source control standard is not intended to mandate a specific remedy or class of remedies. Instead, Westlake is encouraged to examine a wide range of options. This standard should not be interpreted to preclude the equal consideration of using other protective remedies to control the source, such as partial waste removal, capping, slurry walls, insitu treatment/stabilization and consolidation. As part of the CMS Report, Westlake shall address the issue of whether source control measures are necessary, and if so, the type of actions that would be appropriate. Any source control measure proposed should include a discussion on how well the method is anticipated to work given the particular situation at the facility and the known track record of the specific technology.

**F. Comply With Any Applicable Standards for Management of Wastes.**

Westlake shall include a discussion of how the specific waste management activities will be conducted in compliance with all applicable state or federal regulations (e.g., closure requirements, land disposal restrictions).

**G. Other Factors**

There are five general factors that will be considered in selecting/approving a remedy that meets the four standards listed above. These factors represent a combination of technical measures and management controls for addressing the environmental problems at the facility. The five general decision factors include:

- i. Long-term reliability and effectiveness;
- ii. Reduction in the toxicity, mobility or volume of wastes;
- iii. Short-term effectiveness;
- iv. Implementability; and
- v. Cost.

Westlake should provide additional information to support the use of these factors in the evaluation of viable remedial alternatives. Examples of the types of information that may be requested are provided below:

- i. Long-term Reliability and Effectiveness. Demonstrated and expected reliability is a way of assessing the risk and effect of failure. Westlake may consider whether the technology or a combination of technologies have been used effectively under analogous site conditions, whether failure of any one technology in the alternative would have an immediate impact on receptors, and whether the alternative would have the flexibility to deal with uncontrollable changes at the site (e.g., heavy rain storms, earthquakes, etc.). Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure alternative should be evaluated in terms of the projected useful life of the overall alternative and of its component technologies. Useful life is defined as the length of time the level of effectiveness can be maintained.

- ii. Reduction in the Toxicity, Mobility or Volume of Wastes. As a general goal, remedies will be preferred that employ techniques, such as treatment technologies, that are capable of eliminating or substantially reducing the inherent

potential for the wastes in SWMUs (and/or contaminated media at the facility) to cause future environmental releases or other risks to human health and the environment. There may be some situations where achieving substantial reductions in toxicity, mobility or volume may not be practical or even desirable. Examples might include large, municipal-type landfills, or wastes such as unexploded munitions that would be extremely dangerous to handle, and for which the short-term risks of treatment outweigh potential long-term benefits. Estimates of how much the corrective measures alternatives will reduce the waste toxicity, volume, and/or mobility may be helpful in applying this factor. This may be done through a comparison of initial site conditions to expected post-corrective measure conditions.

iii. Short-term Effectiveness. Short-term effectiveness may be particularly relevant when remedial activities will be conducted in densely populated areas, or where waste characteristics are such that risks to workers or to the environment are high and special protective measures are needed. Possible factors to consider include fire, explosion, exposure to hazardous substances and potential threats associated with treatment, excavation, transportation, and redisposal or containment of waste material.

iv. Implementability. Implementability will often be a determining variable in shaping remedies. Some technologies will require state or local approvals prior to construction, which may increase the time necessary to implement the remedy. In some cases, state or local restrictions or concerns may necessitate eliminating or deferring certain technologies or remedial approaches from consideration in remedy selection. Information to consider when assessing implementability may include:

- The administrative activities needed to implement the corrective measure alternative (e.g., permits, rights of way, off-site approvals, etc.) and the length of time these activities will take;

- The constructibility, time for implementation, and time for beneficial results.

- The availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials; and

- The availability of prospective technologies for each corrective measure alternative.

v. Cost. The relative cost of a remedy may be an appropriate consideration, especially in those situations where several different technical alternatives to remediation will offer equivalent protection of human health and the environment, but may vary widely in cost. However, in those situations where only one remedy is being proposed, the issue of cost would not need to be considered. Cost estimates could include costs for: engineering, site preparation, construction, materials, labor, sampling/analysis, waste management/disposal, permitting, health and safety measures, training, operation and maintenance, etc.

#### **H. Recommendation by Westlake for a Final Corrective Measure Alternative**

In the CMS Report, Westlake may recommend a preferred remedial alternative for consideration. Such a recommendation should include a description and supporting rationale for the proposed remedy, consistent with the remedial standards and the

decision factors discussed above. Such a recommendation is not required and the EPA still retains the role of remedy selection.

#### **I. Public Involvement Plan**

After the CMS has been performed by Westlake and the EPA has selected a preferred alternative for proposal in the Statement of Basis, it is the agency's policy to request public comment on the Administrative Record and the proposed corrective measure(s). Changes to the proposed corrective measure(s) may be made after consideration of public comment. The EPA may also require that Westlake perform additional corrective measures studies. If the public is interested, a public meeting may be held. After consideration of the public's comments on the proposed corrective measure, the agency develops the Final Decision and Response to Comments (RTC) to document the selected corrective measure, the agency's justification for such selection, and the response to the public's comment. Additional public involvement activities may be necessary, based on facility specific circumstances.

#### **Section III: Progress Reports**

Westlake will, at a minimum, provide the EPA with signed, or quarterly progress reports. These reports may be required to contain the following information, but agency requirements are not limited to this list:

- a. A description and estimate of the percentage of the CMS completed;
- b. Summaries of *all* findings in the reporting period, including results of any pilot studies;



- c. Summaries of *all* changes made in the CMS during the reporting period;
- d. Summaries of *all* contacts with representative of the local community, public interest groups or State government during the reporting period;
- e. Summaries of *all* contacts made regarding access to off-site property;
- f. Summaries of *all* problems encountered during the reporting period;
- g. Actions being taken to rectify problems;
- h. Changes in relevant personnel during the reporting period;
- i. Projected work for the next reporting period; and
- j. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

**Section IV: Proposed Schedule**

Westlake will establish a schedule to provide EPA with CMS Reports according to the schedule set forth in the Consent Decree.

## **Appendix B**

### **Corrective Measure Implementation (CMI) Scope of Work**

#### **Purpose**

The purpose of the Corrective Measures Implementation (CMI) program is to design, construct, operate, maintain and monitor the performance of the corrective measure or measures selected by the EPA. Corrective measures are intended to protect human health and/or the environment from releases from the facility. Westlake will furnish all personnel, materials and services necessary to implement the corrective measures program.

#### **Scope**

The documents required for Corrective Measures Implementation are, unless the EPA specifies otherwise, a Conceptual Design, Operation and Maintenance Plan, Intermediate Plans and Specifications, Final Plans and Specifications, Construction Workplan, Construction Completion Report, Corrective Measure Completion Report, Health and Safety Plan, Public Involvement Plan, and Progress Reports. The scope of work (SOW) for each document is specified below. The SOW's are intended to be flexible documents capable of addressing both simple and complex site situations. If Westlake can justify, to the satisfaction of the EPA, that a plan and/or report or portions thereof are not needed in the given site-specific situation, then the EPA may waive that requirement. The EPA may require Westlake to conduct additional studies beyond what is discussed in the SOW's in order to support the CMI program. Westlake will furnish all personnel, materials and services necessary to conduct the additional tasks. The CMI consists of the following components, which for clarity are designated as sections in this Scope of Work.

**Section I: Conceptual Design (15% Design Point)**

- A. Introduction/Purpose
- B. Corrective Measures Objectives
- C. Conceptual Model of Contaminant Migration
- D. Description of Corrective Measures
- E. Project Management
- F. Project Schedule
- G. Design Criteria
- H. Design Basis
- I. Waste Management Practices
- J. Required Permits
- K. Long-lead Procurement Considerations
- L. Appendices

**Section II: Operation and Maintenance Plan**

- A. Introduction/Purpose
- B. Project Management
- C. System Description
- D. Personnel Training
- E. Start-up Procedures
- F. Operation and Maintenance Procedures
- G. Replacement Schedule for Equipment and Installed Components
- H. Waste Management Practices
- I. Sampling and Analysis

- J. Corrective Measure Completion Criteria
- K. Operation and Maintenance Contingency Procedures
- L. Data Management and Documentation Requirements

**Section III: Intermediate Plans and Specifications (30, 50, 60, 90 and/or 95% Design Point)**

**Section IV: Final Plans and Specifications (100% Design Point)**

**Section V: Construction Workplan**

- A. Introduction/Purpose
- B. Project Management
- C. Project Schedule
- D. Construction Quality Assurance/Quality Control Programs
- E. Waste Management Procedures
- F. Sampling and Analysis
- G. Construction Contingency Procedures
- H. Construction Safety Procedures
- I. Documentation Requirements
- J. Cost Estimate/Financial Assurance

**Section VI: Construction Completion Report**

**Section VII: Corrective Measure Completion Report**

**Section VIII: Health and Safety Plan**

**Section IX: Public Involvement Plan**

**Section X: Progress Reports**

**Section XI: Proposed Schedule**

**Section I: Conceptual Design (15% Design Point)**

Westlake shall prepare a Conceptual Design (CD) that clearly describes the size, shape, form, and content of the proposed corrective measure; the key components or elements that are needed; the designer's vision of the corrective measure in the form of conceptual drawings and schematics; and the procedures and schedules for implementing the corrective measure(s). It should be noted that more than one conceptual design may be needed in situations where there is a complex site with multiple technologies being employed at different locations. The EPA may require approval of the CD prior to implementation. The CD must, at a minimum, include the following elements:

**A. Introduction/Purpose:** Describe the purpose of the document and provide a summary description of the project.

**B. Corrective Measures Objectives:** Discuss the corrective measure objectives including applicable media cleanup standards.

**C. Conceptual Model of Contaminant Migration:** Present a conceptual model of the site and contaminant migration. The conceptual model consists of a working hypothesis of how the contaminants may move from the release source to the receptor population. The conceptual model is developed by looking at the applicable physical parameters (e.g., water solubility, density, Henry's Law Constant, etc.) for each contaminant and assessing how the contaminant may migrate given the existing site conditions (geologic features, depth to groundwater, etc.). Describe the phase (water, soil, gas, non-aqueous) and location where contaminants are likely to be found. This analysis may have already been done as part of earlier work (e.g., Current Conditions Report). If this is the case, then provide a summary of the conceptual model with a reference to the earlier document.

**D. Description of Corrective Measures:** Considering the conceptual model of contaminant migration, qualitatively describe what the corrective measure is supposed to do and how it will function at the facility. Discuss the feasibility of the corrective measure and its ability to meet the corrective measure objectives.

1. **Data Sufficiency:** Review existing data needed to support the design effort and establish whether or not there is sufficient accurate data available for this purpose. Westlake must summarize the assessment findings and specify any additional data needed to complete the corrective measure design. The EPA may require or Westlake may propose that sampling and analysis plans and/or treatability study Workplans be developed to obtain the additional data. Submittal times for any new sampling and analysis plans and/or treatability study Workplans will be determined by the EPA and will be included in the project schedule.

**E. Project Management:** Describe the management approach including levels of authority and responsibility (include organizational chart), lines of communication and the qualifications of key personnel who will direct the contractor personnel.

**F. Project Schedule:** The project schedule must specify all significant steps in the process and when all CMI deliverables (e.g., Operation and Maintenance Plan, Corrective Measure Construction Workplan, etc.) are to be submitted to the EPA.

**G. Design Criteria:** Specify performance requirements for the overall corrective measure and for each major component. Westlake must select equipment that meets the performance requirements.

**H. Design Basis:** Discuss the process and methods for designing all major components of the corrective measure. Discuss the significant assumptions made and possible sources of error. Provide justification for the assumptions.

1. Conceptual Process/Schematic Diagrams.
2. Site plan showing preliminary plant layout and/or treatment area.
3. Tables listing number and type of major components with approximate dimensions.
4. Tables giving preliminary mass balances.
5. Site safety and security provisions (e.g., fences, fire control, etc.).

**I. Waste Management Practices:** Describe the wastes generated by the construction of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

**J. Required Permits:** List and describe the permits needed to construct and operate the corrective measure. Indicate on the project schedule when the permit applications will be submitted to the applicable agencies and an estimate of the permit issuance date.

**K. Long-Lead Procurement Considerations:** Westlake shall prepare a list of any elements or components of the corrective measure that will require custom fabrication or for some other reason must be considered as long-lead procurement items. The list must include the reason why the items are considered long-lead items, the length of time necessary for procurement, and the recognized sources of such procurement.

**L. Appendices including:**

1. Design Data - Tabulations of significant data used in the design effort;
2. Equations - List and describe the source of major equations used in the design process;
3. Sample Calculations - Present and explain one example calculation for significant or unique design calculations; and
4. Laboratory or Field Test Results.

**Section II: Operation and Maintenance Plan**

Westlake shall prepare an Operation and Maintenance (O&M) Plan that outlines procedures for performing operations, long term maintenance, and monitoring of the corrective measure. A draft O&M Plan shall be submitted to the EPA simultaneously with the draft Plans and Specifications (see Section III). A final O&M Plan shall be submitted to the EPA simultaneously with the final Plans and Specifications. The O&M plan shall, at a minimum, include the following elements:

**A. Introduction/Purpose:** Describe the purpose of the document and provide a summary description of the project.

**B. Project Management:** Describe the management approach including levels of authority and responsibility (include organizational chart), lines of communication and the qualifications of key personnel who will operate and maintain the corrective measures (including contractor personnel).

**C. System Description:** Describe the corrective measure and identify significant equipment.



**D. Personnel Training:** Describe the training process for O&M personnel.

Westlake shall prepare, and include in the technical specifications governing treatment systems, the contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.

**E. Start-Up Procedures:** Describe system start-up procedures including any operational testing.

**F. Operation and Maintenance Procedures:** Describe normal operation and maintenance procedures including:

1. Description of tasks for operation;
2. Description of tasks for maintenance;
3. Description of prescribed treatment or operation conditions; and
4. Schedule showing frequency of each O&M task.

**G. Replacement Schedule for Equipment and Installed Components.**

**H. Waste Management Practices:** Describe the wastes generated by operation of the corrective measure and how they will be managed. Also discuss drainage and indicate how rainwater runoff will be managed.

**I. Sampling and Analysis:** Sampling and monitoring activities may be needed for effective operation and maintenance of the corrective measure. To ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented, Westlake shall prepare a Quality Assurance Project Plan (QAPP) to document all monitoring procedures, sampling, field measurements and sample

analyses performed during these activities. Westlake shall use quality assurance, quality control, and chain-of-custody procedures approved by the EPA. These procedures are described in the released EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations (EPA QA/R-5), which will replace Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAMS-005/80, December 29, 1980.

**J. Corrective Measure Completion Criteria:** Describe the process and criteria (e.g., groundwater cleanup goal met at all compliance points for 1 year) for determining when corrective measures have achieved media cleanup goals. Also describe the process and criteria for determining when maintenance and monitoring may cease. Criteria for corrective measures such as a landfill cap must reflect the need for long-term monitoring and maintenance. Satisfaction of the completion criteria will trigger preparation and submittal of the Corrective Measures Completion Report.

**K. O&M Contingency Procedures:** Include a description of procedures that addresses the following O&M contingencies:

1. Procedures to address system breakdowns and operational problems including a list of redundant and emergency back-up equipment and procedures;
2. Alternate procedures to be implemented if the corrective measure suffers complete failure. The alternate procedures must be able to prevent release or threatened releases of hazardous wastes or constituents, which may endanger human health and/or the environment or exceed media cleanup standards;
3. The O&M Plan must specify that, in the event of a major breakdown and/or complete failure of the corrective measure (includes emergency situations),

Westlake will orally notify the EPA within 24 hours of the event and will notify the EPA in writing within 72 hours of the event. Written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and/or the environment; and

4. Procedures to be implemented in the event that the corrective measure is experiencing major operational problems, is not performing to design specifications and/or will not achieve the cleanup goals in the expected time frame, and steps to be taken if the primary corrective measure were to fail and the secondary corrective measure is to be implemented. This section would thus specify that if the primary corrective measure failed, then design plans would be developed for the secondary measure.

**L. Data Management and Documentation Requirements:** The O&M Plan shall specify that Westlake will collect and maintain the following information:

1. Progress Report Information
2. Monitoring and laboratory data;
3. Records of operating costs; and
4. Personnel, maintenance and inspection records.

This data and information should be used to prepare Progress Reports and the Corrective Measure Completion Report.

**Section III: Intermediate Plans and Specifications (30, 50, 60, 90 and/or 95% Design Point)**

*[NOTE: Westlake may propose or the EPA may require the submittal of several intermediate plans and specifications (e.g., at the 60% Design Point) or none at all.]*

Westlake shall prepare draft Plans and Specifications that are

based on the Conceptual Design but include additional design detail. A draft Operation and Maintenance Plan and Construction Workplan shall be submitted to the EPA simultaneously with the draft Plans and Specifications. The draft design package must include drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Structural Drawings
- Piping and Instrumentation Diagrams
- Excavation and Earthwork Drawings
- Equipment Lists
- Site Preparation and Field Work Standards
- Preliminary Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications to the EPA, Westlake shall:

- Proofread the specifications for accuracy and consistency with the conceptual design, and
- Coordinate and cross-check the specifications and drawings.

#### **Section IV: Final Plans and Specifications (100% Design Point)**

Westlake shall prepare Final Plans and Specifications that are sufficient to be included in a contract document and be advertised for bid. A final Operation and Maintenance Plan and Construction Workplan shall be submitted to the EPA simultaneously with the final Plans and Specifications. The final design package must consist of the detailed drawings and specifications needed to construct the corrective measure. Depending on the nature of the corrective measure, many different types of drawings and specifications may be needed. Some of the elements that may be required are:

- General Site Plans
- Process Flow Diagrams
- Mechanical Drawings
- Electrical Drawings
- Piping and Instrumentation Diagrams
- Structural Drawings
- Excavation and Earthwork Drawings
- Site Preparation and Field Work Standards
- Construction Drawings
- Installation Drawings
- Equipment Lists
- Detailed Specifications for Equipment and Material

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and specifications. Before submitting the final

project specifications to the EPA, Westlake shall proofread the specifications for accuracy and consistency with the preliminary design; and coordinate and cross-check the specifications and drawings.

#### **Section V: Construction Workplan**

Westlake shall prepare a Construction Workplan, which documents the overall management strategy, construction quality assurance procedures and schedule for constructing the corrective measure. A draft Construction Workplan shall be submitted to the EPA simultaneously with the draft Plans and Specifications and draft Operation and Maintenance Plan. A final Construction Workplan shall be submitted to the EPA simultaneously with the final Plans and Specifications and final Operation and Maintenance Plan. Upon receipt of written approval from the EPA, Westlake shall commence the construction process and implement the Construction Workplan in accordance with the schedule and provisions contained therein. The Construction Workplan must be approved by the EPA prior to the start of corrective measure construction. The Construction Workplan must, at a minimum, include the following elements:

**A. Introduction/Purpose:** Describe the purpose of the document and provide a summary description of the project.

**B. Project Management:** Describe the construction management approach including levels of authority and responsibility (include organizational chart), lines of communication and the qualifications of key personnel who will direct the corrective measure construction effort and provide construction quality assurance/quality control (including contractor personnel).

**C. Project Schedule:** The project schedule must include timing for key elements of the bidding process, timing for initiation and completion of all major corrective measure construction tasks as specified in the Final Plans and Specifications, and specify when the Construction Completion Report is to be submitted to the EPA.

**D. Construction Quality Assurance/Quality Control Programs:** The purpose of construction quality assurance is to ensure, with a reasonable degree of certainty, that a completed corrective measure will meet or exceed all design criteria, plans, and specifications. The Construction Workplan must include a complete Construction Quality Assurance Program to be implemented by Westlake.

**E. Waste Management Procedures:** Describe the wastes generated by construction of the corrective measure and how they will be managed.

**F. Sampling and Analysis:** Sampling and monitoring activities may be needed for construction quality assurance/quality control and/or other construction related purposes. To ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented, Westlake shall prepare a Quality Assurance Project Plan (QAPP) to document all monitoring procedures, sampling, field measurements and sample analysis performed during these activities. Westlake shall use quality assurance, quality control, and chain-of-custody procedures approved by the EPA. These procedures are described in the EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations (EPA QA/R-5), which replaces Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, QAMS-005/80, December 29, 1980.

**G. Construction Contingency Procedures:** Include a description of procedures that addresses the following construction contingencies:

1. Changes to the design and/or specifications may be needed during construction to address unforeseen problems encountered in the field. Procedures to address such circumstances, including notification of the EPA, must be included in the Construction Workplan;

2. The Construction Workplan must specify that, in the event of a construction emergency (e.g., fire, earthwork failure, etc.), Westlake will orally notify the EPA within 24 hours of the event and will notify the EPA in writing within 72 hours of the event. The written notification must, at a minimum, specify what happened, what response action is being taken and/or is planned, and any potential impacts on human health and/or the environment; and

3. Procedures to be implemented if unforeseen events prevent corrective measure construction. For example, in certain circumstances both a primary and secondary corrective measure may be selected for the Facility. If the primary corrective measure could not be constructed, then the secondary measure would be implemented. This section would thus specify that if the primary corrective measure could not be constructed, then design plans would be developed for the secondary measure.

**H. Construction Safety Procedures:** Construction safety procedures should be specified in a separate Health and Safety Plan. [See Section VIII]

**I. Documentation Requirements**

Westlake shall describe how analytical data and results will be evaluated, documented, and managed.



## **J. Cost Estimate/Financial Assurance**

[NOTE: See 40 CFR § 264.101]

Financial assurance for corrective measure construction and operation may be required by an enforcement order, facility permit, or permit modification. The Construction Workplan must include a cost estimate and specify which financial mechanism will be used and when the mechanism will be established. The cost estimate shall include both construction and operation and maintenance costs. An initial cost estimate shall be included in the draft Construction Workplan and a final cost estimate shall be included in the final Construction Workplan. The financial assurance mechanism may include a performance or surety bond, a trust fund, a letter of credit, financial test and corporate guarantee equivalent to that in 40 CFR, § 265.143 or any other mechanism acceptable to the EPA. Financial assurance mechanisms are used to assure the EPA that Westlake has adequate financial resources to construct and operate the corrective measure.

### **Section VI: Construction Completion Report**

Westlake shall prepare a Construction Completion (CC) Report, which documents how the completed project is consistent with the Final Plans and Specifications. A CC Report shall be submitted to the EPA when the construction and any operational tests have been completed. The CC Report shall, at a minimum, include the following elements:

1. Purpose;
2. Synopsis of the corrective measure, design criteria, and certification that the

corrective measure was constructed in accordance with the Final Plans and Specifications;

3. Explanation and description of any modifications to the Final Plans and Specifications and why these were necessary for the project;
4. Results of any operational testing and/or monitoring, indicating how initial operation of the corrective measure compares to the design criteria;
5. Summary of significant activities that occurred during construction. Include a discussion of problems encountered and how they were addressed;
6. Summary of any inspection findings (include copies of key inspection documents in appendices);
7. As built drawings or photographs; and
8. Schedule indicating when any treatment systems will begin full scale operations.

**Section VII: Corrective Measure Completion Report**

Westlake shall prepare a Corrective Measure Completion (CMC) Report when Westlake believes that the corrective measure completion criteria have been satisfied. The purpose of the CMC Report is to fully document how the corrective measure completion criteria have been satisfied and to justify why the corrective measure and/or monitoring may cease. The CMC Report shall, at a minimum, include the following elements:

1. Purpose;
2. Synopsis of the corrective measure;
3. Corrective Measure Completion Criteria: Describe the process and criteria

for determining when corrective measures, maintenance and monitoring may cease.

Corrective measure completion criteria were given in the final Operation and

Maintenance (O&M) Plan;

4. Demonstration that the completion criteria have been met. Include results of testing and/or monitoring, indicating how operation of the corrective measure compares to the completion criteria;

5. Summary of work accomplishments (e.g., performance levels achieved, total hours of treatment operation, total treated and/or excavated volumes, nature and volume of wastes generated, etc.);

6. Summary of significant activities that occurred during operations. Include a discussion of problems encountered and how they were addressed;

7. Summary of inspection findings (include copies of key inspection documents in appendices); and

8. Summary of total operation and maintenance costs.

#### **Section VIII: Health and Safety Plan**

Westlake shall submit a Health and Safety Plan for all field activity, although it does not require review and approval by the EPA. The Health and Safety Plan shall be developed as a stand alone document but may be submitted with the CMI Workplan. The Health and Safety Plan must, at a minimum, include the following elements:

1. Objectives: Describe the goals and objectives of the health and safety program (must apply to on-site personnel and visitors). The health and safety plan must be consistent with the Facility Contingency Plan, OSHA Regulations, NIOSH Occupational

Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985), all state and local regulations and other EPA guidance as provided.

2. Hazard Assessment: List and describe the potentially hazardous substances that could be encountered by field personnel during construction and/or operation and maintenance activities. Discuss the following:

- Inhalation Hazards
- Dermal Exposure
- Ingestion Hazards
- Physical Hazards
- Overall Hazard Rating

Include a table that, at a minimum, lists: known contaminants, highest observed concentration, media, and symptoms/effects of acute exposure.

3. Personal Protection/Monitoring Equipment

- Describe personal protection levels and identify all monitoring equipment for each operational task.
- Describe any action levels and corresponding response actions (i.e., when will levels of safety be upgraded).
- Describe decontamination procedures and areas.

4. Site Organization and Emergency Contacts. List and identify all contacts (include phone numbers). Identify the nearest hospital and provide a regional map showing the shortest route from the facility to the hospital. Describe site emergency procedures and any site safety organizations. Include evacuation procedures for

neighbors (where applicable). Include a facility map showing emergency station locations (first aid, eye wash areas, etc.).

### **Section IX: Public Involvement Plan**

All Public Involvement Plans prepared by Westlake shall be submitted to the EPA for comment and approval prior to use. Westlake must never appear to represent or speak for the EPA before the public, other government officials, or the media. Public Involvement activities that may be required of Westlake include, the following:

1. Conducting an open house or informal meeting (i.e., availability session) in a public location where people can talk to agency officials and Westlake on a one-to-one basis;

2. Preparing fact sheets summarizing current or proposed corrective action activities (all fact sheets should be reviewed by the EPA prior to public distribution);

3. Communicating effectively with people who have a vested interest in the corrective action activities, (e.g., providing written or verbal information in the foreign language of a predominantly non-English-speaking community); and

4. Maintaining an easily accessible repository (such as a town hall or public library or the facility itself, in some limited circumstances) of information on the facility-specific corrective action program, including the order or permit, approved Workplans, and/or other reports. A schedule for community relations activities shall be included in the Public Involvement Plan.

### **Section X: Progress Reports**

Westlake will, at a minimum, provide the EPA with signed quarterly progress reports during corrective measure design, construction, operation and maintenance. The

EPA may adjust the frequency of progress reporting to address site-specific needs. For example, more frequent progress reports may be needed to track critical activities such as corrective measure construction and start-up. Progress reports must, at a minimum, include the following elements:

1. A description of significant activities (e.g., sampling events, inspections, etc.) and work completed/work accomplishments (e.g., performance levels achieved, hours of treatment operation, treated and/or excavated volumes, concentration of contaminants in treated and/or excavated volumes, nature and volume of wastes generated, etc.) during the reporting period;

2. Summary of system effectiveness. Provide a comparison of system operation to predicted performance levels (applicable only during operation of the corrective measure);

3. Summaries of all findings (including any inspection results);

4. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;

6. Actions being taken and/or planned to rectify problems;

7. Changes in personnel during the reporting period;

8. Projected work for the next reporting period; and

9. If requested by the EPA, the results of any sampling tests and/or other data generated during the reporting period.

**Section XI: Proposed Schedule**

Westlake will provide the EPA with CMI reports according to the following schedule:

Facility Submission Due Date

Conceptual Design [ DATE ]

(Section I)

Operation and Maintenance [ DATE ]

Plan (Section II)

Intermediate Plans and [NUMBER ] days after

Specifications Conceptual Design Approval

(Section III)

Final Plans and [ NUMBER ] days after

Specifications the EPA

(Section IV)

Comments on Intermediate Plans and Specifications (date of approval may be tied to submittal of the CMI Workplan, if required)

Construction Workplan Concurrent with Final Plans and Specifications

(Section V) (or approval thereof)

Construction Completion [ DATE ]

Report (Section VI)

Corrective Measure [ DATE ]

Completion Report (based on when completion criteria are believed to

(Section VII)

Health and Safety Plan [ DATE ]

(Section VIII)

Public Involvement Plan [ DATE ]

(Section IX)

Progress Reports on quarterly basis.



## Appendix C

### Corrective Measures Study (CMS) Scope of Work

#### PURPOSE

The purpose of this Corrective Measures Study (CMS) is to develop and evaluate the corrective action alternative(s) and to recommend the corrective measure(s) be taken at the facility. The Respondent shall furnish the personnel, materials, and services necessary to prepare the Corrective Measures Study, except as otherwise specified.

#### SCOPE

The Corrective Measures Study consists of four tasks:

#### **TASK I: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE MEASURES ALTERNATIVE(S)**

- A. Description of Current Situation
- B. Establishment of Media Clean Up Objectives
- C. Identification of the Corrective Measures Alternative or Alternatives

#### **TASK II: EVALUATION OF THE CORRECTIVE MEASURES**

#### **ALTERNATIVE(S)**

- A. Long-term Effectiveness
- B. Reduction in the Toxicity, Mobility or Volume of Wastes
- C. Short-term Effectiveness
- D. Implementability
- E. Community Acceptance
- F. State Acceptance
- G. Cost

**TASK III: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE(S)**

**TASK IV: REPORTS**

A. Corrective Measures Report

B. Progress Reports 2

**TASK I: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE MEASURES ALTERNATIVE(S)**

Based on the results of the RCRA Facility Investigation, Respondent shall identify, screen, and develop the alternative or alternatives for removal, containment, treatment, and/or other remediation of the contamination based on the media clean up objective established for the corrective action.

A. Description of Current Situation

Respondent shall submit a summary of, and if necessary an update to, the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation Report. In addition to summarizing the environmental conditions, this section should describe any interim actions implemented or ongoing.

B. Establishment of Media Clean Up Objectives

Respondent, in conjunction with the EPA, shall establish site specific media clean up objectives for the corrective action. These objectives shall be based on EPA guidance, public health and environmental criteria, information gathered during the RCRA Facility Investigation, and the requirements of any applicable Federal statutes. Media clean up objectives include the following components:

1. clean up levels which are the site-specific concentrations in a given media that a final remedy must achieve for the remedy to be considered complete;

2. points of compliance which represents where the media clean up levels are to be achieved; and

3. remediation time frame, which is the site-specific schedule for a remedy. It includes both the time frame to construct the remedy and estimate of the time frame to achieve the clean up levels at the point of compliance.

At a minimum, all corrective actions concerning groundwater releases from RCRA regulated units must be consistent with, and as stringent as, those required under 40 C.F.R. 264.100.

C. Identification of the Corrective Measures Alternative(s)

Respondent shall identify the corrective measure alternative or alternatives that are applicable to the facility and that will achieve the media clean up objectives.

Technologies can be combined to form the overall corrective action alternative(s). The 3 alternative or alternatives developed should represent a workable number of option(s).

These alternatives should be screened against RCRA's threshold criteria, which are:

1. protection of human health and the environment;
2. attainment of media clean up objectives; and
3. controlling the sources.

Alternatives that do not meet these threshold criteria do not warrant further consideration.

## **TASK II: EVALUATION OF THE CORRECTIVE MEASURES**

### **ALTERNATIVE(S)**

Respondent shall describe each corrective measures alternative that passes through the initial screening in Task I and evaluate each corrective measures alternative and its components relative to the following evaluation/balancing criteria: long-term effectiveness; implementability; short-term effectiveness; toxicity, mobility and volume reduction; community acceptance; state acceptance; and cost.

#### **A. Long-term Effectiveness**

Respondent shall demonstrate the expected effectiveness, reliability and risk of failure of the alternative(s). In this demonstration, Westlake should discuss the following:

1. The effectiveness of the alternative under analogous site conditions;
2. The potential impact resulting from a failure of the alternative, including failures from uncontrollable changes at the site (e.g. heavy rain storms, induced groundwater flow changes from off-site pumping wells); and
3. Estimates of the projected useful life of the overall alternative and of its component technologies.

#### **B. Reduction in the Toxicity, Mobility or Volume of Wastes**

As a general goal, EPA prefers remedies, which employ techniques, such as treatment technologies, that are capable of eliminating or substantially reducing the inherent potential for the wastes in the contaminated media to cause future environmental releases or other risks to human health and the environment. There may be some situations where achieving substantial reductions in toxicity, mobility or volume may not be practical or even desirable. Examples include large, municipal-type landfills, or

wastes such as unexploded munitions, which would be extremely dangerous to handle, and for which short-term risks of treatment outweigh potential long-term benefits. To the extent practical, Respondent shall estimate how much the corrective measures alternatives will reduce the waste, toxicity, volume and/or mobility. Respondent should complete this assessment through a comparison of initial site conditions to expected post corrective measure conditions.

C. Short-term Effectiveness

The short-term effectiveness may be particularly relevant when Respondent will be conducting remedial activities in densely populated areas, or where waste characteristics are such that risks to workers or to the environment are high and special protective measures are needed. The Respondent shall consider the following types of factors: fire, explosion, exposure to hazardous substances and potential threats associated with treatment, excavation, transportation and redisposal, or containment of waste material.

D. Implementability

Respondent shall describe the implementability of each corrective measure, including the relative ease of installation (constructability) and the time required to achieve a given level of response. Respondent should include the following type of information:

1. The administrative activities needed to implement the corrective measure alternative (e.g. permits, off-site approvals) and the length of time these activities will take;
2. The constructability, time for implementation, and time for beneficial results;

3. The availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials; and

4. The availability of prospective technologies for each corrective measure alternative.

E. Community Acceptance

Respondent is responsible for including community involvement as an ongoing part of the corrective action. This section shall include a discussion of any concerns raised by the community during the investigation. It also shall discuss any aspects associated with an alternative, in which there is a potential for community objections.

F. State Acceptance

The Respondent shall include a discussion of how the specific corrective measures activities will be conducted in compliance with all applicable State regulations (i.e., permit requirements).

G. Cost Estimate

Respondent shall develop an estimate of the cost of each corrective measures alternative. Cost estimates shall include costs for engineering, site preparation, construction, materials, labor, sampling/analysis, waste management/disposal, permitting, health and safety measures, training, operation and maintenance etc.

**TASK III: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE(S)**

Respondent shall justify and recommend a corrective measures alternative based on an evaluation of the balancing criteria. Such a recommendation shall include a description and supporting rationale for the proposed remedy, including how it will

achieve the media clean up objectives and the proposed remedy's relationship to the decision factors discussed above. This recommendation shall include summary tables that allow the alternative or alternatives to be understood easily. The Respondent shall highlight tradeoffs among the balancing factors for the alternatives under consideration. EPA will select the corrective measures alternative to be implemented, based on the results of Tasks I and II.

#### **TASK IV: REPORTS**

##### **A. Corrective Measures Report**

Respondent shall prepare a draft and final Corrective Measures Study Report presenting the results of Tasks I through III and recommending a corrective measures alternatives

##### **B. Progress Reports**

Respondent will continue to submit bimonthly progress reports. The bimonthly progress reports shall, at a minimum contain the following information:

1. Description and estimate of the percentage of the CMS completed;
2. Summaries of all findings;
3. Summaries of all changes made in the CMS during the reporting period;
4. Summaries of all contacts with representatives of the local community, public interest groups, or state government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period;

8. Projected work for the next reporting period; and

9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc

C. Interim Measures (IM) Scope of Work

D. Description of PVC Plant



Appendix D  
Interim Measures (IM) Scope Of Work

PURPOSE

The purpose of this Interim Corrective Measure is to remove and/or remediate the source of a release of hazardous wastes and/or hazardous constituents from regulated units, solid waste management units, and other source areas at the facility. Westlake shall furnish all personnel, materials, and services necessary for, or incidental to, performing the Interim Corrective Measures at Westlake PVC Plant.

Westlake shall prepare plans, conduct investigations and perform remediation that shall satisfy the tasks listed below, which are more specifically developed in the following pages. Such plans and investigations shall be submitted pursuant to Section VII, "WORK TO BE PERFORMED".

Westlake must provide documentation that a SWMU, or a regulated unit should be excluded from the Interim Corrective Measures. Westlake shall provide written justification and/or documentation for any omissions from the Scope of Work for Interim Corrective Measures, it's designated tasks, subtasks as well as regulated units and SWMU(s). Such omissions are subject to the approval of EPA following the review of the justifications.

SCOPE

The Interim Corrective Measures consists of four (4) tasks:

- Task I:           Interim Corrective Measures Workplan
  - A. Interim Measures Objectives
  - B. Health and Safety Plan
  - C. Data Collection Quality Assurance Plan
  - D. Data Management Plan
  - E. Groundwater Assessment Plan
  - F. Community Relations Plan
  
- Task II:           Interim Corrective Measures Design Workplan
  - A. Design Plans and Specifications
  - B. Operations and Maintenance Plan
  - C. Project Schedule
  - D. Final Design Documents

- Task III: Interim Corrective Measures Construction Quality Assurance Plan
- A. Construction Quality Assurance Objectives
  - B. Inspection Activities
  - C. Sampling Requirements
  - D. Documentation
- Task IV: Reports and Workplans
- A. Interim Corrective Measures Workplan
  - B. Progress Reports
  - C. Draft and Final Design Documents
  - D. Draft and Final Construction Quality Assurance Workplan
  - E. Draft and Final Interim Corrective Measures Report
  - F. General Report Requirements

#### TASK I: INTERIM CORRECTIVE MEASURES

Westlake shall submit for EPA approval an Interim Corrective Measures Workplan. The Workplan shall include the development of several plans, which shall be prepared concurrently.

##### A. Interim Corrective Measures Objectives

The Workplan shall specify the objectives of the interim corrective measures, demonstrate how the interim measures will abate releases and threatened releases, and, to the extent possible, be consistent and integrated with any long term solution at the facility. The Interim Corrective Measures (ICM) Workplan will include a discussion of the technical approach, engineering design, engineering plans, schedules, budget, and personnel. The ICM Workplan will also include a description of qualifications of personnel performing or directing the interim measures, including contractor and subcontractor personnel. This plan shall also document the overall technical and management approach to the interim corrective measures.

1. Project Objectives
2. Technical Approach
3. Project Management Approach

4. Responsibility and Authority;

The Responsibility and Authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the interim measure shall be described fully in the Interim Corrective Measures Workplan. The chain of command and organizational structure of the project team shall be explicitly depicted in an organizational chart.

5. Summary of Personnel Qualifications

The Summary of Personnel Qualifications section of the ICM Workplan shall be submitted to the EPA within fifteen days of receipt of EPA's written notification that Interim Measures is required and shall include at a minimum the following:

- i) Name, title and qualifications of the professional engineer (P.E.) and/or professional geologist (P.G.) directing the project.
- ii) Name, title and qualifications of any contractors, subcontractors and their personnel involved with the project.

**B. Health and Safety Plan**

Westlake shall prepare a facility Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:

- a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
- b. Description of known hazards and evaluations of the risks associated with each activity conducted including, but not limited to, on and off-site exposure to contaminants during the implementation of interim measures at the facility.
- c. List of key personnel and alternates responsible for site safety, response operations, and for protection of public health;
- d. Delineation of work area;
- e. Description of levels of protection to be worn by personnel in work area;
- f. Procedures to control site access;
- g. Description of documentation procedures for personnel and equipment;

- h. Establishment of site emergency procedures;
  - i. Emergency medical care for injuries and toxicological problems;
  - j. Description of requirements for an environmental surveillance program;
  - k. Description of the safety training provided to personnel in the work area; and
  - l. Establishment of procedures for protecting workers from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
  - b. EPA Order 1440.1 - Respiratory Protection;
  - c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
  - d. Facility Contingency Plan;
  - e. EPA Standard Operating Safety Guide (1984);
  - f. OSHA regulations in accordance with 29 C.F.R. 1910 and 1926;
  - g. State and local regulations; and
  - h. Other EPA guidance.
3. The Health and Safety Plan shall be revised to address the activities to be performed at the facility to implement the interim measures.

C. Data Collection Quality Assurance Plan

The ICM Workplan shall include a plan to document all monitoring performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented.

- 1. Data Collection Strategy

The strategy section of the Data Collection Quality Assurance Plan shall include, but not be limited to, the following:

- a. Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses;
- b. Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
- c. Description of the rationale used to assure that the data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition or an environmental condition. Example of factors which shall be considered and discussed include:
  - i) Environmental conditions at the time of sampling;
  - ii) Number of sampling points;
  - iii) Representativeness of selected media; and
  - iv) Representativeness of selected analytical parameters.
- d. Description of the measures to be taken to assure that the following data sets can be compared to each other:
  - i) Data generated by Westlake over some time period;
  - ii) Data generated by an outside laboratory or consultant versus data generated by Westlake;
  - iii) Data generated by separate consultants or laboratories; and
  - iv) Data generated by an outside consultant or laboratory over some time period.
- e. Details relating to the schedule and information to be provided in quality assurance reports. The reports should include, but not be limited to:
  - i) Periodic assessment of measurement data accuracy, precision, and completeness;
  - ii) Results of performance audits;

- iii) Results of system audits;
- iv) Significant quality assurance problems and recommended solutions, and
- v) Resolutions of previously stated problems.

## 2. Sampling and Field Measurements

The Sampling and Field Measurements section of the Data Collection Quality Assurance Plan shall discuss:

- a. Selecting appropriate sampling and field measurement locations, depths, etc.;
- b. Providing a statistically sufficient number of sampling and field measurement sites;
- c. Measuring all necessary ancillary data;
- d. Determining conditions under which sampling should be conducted;
- e. Determining which media are to be sampled (e.g., ground water, air, soil, sediment, etc.);
- f. Determining which parameters are to be measured and where;
- g. Selecting the frequency of sampling and length of sampling period;
- h. Selecting the types of samples (e.g., composites v.s. grabs) and number of samples to be collected;
- i. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;
- j. Documenting field sampling and field measurement operations and procedures, including:
  - i) Documentation of procedures for preparation of reagents or supplies that become an integral part of the sample (e.g., filters, and adsorbing reagents);

- ii) Procedures and forms for recording the exact location and specific considerations associated with sample and field measurement acquisition;
  - iii) Documentation of specific sample preservation method;
  - iv) Calibration of field devices;
  - v) Collection of replicate samples;
  - vi) Submission of field-biased blanks, where appropriate;
  - vii) Potential interferences present at the facility;
  - viii) Construction materials and techniques associated with monitoring wells and piezometers;
  - ix) Field equipment listing and type sample containers;
  - x) Sampling and field measurement order; and
  - xi) Decontamination procedures.
- k. Selecting appropriate sample containers;
  - l. Sample preservation; and
  - m. Chain-of-custody, including:
    - i) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
    - ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

### 3. Sample Analysis

The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following:

- a. Chain-of-custody procedures, including:
  - i) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field

- samples, obtain documents of shipments, and verify the data entered onto the sample custody records;
- ii) Provision for a laboratory sample custody log consisting of serially numbered standard lab tracking report sheets; and
  - iii) Specification of laboratory sample custody procedures for sample handling, storage, and dispersement for analysis.
- b. Sample storage procedures and holding times;
  - c. Sample preparation methods;
  - d. Analytical procedures, including:
    - i) Scope and application of the procedure;
    - ii) Sample matrix;
    - iii) Potential interferences;
    - iv) Precision and accuracy of the methodology; and
    - v) Method detection limits.
  - e. Calibration procedures and frequency;
  - f. Data reduction, validation and reporting;
  - g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
    - i) Method blank(s);
    - ii) Laboratory control sample(s);
    - iii) Calibration check sample(s);
    - iv) Replicate sample(s);
    - v) Matrix-spiked sample(s);
    - vi) "Blind" quality control sample(s);



- vii) Control charts;
- viii) Surrogate samples;
- ix) Zero and span gases; and
- x) Reagent quality control checks.

A performance audit may be conducted by U.S. EPA on the laboratories selected by Westlake.

- h. Preventive maintenance procedures and schedules;
- i. Corrective action (for laboratory problems); and
- j. Turnaround time.

D. Data Management Plan

Westlake shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation:

1. Data Record

The data record shall include the following:

- a. Unique sample or field measurement code;
- b. Sampling or field measurement date and location, and sample or measurement type;
- c. Sampling or field measurement raw data;
- d. Laboratory analysis ID number;
- e. Property or component measured; and
- f. Result of analysis (e.g., concentration).

2. Tabular Displays

The following data shall be presented in tabular displays:

- a. Unsorted (raw) data;
- b. Results for each medium, or for each constituent monitored;
- c. Data reduction for statistical analysis;
- d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- e. Summary data.

3. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- a. Display sampling location and sampling grid;
- b. Indicate boundaries of sampling areas, and areas where more data are required;
- c. Display levels of contamination at each sampling location;
- d. Display geographical extent of contamination;
- e. Display contamination levels, averages, and maxima;
- f. Illustrate changes in concentration in relation to distance from the source, time, depth and other parameters; and
- g. Indicate features affecting intermeddle transport and show potential receptors.

E. Groundwater Assessment Plan

The purpose of the Groundwater Assessment Program is to establish the protocol defining groundwater quality monitoring at Westlake's Facility. Concurrent investigations pursuant to the Scope(s) Of Work for the ICM,RFI, and/or the CMS are anticipated by EPA. To insure consistency in the groundwater monitoring program for all phases of the investigations undertaken at the Facility, Westlake shall prepare a Groundwater Assessment Program, and an Annual Groundwater Assessment report. At any point in the effective life of this Order, the Groundwater Assessment Program shall reflect the past activities, current activities, and shall be consistent with the anticipated elements of

the ICM, RFI, CMS and CMI Workplans and activities. The Groundwater Assessment Program shall not be cause in itself to conduct investigations, rather it shall define the groundwater monitoring systems, and the need to continue monitoring in the absence of an investigative Workplan.

Westlake shall prepare and submit to EPA, a Groundwater Assessment Program Workplan (GWA) and an Annual Groundwater Assessment Report. At a minimum the GWA Workplan and Report shall be consistent with 40 CFR .265.90(a) and the Groundwater Technical Enforcement Guidance Document. The GWA Workplan shall be due at the Agency within sixty (60) days of EPA's written notification that Interim Measures is required. The Annual Groundwater Assessment Report will be due no later than March 1 of each year.

1. Groundwater Assessment Workplan

Westlake's Groundwater Assessment Program must be capable of determining: 1) Whether hazardous waste or hazardous waste constituents have entered the groundwater; 2) The rate and extent of migration of hazardous waste or hazardous waste constituents in the groundwater; 3) The concentrations of hazardous waste or hazardous waste constituents in the groundwater; 4) The uppermost aquifer correctly identified; 5) Geological and hydrological formations fully characterized. Westlake's Groundwater Assessment Workplan shall include:

- a. Identification of all the monitoring wells that will comprise the groundwater assessment monitoring system
- b. Rationale for the monitoring well selection;
- c. Construction logs for each monitoring well;
- d. A list of the monitoring parameters, this list shall include indicator parameters as well as the appropriate hazardous wastes or hazardous constituents in 40 C.F.R. Part 264, Appendix IX;
- e. Evaluation procedures for determining the hydrogeologic characteristics of the aquifer(s) contaminated by the hazardous waste and/or hazardous constituents.
- f. Geologic cross-sections;
- g. Sampling, analytical methods and QA/QC plan for monitoring groundwater samples according to the list generated under paragraph I.E.1.d;

- h. Evaluation procedures for determining rate and extent of groundwater contamination, including any use of previously-gathered groundwater quality information; and
- i. A schedule of implementation

2. Annual Groundwater Assessment Report

The Annual Groundwater Assessment Report shall evaluate the groundwater quality, monitoring system and program, as well as the abatement system at the Facility. Pursuant to this Order, wells shall be sampled according to an EPA approved sampling plan as outlined in Section I.E.1.g of the "ICM Scope of Work". Westlake's Annual Groundwater Assessment Report shall include:

- a. Groundwater surface elevations measured on a quarterly basis, for each well specified in the Groundwater Assessment Program Workplan;
- b. Potentiometric maps on a quarterly basis;
- c. Definition of the uppermost aquifer and full characterization of the hydrogeologic formations;
- d. Annual determination of the groundwater flow rate and direction in the uppermost aquifer;
- e. Concentrations or values of the assessment parameters obtained from the quarterly analysis at each groundwater monitoring well;
- f. Evaluation of the indicator parameters as outlined within the Facility's Groundwater Assessment Program Workplan;
- g. Calculated hydraulic conductivity and effective porosity;
- h. Summary of results; and
- i. Amended GWA Workplan for the next year.

F. **Community Relations Plan**

Westlake shall prepare a plan, for the dissemination of information to the public regarding interim measure activities and results. These activities shall include the preparation and distribution of fact sheets and participation in public meetings.

**TASK II: INTERIM CORRECTIVE MEASURES DESIGN WORKPLAN**

Westlake shall be required to prepare construction plans and specifications to implement and facilitate the interim measure(s) at the facility. The components of this Task include the following:

A. **Design Plans and Specifications**

Westlake shall develop clear and comprehensive design plans and specifications that include but are not limited to the following:

1. Discussion of the design strategy and the design basis, including:
  - a. Compliance with all applicable or relevant environmental and public health standards; and
  - b. Minimization of environmental and public impacts.
2. Discussion of the technical factors of importance including:
  - a. Use of currently accepted environmental control measures and technology;
  - b. The constructability of the design; and
  - c. Use of currently acceptable construction practices and techniques.
3. Description of assumptions made and detailed justification of these assumptions;
4. Discussion of the possible sources of error and references to possible operation and maintenance problems;
5. Detailed drawings of the proposed design including:
  - a. Qualitative flow sheets;

- b. Quantitative flow sheets;
  - c. Facility layout; and
  - d. Utility locations.
- 6. Tables listing materials, equipment and specifications;
  - 7. Tables giving material balances;
  - 8. Appendices including:
    - a. Sample calculations (one example presented and explained clearly for significant or unique design calculations);
    - b. Derivation of equations essential to understanding the report; and
    - c. Results of laboratory or field tests.

General correlation between drawings and technical specifications, is a basic requirement of any set of working construction plans and specifications. Before submitting the project specifications, Westlake shall coordinate and cross-check the specifications and drawings and complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

**B. Operation and Maintenance Plan**

Westlake shall prepare and Operation and Maintenance Plan to cover both implementation and long term maintenance of the interim measure. The plan shall be composed of the following elements:

- 1. Equipment start-up and operator training; Westlake shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing: appropriate service visits by experienced personnel to supervise the installation, adjustment, start-up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished.
- 2. Description of normal operation and maintenance (O&M);
  - a. Description of tasks for operation;
  - b. Description of tasks for maintenance;
  - c. Description of prescribed treatment or operation conditions;

- d. Schedule showing frequency of each O&M task; and
  - e. Common and/or anticipated remedies.
3. Description of routine monitoring and laboratory testing;
- a. Description of monitoring tasks;
  - b. Description of required laboratory tests and their interpretation;
  - c. Required QA/QC; and
  - d. Schedule of monitoring frequency and date, if appropriate, when monitoring may cease.
4. Description of equipment; and
- a. Equipment identification;
  - b. Installation of monitoring components;
  - c. Maintenance of site equipment; and
  - d. Replacement schedule for equipment and installed components.
5. Records and reporting mechanisms required.
- a. Daily operating logs;
  - b. Laboratory records;
  - c. Mechanism for reporting emergencies;
  - d. Personnel and maintenance records; and
  - e. Monthly/annual reports to Federal/State agencies.

The Operation and Maintenance Plan shall be submitted with the Final Design Documents.

### C. Project Schedule

Westlake shall develop a detailed Project Schedule for construction and implementation of the interim measure(s), which identifies timing for initiation, and completion of all critical path tasks. Westlake shall specifically identify dates for

completion of the project and major interim milestones, which are enforceable terms of this order. A Project Schedule shall be submitted simultaneously with the Final Design Documents.

D. Final Design Documents

The Final Design Documents shall consist of the Final Design Plans and Specifications (100% complete), the Final Operation and Maintenance Plan, and Project Schedule. Westlake shall submit the final documents 100% complete with reproducible drawings and specifications. The quality of the design documents should be such that Westlake would be able to include them in a bid package and invite contractors to submit bids for the construction project.

TASK III: INTERIM CORRECTIVE MEASURES CONSTRUCTION QUALITY ASSURANCE PLAN

Construction Quality Assurance (CQA) is required to ensure, with a reasonable degree of certainty, that a completed interim measure(s) meets or exceeds all design criteria, plans and specifications. The CQA Plan is a facility-specific document, which must be submitted to the Agency for approval prior to the start of construction. At a minimum, the CQA Plan should include the following elements: Discussion of the technical approach; Construction Quality Assurance Objectives, Inspection Activities, Sampling and Documentation. The CQA Plan shall also include a description of qualifications of personnel performing or directing the interim measure(s), including contractor personnel. This plan shall also document the overall technical and management approach to the Interim Corrective Measures.

A. Construction Quality Assurance Objectives

In the CQA Objectives, Westlake shall identify and document the objectives and framework for the development of a construction quality assurance program including, but not limited to the following: Responsibility and Authority; and a Summary of Personnel Qualifications. This plan shall also document the overall technical and management approach to the Interim Corrective Measures.

1. Project Objectives
2. Technical Approach
3. Project Management Approach



4. Responsibility and Authority;

The Responsibility and Authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the construction of the interim measure shall be described fully in the CQA Plan. Westlake must identify a CQA Officer and the necessary supporting inspection staff.

5. Summary of Personnel Qualifications

The Summary of Personnel Qualifications section of the CQA Plan shall be submitted to the EPA for review and shall include at a minimum the following:

- i) Name, title and qualifications of the professional engineer (P.E.) and/or professional geologist (P.G.) directing the project.
- ii) Name, title and qualifications of any contractors, subcontractors and their personnel involved with the project.

**B. Inspection Activities**

The observations and tests that will be used to monitor the construction and/or installation of the components of the corrective measure(s) shall be summarized in the CQA plan. The plan shall include the scope and frequency of each type of inspection. Inspections shall verify compliance with all environmental requirements and include, but not be limited to air quality and emissions monitoring records, waste disposal records (e.g., RCRA transportation manifests), etc. The inspection should also ensure compliance with all health and safety procedures. In addition to oversight inspections, Westlake shall conduct the following activities:

1. Preconstruction inspection and meeting Westlake shall conduct an preconstruction inspection and meeting to:
  - a. Review methods for documenting and reporting inspection data;
  - b. Review methods for distributing and storing documents and reports;
  - c. Review work area security and safety protocol;
  - d. Discuss any appropriate modifications of the construction quality assurance plan to ensure that sit-specific considerations are addressed; and

- e. Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by a designated person and minutes should be transmitted to all parties.

2. Prefinal inspection

Within ten (10) days of preliminary project completion, Westlake shall notify EPA for the purposes of conducting a prefinal inspection. The prefinal inspection will consist of a walk-through inspection of the entire project site. The inspection is to determine whether the project is complete and consistent with the contract documents and the EPA approved interim measure. Any outstanding construction items discovered during the inspection will be identified and noted. Additionally, treatment equipment will be operationally tested by Westlake. Westlake will certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting will be completed where deficiencies are revealed. The prefinal inspection report should outline the outstanding construction items, actions required to resolve items, completion date for these items, and date for final inspection.

3. Final inspection

Within ten (10) days of completion of any outstanding construction items, Westlake shall notify EPA for the purposes of conducting a final inspection. The final inspection will consist of a walk-through inspection of the project site. The prefinal inspection report will be used as a checklist with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that outstanding items have been resolved.

### C. Sampling Requirements

The sampling activities, sample size, sample locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems as addressed in the project specifications should be presented in the CQA plan.

### D. Documentation

Reporting requirements for CQA activities shall be described in detail in the CQA plan. This should include such items as daily summary reports, inspection data sheets, problem identification and interim corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records also should be presented in the CQA plan.

## TASK IV: REPORTS AND WORKPLANS

### A. Interim Corrective Measures Workplan

Westlake shall submit to the EPA an Interim Corrective Measures Workplan (Task I), within thirty (30) days of EPA's written notification that Interim Measures is required.

### B. Progress

Westlake shall at a minimum provide the EPA with signed monthly progress reports containing.

1. A description and estimate of percentage of the ICM completed;
2. Summaries of all findings;
3. Summaries of all changes made in the ICM during the reporting period;
4. Summaries of all contacts with representative of the local community, public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period:
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period;
8. Projected work for the next period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

### C. Draft and Final Design Documents

Within sixty (60) days of approval of the ICM Workplan, Westlake shall submit for EPA review and comments, a draft ICM Design and/or Plans that satisfy the requirements of Task II. The Design Plan and documents shall be revised to incorporate comments received on the Draft Design Plan. The revised ICM Design and/or Plan shall be submitted within thirty (30) days of receipt of Agency comments on the draft. EPA will approve the revised Design documents or modify it. All plans and reports become final upon EPA approval.

Westlake shall submit the Final Design Documents as described in Task II.

D. Draft and Final Construction Quality Assurance Workplan

Within thirty (30) days of approval of the ICM Workplan, Westlake shall submit for EPA review and comments, a draft ICM CQA Workplan that satisfies the requirements of Task III. The CQA Workplan shall be revised to incorporate comments received on the Draft CQA Workplan. The revised ICM CQA Workplan shall be submitted within thirty (30) days of receipt of Agency comments on the draft. EPA will approve the revised Workplan or modify it. All plans and reports become final upon EPA approval or EPA modification.

E. Draft and Final Interim Corrective Measures Implementation Report

Within ninety (90) days of "completion" of the ICM construction and/or final inspection (except for long term operation, maintenance and monitoring), Westlake shall prepare an Interim Corrective Measures (ICM) Report to present Tasks I and II. The ICM Report shall be developed in draft form for U.S. EPA review. The revised ICM Report shall be submitted within thirty (30) days of receipt of Agency comments on the draft. The ICM Report shall be developed in final format incorporating comments received on the Draft ICM Report.

The ICM Report shall document that the project is consistent with the design specifications, and that the interim measures are performing adequately. The report shall include, but not be limited to the following elements:

1. Synopsis of the interim measures and certification of the design and construction;
2. Explanation of any modifications to the plans and why these were necessary for the project;
3. Listing of the criteria, established before the interim measures was initiated, for judging the functioning of the interim measures and also explaining any modification to these criteria;
4. Results of facility monitoring, indicating that the interim measures will meet or exceed the performance criteria; and
5. Explanation of the operation and maintenance (including monitoring) to be undertaken at the facility.

This report shall include all of the inspection summary reports, inspection data sheets, problem identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineer's acceptance reports, deviations from design and material specifications (with justifying documentation) and as-built drawings.

**F. General Report Requirements**

Two (2) copies of all reports, including the Task I Report and Workplan, Task II Report and Workplan, Task III Report and Workplan, Task IV Workplan and both the Draft and Final Interim Corrective Measures Reports (Task II and III) shall be provided by Westlake to EPA.

**Appendix E**  
**Legal Description of PVC Plant**

REVISED  
PROPERTY DESCRIPTION

BEING TWO SEPARATE PIECES OF LAND LOCATED ON THE NORTHERLY SII  
OF KENTUCKY HIGHWAY 282, EAST OF RELOCATED KENTUCKY HIGHWAY 95  
THE CITY OF CALVERT CITY IN MARSHALL COUNTY, KENTUCKY, SAID  
PROPERTY BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TRACT "A"

BEGINNING AT CORNER "A", A STEEL ROD SET WHERE THE  
WESTERLY LINE OF THE HERBIN DESCRIBED TRACT INTERSECTS  
THE NORTHERLY RIGHT-OF-WAY LINE OF KENTUCKY HIGHWAY  
282, SAID STEEL ROD BEING LOCATED 30 FEET NORTH OF AND  
PERPENDICULAR TO THE CENTER LINE OF SAID HIGHWAY AND  
761.94 FEET EAST OF ANOTHER STEEL ROD SITUATED AT THE  
NORTHEAST CORNER OF THE INTERSECTION OF SAID NORTHERLY  
RIGHT-OF-WAY LINE WITH THE EASTERLY RIGHT-OF-WAY LINE  
OF RELOCATED KENTUCKY HIGHWAY 95, SAID DISTANCE BEING  
MEASURED ALONG AND WITH THE NORTHERLY RIGHT-OF-WAY LINE  
OF SAID KENTUCKY HIGHWAY 282; THENCE N. 03°-36'-21" W.  
LEAVING SAID RIGHT-OF-WAY LINE, 233.95 FEET TO A STEEL  
ROD SET AT CORNER "B" OF THE HERBIN DESCRIBED TRACT;  
THENCE N. 70°-00'-20" W. A DISTANCE OF 315.70 FEET TO A  
STEEL ROD SET AT CORNER "C"; THENCE N. 13°-59'-38" E. A  
DISTANCE OF 188.00 FEET TO A STEEL ROD SET AT CORNER  
"D", SAID CORNER "D" BEING LOCATED S. 88°-16'-44" E. A  
DISTANCE OF 63.07 FEET FROM AIR PRODUCTS AND CHEMICALS,  
INC., HORIZONTAL CONTROL MONUMENT 3F; THENCE S. 69°-  
57'-24" E. A DISTANCE OF 287.82 FEET TO A STEEL ROD SET  
AT CORNER "E"; SAID CORNER "E" BEING LOCATED N. 61°-  
50'-02" E. A DISTANCE OF 14.79 FEET FROM AIR PRODUCTS  
AND CHEMICALS, INC., HORIZONTAL CONTROL MONUMENT 3-51;  
THENCE N. 20°-05'-38" E. A DISTANCE OF 254.18 FEET TO A  
STEEL ROD SET AT CORNER "F"; THENCE N. 70°-01'-51" W. A  
DISTANCE OF 368.49 FEET TO A STEEL ROD SET AT CORNER  
"G"; THENCE N. 19°-59'-40" E. A DISTANCE OF 51.22 FEET  
TO A RAILROAD SPIKE DRIVEN INTO THE PAVEMENT AT CORNER  
"H"; THENCE N. 70°-00'-20" W. A DISTANCE OF 125.01 FEET  
TO A STEEL ROD SET AT CORNER "I"; THENCE N. 19°-59'-40"  
E. A DISTANCE OF 52.00 FEET TO A STEEL ROD SET AT  
CORNER "J"; THENCE N. 70°-00'-20" W. A DISTANCE OF  
27.80 FEET TO A STEEL ROD SET AT CORNER "K"; THENCE N.  
19°-59'-40" E. A DISTANCE OF 34.00 FEET TO A STEEL ROD  
SET AT CORNER "L"; THENCE N. 70°-00'-20" W. A DISTANCE  
OF 64.01 FEET TO A CHECKED CROSS MARK ON A CONCRETE  
SLAB AT CORNER "M"; THENCE N. 19°-54'-40" E. A DISTANCE  
OF 43.00 FEET TO A STEEL ROD SET AT CORNER "N"; THENCE  
N. 70°-00'-20" W. A DISTANCE OF 11.56 FEET TO A STEEL  
ROD SET AT CORNER "O"; THENCE N. 19°-54'-40" E. A  
DISTANCE OF 57.00 FEET TO A STEEL ROD SET AT CORNER  
"P"; THENCE N. 70°-00'-20" W. A DISTANCE OF 82.51 FEET  
TO CORNER "Q" MARKED WITH INK AND ORANGE PAINT ON THE  
FLOOR OF THE EXISTING FVOR-PVC WAREHOUSE; THENCE N.  
19°-54'-40" E. ALONG AND WITH A LINE ALONG THE  
EASTERLY MOST SURFACE OF AN EXISTING "I" BEAM COLUMN  
LINE, A DISTANCE OF 222.97 FEET TO A RAILROAD SPIKE SET  
IN THE PAVEMENT AT CORNER "R"; THENCE S. 70°-00'-20" E.  
A DISTANCE OF 226.61 FEET TO ANOTHER RAILROAD SPIKE SET  
IN THE PAVEMENT AT CORNER "S"; THENCE N. 19°-59'-40" E.  
A DISTANCE OF 17.00 FEET TO ANOTHER RAILROAD SPIKE SET  
IN THE PAVEMENT AT CORNER "T", SAID CORNER "T" BEING  
LOCATED S. 13°-31'-43" W. A DISTANCE OF 618.86 FEET  
FROM AIR PRODUCTS AND CHEMICALS, INC., HORIZONTAL  
CONTROL MONUMENT 3B; THENCE S. 70°-00'-20" E. A  
DISTANCE OF 556.87 FEET TO A STEEL ROD SET AT CORNER  
"U", SAID CORNER "U" BEING LOCATED S. 04°-43'-01" W. A

DISTANCE OF 40.34 FEET FROM AIR PRODUCTS AND CHEMICALS, INC., HORIZONTAL CONTROL MONUMENT 3-D1; THENCE W. 19°-59'-40" E. A DISTANCE OF 42.58 FEET TO A STEEL ROD SET AT CORNER "V"; THENCE N. 63°-37'-23" E. A DISTANCE OF 34.94 FEET TO A STEEL ROD SET AT CORNER "W"; THENCE N. 19°-59'-40" E. A DISTANCE OF 90.28 FEET TO A STEEL ROD SET AT CORNER "X"; THENCE S. 70°-00'-20" E. A DISTANCE OF 77.74 FEET TO A STEEL ROD SET AT CORNER "Y"; THENCE N. 19°-59'-40" E. A DISTANCE OF 32.50 FEET TO A STEEL ROD SET AT CORNER "Z"; THENCE S. 70°-00'-20" E. A DISTANCE OF 139.84 FEET TO A STEEL ROD SET AT CORNER "AA"; THENCE S. 19°-59'-40" W. A DISTANCE OF 126.33 FEET TO A STEEL ROD SET AT CORNER "BB"; THENCE S. 73°-18'-46" E. A DISTANCE OF 384.16 FEET TO A STEEL ROD SET AT CORNER "CC"; THENCE S. 73°-18'-46" E. CONTINUING WITH THE LAST AFORESAID BEARING, 267.54 FEET TO A STEEL ROD SET AT CORNER "DD"; THENCE S. 70°-00'-20" E. A DISTANCE OF 693.66 FEET TO A STEEL ROD SET AT CORNER "EE"; THENCE S. 28°-42'-45" W. A DISTANCE OF 27.57 FEET TO A STEEL ROD PREVIOUSLY SET AT CORNER "FF"; THENCE N. 70°-02'-16" W. A DISTANCE OF 800.45 FEET TO A STEEL ROD PREVIOUSLY SET AT CORNER "GG"; THENCE S. 19°-55'-51" W. A DISTANCE OF 132.07 FEET TO A CONCRETE NAIL PREVIOUSLY SET AT CORNER "HH", SAID CORNER "HH" BEING LOCATED S. 11°-22'-32" W. A DISTANCE OF 74.87 FEET FROM AIR PRODUCTS AND CHEMICALS, INC., HORIZONTAL CONTROL MONUMENT 5-D1; THENCE N. 70°-07'-40" W. A DISTANCE OF 329.74 FEET TO A STEEL ROD PREVIOUSLY SET AT CORNER "II", SAID CORNER "II" BEING LOCATED N. 83°-12'-24" W. A DISTANCE OF 327.15 FEET FROM THE AFORESAID MONUMENT 5-D1; THENCE S. 19°-58'-45" W. A DISTANCE OF 765.38 FEET TO A STEEL ROD PREVIOUSLY SET ON THE NORTHERLY RIGHT-OF-WAY LINE OF KENTUCKY HIGHWAY 282 AT CORNER "JJ", SAID CORNER "JJ" BEING LOCATED E. 69°-15'-10" W. A DISTANCE OF 15.66 FEET AND S. 75°-35'-32" W. A DISTANCE OF 223.63 FEET FROM AN IRON PIN SET IN CONCRETE FOUND AT THE SOUTHERLY MOST CORNER OF THE PROPERTY DESCRIBED IN DEED BOOK 179, PAGE 116 OF THE MARSHALL COUNTY COURT CLERK'S OFFICE, SAID CORNER "JJ" ALSO BEING LOCATED ON THE ARC OF A CURVE CONCAVE TO THE NORTH AND HAVING A RADIUS LENGTH OF 1,011.74 FEET AND A DEGREE OF CURVATURE OF 85°-39'-47"; THENCE IN A WESTERLY DIRECTION ALONG THE ARC OF SAID CURVE AND THE AFORESAID NORTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 8.07 FEET TO A STEEL ROD SET AT THE END OF SAID CURVE AT CORNER "KK", THE AFORESAID ARC OF SAID CURVE HAVING A CHORD LENGTH OF 8.07 FEET AND A BEARING ON THE CHORD OF S. 82°-11'-49" W. AS MEASURED FROM CORNER "JJ" TO CORNER "KK"; THENCE S. 82°-24'-07" W. ALONG AND WITH THE AFORESAID NORTHERLY RIGHT-OF-WAY LINE, 544.91 FEET TO CORNER "A", THE POINT AND PLACE OF BEGINNING.

THE AFORESAID TRACT "A" CONTAINS 1,104,920 SQUARE FEET OR 25.365 ACRES.

PARCEL "B"

BEGINNING AT CORNER "R" AS DESCRIBED IN THE AFORESAID DESCRIPTION OF TRACT "A"; THENCE N. 70°-00'-20" W. A DISTANCE OF 132.50 FEET AND THEN S. 19°-59'-40" W. A DISTANCE OF 80.69 FEET TO A STEEL ROD SET AT CORNER "LL", THE TRUE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL "B"; THENCE S. 19°-59'-40" W. A DISTANCE OF 91.10 FEET TO A STEEL ROD SET AT CORNER "MM"; THENCE S. 70°-00'-20" E. A DISTANCE OF 50.00 FEET TO A STEEL ROD SET AT CORNER "NN"; THENCE S. 19°-59'-40" W. A DISTANCE OF 44.00 FEET TO A STEEL ROD SET AT CORNER "OO"; THENCE N. 70°-00'-20" W. A DISTANCE OF 50.00 FEET TO A STEEL ROD AND THEN CONTINUING WITH SAID BEARING AN ADDITIONAL 171.37 FEET FOR A TOTAL DISTANCE OF 221.37 FEET TO A STEEL ROD SET AT CORNER "PP"; THENCE N. 19°-59'-40" E. A DISTANCE OF 135.10 FEET TO A STEEL ROD SET AT CORNER "QQ"; THENCE S. 70°-00'-20" E. A DISTANCE OF 171.37 FEET TO CORNER "LL", THE TRUE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL "B".

THE AFORESAID PARCEL "B" CONTAINS 25,352 SQUARE FEET OR 0.582 ACRE.



THE AFORESAID TRACT "A" IS SUBJECT TO CERTAIN EASEMENTS AND RESERVATIONS UPON AND ACROSS SAID TRACT, SAID EASEMENTS BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

50 FOOT WIDE DRAINAGE EASEMENT

BEGINNING AT CORNER "B" AS PREVIOUSLY DESCRIBED UNDER SAID TRACT "A"; THENCE N. 70°-00'-20" W. A DISTANCE OF 41.51 FEET; THENCE N. 72°-45'-17" E. A DISTANCE OF 785.16 FEET TO A POINT ON THE LINE LOCATED BETWEEN CORNERS "II" AND "JJ" AFORESAID, SAID POINT BEING LOCATED S. 19°-58'-55" W. A DISTANCE OF 332.06 FEET FROM SAID CORNER "II"; THENCE S. 19°-58'-55" W. A DISTANCE OF 62.79 FEET; THENCE S. 72°-45'-17" W. PARALLEL WITH AND 50 FEET PERPENDICULAR TO THE NORTHERLY LINE OF THE HEREIN DESCRIBED EASEMENT, 720.33 FEET TO A POINT ON THE LINE LOCATED BETWEEN CORNERS "A" AND "B" AFORESAID; THENCE N. 03°-38'-21" W. A DISTANCE OF 25.72 FEET TO CORNER "B", THE POINT OF BEGINNING OF THE HEREIN DESCRIBED EASEMENT AND CONTAINING 37,150 SQUARE FEET OR 0.853 ACRE.

A.P.C.I. RAIL SPUR EASEMENT

BEGINNING AT CORNER "CC" AS PREVIOUSLY DESCRIBED UNDER SAID TRACT "A"; THENCE N. 97°-42'-54" W. A DISTANCE OF 263.14 FEET; THENCE N. 70°-00'-27" W. A DISTANCE OF 132.85 FEET; THENCE N. 19°-59'-40" E. A DISTANCE OF 57.89 FEET TO CORNER "BB" AFORESAID; THENCE S. 73°-18'-46" E. A DISTANCE OF 384.16 FEET TO CORNER "CC", THE POINT OF BEGINNING OF THE HEREIN DESCRIBED EASEMENT AND CONTAINING 16,417 SQUARE FEET OR 0.377 ACRE.

20 FOOT WIDE STREAM LINE AND SEWER LINE EASEMENT

BEGINNING AT A POINT LOCATED ON THE LINE BETWEEN CORNERS "GG" AND "HH" PREVIOUSLY DESCRIBED UNDER SAID TRACT "A", SAID POINT BEING LOCATED N. 19°-55'-51" E. A DISTANCE OF 59.27 FEET FROM CORNER "HH"; THENCE N. 69°-57'-35" W. ALONG AND WITH THE SOUTHERLY LINE OF THE HEREIN DESCRIBED EASEMENT, 421.35 FEET; THENCE N. 20°-02'-17" E. A DISTANCE OF 128.22 FEET TO A POINT ON THE LINE BETWEEN CORNERS "BB" AND "CC" AFORESAID, SAID POINT BEING LOCATED S. 73°-18'-46" E. A DISTANCE OF 109.57 FEET FROM SAID CORNER "BB"; THENCE S. 73°-18'-46" E. A DISTANCE OF 20.03 FEET; THENCE S. 20°-02'-17" W. A DISTANCE OF 109.39 FEET; THENCE S. 69°-57'-35" E. A DISTANCE OF 401.32 FEET TO A POINT LOCATED ON THE LINE BETWEEN CORNERS "GG" AND "HH"; THENCE S. 19°-55'-51" W. A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED EASEMENT AND CONTAINING 10,603 SQUARE FEET OR 0.243 ACRE.

25 FOOT WIDE ELECTRICAL SERVICE EASEMENT

BEGINNING AT A POINT ON THE LINE BETWEEN CORNERS "CC" AND "DD" PREVIOUSLY DESCRIBED UNDER TRACT "A", SAID POINT BEING LOCATED N. 73°-18'-46" W. A DISTANCE OF 42.39 FEET FROM CORNER "DD"; THENCE S. 64°-17'-57" W. A DISTANCE OF 162.67 FEET; THENCE N. 25°-42'-03" W. A DISTANCE OF 25.00 FEET; THENCE N. 64°-17'-57" E. A DISTANCE OF 135.28 FEET TO THE LINE BETWEEN CORNERS "CC" AND "DD"; THENCE S. 73°-18'-46" E. A DISTANCE OF 37.08 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED EASEMENT AND CONTAINING 3,724 SQUARE FEET OR 0.086 ACRE.

AN EIGHT FOOT WIDE PIPELINE EASEMENT IS HEREBY CONVEYED BETWEEN TRACT "A" AND PARCEL "B" PREVIOUSLY DESCRIBED, SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING WHERE THE NORTHERLY LINE OF THE HEREIN DESCRIBED EASEMENT INTERSECTS THE LINE BETWEEN CORNERS "Q" AND "R" PREVIOUSLY DESCRIBED UNDER TRACT "A", SAID POINT BEING LOCATED S. 19°-54'-40" W. A DISTANCE OF 21.19 FEET FROM SAID CORNER "R"; THENCE S. 19°-54'-40" W. A DISTANCE OF 8.68 FEET; THENCE N. 70°-01'-16" W. A DISTANCE OF 201.57 FEET; THENCE S. 20°-08'-24" W. A DISTANCE OF 81.79 FEET; THENCE N. 69°-49'-17" W. A DISTANCE OF 130.76 FEET TO THE EASTERLY LINE OF THE AFORESAID PARCEL "B"; THENCE N. 19°-59'-40" E. A DISTANCE OF 8.90 FEET TO A POINT LOCATED S. 19°-59'-40" W. A DISTANCE OF 21.92 FEET FROM THE AFORESAID CORNER "LL"; THENCE S. 69°-49'-17" E. A DISTANCE OF 122.78 FEET; THENCE N. 20°-08'-24" E. A DISTANCE OF 81.77 FEET; THENCE S. 70°-01'-16" E. A DISTANCE OF 209.54 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED EASEMENT AND CONTAINING 2,312 SQUARE FEET OR 0.076 ACRE.

THE BEARINGS IN THIS DESCRIPTION ARE BASED UPON A BEARING OF S. 69°-15'-10" W. ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF KENTUCKY HIGHWAY 282 AS SHOWN BY AIR PRODUCTS AND CHEMICALS, INC., DRAWING #31-9497B.



*June 21, 1990*

## **Appendix F.**

### **RCRA Facility Investigation (RFI) Scope of Work**

#### **Purpose**

The purpose of the RCRA Facility Investigation (RFI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at a facility and to gather all necessary data to support a Corrective Measures Study. Westlake shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RFI.

#### **Scope**

The RFI is one step in the corrective action program. The RFI consists of the following components, which for clarity have been designated as sections.

#### **Section I: Description of Current Conditions**

- A. Facility Background
- B. Preliminary Assessment of Nature and Extent of Contamination
- C. Implementation of Interim/Stabilization Measures

#### **Section II: RFI Workplan**

- A. Purpose/Objectives
- B. Project Management
- C. Data Collection/Quality Assurance
- D. Data Management and Reporting
- E. Health and Safety Plan
- F. Public Involvement Plan
- G. Schedule for Facility Investigation

**Section III: Facility Investigation**

- A. Purpose/Objectives
- B. Environmental Setting
- C. Source Characterization
- D. Contamination Characterization
- E. Potential Receptor Identification

**Section IV: Preliminary Evaluation of Corrective Measure Technologies by**

Laboratory or Bench-Scale Studies *[optional]*

**Section V: Investigation Results and Analysis**

- A. Data Analysis
- B. Media Cleanup Standards *[where applicable]*
- C. Analysis of Risk *[optional]*

**Section VI: Progress Reports**

**Section VII: Proposed Schedule**

**Section I: Description of Current Conditions**

Westlake shall submit, for EPA approval, a report (as set forth below) providing the background information on the facility, contamination, and interim measures. Westlake shall indicate in the applicable section if some of this information is not available. This report shall contain information that is consistent with the data gathered during the RFA (and the release assessment, if performed). The current condition report shall be submitted prior to, or concurrently with, the submission of the RFI to allow the EPA time to review it.

**A. Facility Background**

Westlake's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage, or disposal of solid and hazardous waste. Westlake's report shall include:

1. Map(s). For permitted facilities, all maps shall be consistent with the requirements set forth in 40 CFR §270.14 and be of sufficient detail and accuracy to locate and report all current and future work performed at the site. (Aerial photographs should be included with SWMUs and AOCs superimposed on them.) Maps shall depict the following (to the extent not already included in map requirements under 40 CFR §270.14 (b)(19) for permitted facilities):

- General geographic location;
- Property lines, with the owners of all adjacent property clearly indicated;
- Topography and surface drainage (with a contour interval of [number] feet and a scale of 1 inch = 100 feet) depicting all waterways, wetlands, flood plains, water features, drainage patterns, and surface-water containment areas;
- All tanks, buildings, utilities, paved areas, easements, rights-of way, and other features;
- All solid or hazardous waste treatment, storage, or disposal areas active after November 19, 1980;
- All known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on or after November 19, 1980;
- All known past and present product and waste underground tanks or piping;
- Surrounding land uses (residential, commercial, industrial, agricultural, recreational);

- The location of all production and groundwater monitoring wells on the facility and within a 2-mile radius of the facility boundary. These wells shall be clearly labeled and ground and top of casing elevations and construction details included (these elevations and details may be included as an attachment); and
- Wind rose and meteorology.

2. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility.

3. Approximate dates or periods of past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or federal response units or private parties), including any inspection reports or technical reports generated as a result of the response.

4. A summary of past permits applied for and/or received, any enforcement actions and their subsequent responses and a list of documents and studies prepared for the facility. This may include information from previous owner/operators, if available.

#### **B. Preliminary Assessment of Nature and Extent of Contamination**

Westlake shall prepare and submit, for EPA approval, a preliminary report describing the existing information on the nature and extent of contamination.

1. Westlake's report shall summarize all possible source areas of contamination. This, at a minimum, shall include all RCRA-regulated units, solid waste management units, spill areas, and other suspected source areas of contamination. For each area, Westlake shall identify the following:

- Location of unit/area ( to be depicted on facility map provided in Section I);
- Quantities of solid and hazardous wastes (both managed and spilled or released);

- Type of Hazardous waste or constituents (both causing or potentially causing contamination), to the extent known;
- Identification of areas where additional information is necessary; and
- The results of both the RCRA Facility Assessment (RFA) and a summary of suggested further actions for all SWMUs and Areas of Concern (AOCs) and the release assessment (if performed).

2. Westlake shall prepare a preliminary assessment and description of the existing degree and extent of contamination. This shall include:

- For each medium where the permit or order identifies a release (e.g., soil, ground water, surface water, air, etc.), a description of the existing extent of contamination. This description must include all available monitoring data and qualitative information on the locations and levels of contamination at the facility (both onsite and offsite). Include biodata (e.g., fishkills, distressed vegetation, abnormal individuals of a species, carcasses, tissue studies, etc.). Include a general assessment of the data quality, a map showing the location of all existing sampling points and potential source areas and contour maps showing any existing ground water plumes at the facility (if ground water release). Highlight potential ongoing release areas that would warrant use of interim corrective measures (see Paragraph C. Implementation of Interim/Stabilization Measures).

- A list and brief description of all previous investigations that have occurred at the facility, who they were conducted for (i.e., agency) and agency contacts.

3. Westlake shall prepare a preliminary assessment and description of potential migration pathways. This shall include:

- All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, food webs, meteorology, and air quality;

- Physical properties of contaminants; and
- An assessment of whether off-site migration of contaminants has occurred; (may include a conceptual model of contaminant migration).

4. Westlake shall describe the potential impact(s) on human health and the environment, including demography, identification of possible sensitive subpopulations (e.g., schools, homes for the elderly, hospitals and ecosystems), ground water and surface water use, and land use.



**APPENDIX G.**  
**Form for Monitoring Roll Off Containers**  
**Page 1 of 2**

I. In accordance with 40 C.F.R. 63 Subpart G, 40 C.F.R. 61 Subpart FF, and 40 C.F.R. 265 Subpart CC, Westlake shall initially and semi-annually monitor:

A. Roll-Off containers containing:

(i) HON wastewater sludges or residuals removed from trenches, sumps, tanks, etc. (63 Subpart G);

(ii) material with greater than or equal to 10 ppm benzene (61 Subpart FF); or

(iii) material with greater than or equal to 500 ppm VOCs (265 Subpart CC); and

B. Drums containing material with greater than or equal to 10 ppm benzene (61 Subpart FF) and not contained in a DOT approved container (111 gal or less).

II. Westlake shall record the monitoring of each Roll-Off container or Drum by filling in the blanks below. This document shall be returned to Westlake Environmental Department ASAP.

A. Drum Description /Date or Roll-Off Box Number: \_\_\_\_\_

B. DATE AND TIME OF INSPECTION: \_\_\_\_\_

C. NAME OF INSPECTOR: \_\_\_\_\_

D. FID METER ID: \_\_\_\_\_ (ATTACH CALIBRATION SHEET)

E. MAX METER READING OBSERVED: \_\_\_\_\_ PPM

F. ARE THERE ANY LEAKS AS IDENTIFIED BY VISUAL, AUDIBLE, OR  
OLFACTORY INDICATION? YES / NO (CIRCLE ONE)

IF YES WAS INDICATED ABOVE, OR A METER READING OF 500 PPM OR  
GREATER IS OBSERVED, A FIRST ATTEMPT TO REMEDY THE PROBLEM  
MUST BE MADE WITHIN FIVE (5) DAYS. THE FIRST ATTEMPT MAY BE

**Form for Monitoring Roll Off Containers**  
**Page 2 Of 2**

REPOSITIONING OF THE TARP, ADDING ADDITIONAL BUNGEE CORDS, OR TIGHTENING OF THE RETAINING RING ON A DRUM. IF FIRST ATTEMPT IS UNSUCCESSFUL, THE PROBLEM MUST BE RESOLVED WITHIN FIFTEEN (15) DAYS OF INITIAL IDENTIFICATION OF THE PROBLEM BY ANY MEANS NECESSARY. THIS MAY INCLUDE INSTALLING NEW TARP, OR TRANSFERRING WASTE INTO DIFFERENT CONTAINER. SEE OTHER SIDE FOR REPAIR DOCUMENTATION.

**REPAIR DOCUMENTATION**

- G. ATTEMPTS (COMPLETE UNTIL NO INDICATION OF LEAK IS OBSERVED)
  
- H. ATTEMPT # (First, Second or Third)
  
- I. DATE: \_\_\_\_\_ OPERATOR NAME FOR EACH ATTEMPT \_\_\_\_\_:
  
- J. METHOD OF REPAIR: \_\_\_\_\_
  
- K. WAS REPAIR SUCCESSFUL? (CIRCLE ONE) YES / NO
  
- L. MAXIMUM METER READING: \_\_\_\_\_ PPM
  
- M. METER ID: \_\_\_\_\_

## Appendix H

### Health and Safety Plan

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Westlake shall prepare a facility Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:
  - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
  - b. Description of known hazards and evaluations of the risks associated with each activity conducted including, but not limited to, on and off-site exposure to contaminants during the implementation of interim measures at the facility.
  - c. List of key personnel and alternates responsible for site safety, response operations, and for protection of public health;
  - d. Delineation of work area;
  - e. Description of levels of protection to be worn by personnel in work area;
  - f. Procedures to control site access;
  - g. Description of documentation procedures for personnel and equipment;
  - h. Establishment of site emergency procedures;
  - i. Emergency medical care for injuries and toxicological problems;
  - j. Description of requirements for an environmental surveillance program;
  - k. Description of the safety training provided to personnel in the work area; and
  - l. Establishment of procedures for protecting workers from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
  - a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
  - b. EPA Order 1440.1 - Respiratory Protection;

## Appendix H

### Health and Safety Plan

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- c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
  - d. Facility Contingency Plan;
  - e. EPA Standard Operating Safety Guide (1984);
  - f. OSHA regulations in accordance with 29 C.F.R. 1910 and 1926;
  - g. State and local regulations; and
  - h. Other EPA guidance.
3. The Health and Safety Plan shall be revised to address the activities to be performed at the facility to implement the Emergency/Interim Measures, Confirmatory Sampling, RCRA Facility Investigation, and Corrective Measures. One plan may be prepared to address all of these activities.