

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

UNITED STATES OF AMERICA,)
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 Plaintiff,)
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 v.)
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 NORRELL E. DEARING, et al.,)
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 Defendants,)
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 v.)
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 FIRST NATIONWIDE FINANCIAL)
 CORPORATION, et al.,)
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 Third-Party Defendants.)
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CIVIL ACTION
No. 4:89 CV 2002
JUDGE GAUGHAN
MAGISTRATE PERELMAN

STATE OF OHIO,)
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 Plaintiff,)
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 v.)
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 NORRELL E. DEARING, et al.,)
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 Defendants,)
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 FIRST NATIONWIDE FINANCIAL)
 CORPORATION, et al.,)
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 Third-Party Defendants.)
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CIVIL ACTION
No. 4:92 CV 1364
JUDGE GAUGHAN
MAGISTRATE PERELMAN

CONSENT DECREE

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CONSENT DECREE

I. BACKGROUND

A. The United States of America ("United States"), on behalf of the Administrator of the United States Environmental Protection Agency ("EPA"), filed a complaint and an amended complaint in this matter pursuant to Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. § 9607. The United States' amended complaint sets forth claims against nine potentially responsible parties at the Site, including five alleged generators of hazardous substances disposed of at the Site. Three of the Defendants filed a third-party complaint, in which three other Defendants later joined, against six additional parties pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, seeking contribution. Two of these Third-Party Defendants subsequently were dismissed from this action.

B. The United States in its amended complaint seeks, inter alia: (1) reimbursement of costs incurred by EPA and the Department of Justice for response actions at the Site, located in the Village of Rock Creek, Ashtabula County, Ohio, together with accrued interest; and (2) a declaratory judgment that the Defendants are liable, jointly and severally, for all future response costs incurred by the United States in connection with the Site.

C. The State of Ohio (the "State") has also filed a complaint

against the Defendants in this Court for recovery of response costs and declaratory relief pursuant to CERCLA, 42 U.S.C. § 9601 et seq., and the Federal Declaratory Judgment Act, 28 U.S.C. § 2201. The State of Ohio's complaint sets forth claims against eight potentially responsible parties, including four alleged generators of hazardous substances disposed of at the Site.

D. For this Consent Decree, the Settling Defendants and Settling Third-Party Defendants have organized into "Settling Performing Parties," (identified in Appendix D) and "Settling Non-Performing Parties" (identified in Appendix E). The Settling Performing Parties and Settling Non-Performing Parties do not admit any liability to the Plaintiffs arising out of the transactions or occurrences alleged in the complaints, nor do they acknowledge that the release or threatened release of hazardous substances at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment. Except as otherwise provided in the Federal Rules of Evidence, the participation by any Settling Performing Party or Settling Non-Performing Party in this Consent Decree shall not be considered an admission of liability for any purpose, and the fact of such participation shall not be admissible against any such Settling Performing Party or Settling Non-Performing Party in any judicial or administrative proceeding, except in an action or proceeding brought by the United States or the State to enforce the terms of

this Consent Decree.

E. Pursuant to Section 105 of CERCLA, 42 U.S.C § 9605, EPA placed the Site on the National Priorities List, set forth at 40 C.F.R. Part 300, Appendix B, by publication in the Federal Register on September 8, 1983 (48 Fed. Reg. 40673).

F. In response to a release or a substantial threat of release of hazardous substances at or from the Site, EPA commenced in August 1983 a Remedial Investigation/Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430.

G. EPA completed a Remedial Investigation ("RI") Report in or about December 1984, and EPA completed a Feasibility Study ("FS") Report in or about May 1985.

H. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and the proposed plan for remedial action in or about June 1985. EPA selected a remedy for the Old Mill Site in a Record of Decision dated August 8, 1985, on which the State has given its concurrence.

I. The Old Mill Site Remedial Action selected in the ROD was initiated by the U.S. Army Corps of Engineers on behalf of EPA on May 9, 1988. The Remedial Action construction was completed in June 29, 1990. Pursuant to Section 104(c)(6) of CERCLA, 42 U.S.C. § 9604(c)(6), the Remedial Action was conducted by EPA until September 1999, when responsibility for Operation & Maintenance ("O & M") was scheduled to be assumed by the State. The State assumed

responsibility for O & M on November 1, 2000.

J. Pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and 40 C.F.R. § 300.400(f)(4)(ii), EPA completed a five year review of the Old Mill remedy on January 19, 1996.

K. The decision by EPA on the changes to the Remedial Action to be implemented at the Site based on the five year review is embodied in the Statement of Work, approved by EPA on July 28, 1999, on which the State has had a reasonable opportunity to review and comment and on which the State has given its concurrence.

L. The Settling Performing Parties herein agree to assume responsibility for the changes to, and O&M of, the Remedial Action at the Site within 30 days after the effective date of this Consent Decree. Based on the information presently available to EPA and the State, EPA and the State believe that the Work will be properly and promptly conducted by the Settling Performing Parties if conducted in accordance with the requirements of this Consent Decree and its Appendices.

M. Solely for the purposes of Section 113(j) of CERCLA, 42 U.S.C. § 0613(j), the changes to, and O&M of, the Remedial Action to be performed by the Settling Performing Parties shall constitute a response action taken or ordered by the President.

N. The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and implementation of this Consent

Decree will expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

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

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1345, and 42 U.S.C. §§ 9606, 9607, and 9613(b). This Court also has personal jurisdiction over the Settling Performing Parties and Settling Non-Performing Parties. Solely for the purposes of this Consent Decree and the underlying complaint, Settling Performing Parties and Settling Non-Performing Parties waive all objections and defenses that they may have to jurisdiction of the Court or to venue in this District. Settling Performing Parties and Settling Non-Performing Parties shall not challenge this Court's jurisdiction to enter and enforce this Consent Decree. Settling Performing Parties and Settling Non-Performing Parties shall not challenge the terms of this Consent Decree, except in accordance with the dispute resolution mechanism provided herein at Section XX (Dispute Resolution).

III. PARTIES BOUND

2. This Consent Decree applies to and is binding upon the

United States and the State, and upon Settling Performing Parties and Settling Non-Performing Parties, and their successors and assigns. Any change in ownership or corporate status of a Settling Performing Party and Settling Non-Performing Party including, but not limited to, any transfer of assets or real or personal property, shall in no way alter such Settling Performing Party's and Settling Non-Performing Party's responsibilities under this Consent Decree.

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

IV. DEFINITIONS

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

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

"Consent Decree" shall mean this Decree and all Appendices attached hereto [listed in Section XXX (Appendices)]. In the event of conflict between this Decree and any Appendix, this Decree shall control.

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

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

"Five Year Review Report" shall mean the report relating to the periodic review of the Old Mill Superfund Site prepared by EPA pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), dated January 19, 1996, and all attachments thereto.

"Future Response Costs" shall mean all costs and interest on costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Consent Decree, verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Decree, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Sections VII (Remedy Review), IX (Access and Institutional Controls), if necessary (including, but not limited to, attorneys fees and any monies paid to secure access and/or to secure institutional controls, including the amount of just compensation), XV (Emergency Response), and Paragraph 85 (Work Takeover), and Oversight Costs commencing on the effective date of this Consent Decree.

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

"Matters Addressed" in this Consent Decree shall mean all

response actions taken or to be taken, and all response costs incurred or to be incurred by the United States, the State, or any other person with respect to the Site. The "Matters Addressed" in this Consent Decree do not include those response costs or those response actions as to which the United States or the State has reserved its rights under this Consent Decree (except for claims for failure to comply with this Decree), in the event that the United States or the State asserts rights against the Settling Performing Parties or Settling Non-Performing Parties coming within the scope of such reservations.

"Municipal Solid Waste" shall mean all waste materials generated by households, including single and multi-family residences, and hotels and motels. The term also includes waste materials generated by commercial, institutional, and industrial sources, to the extent such wastes (A) are essentially the same as waste normally generated by households, or (B) are collected and disposed of with other municipal solid waste or sewage sludge as part of normal municipal solid waste collection services and, regardless of when generated, would be considered conditionally exempt small quantity generator waste under regulations issued pursuant to Section 3001(d)(4) of the Solid Waste Disposal Act (42 U.S.C. 6921(d)(4)). Examples of Municipal Solid Waste include food and yard waste, paper, clothing, appliances, consumer product packaging, disposable diapers, office supplies, cosmetics, glass

and metal food containers, elementary or secondary school science laboratory waste, and household hazardous waste. The term does not include combustion ash generated by resource recovery facilities or municipal incinerators, or waste from manufacturing or processing (including pollution control) operations not essentially the same as waste normally generated by households.

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

"Ohio EPA" shall mean the Ohio Environmental Protection Agency.

"Oversight Costs" shall mean, for purposes of this Consent Decree only, that portion of Future Response Costs incurred by the United States in monitoring and supervising the Settling Performing Parties' performance of the response activities, including, but not limited to, performance of the changes to, and O&M of, the Remedial Action, to determine whether such performance is consistent with the requirements of this Consent Decree, including the costs associated with reviewing and/or developing plans, reports or other items submitted for approval under this Decree, and costs incurred in supervising Settling Performing Parties' implementation of response activities performed at the Site. The State is the lead agency for oversight of response activities and the Remedial Action pursuant to terms of a cooperative agreement with EPA. EPA and the

State anticipate that the State will have a primary role, and EPA a secondary role, in monitoring and supervising the response activities of the Settling Performing Parties absent unusual or unanticipated circumstances. Oversight Costs do not include, inter alia, Future Response Costs that include: (1) the costs of direct action by EPA to investigate, evaluate or monitor a release, threat of release, or a danger posed by such release or threat of release; (2) the costs of litigation or other enforcement activities; (3) the costs of determining the need for taking direct response actions by EPA to conduct a removal or the Remedial Action at the Site; (4) the costs of undertaking future five-year reviews set forth in Section VII (Remedy Review) or otherwise determining whether or to what extent the response activities have ensured protection of public health and the environment at the Site; (5) the cost of enforcing the terms of this Consent Decree, including all costs incurred in connection with Dispute Resolution pursuant to Section XX (Dispute Resolution); (6) costs of securing access under Section IX (Access and Institutional Controls), if necessary; and (7) the costs incurred by the United States in performing Work Takeover pursuant to Paragraph 85.

"Owner, Operator, or Lessee of Residential Property" shall mean a person who owns, operates, manages, or leases Residential Property and who uses or allows the use of the Residential Property exclusively for residential purposes.

"Operation and Maintenance" or "O&M" shall mean all activities required to maintain the effectiveness of the Remedial Action as required under the Statement of Work, attached as Appendix A, approved by EPA and the State pursuant to this Consent Decree, the ROD, and the Five-Review Report.

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

"Parties" shall mean the United States, the State of Ohio, the Settling Performing Parties and the Settling Non-Performing Parties.

"Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs that the United States paid at or in connection with the Site through the effective date of this Consent Decree, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

"Performance Standards" shall mean the cleanup standards and other measures of achievement of the goals of the Remedial Action, set forth in the ROD, the Five-Year Review Report, the SOW and this Consent Decree.

"Plaintiffs" shall mean the United States and the State of Ohio.

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

"Record of Decision" or "ROD" shall mean the EPA Record of

Decision relating to the Site signed on August 8, 1985, by the Regional Administrator, EPA Region 5, or his/her delegate, and all attachments thereto, and attached as Appendix B.

"Remedial Action" shall mean all activities, including O&M, required to maintain the effectiveness of the response action as required under the Statement of Work approved by EPA and the State pursuant to this Consent Decree, the ROD, and the Five-Year Review Report.

"Residential Property" shall mean single or multi-family residences, including accessory land, buildings, or improvements incidental to such dwellings, which are exclusively for residential use.

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

"Settling Non-Performing Parties" shall mean those Parties identified in Appendix E.

"Settling Performing Parties" shall mean those Parties identified in Appendix D.

"Sewage Sludge" means solid, semisolid, or liquid residue removed during the treatment of municipal waste water, domestic sewage, or other waste water at or by publicly owned or federally owned treatment works.

"Site" shall mean the Old Mill Superfund Site, consisting of two parcels of land, the Henfield Property of approximately 3 acres,

the Kraus Property, of approximately 10 acres, the land areas not located on the Henfield property encompassed by the Martin Sump, associated interceptor trenches, and monitoring wells RWSH-2, RWDH-2, RWSH-3, RWDH-3, RWSH-4 and RWDH-4, and proposed locations for RWSH-5, and RWDH-5, and any area of groundwater contamination with hazardous substances migrating therefrom, in the Village of Rock Creek, Ashtabula County, Ohio and depicted generally on the map attached as Appendix C.

"Site Work Plan" shall mean the document developed pursuant to Paragraph 10 of this Consent Decree and the SOW, and any amendments thereto, approved by EPA, after reasonable opportunity for review and comment by Ohio EPA, and incorporated herein by reference.

"Small Business" shall mean any business entity that employs no more than 100 individuals and is a "small business concern" as defined under the Small Business Act (15 U.S.C. 631 et seq.).

"Small Nonprofit Organization" shall mean any organization that does not distribute any part of its income or profit to its members, directors, or officers, employs no more than 100 paid individuals at the involved chapter, office, or department, and was recognized as a nonprofit organization under Section 501(c)(3) of the Internal Revenue Code of 1986.

"State" shall mean the State of Ohio, by and through its Attorney General on behalf of Ohio EPA.

"State Future Response Costs" shall mean all costs and interest

on costs, including, but not limited to, direct and indirect costs, that the State incurs in reviewing or developing plans, reports and other items pursuant to this Consent Decree, verifying the Work, or otherwise implementing, overseeing, or enforcing this Consent Decree, including, but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Sections VII (Remedy Review), IX (Access and Institutional Controls), if necessary (including, but not limited to, attorneys' fees and any monies paid to secure access and/or to secure institutional controls, including the amount of just compensation), XV (Emergency Response), and Paragraph 85 (Work Takeover), and State Oversight Costs commencing on the effective date of this Consent Decree.

"State Oversight Costs" shall mean, for purposes of this Consent Decree only, that portion of State Future Response Costs incurred by the State in monitoring and supervising the Settling Performing Parties' performance of the response activities, including, but not limited to, performance of the changes to, and O&M of, the Remedial Action to determine whether such performance is consistent with the requirements of this Consent Decree, including the costs associated with reviewing and/or developing plans, reports or other items submitted for approval under this Decree, and costs incurred in supervising Settling Performing Parties' implementation of response activities performed at the Site. The State is the lead agency for

oversight of response activities and the Remedial Action pursuant to terms of a cooperative agreement with EPA. EPA and the State anticipate that the State will have a primary role, and EPA a secondary role, in monitoring and supervising the response activities of Settling Performing Parties, absent unusual or unanticipated circumstances. State Oversight Costs do not include, inter alia, State Future Response Costs that include: (1) the costs of direct action by Ohio EPA to investigate, evaluate or monitor a release, threat of release, or a danger posed by such release or threat of release; (2) the costs of litigation or other enforcement activities; (3) the costs of participating in or conducting future five-year reviews set forth in Section VII (Remedy Review) or otherwise determining whether or to what extent the response activities have ensured protection of public health and the environment at the Site; (4) the cost of enforcing the terms of this Consent Decree, including all costs incurred in connection with Dispute Resolution pursuant to Section XX (Dispute Resolution); (5) costs of securing access under Section IX (Access and Institutional Controls), if necessary; and (6) the costs incurred by the State in performing Work Takeover pursuant to Paragraph 85.

"State Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the State paid at or in connection with the Site through the effective date of this

Consent Decree, plus Interest on all such costs which has accrued pursuant to 42 U.S.C. § 9607(a) through such date.

"Statement of Work" or "SOW" shall mean the document referenced in Paragraph 10 and approved by EPA and the State, and any amendments thereto, attached as Appendix A, and incorporated herein by reference.

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

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

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33), 42 U.S.C. § 9601(33); and (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

"Work" shall mean all activities Settling Performing Parties are required to perform under this Consent Decree, including the changes to, and O&M of, the Remedial Action.

V. GENERAL PROVISIONS

5. Objectives of the Parties

The objectives of the Parties in entering into this Consent Decree are to: 1) protect public health, welfare, and the environment at the Site by the design and implementation of

response actions at the Site by the Settling Performing Parties; 2) reimburse response costs of the Plaintiffs; 3) resolve the claims of Plaintiffs against Settling Performing Parties and Settling Non-Performing Parties as provided in this Consent Decree; and 4) resolve the claims that the Settling Performing Parties and Settling Non-Performing Parties have against each other.

6. Commitments by Settling Performing Parties

a. Settling Performing Parties shall finance and perform the Work in accordance with this Consent Decree, the ROD, the SOW, and all work plans and other plans, standards, specifications, and schedules set forth herein or developed by Settling Defendants and approved by EPA pursuant to this Consent Decree. Settling Performing Parties shall also reimburse the United States for Past Response Costs and Future Response Costs as provided in this Consent Decree, and shall reimburse the State for State Past Response Costs and State Future Response Costs as provided in this Consent Decree. Settling Performing Parties shall assume responsibility for performance of the changes to, and O&M of, the Remedial Action at the Site within 30 days after the effective date of this Consent Decree.

b. If new monitor wells are installed and/or a sampling event is conducted at the Site after March 22, 2001, and prior to Settling Performing Parties' assumption of O&M at the Site under this Consent Decree, Settling Performing Parties shall pay all

associated costs of the well installations and the sampling event.

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

7. Compliance With Applicable Law

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

8. Permits

a. As provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and Section 300.400(e) of the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of

the Work). Where any portion of the Work that is not on-Site requires a federal or state permit or approval, Settling Performing Parties shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals.

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

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

VI. PERFORMANCE OF THE WORK BY SETTLING PERFORMING PARTIES

9. Selection of Supervising Contractor.

a. All aspects of the Work to be performed by Settling Performing Parties pursuant to Sections VI (Performance of the Work by Settling Performing Parties), VII (Remedy Review), VIII (Quality Assurance, Sampling, and Data Analysis), and XV (Emergency Response) of this Consent Decree shall be under the direction and supervision of the Supervising Contractor, the selection of which shall be subject to disapproval by EPA, after reasonable opportunity for review and comment by Ohio EPA. Within 10 working days after the effective date of this Consent Decree, Settling

Performing Parties shall notify EPA and Ohio EPA in writing of the name, title, and qualifications of any contractor proposed to be the Supervising Contractor. EPA, in consultation with Ohio EPA, will issue a notice of disapproval or an authorization to proceed. If at any time thereafter, Settling Performing Parties propose to change a Supervising Contractor, Settling Performing Parties shall give such notice to EPA and Ohio EPA and shall obtain an authorization to proceed from EPA, in consultation with Ohio EPA, before the new Supervising Contractor performs, directs, or supervises any Work under this Consent Decree.

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

c. If EPA fails to provide written notice of its

authorization to proceed or disapproval as provided in this Paragraph and this failure prevents the Settling Performing Parties from meeting one or more deadlines in a plan approved by EPA pursuant to this Consent Decree, Settling Performing Parties may seek relief under the provisions of Section XIX (Force Majeure) hereof.

10. Changes to, and O&M of, the Remedial Action

a. The Parties have agreed to a Statement of Work and schedule for the performance of the changes to, and O&M of, the Remedial Action at the Site ("Statement of Work" or "SOW"), that are attached as Appendix A and are incorporated herein by reference and enforceable under this Consent Decree. The SOW provides for construction and implementation of the changes to, and O&M of, the Remedial Action in accordance with this Consent Decree, the ROD, and the Five-Year Review Report and approved by EPA and the State.

b. The SOW includes the following: (1) methodology for implementation of the ROD, and the changes to, and O&M of, the Remedial Action; (2) schedule for developing and submitting the Site Work Plan and required Site Work Plan component plans including, but not limited to: a plan for selection of the Supervising Contractor; a method for satisfying applicable permitting requirements, if any; a Health and Safety Plan ("HASP") which conforms to the Occupational Safety and Health Administration and EPA requirements including, but not limited to, 29 C.F.R. §

1910.120; a Sampling and Analysis Plan ("SAP"); a Quality Assurance Project Plan ("QAPP") which shall be consistent with the EPA model QAPP entitled: "Region 5 Superfund Model Quality Assurance Project Plan" (May 1996); a Field Sampling Plan ("FSP"); a Data Management Plan; and a Contingency Plan; and (3) a framework for developing and submitting other required O&M and Site Work Plan tasks. The Site Work Plan submitted in accordance with this Paragraph shall set forth a schedule and methodology for implementation of all tasks associated with the changes to, and O&M of, the Remedial Action, including but not limited to, the field investigation, additional monitoring well installation, periodic collection of groundwater and treatment plant samples at approved points, and periodic collection of groundwater elevation data on all new and existing monitoring wells and piezometers. The Site Work Plan also shall identify the initial formulation of the Settling Performing Parties' Remedial Action Project Team (including, but not limited to, the Supervising Contractor) and Settling Performing Parties' Project Coordinator. Upon its approval by EPA, after reasonable opportunity for review and comment by Ohio EPA, the Site Work Plan and all component plans, shall be incorporated into and become enforceable under this Consent Decree.

c. The Settling Performing Parties shall implement the activities required under the SOW and Site Work Plan and component plans, as approved. The Settling Performing Parties shall submit

to EPA and the State all plans, submittals, or other deliverables required under the approved SOW in accordance with the approved schedule for review and approval pursuant to Section XI (Agency Approval of Plans and Other Submissions). The Settling Performing Parties shall commence physical activities for the changes to, and O&M of, the Remedial Action at the Site pursuant to the approved schedule in the SOW no later than 30 days after the effective date of this Consent Decree.

11. The Settling Performing Parties shall continue to implement the changes to, and O&M of, the Remedial Action as is required under the ROD, the SOW, and this Consent Decree.

12. Modification of the SOW and Related Work Plans.

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

b. For the purposes of this Paragraph 12, and Paragraphs 43 and 44 only, the "scope of the remedy selected in the ROD" is: (a) removal and off-site disposal of contaminated soil; (b) groundwater extraction and treatment; (c) aquifer use

restrictions; (d) provision of public water supplies to those residents potentially affected by contaminated groundwater; and (e) operation and maintenance.

c. If the Settling Performing Parties object to any modification determined by EPA, in consultation with Ohio EPA, to be necessary pursuant to this Paragraph, they may seek dispute resolution pursuant to Section XX (Dispute Resolution), Paragraph 62 (record review). The SOW shall be modified in accordance with final resolution of the dispute.

d. The Settling Performing Parties shall implement any Work required by any modifications incorporated in the SOW in accordance with this Paragraph.

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

13. The Settling Performing Parties shall, prior to any off-Site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving facility's state and to the EPA Remedial Project Manager and the Ohio EPA Project Coordinator of such shipment of Waste Material. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not

exceed 10 cubic yards.

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

b. The identity of the receiving facility and state will be determined by the Settling Performing Parties following the award of the contract for the changes to, and O&M of, the Remedial Action. The Settling Performing Parties shall provide the information required by Paragraph 13.a as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

VII. REMEDY REVIEW

14. Periodic Review.

At least every five years, as required by Section 121(c) of CERCLA, 42 U.S.C. § 9621(c), and any applicable regulations,

Settling Performing Parties shall conduct any studies and investigations as requested by EPA, in order to permit EPA to conduct reviews of whether the Site remedy, including the remedy in the ROD, the SOW and this Consent Decree is protective of human health and the environment. The State may participate in such reviews or conduct its own reviews.

15. EPA Selection of Further Response Actions.

If EPA determines, at any time, that the remedy in the ROD is not protective of human health and the environment, EPA may select, after consultation with Ohio EPA, further response actions for the Site in accordance with the requirements of CERCLA and the NCP. EPA shall notify Ohio EPA and the Settling Performing Parties of its determination regarding the effectiveness of the remedy in protecting human health and the environment. To the extent that Ohio EPA participates in or conducts its own review, Ohio EPA shall notify EPA and the Settling Performing Parties of its determination regarding the effectiveness of the remedy in the ROD in protecting human health and the environment.

16. Opportunity To Comment.

Settling Performing Parties and, if required by Sections 113(k)(2) or 117 of CERCLA, 42 U.S.C. §§ 9613(k)(2) or 9617, the public, will be provided with an opportunity to comment on any further response actions proposed by EPA as a result of the review conducted pursuant to Section 121(c) of CERCLA and to submit

written comments for the record during the comment period.

VIII. QUALITY ASSURANCE, SAMPLING, and DATA ANALYSIS

17. Settling Performing Parties shall use quality assurance, quality control, and chain of custody procedures for all samples in accordance with "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operation," (EPA QA/R5; "Preparing Perfect Project Plans," (EPA /600/9-88/087), and subsequent amendments to such guidelines upon notification by EPA to Settling Performing Parties of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. Prior to the commencement of any monitoring project under this Consent Decree, Settling Performing Parties shall submit for EPA's approval, after consultation with Ohio EPA, a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW, the NCP and the following guidance documents: Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980; Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Emergency and Remedial Response, QAMS-004/80, December 29, 1980; and Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, U.S. EPA, Region IV, Environmental Services Division, April 1, 1986, as revised. If relevant to the proceeding, the Parties agree

that validated sampling data generated in accordance with the QAPP(s) and reviewed and approved by EPA shall be admissible as evidence, without objection, in any proceeding under this Decree. Settling Performing Parties shall ensure that EPA and Ohio EPA personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Settling Performing Parties in implementing this Consent Decree. In addition, Settling Performing Parties shall ensure that such laboratories shall analyze all samples submitted by EPA and Ohio EPA pursuant to the QAPP for quality assurance monitoring. Settling Performing Parties shall ensure that the laboratories they utilize for the analysis of samples taken pursuant to this Decree perform all analyses according to accepted EPA methods. Accepted EPA methods consist of those methods which are documented in the "Contract Lab Program Statement of Work for Inorganic Analysis" and the "Contract Lab Program Statement of Work for Organic Analysis," dated February 1988, and any amendments made thereto during the course of the implementation of this Decree. Settling Performing Parties shall ensure that all laboratories they use for analysis of samples taken pursuant to this Consent Decree participate in an EPA or EPA-equivalent QA/QC program. Settling Performing Parties shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Decree will be conducted in accordance with the procedures set forth in the QAPP approved by

EPA.

18. Upon request, the Settling Performing Parties shall allow split or duplicate samples to be taken by EPA and Ohio EPA or their authorized representatives. Settling Performing Parties shall notify EPA and Ohio EPA not less than 7 days in advance of any sample collection activity unless shorter notice is agreed to by EPA and Ohio EPA. In addition, EPA and Ohio EPA shall have the right to take any additional samples that EPA or Ohio EPA deem necessary. Upon request, EPA and Ohio EPA shall allow the Settling Performing Parties to take split or duplicate samples of any samples they take as part of the Plaintiffs' oversight of the Settling Performing Parties' implementation of the Work.

19. Settling Performing Parties shall submit to EPA and Ohio EPA three copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Settling Performing Parties with respect to the Site and/or the implementation of this Consent Decree unless EPA, after consultation with Ohio EPA, agrees otherwise.

20. Notwithstanding any provision of this Consent Decree, the United States and the State hereby retain all of their information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA and any other applicable statutes or regulations.

IX. ACCESS AND INSTITUTIONAL CONTROLS

21. Commencing upon the date of lodging of this Consent Decree, the Settling Performing Parties agree to provide the United States, the State, and their representatives, including EPA and its contractors, and Ohio EPA and its contractors, access at all reasonable times to the Site and any other property to which access is required for the implementation of this Consent Decree, to the extent access to the property is controlled by Settling Performing Parties, for the purposes of conducting any activity related to this Consent Decree including, but not limited to:

- a. Monitoring the Work;
- b. Verifying any data or information submitted to the United States and the State;
- c. Conducting investigations relating to contamination at or near the Site;
- d. Obtaining samples;
- e. Assessing the need for, planning, or implementing additional response actions at or near the Site;
- f. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Settling Defendants or their agents, consistent with Section XXV (Access to Information); and
- g. Assessing Settling Performing Parties' compliance with this Consent Decree.

22. To the extent that the Site or any other property to which access is required for the implementation of this Consent Decree is owned or controlled by persons other than Settling Performing Parties, Settling Performing Parties shall use best efforts to secure from such persons access for Settling Performing Parties, as well as for the United States, the State, and their representatives, including but not limited to, their contractors, as necessary to effectuate this Consent Decree. For purposes of this Paragraph "best efforts" includes the payment of reasonable sums of money in consideration of access, except that Settling Performing Parties shall not be required to pay any money in consideration of access to the United States, the State, or to any potentially responsible party at the Site. If any access required to complete the Work is not obtained within 45 days of the date of lodging of this Consent Decree, or within 45 days of the date EPA or Ohio EPA notifies the Settling Performing Parties in writing that additional access beyond that previously secured is necessary, Settling Performing Parties shall promptly notify the United States and the State in writing, and shall include in that notification a summary of the steps Settling Performing Parties have taken to attempt to obtain access. The United States, or the State, may, as it deems appropriate, assist Settling Performing Parties in obtaining access. Settling Performing Parties shall reimburse the United States, or the State, in accordance with the procedures in

Section XVII (Reimbursement of Response Costs), for all costs incurred by the United States or the State in obtaining access.

23. Notwithstanding any provision of this Consent Decree, the United States and the State retain all of their access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA and any other applicable statute or regulations.

24. The Settling Performing Parties agree to implement the institutional controls set forth in the ROD, and the SOW to the extent that they have the legal authority to do so.

X. REPORTING REQUIREMENTS

25. In addition to any other requirement of this Consent Decree, Settling Performing Parties shall submit to EPA and Ohio EPA each, three copies of written monthly progress reports that:

- (a) describe the actions which have been taken toward achieving compliance with this Consent Decree during the previous month;
- (b) include a summary of all results of sampling and tests and all other data received or generated by Settling Performing Parties or their contractors or agents in the previous month;
- (c) identify status of all work plans, plans and other deliverables required by this Consent Decree completed and submitted during the previous month;
- (d) describe all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next six weeks and provide other information

relating to the progress of the Work; (e) include progress toward completion of the Work, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the Work, and a description of efforts made to mitigate those delays or anticipated delays; (f) include any modifications to the work plans or other schedules that Settling Performing Parties have proposed to EPA and Ohio EPA or that have been approved by EPA; (g) describe all activities, if any, undertaken in support of the Community Relations Plan during the previous month and those to be undertaken in the next six weeks; and (h) include any notification requirements set forth in the SOW including, but not limited to, exceedances of Performance Standards. Settling Performing Parties shall submit these progress reports to EPA and Ohio EPA by the tenth day of every month following the lodging of this Consent Decree until EPA and Ohio EPA notify the Settling Performing Parties pursuant to Paragraph 44.b of Section XIV (Certification of Completion). If requested by EPA or Ohio EPA, Settling Performing Parties shall also provide briefings for EPA and Ohio EPA to discuss the progress of the Work.

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

27. Upon the occurrence of any event during performance of the Work that Settling Performing Parties are required to report pursuant to Section 103 of CERCLA or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), Settling Performing Parties shall within 24 hours of the onset of such event orally notify the EPA Remedial Project Manager or the Alternate EPA Remedial Project Manager (in the event of the unavailability of the EPA Remedial Project Manager), or, in the event that neither the EPA Remedial Project Manager nor Alternate EPA Remedial Project Manager is available, the Emergency Response Section, Region 5, United States Environmental Protection Agency. These reporting requirements are in addition to the reporting required by CERCLA Section 103 or EPCRA Section 304.

28. Within 10 days of the onset of such an event, Settling Performing Parties shall furnish to EPA and Ohio EPA a written report, signed by the Settling Performing Parties' Project Coordinator, setting forth the events which occurred and the measures taken, and to be taken, in response thereto. Within 30 days of the conclusion of such an event, Settling Performing Parties shall submit a report setting forth all actions taken in response thereto.

29. Settling Performing Parties shall submit three copies of all plans, reports, and data required by the SOW, or any other approved plans to EPA in accordance with the schedules set forth in

such plans. Settling Performing Parties shall simultaneously submit three copies of all such plans, reports and data to Ohio EPA.

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

XI. AGENCY APPROVAL OF PLANS AND OTHER SUBMISSIONS

31. After review of any plan, report or other item which is required to be submitted for approval pursuant to this Consent Decree, EPA, after reasonable opportunity for review and comment by Ohio EPA, or EPA, after consultation with Ohio EPA, as appropriate, shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that the Settling Performing Parties modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Settling Performing Parties at least one notice of deficiency and an opportunity to cure within 30 days, except where to do so would cause serious disruption to the Work or where previous

submission(s) have been disapproved due to material defects and the deficiencies in the submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.

32. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 31(a), (b), or (c), Settling Performing Parties shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XX (Dispute Resolution) with respect to the modifications or conditions made by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 31(c) and the submission has a material defect, EPA and Ohio EPA retain their rights to seek stipulated penalties, as provided in Section XXI (Stipulated Penalties).

33. a. Upon receipt of a notice of disapproval pursuant to Paragraph 31(d), Settling Performing Parties shall, within 30 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other item for approval. Any stipulated penalties applicable to the submission, as provided in Section XXI (Stipulated Penalties), shall accrue during the 30-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 34 and 35

b. Notwithstanding the receipt of a notice of disapproval

pursuant to Paragraph 31(d), Settling Performing Parties shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission. Implementation of any non-deficient portion of a submission shall not relieve Settling Performing Parties of any liability for stipulated penalties under Section XXI (Stipulated Penalties).

34. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by EPA, EPA may again require the Settling Performing Parties to correct the deficiencies, in accordance with the preceding Paragraphs. EPA also retains the right to modify or develop the plan, report or other item. Settling Performing Parties shall implement any such plan, report, or item as modified or developed by EPA, subject only to their right to invoke the procedures set forth in Section XX (Dispute Resolution).

35. If upon resubmission, a plan, report, or item is disapproved or modified by EPA due to a material defect, Settling Performing Parties shall be deemed to have failed to submit such plan, report, or item timely and adequately unless the Settling Performing Parties invoke the dispute resolution procedures set forth in Section XX (Dispute Resolution) and EPA's action is overturned pursuant to that Section. The provisions of Section XX (Dispute Resolution) and Section XXI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of

any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is upheld, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XXI (Stipulated Penalties).

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

XII. PROJECT COORDINATORS

37. Within 14 days after the effective date of this Consent Decree, Settling Performing Parties, Ohio EPA, and EPA will notify each other, in writing, of the name, address and telephone number of their respective designated Project Coordinators and Alternate Project Coordinators. EPA's Project Coordinator and Alternate Project Coordinator shall bear the titles Remedial Project Manager and Alternate Remedial Project Manager, respectively. If a Project Coordinator or Alternate Project Coordinator, or EPA's Remedial Project Manager and Alternate Remedial Project Manager, initially designated is changed, the identity of the successor will be given

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

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

present an immediate threat to public health or welfare or the environment due to release or threatened release of Waste Material. Nothing in this Section shall limit, expand or otherwise affect the authority of Ohio EPA Project Coordinator and other state and local officials under any applicable law, including Chapters 3704, 3734, 3745, 3767 and 6111 of the Ohio Revised Code and regulations adopted thereunder, to undertake actions at the Site in response to conditions which may present an immediate hazard to public health, safety, welfare or the environment. Any disputes between the EPA Remedial Project Manager, on the one hand, and the Ohio EPA Project Coordinator or other State officials, on the other hand, shall be resolved in accordance with the provisions of Section XX (Dispute Resolution), below.

XIII. ASSURANCE OF ABILITY TO COMPLETE WORK

39. Within 30 days after the effective date of this Consent Decree, Settling Performing Parties shall establish and maintain financial security in the amount of \$1,875,356 in one or more of the following forms:

- a. A surety bond guaranteeing performance of the Work;
- b. One or more irrevocable letters of credit equaling the total estimated cost of the Work;
- c. A trust fund;
- d. A guarantee to perform the Work by one or more parent

corporations or subsidiaries, or by one or more unrelated corporations that have a substantial business relationship with at least one of the Settling Performing Parties; or

e. A demonstration that one or more of the Settling Performing Parties satisfy the requirements of 40 C.F.R. Part 264.143(f).

40. If the Settling Performing Parties seek to demonstrate the ability to complete the Work through a guarantee by a third party pursuant to Paragraph 39(d) of this Consent Decree, Settling Performing Parties shall demonstrate that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f). If Settling Performing Parties seek to demonstrate their ability to complete the Work by means of the financial test or the corporate guarantee pursuant to Paragraph 39(d) or (e), they shall resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the effective date of this Consent Decree. In the event that EPA, after a reasonable opportunity for review and comment by the State, determines at any time that the financial assurances provided pursuant to this Section are inadequate, Settling Performing Parties shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 39 of this Consent Decree. Settling Performing Parties' inability to demonstrate financial ability to

complete the Work shall not excuse performance of any activities required under this Consent Decree.

41. If Settling Performing Parties can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 39, above, after the effective date of this Consent Decree, Settling Performing Parties may, on any anniversary date of the effective date of this Consent Decree, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining work to be performed. Settling Performing Parties shall submit a proposal for such reduction to EPA and Ohio EPA, in accordance with the requirements of this Section, and may reduce the amount of the security upon approval by EPA, after consultation with Ohio EPA. In the event of a dispute, Settling Performing Parties may reduce the amount of the security in accordance with the final administrative or judicial decision resolving the dispute.

42. Settling Performing Parties may change the form of financial assurance provided under this Section at any time, upon notice to EPA and Ohio EPA, and approval by EPA, after reasonable opportunity for review and comment by Ohio EPA, provided that the new form of assurance meets the requirements of this Section. In the event of a dispute, Settling Performing Parties may change the form of the financial assurance only in accordance with the final

administrative or judicial decision resolving the dispute.

XIV. CERTIFICATION OF COMPLETION

43. Completion of the Changes to the Remedial Action

a. Within 90 days after Settling Performing Parties conclude that the changes to the Remedial Action have been fully performed and the Performance Standards have been attained, Settling Performing Parties shall schedule and conduct a pre-certification inspection to be attended by Settling Defendants, EPA, and Ohio EPA. If, after the pre-certification inspection, the Settling Performing Parties still believe that the changes to the Remedial Action have been fully performed and the Performance Standards have been attained, they shall submit a written report requesting certification to EPA and Ohio EPA for approval, pursuant to Section XI (Agency Approval of Plans and Other Submissions) within 30 days of the inspection. In the report, a registered professional engineer and the Settling Performing Parties' Project Coordinator shall state that the changes to the Remedial Action have been completed in full satisfaction of the requirements of this Consent Decree. The report shall contain the following statement, signed by a responsible corporate official of a Settling Performing Party or the Settling Performing Parties' Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying

this submission is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If, after completion of the pre-certification inspection and receipt and review of the written report, EPA determines, after consultation with Ohio EPA, that the changes to the Remedial Action or any portion thereof have not been completed in accordance with this Consent Decree or that the Performance Standards have not been attained, EPA and Ohio EPA will notify Settling Performing Parties in writing of the activities that must be undertaken by Settling Performing Parties pursuant to this Consent Decree to complete the changes to the Remedial Action and maintain the Performance Standards; provided, however, that EPA may only require Settling Performing Parties to perform such activities pursuant to this Paragraph to the extent that such activities are consistent with the "scope of the remedy selected in the ROD" as that term is defined in Paragraph 12.b. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW or require the Settling Performing Parties to submit a schedule to EPA and Ohio EPA for approval pursuant to Section XI (Agency Approval of Plans and Other Submissions). Settling Performing Parties shall perform all activities described in the notice in accordance with the specifications and schedules established pursuant to this Paragraph, subject to their right to invoke the dispute resolution

procedures set forth in Section XX (Dispute Resolution).

b. If EPA concludes, based on the initial or any subsequent report requesting Certification of Completion and after consultation with Ohio EPA, that the changes to the Remedial Action have been performed in accordance with this Consent Decree and that the Performance Standards have been attained, EPA will so certify in writing to Settling Performing Parties. This certification shall constitute the Certification of Completion of the Changes to the Remedial Action for purposes of this Consent Decree, including, but not limited to, Section XXII (Covenants Not to Sue by Plaintiffs). Certification of Completion of the changes to the Remedial Action shall not affect Settling Performing Parties' obligations under this Consent Decree.

44. Completion of the Work

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

the following statement, signed by a responsible corporate official of a Settling Performing Party or the Settling Performing Parties' Project Coordinator:

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

If EPA, after review of the written report and after consultation with the Ohio EPA, determines that any portion of the Work has not been completed in accordance with this Consent Decree, EPA will notify Settling Performing Parties in writing of the activities that must be undertaken by Settling Performing Parties pursuant to this Consent Decree to complete the Work. Provided, however, that EPA may only require Settling Performing Parties to perform such activities pursuant to this Paragraph to the extent that such activities are consistent with the "scope of the remedy selected in the ROD," as that term is defined in Paragraph 12.b. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the SOW or require the Settling Performing Parties to submit a schedule to EPA and the Ohio EPA for approval pursuant to Section XI (Agency Approval of Plans and Other Submissions). Settling Performing Parties shall perform all activities described in the notice in accordance with the specifications and schedules established therein, subject to their right to invoke the dispute resolution procedures set forth

in Section XX (Dispute Resolution).

b. If EPA concludes, based on the initial or any subsequent request for Certification of Completion by Settling Performing Parties and after consultation with the Ohio EPA, that the Work has been performed in accordance with this Consent Decree, EPA will so notify the Settling Performing Parties in writing.

XV. EMERGENCY RESPONSE

45. In the event of any action or occurrence during the performance of the Work which causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Settling Performing Parties shall, subject to Paragraph 46, immediately take all appropriate action to prevent, abate, or minimize such release or threat of release, and shall immediately notify the EPA Remedial Project Manager and Ohio EPA Project Coordinator, or, if the EPA Remedial Project Manager and Ohio EPA Project Coordinator are unavailable, the EPA Alternate Remedial Project Manager and Ohio EPA Alternate Project Coordinator, respectively, as appropriate. If none of these persons is available, the Settling Performing Parties shall notify EPA [Emergency Response Unit], Region 5, and Ohio EPA [Emergency Response Unit]. Settling Performing Parties shall take such actions in consultation with EPA's Remedial Project Manager or

other available authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plans, the Contingency Plans, and any other applicable plans or documents developed pursuant to the SOW. In the event that Settling Performing Parties fail to take appropriate response action as required by this Section, and EPA or, as appropriate, Ohio EPA, takes such action instead, Settling Performing Parties shall reimburse EPA and the State all costs of the response action not inconsistent with the NCP pursuant to Section XVII (Reimbursement of Response Costs).

46. Nothing in the preceding Paragraph or in this Consent Decree shall be deemed to limit any authority of the United States or the State: a) to take all appropriate action to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, or b) to direct or order such action, or seek an order from the Court, to protect human health and the environment or to prevent, abate, respond to, or minimize an actual or threatened release of Waste Material on, at, or from the Site, subject to Section XXII (Covenants Not to Sue by Plaintiffs).

XVI. PAYMENTS BY SETTLING NON-PERFORMING PARTIES

47. The Settling Non-Performing Parties have individually paid the Settling Performing Parties as of the date of lodging of this

Consent Decree all monies necessary to satisfy their respective claims for contribution arising out of this action. Accordingly, the Settling Non-Performing Parties shall have no further obligations under this Consent Decree except as otherwise specifically set forth in this Consent Decree or the separate Settlement Agreement between the Settling Performing Parties and Settling Non-Performing Parties.

XVII. REIMBURSEMENT OF RESPONSE COSTS

48. Within 30 days after the effective date of this Consent Decree, Settling Performing Parties shall:

a. Pay to the EPA Hazardous Substance Superfund \$7,325,000, in reimbursement of Past Response Costs, by FedWire Electronic Funds Transfer ("EFT" or wire transfer) to the U.S. Department of Justice account in accordance with current electronic funds transfer procedures, referencing U.S.A.O. file number 1991V00927, the EPA Region and Site/Spill ID #05-25, and DOJ case number #90-11-2-63A. Payment shall be made in accordance with instructions provided to the Settling Performing Parties by the Financial Litigation Unit of the United States Attorney's Office for the Northern District of Ohio following lodging of the Consent Decree. Any payments received by the Department of Justice after 4:00 P.M. (Eastern Time) will be credited on the next business day. Settling Performing Parties shall send notice that such payment has

been made to the United States as specified in Section XXVII (Notices and Submissions).

b. Pay to the State: (1) \$760,000; and (2) within 60 days of receipt of each Ohio EPA invoice requiring payment, O&M costs incurred by the State from August 1, 2001, through the date that the Settling Performing Parties assume responsibility for performance of O&M at the Site under this Consent Decree, except that Settling Performing Parties need not pay for any monthly O&M costs exceeding \$10,000 in a month. These payments shall be made in the form of a cashier's check or certified check made payable to "Treasurer, State of Ohio," in reimbursement of State Past Response Costs. The Settling Performing Parties shall send the cashier's check or certified check to Jena Suhadolnik, or her successor, Ohio Attorney General Office, Environmental Enforcement Section, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215-3428, and shall reference the Old Mill Site, E1850183.

49. a. Settling Performing Parties shall reimburse the EPA Hazardous Substance Superfund for all Future Response Costs not inconsistent with the National Contingency Plan. The United States will send Settling Performing Parties a bill requiring payment that includes a SCORE\$ summary and DOJ cost summary on an annual basis. Settling Performing Parties shall make all payments within 30 days of Settling Performing Parties' receipt of each bill requiring payment, except as otherwise provided in Paragraph 50. The

Settling Performing Parties shall make all payments required by this Paragraph in the form of a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund" and referencing the EPA Region and Site/Spill ID #05A8, the DOJ case number 90-11-2-63A, and the name and address of the party making payment. The Settling Performing Parties shall send the certified or cashier's check(s) to: U.S. EPA Region 5, Attention: Superfund Accounting, P.O. Box 70753, Chicago, Illinois 60673, and shall send copies of the check(s) to the United States as specified in Section XXVII (Notices and Submissions).

b. Settling Performing Parties shall reimburse the State for all State Future Response Costs not inconsistent with the National Contingency Plan. The State will send Settling Performing Parties a bill requiring payment that includes a State Cost Summary (including direct and indirect costs incurred by the State and its contractors) on a periodic basis. Settling Performing Parties shall make all payments within 30 days of Settling Performing Parties' receipt of each bill requiring payment, except as otherwise provided in Paragraph 50. The Settling Performing Parties shall make all payments to the State required by this Paragraph in the manner described in Paragraph 48(b).

50. Settling Performing Parties may contest payment of any Future Response Costs under Paragraph 49 if they determine that the United States, or the State, has made an accounting error, or if

they allege that a cost item that is included represents costs that are inconsistent with the NCP. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the United States, or the State, as appropriate, pursuant to Section XXVII (Notices and Submissions). Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, the Settling Performing Parties shall within the 30-day period pay all uncontested Future Response Costs to the United States, or the State, in the manner described in Paragraph 49. Simultaneously, the Settling Performing Parties shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of Ohio and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. The Settling Performing Parties shall send to the United States, or the State, as appropriate, as provided in Section XXVII (Notices and Submissions), a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, the Settling Performing Parties shall initiate the Dispute

Resolution procedures in Section XX (Dispute Resolution). If the United States, or the State, prevails in the dispute, within 5 days of the resolution of the dispute, the Settling Performing Parties shall pay the sums due (with accrued interest) to the United States, or the State, in the manner described in Paragraph 49. If the Settling Performing Parties prevail concerning any aspect of the contested costs, the Settling Performing Parties shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States, or the State; Settling Performing Parties shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XX (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding the Settling Performing Parties' obligation to reimburse the United States and the State for their Future Response Costs.

51. In the event that the payments required by Paragraph 48 are not made within 30 days of the effective date of this Consent Decree or the payments required by Paragraph 49 are not made within 30 days of the Settling Performing Parties' receipt of the bill, Settling Performing Parties shall pay Interest on the unpaid balance. The Interest to be paid on Past Response Costs and State Past Response Costs under this Paragraph shall begin to accrue 30 days after the effective date of this Consent Decree. The Interest

on Future Response Costs and State Future Response Costs shall begin to accrue on the date of the bill. The Interest shall accrue through the date of the Settling Performing Parties' payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiffs by virtue of Settling Performing Parties' failure to make timely payments under this Section. The Settling Performing Parties shall make all payments required by this Paragraph in the manner described in Paragraph 49.

XVIII. INDEMNIFICATION AND INSURANCE

52. a. The United States and the State do not assume any liability by entering into this agreement or by virtue of any designation of Settling Performing Parties as EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C.

§ 9604(e). Settling Performing Parties shall indemnify, save and hold harmless the United States, the State and their officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Settling Performing Parties, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree, including, but not limited to, any

claims arising from any designation of Settling Performing Parties as EPA's authorized representatives under Section 104(e) of CERCLA. Settling Performing Parties shall indemnify, save and hold harmless, the United States and the State of Ohio from any and all claims or causes of action arising from, or related to, events or conditions at the Site, other than the willful misconduct of the United States or the State, or their agents. Further, the Settling Performing Parties agree to pay the United States and the State all costs they incur including, but not limited to, attorneys fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States or the State based on negligent or other wrongful acts or omissions of Settling Performing Parties, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Consent Decree. Neither the United States nor the State shall be held out as a party to any contract entered into by or on behalf of Settling Performing Parties in carrying out activities pursuant to this Consent Decree. Neither the Settling Performing Parties nor any such contractor shall be considered an agent of the United States or the State.

b. The United States and the State shall give Settling Performing Parties notice of any claim for which the United States or the State plans to seek indemnification pursuant to Paragraph

52.a., and shall consult with Settling Performing Parties prior to settling such claim.

53. Settling Performing Parties waive all claims against the United States and the State for damages or reimbursement or for set-off of any payments made or to be made to the United States or the State, arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Performing Parties and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Settling Performing Parties shall indemnify and hold harmless the United States and the State with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Settling Performing Parties and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

54. No later than 15 days before commencing any on-Site Work, Settling Performing Parties shall secure, and shall maintain until the first anniversary of EPA's Certification of Completion of the Changes to the Remedial Action pursuant to Paragraph 43.b. of Section XIV (Certification of Completion) comprehensive general liability insurance with limits of \$1 million, combined single limit, and automobile liability insurance with limits of \$1

million, combined single limit, naming the United States and the State as additional insureds. In addition, for the duration of this Consent Decree, Settling Performing Parties shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Settling Performing Parties in furtherance of this Consent Decree. Prior to commencement of the Work under this Consent Decree, Settling Performing Parties shall provide to EPA and Ohio EPA certificates of such insurance and a copy of each insurance policy. Settling Defendants shall resubmit such certificates and copies of policies each year on the anniversary of the effective date of this Consent Decree. If Settling Performing Parties demonstrate by evidence satisfactory to EPA and Ohio EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the same risks but in a lesser amount, then, with respect to that contractor or subcontractor, Settling Performing Parties need provide only that portion of the insurance described above which is not maintained by the contractor or subcontractor.

XIX. FORCE MAJEURE

55. "Force Majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of the

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

56. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a Force Majeure event, the Settling Performing Parties shall notify orally EPA's Remedial Project Manager and Ohio EPA's Project Coordinators or, in their absence, EPA's Alternate Remedial Project Manager and Ohio EPA's Alternate Project Coordinators as appropriate or, in the event all of EPA's designated representatives are unavailable, the Director of the Superfund Division, EPA Region 5, within 7 days of when Settling Performing Parties first knew that the event might cause a delay. Within 7 days thereafter, Settling Performing Parties shall provide

in writing to EPA and Ohio EPA an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; the Settling Performing Parties' rationale for attributing such delay to a Force Majeure event if they intend to assert such a claim; and a statement as to whether, in the opinion of the Settling Performing Parties, such event may cause or contribute to an endangerment to public health, welfare or the environment. The Settling Performing Parties shall include with any notice all available documentation supporting their claim that the delay was attributable to a Force Majeure. Failure to comply with the above requirements shall preclude Settling Performing Parties from asserting any claim of Force Majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Settling Performing Parties shall be deemed to know of any circumstance of which Settling Performing Parties, any entity controlled by Settling Performing Parties, or Settling Performing Parties' contractors knew or should have known.

57. If EPA, after consultation with Ohio EPA, agrees that the delay or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligations under this Consent Decree that are affected by the Force Majeure event will be

extended by EPA, after consultation with Ohio EPA, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the Force Majeure event shall not, of itself, extend the time for performance of any other obligation. If EPA, after consultation with Ohio EPA, does not agree that the delay or anticipated delay has been or will be caused by a Force Majeure event, EPA will notify the Settling Performing Parties in writing of its decision. If EPA, after consultation with Ohio EPA, agrees that the delay is attributable to a Force Majeure event, EPA will notify the Settling Performing Parties in writing of the length of the extension, if any, for performance of the obligations affected by the Force Majeure event.

58. If the Settling Performing Parties elect to invoke the dispute resolution procedures set forth in Section XX (Dispute Resolution), they shall do so no later than 15 days after receipt of EPA's notice. In any such proceeding, Settling Performing Parties shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a Force Majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Settling Performing Parties complied with the requirements of Paragraphs 55 and 56, above. If Settling Performing Parties carry this burden, the delay

at issue shall be deemed not to be a violation by Settling Performing Parties of the affected obligation of this Consent Decree identified to EPA, Ohio EPA and the Court.

XX. DISPUTE RESOLUTION

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

b. The dispute resolution provisions of this Section shall also apply to disputes between EPA and the State for review of disputes over compliance with the terms of this Consent Decree. State disputes over whether an ARAR should be waived by EPA under the Consent Decree and pursuant to CERCLA Section 121(d)(4), 42 U.S.C. § 9621(d)(4), however, shall be subject to a substantial evidence test under CERCLA Section 121(f)(2)(B), 42 U.S.C. § 9621(f)(2)(B). For purposes of Paragraphs 60 through 63, the State shall have the same rights, obligations and limitations as prescribed for the Settling Performing Parties in those Paragraphs. Except as provided in Paragraph 50, any Party(ies) may participate

in a dispute under this Section.

60. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between the Parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is modified by written agreement of the Parties to the dispute. The dispute shall be considered to have arisen when any Party(ies) [the Disputing Party(ies)] sends the other Parties a written Notice of Dispute.

61. a. In the event that the Parties cannot resolve a dispute by informal negotiations under the preceding Paragraphs, then the position advanced by EPA shall be considered binding unless, within 14 days after the conclusion of the informal negotiation period, the Disputing Party(ies) invokes the formal dispute resolution procedures of this Section by serving on the other Parties a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis or opinion supporting that position and any supporting documentation relied upon by the Disputing Party(ies). The Statement of Position shall specify the Disputing Party(ies)'s position as to whether formal dispute resolution should proceed under Paragraph 62 or Paragraph 63.

b. Within 14 days after receipt of the Disputing Party(ies)'s Statement of Position, EPA will serve on the

Disputing Party(ies) its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by EPA. EPA's Statement of Position shall include a statement as to whether formal dispute resolution should proceed under Paragraph 62 or 63. Within 14 days after receipt of EPA's Statement of Position, the Disputing Party(ies) may submit a Reply.

c. If there is disagreement between EPA and any other Party as to whether dispute resolution should proceed under Paragraph 62 or 63, the Parties to the dispute shall follow the procedures set forth in the Paragraph determined by EPA to be applicable. However, if the Disputing Party(ies) ultimately appeals to the Court to resolve the dispute, the Court shall determine which Paragraph is applicable in accordance with the standards of applicability set forth in Paragraphs 62 and 63.

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

adequacy of the performance of response actions taken pursuant to this Consent Decree. Nothing in this Consent Decree shall be construed to allow any dispute by Settling Performing Parties regarding the validity of the provisions of the ROD.

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

b. The Director of the Superfund Division, EPA Region 5, will issue a final administrative decision resolving the dispute based on the administrative record described in Paragraph 62.a. This decision shall be binding upon the Parties, subject only to the right to seek judicial review pursuant to Paragraph 62.c. and d.

c. Any administrative decision made by EPA pursuant to Paragraph 62.b. shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by the Disputing Party(ies) with the Court and served on all Parties within 10 days of receipt of EPA's decision. The motion shall include a description of the matter in dispute, the efforts made by the Parties to resolve it, the relief requested, and the schedule,

if any, within which the dispute must be resolved to ensure orderly implementation of this Consent Decree. The United States and the other Parties may file a response to the Disputing Party(ies)''s motion.

d. In proceedings on any dispute governed by this Paragraph, the Disputing Party(ies) shall have the burden of demonstrating that the decision of the Superfund Division Director is arbitrary and capricious or otherwise not in accordance with law. Judicial review of EPA's decision shall be on the administrative record compiled pursuant to Paragraph 62.a.

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

a. Following receipt of the Disputing Party(ies)''s Statement of Position submitted pursuant to Paragraph 61, the Director of the Superfund Division, EPA Region 5, will issue a final decision resolving the dispute. The Superfund Division Director's decision shall be binding on the Settling Performing Parties unless, within 10 days of receipt of the decision, the Disputing Party(ies) file with the Court and serve on the Parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the Parties to resolve it,

the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the Consent Decree. The United States and the other Parties may file a response to the motion.

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

64. The invocation of formal dispute resolution procedures under this Section shall not extend, postpone or affect in any way any obligation of the Settling Performing Parties under this Consent Decree, not directly in dispute, unless EPA or the Court agrees otherwise. Stipulated penalties with respect to the disputed matter shall continue to accrue, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 72. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Consent Decree. In the event that the Settling Performing Parties do not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XXI (Stipulated Penalties). To the extent that any obligation of the Settling Performing Parties is delayed directly by the pendency of a dispute between the State and EPA, stipulated penalties shall not accrue.

XXI. STIPULATED PENALTIES

65. Settling Performing Parties shall be liable for stipulated penalties in the amounts set forth in Paragraphs 66 and 67 to the United States and the State, on a 50:50 basis, for failure to comply with the requirements of this Consent Decree specified below, unless excused under Section XIX (Force Majeure). "Compliance" by Settling Performing Parties shall include completion of the activities under this Consent Decree or any work plan or other plan approved under this Consent Decree identified below in accordance with all applicable requirements of law, this Consent Decree, the SOW, and any plans or other documents approved by EPA pursuant to this Consent Decree and within the specified time schedules established by and approved under this Consent Decree.

66. a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Subparagraph b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 300	1 to 30 days
\$ 625	31 to 60 days
\$ 1000	over 60 days

b. Compliance milestones subject to stipulated penalties shall include, but not be limited to:

i. Submittal of draft Site Work Plan and component

- plans.
- ii. Submittal of final Site Work Plan and component plans.
- iii. Completion of installation of additional monitoring wells in accordance with the approved Site Work Plan.
- iv. Quarterly monitoring of groundwater levels in accordance with the approved Site Work Plan.
- v. Quarterly monitoring of influent/effluent ports of the treatment plant in accordance with the approved Site Work Plan.
- vi. Annual monitoring of monitoring wells, piezometers, and sumps in accordance with the approved Site Work Plan.
- vii. Biennial monitoring of monitoring wells, piezometers, and sumps in accordance with the approved Site Work Plan.

67. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other written documents pursuant to the SOW, the approved Site Work Plan and component plans, and this Consent Decree, including, but not limited to, Monthly Operating Reports and Annual Performance Evaluation Reports:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 175	1 to 30 days
\$ 375	31 to 60 days
\$ 625	over 60 days

68. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section XI (Agency Approval of Plans and

Other Submissions), during the period, if any, beginning on the 31st day after EPA's and Ohio EPA's receipt of such submission until the date that EPA notifies Settling Performing Parties of any deficiency; (2) with respect to a decision by the Director of the Superfund Division, EPA Region 5, under Paragraph 62.b. or 63.a. of Section XX (Dispute Resolution), during the period, if any, beginning on the 21st day after the date that Settling Performing Parties' reply to EPA's Statement of Position is received until the date that the Director issues a final decision regarding such dispute; or (3) with respect to judicial review by this Court of any dispute under Section XX (Dispute Resolution), during the period, if any, beginning on the 31st day after the Court's receipt of the final submission regarding the dispute until the date that the Court issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree.

69. a. If either EPA or the State believes that the Settling Performing Parties have failed to comply with a requirement of this Consent Decree, EPA and the State shall consult about whether there has been noncompliance and whether to issue notification and description of noncompliance.

b. Upon determination of whether there has been noncompliance and whether to notify the Settling Performing Parties of noncompliance, and consistent with Plaintiffs' determination of

these issues, EPA and the State may send the Settling Performing Parties a written demand, as provided in Section 121(e)(2), 42 U.S.C. § 9621(e)(2), for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA and the State have notified the Settling Performing Parties of a violation.

70. All penalties accruing under this Section shall be due and payable to the United States and the State within 30 days of the Settling Performing Parties' receipt of a demand for payment of the penalties, unless Settling Performing Parties invoke the Dispute Resolution procedures under Section XX (Dispute Resolution). All payments to the United States under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to U.S. Environmental Protection Agency, Superfund Accounting, P.O. Box 70753, Chicago, Illinois 60673, shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID #05A8, the DOJ Case Number 90-11-2-63A, and the name and address of the party making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to the United States as provided in Section XXVII (Notices and Submissions). All payments to the State under this Section shall be paid by certified or cashier's check(s) made payable to "Treasurer, State of Ohio," shall be mailed to Jena Suhadolnik, or

her successor, Ohio Attorney General Office, Environmental Enforcement Section, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215-3428, and shall reference the Old Mill Site, E1850183, and the name of the Party making payment. Copies of check(s) paid pursuant to this Section, and any accompanying transmittal letter(s), shall be sent to the State as provided in Section XXVII (Notices and Submissions).

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

72. Penalties shall continue to accrue as provided in Paragraph 68 during any dispute resolution period, but need not be paid until the following:

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

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

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

73. a. If Settling Performing Parties fail to pay stipulated penalties when due, the United States and the State may institute proceedings to collect the penalties, as well as interest. Settling Performing Parties shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 69.

b. Nothing in this Consent Decree shall be construed as prohibiting, altering, or in any way limiting the ability of the United States or the State to seek any other remedies or sanctions available by virtue of Settling Performing Parties' violation of this Decree or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(1) of CERCLA. Provided, however, that the United States shall not seek civil penalties pursuant to Section 122(1) of CERCLA for

any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of the Consent Decree.

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

XXII. COVENANTS NOT TO SUE BY PLAINTIFFS

75. In consideration of the actions that will be performed and the payments that will be made by the Settling Performing Parties and Settling Non-Performing Parties under the terms of the Consent Decree, and except as specifically provided in Paragraphs 77, 78, 83, and 84 of this Section, the United States covenants not to sue or to take administrative action against Settling Performing Parties and Settling Non-Performing Parties pursuant to Sections 106 and 107(a) of CERCLA, and Section 7003 of RCRA, relating to the Site. Except with respect to future liability, these covenants not to sue shall take effect upon the receipt by EPA of the payments required by Paragraph 48.a of Section XVII (Reimbursement of Response Costs). With respect to future liability, these covenants not to sue shall take effect upon Certification of Completion of the Changes to the Remedial Action by EPA pursuant to Paragraph 43.b of Section XIV (Certification of Completion). These covenants not to sue are conditioned upon the satisfactory performance by

Settling Performing Parties and Settling Non-Performing Parties of their obligations under this Consent Decree. These covenants not to sue extend only to the Settling Performing Parties and Settling Non-Performing Parties and do not extend to any other person.

76. In consideration of the actions that will be performed and the payments that will be made by the Settling Performing Parties and Settling Non-Performing Parties under the terms of the Consent Decree, and except as specifically provided in Paragraphs 80, 81, 83 and 84 of this Section, the State covenants not to sue or to take administrative action against Settling Performing Parties and Settling Non-Performing Parties relating to the Site pursuant to Section 107(a) of CERCLA, Section 7003 of RCRA, hazardous waste laws under Ohio Revised Code Ch. 3734 and rules adopted thereunder, and water pollution control laws contained in Ohio Revised Code Ch. 6111. Except with respect to future liability, these covenants not to sue shall take effect upon the receipt by the State of the payments required by Paragraph 48.b. of Section XVII (Reimbursement of Response Costs). With respect to future liability, these covenants not to sue shall take effect upon Certification of Completion of the Changes to the Remedial Action by EPA pursuant to Paragraph 43.b of Section XIV (Certification of Completion). These covenants not to sue are conditioned upon the satisfactory performance by Settling Performing Parties and Settling Non-Performing Parties of their obligations under this Consent Decree.

These covenants not to sue extend only to the Settling Performing Parties and Settling Non-Performing Parties and do not extend to any other person.

77. The United States' Pre-certification Reservations.

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

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

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

78. The United States' Post-certification Reservations.

Notwithstanding any other provision of this Consent Decree, the United States reserves, and this Consent Decree is without prejudice to, the right to institute proceedings in this action or

in a new action, or to issue an administrative order seeking to compel Settling Performing Parties and Settling Non-Performing Parties (1) to perform further response actions relating to the Site or (2) to reimburse the United States for additional costs of response if, subsequent to Certification of Completion of the Changes to the Remedial Action:

(i) conditions at the Site, previously unknown to EPA, are discovered, or

(ii) information, previously unknown to EPA, is received, in whole or in part,

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

79. For purposes of Paragraph 77, the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date of the ROD, the administrative record supporting the ROD, the Decision Document, and the post-ROD administrative record for the Site. For purposes of Paragraph 78, the information and the conditions known to EPA shall include only that information and those conditions known to EPA as of the date of Certification of Completion of the Changes to the Remedial Action and set forth in the ROD, the administrative record supporting the ROD, the post-ROD administrative record, or in any information received by EPA pursuant to the requirements of

this Consent Decree prior to Certification of Completion of the Changes to the Remedial Action.

80. The State's Pre-certification Reservations.

Notwithstanding any other provision of this Consent Decree, the State reserves, and this Consent Decree is without prejudice to, any right it may have, jointly with or separate from the United States, to institute administrative action or proceedings in this action or in a new action pursuant to the State's authorities under applicable law, seeking to compel Settling Performing Parties and Settling Non-Performing Parties (1) to perform further response actions relating to the Site or (2) to reimburse the State for additional costs of response if, prior to Certification of Completion of the Changes to the Remedial Action:

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

and the State determines that these previously unknown conditions or information, together with any other relevant information indicates that the Remedy is not protective of human health or the environment.

81. The State's Post-certification Reservations.

Notwithstanding any other provision of this Consent Decree, the State reserves, and this Consent Decree is without prejudice to,

any right it may have, jointly with, or separately from the United States, to institute administrative action or proceedings in this action or in a new action pursuant to the State's authorities under applicable law, seeking to compel Settling Performing Parties and Settling Non-Performing Parties (1) to perform further response actions relating to the Site or (2) to reimburse the State for additional costs of response if, subsequent to Certification of Completion of the Changes to the Remedial Action:

(i) conditions at the Site, previously unknown to the State, are discovered, or

(ii) information, previously unknown to the State, is received, in whole or in part,

and the State determines, based on these previously unknown conditions or this information, together with other relevant information, that the Remedy is not protective of human health or the environment.

82. For purposes of Paragraph 80, the information and the conditions known to the State shall include only that information and those conditions known to the State as of the date of the ROD, the administrative record supporting the ROD and the post-ROD administrative record for the Site. For purposes of Paragraph 81, the information and the conditions known to the State shall include only that information and those conditions set forth in the ROD, the administrative record supporting the ROD, the post-ROD

administrative record for the Site, or in any information received by the State pursuant to the requirements of this Consent Decree prior to Certification of Completion of the Changes to the Remedial Action.

83. General Reservations of Rights as to Settling Performing Parties.

The covenants not to sue set forth above do not pertain to any matters other than those expressly specified in Paragraphs 75 and 76. The United States and the State reserve, and this Consent Decree is without prejudice to, all rights against Settling Performing Parties with respect to all other matters, including but not limited to, the following:

- (1) claims based on a failure by Settling Performing Parties to meet a requirement of this Consent Decree;
- (2) liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Site;
- (3) liability for future disposal of Waste Material at the Site, other than as provided for in the ROD, the Work, or otherwise ordered by EPA;
- (4) liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- (5) criminal liability;

(6) liability for violations of federal or state law which occur during or after implementation of the Changes to, and O&M of, the Remedial Action; and

(7) liability, prior to Certification of Completion of Changes to the Remedial Action, for additional response actions that EPA, in consultation with Ohio EPA, determines are necessary to achieve Performance Standards, but that cannot be required pursuant to Paragraph 12 (Modification of the SOW and Related Work Plans).

84. General Reservations of Rights as to Settling Non-Performing Parties.

The covenants not to sue set forth above do not pertain to any matters other than those expressly specified in Paragraphs 75 and 76. The United States and the State reserve, and this Consent Decree is without prejudice to, all rights against Settling Non-Performing Parties with respect to all other matters, including but not limited to, the following:

- (1) claims based on a failure by any Settling Non-Performing Party to make its payment under this Consent Decree;
- (2) liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Site;
- (3) liability for future disposal of Waste Material at the Site, other than as provided for in the ROD, the Work, or

otherwise ordered by EPA;

(4) liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

(5) criminal liability;

(6) liability for violations of federal or state law that occur during or after implementation of the Changes to, and O&M of, the Remedial Action. For purposes of this subparagraph Settling Non-Performing Parties' liability, if any, shall not include liability for violation of federal or state law which occurs in connection with implementation of the Changes to, and O&M of, the Remedial Action.

85. Work Takeover In the event EPA determines, in consultation with the State, that Settling Performing Parties have ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA or Ohio EPA may assume the performance of all or any portions of the Work as EPA, in consultation with Ohio EPA, determines necessary. Settling Performing Parties may invoke the procedures set forth in Section XX (Dispute Resolution), Paragraph 59, to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by the United States or the State in

performing the Work pursuant to this Paragraph shall be considered Future Response Costs or State Future Response Costs, as appropriate, that Settling Performing Parties shall pay pursuant to Section XVII (Reimbursement of Response Costs).

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

XXIII. COVENANTS BY SETTLING PERFORMING PARTIES AND SETTLING NON-PERFORMING PARTIES.

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

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund (established pursuant to the Internal Revenue Code, 26 U.S.C. § 9507) through CERCLA Sections 106(b)(2), 107, 111, 112, 113 or any other provision of law;

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

c. any claims arising out of response activities at the Site, including claims based on EPA's selection of response

actions, EPA's and Ohio EPA's oversight of response activities or EPA's and Ohio EPA's approval of plans for such activities; or

d. any claims for costs, fees or expenses incurred in this action, including claims under 28 U.S.C. § 2412 (Equal Access to Justice Act), as amended.

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

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

90. Effective ninety (90) days after the effective date of this Consent Decree, Settling Performing Parties and Settling Non-Performing Parties agree to waive all claims or causes of action that they may have for all matters relating to the Site, including for contribution, against the following:

a. any person (i) whose liability to Settling Performing Parties and Settling Non-Performing Parties with respect to the Site is based solely on CERCLA § 107(a)(3) or (4), (ii) who arranged for the disposal, treatment, or transport for disposal or treatment, or accepted for transport for disposal or treatment, of only Municipal Solid Waste or Sewage Sludge owned by such person, and (iii) who is a Small Business, a Small Non-profit Organization, or the Owner, Operator, or Lessee of Residential Property; and

b. any person (i) whose liability to Settling Performing Parties and Settling Non-Performing Parties with respect to the Site is based solely on CERCLA § 107(a)(3) or (4), and (ii) who arranged for the disposal, treatment, or transport for disposal or treatment, or accepted for transport for disposal or treatment, of 55 gallons or less of liquid materials containing hazardous substances, or 100 pounds or less of solid materials containing hazardous substances, except where EPA has determined that such

material contributed or could contribute significantly to the costs of response at the Site.

91. Settling Performing Parties and Settling Non-Performing Parties hereby covenant not to sue and agree not to assert any direct or indirect claims against each other or against their officers, directors, employees, or agents with respect to Matters Addressed in this Consent Decree, except as necessary to enforce the terms of any agreements by or between them relating to Matters Addressed in this Consent Decree.

XXIV. EFFECT OF SETTLEMENT; CONTRIBUTION PROTECTION

92. Nothing in this Consent Decree shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Consent Decree. The preceding sentence shall not be construed to waive or nullify any rights that any person not a signatory to this Decree may have under applicable law. Each of the Parties expressly reserves any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto.

93. The Parties agree, and by entering this Consent Decree this Court finds, that the Settling Performing Parties and Settling Non-Performing Parties are entitled, as of the effective date of this

Consent Decree, to protection from contribution actions or claims as provided by CERCLA Section 113(f)(2), 42 U.S.C. § 9613(f)(2) for Matters Addressed in this Consent Decree.

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

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

96. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, Settling Performing Parties and Settling Non-Performing Parties shall not assert, and may not maintain, any defense or

claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenants not to sue set forth in Section XXII (Covenants Not to Sue by Plaintiffs).

XXV. ACCESS TO INFORMATION

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

98. a. Settling Performing Parties may assert business confidentiality claims covering part or all of the documents or

information submitted to Plaintiffs under this Consent Decree to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b), or applicable State law. Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. Documents or information determined to be confidential by Ohio EPA will be afforded the protection specified in applicable State law. If no claim of confidentiality accompanies documents or information when they are submitted to EPA and the State, or if EPA has notified Settling Performing Parties that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA, the public may be given access to such documents or information without further notice to Settling Performing Parties.

b. The Settling Performing Parties may assert that certain documents, records and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Settling Performing Parties assert such a privilege in lieu of providing documents, they shall provide the Plaintiffs with the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the contents of the document,

record, or information: and (6) the privilege asserted by Settling Performing Parties. However, no documents, reports or other information created or generated pursuant to the requirements of the Consent Decree shall be withheld on the grounds that they are privileged.

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

XXVI. RETENTION OF RECORDS

100. Until 10 years after the Settling Performing Parties' receipt of EPA's notification pursuant to Paragraph 44.b of Section XIV (Certification of Completion), each Settling Performing Party shall: a) preserve and retain all records and documents now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or liability of any person for response actions conducted and to be conducted at the Site, regardless of any corporate retention policy to the contrary; and b) at Settling Performing Parties' expense, preserve and retain all records and documents that have been submitted or may in the future be submitted to the Document Repository established by prior Order of this Court. Until 10

years after the Settling Performing Parties' receipt of EPA's notification pursuant to Paragraph 44.b of Section XIV (Certification of Completion), Settling Performing Parties shall also instruct their contractors and agents to preserve all documents, records, and information of whatever kind, nature or description relating to the performance of the Work.

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

the Consent Decree shall be withheld on the grounds that they are privileged.

102. Each Settling Performing Party and Settling Non-Performing Party hereby certifies individually that, to the best of its knowledge and belief, after thorough inquiry, it has produced to the Document Repository all records, documents or other information requested by the United States or the State relating to its potential liability regarding the Site since notification of potential liability by the United States or the State or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Section 104(e) and 122(e) of CERCLA, 42 U.S.C. 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. 6927, and with the Ohio EPA requests for information.

XXVII. NOTICES AND SUBMISSIONS

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

satisfaction of any written notice requirement of the Consent Decree with respect to the United States, EPA, the State, Ohio EPA and the Settling Performing Parties, respectively.

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044
Re: DJ # 90-11-2-63A

As to EPA:

Director, Superfund Division
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

and

Linda Kern
EPA's Remedial Project Manager
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

As to the State of Ohio:

Chief, Environmental Enforcement Section
Ohio Attorney General Office
30 East Broad Street, 25th Floor
Columbus, Ohio 43215-3428
Re: E1850183

As to Ohio EPA:

Michael Eberle, or his successor
Ohio EPA's Project Coordinator
Division of Emergency and Remedial Response
Ohio Environmental Protection Agency
Northeast District Office

2110 East Aurora Road
Twinsburg, Ohio 44087-1969

As to the Settling Performing Parties:

Dale Showers
Eckenfelder/Brown and Caldwell
227 French Landing Drive
Nashville, Tennessee 37228
(615) 255-2288 (phone)
(615) 256-8332 (fax)

and

Ralph E. Cascarilla, Esquire
Walter & Haverfield, P.L.L.
1300 Terminal Tower
50 Public Square
Cleveland, Ohio 44113-2253
(216) 781-1212 (phone)
(216) 575-0911 (fax)

and

Jerome C. Muys, Jr., Esquire
Swidler Berlin Shereff & Friedman, LLP
3000 K Street, N.W., Suite 300
Washington, D.C. 20007
(202) 424-7547 (direct)
(202) 424-7643 (fax)

and

John E. Sullivan, Esquire
Baker & Hostetler L.L.P.
3200 National City Center
Cleveland, Ohio 44114-3401
(216) 861-7981 (phone)
(216) 696-0740 (fax)

and

William E. Coughlin, Esquire
Calfee, Halter & Griswold, L.L.P.
800 Superior Avenue
Suite 1400
Cleveland, Ohio 44114-0816
(216) 622-8334 (phone)

XXVIII. EFFECTIVE DATE

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

XXIX. RETENTION OF JURISDICTION

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

XXX. APPENDICES

106. The following Appendices are attached to and incorporated into this Consent Decree:

"Appendix A" is the SOW.

"Appendix B" is the ROD.

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

"Appendix D" is the complete list of Settling Performing Parties.

"Appendix E" is the complete list of Settling Non-Performing Parties.

XXXI. COMMUNITY RELATIONS

107. Settling Performing Parties shall propose to EPA and Ohio EPA their participation in the community relations plan to be developed by EPA. EPA, in consultation with Ohio EPA, will determine the appropriate role for the Settling Performing Parties under the Plan. Settling Performing Parties shall also cooperate with EPA and Ohio EPA in providing information regarding the Work to the public. As requested by EPA or Ohio EPA, Settling Performing Parties shall participate in the preparation of such information for dissemination to the public which may be held or sponsored by EPA or Ohio EPA to explain activities at or relating to the Site. As requested by EPA or Ohio EPA, Settling Performing Parties shall participate in any public meetings held in connection with emergency situations that arise at the Site.

XXXII. MODIFICATION

108. Schedules specified in this Consent Decree for completion of the Work may be modified by agreement of EPA, in consultation

with Ohio EPA, and the Settling Performing Parties. All such modifications shall be made in writing.

109. Except as provided in Paragraph 12 ("Modification of the SOW and Related Work Plans"), no material modifications shall be made to the SOW without written notification to and written approval of the United States, the State, Settling Performing Parties, and the Court. Modifications to the SOW that do not materially alter that document may be made by written agreement between EPA, in consultation with Ohio EPA, and the Settling Performing Parties.

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

XXXIII. LODGING AND OPPORTUNITY FOR PUBLIC COMMENT

111. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) days for public notice and comment in accordance with Section 122(d)(2) of CERCLA, 42 U.S.C. § 9622(d)(2), and 28 C.F.R. § 50.7. The United States and the State each reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations which indicate that the Consent Decree is inappropriate, improper, or inadequate. Settling Performing Parties and Settling Non-Performing Parties consent to the entry of

this Consent Decree without further notice.

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

XXXIV. SIGNATORIES/SERVICE

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

114. Each Settling Performing Party and Settling Non-Performing Party hereby agrees not to oppose entry of this Consent Decree by this Court or to challenge any provision of this Consent Decree unless the United States has notified the Settling Performing Parties and Settling Non-Performing Parties in writing that it no longer supports entry of the Consent Decree.

115. Each Settling Performing Party and Settling Non-Performing Party shall identify, on the attached signature page, the name, address and telephone number of an agent who is authorized to

accept service of process by mail on behalf of that Party with respect to all matters arising under or relating to this Consent Decree. Settling Performing Parties and Settling Non-Performing Parties hereby agree to accept service in that manner and to waive the formal service requirements set forth in Rule 4 of the Federal Rules of Civil Procedure and any applicable local rules of this Court, including, but not limited to, service of a summons.

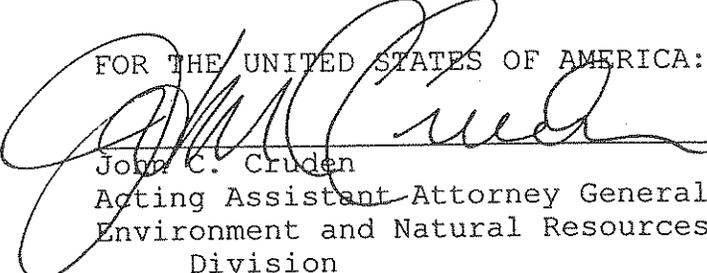
SO ORDERED THIS _____ DAY OF _____, 2001.

United States District Judge

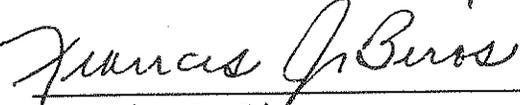
THE UNDERSIGNED PARTIES enter into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92-CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR THE UNITED STATES OF AMERICA:

Date: _____


John C. Cruden
Acting Assistant Attorney General
Environment and Natural Resources
Division
U.S. Department of Justice

Date: 08/14/01

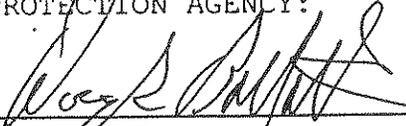

Francis J. Biros
Esperanza Anderson
Trial Attorneys
Environmental Enforcement Section
U.S. Department of Justice
P.O. Box 7611
Ben Franklin Station
Washington, D.C. 20044

Date: _____

Steven J. Paffilas
Assistant United States Attorney
Northern District of Ohio
U.S. Department of Justice
1800 Bank One Center
600 Superior Avenue East
Cleveland, Ohio 44114

FOR THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY:

Date: 8/3/01



William E. Muno
Director, Superfund Division
Region 5
U.S. Environmental Protection
Agency
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Date: 8/7/01



Nola Hicks
Assistant Regional Counsel
U.S. Environmental Protection
Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

FOR THE STATE OF OHIO:

BETTY D. MONTGOMERY
Attorney General of Ohio

Date: May 14, 2001

Timothy J. Kern
Timothy J. Kern
Assistant Attorney General
Environmental Enforcement Section
30 East Broad Street
25th Floor
Columbus, Ohio 43215-3428

FOR THE OHIO ENVIRONMENTAL
PROTECTION AGENCY:

Date: May 8, 2001

Cynthia A. Hafner
Cynthia A. Hafner
Chief, Division of Emergency and
Remedial Response
122 South Front Street
Columbus, Ohio 43216-1049

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR LORD CORPORATION ~~XXXXXXXXXXXX~~ :

Date: May 10, 2001

James W. Wright
[Signature]

James W. Wright
[Name -- Please Type]

Vice President & Secretary
[Title -- Please Type]

111 Lord Drive
Cary, NC 27511
[Address -- Please Type]

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

Name: James W. Wright
[Please Type]

Title: VP & Secretary

Address: 111 Lord Drive, Cary, NC 27511

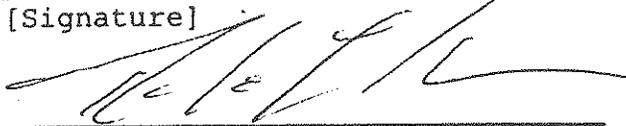
Tel. Number: 919-468-5979, Ext. 6222

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Date: May 10, 2001

FOR ArvinMeritor, Inc. ~~XXXXXXXXXXXX~~
Successor-in-interest to
Meritor Automotive, Inc. and
Rockwell International Corporation

[Signature]



[Name -- Please Type]

Robert L. Schroder

[Title -- Please Type]

Assistant General Counsel and Unit Manager
[Address -- Please Type]

2135 West Maple Road
Troy, Michigan 48084

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

Name: Jerome C. Muys, Jr.
[Please Type]
Title: Esquire
Swidler Berlin Shereff Friedman, LLP
Address: 3000 K Street, NW, Suite 300
Washington, DC 20007-5116
Tel. Number: (202) 424-7547

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR Molded Fiber Glass COMPANY, INC.:

Date: 5/15/01

[Signature]
[Signature]

LOU LAVORATA
[Name -- Please Type]

CFO
[Title -- Please Type]

2925 MFG PLACE
[Address -- Please Type]

ASHTABULA, OHIO

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

Name: LOU LAVORATA
[Please Type]

Title: CFO

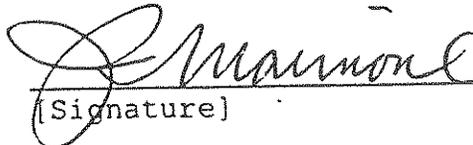
Address: 2925 MFG PLACE
ASHTABULA, OHIO

Tel. Number: 440-994-5204

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR PREMIX COMPANY, INC.:

Date: MAY 7, 2001


[Signature]

JOHN R. MAIMONE
[Name -- Please Type]

C.E.O.
[Title -- Please Type]

P.O. Box 281
[Address -- Please Type]

NORTH KINGSVILLE, OH 44068

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

Name: _____
[Please Type]

Title: _____

Address: _____

Tel. Number: _____

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR The Stackpole Corporation :

Date: May 3, 2001

J. Samuel Parkhill
[Signature]

J. Samuel Parkhill
[Name -- Please Type]

President
[Title -- Please Type]

85 Wells Avenue; Suite 200
[Address -- Please Type]

Newton, MA 02459-3215

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

Name: William E. Coughlin, Esq.
[Please Type]
Title: Calfee, Halter & Griswold
Address: 1400 McDonald Investment Center
800 Superior Avenue; Suite 1400
Cleveland, OH 44114-2688
Tel. Number: 216-622-8200

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR: Aardvark Associates, Inc.
(Settling Non-Performing Party)

Date: May 8, 2001



(Signature)

R.A. Nielson

(Name - Please Print)

President

(Title - Please Print)

26924 Highway 77

Guys Mills, PA 16327

(Address - Please Print)

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

Name: Michael A. Cyphert

Title: Attorney

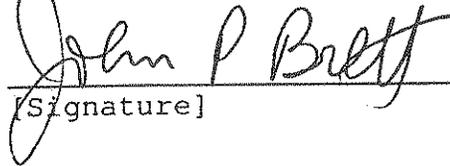
Address: Thompson Hine LLP
3900 Key Center
127 Public Square
Cleveland, Ohio 44114-1216

Tel. Number: (216) 566-5500

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR Combustion Engineering ~~COMPANY~~, INC.:

Date: May 15, 2001



[Signature]

John P. Brett

[Name -- Please Type]

Vice President

[Title -- Please Type]

Combustion Engineering, Inc.

c/o CVCSC

175 Capital Blvd.

[Address -- Please Type]

Rocky Hill, CT 06067

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

Name: John P. Brett

[Please Type]

Title:

Vice President

Address: Combustion Engineering, Inc. c/o CVCSC

175 Capital Blvd. Rocky Hill, CT 06067

Tel. Number:

(860) 258-3342

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR FORMICA CORPORATION COMPANY, INC.:

Date:

May 18, 2001

David Schneider
[Signature]

David Schneider

[Name -- Please Type]

Vice President

[Title -- Please Type]

15 Independence Blvd.

[Address -- Please Type]

Warren, NJ 07059

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

Name: C T Corporation
[Please Type]

Title: _____

Address: 1300 East 9th Street, Cleveland, OH 44114

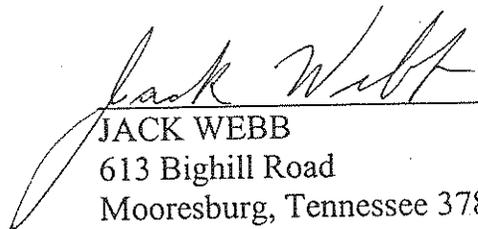
Tel. Number: 800-624-0909

CONSENT DECREE

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of *United States v. Norrell E. Dearing, et al v. First Nationwide Financial Corp.*, Civ. No. 4:89 CV 2001 (N.D. Ohio) and *State of Ohio v. Norrell E. Dearing, et al v. First Nationwide Financial Corp.*, Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR JACK WEBB

Date: May 3, 2001



JACK WEBB
613 Bighill Road
Mooresburg, Tennessee 37811

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

TERRANCE P. GRAVENS
Attorney
Rawlin, Gravens & Franey Co., L.P.A.
1370 Ontario Street.
1240 Standard Building
Cleveland, Ohio 44113
(216) 579-1602

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

By Granite Management Corp,
Successor in interest

FOR First Nationwide National Bank COMPANY, INC.:

Date:

5/21/01

[Signature]

Peter Sherry, Jr.

[Name -- Please Type]

Vice President, General Counsel & Secy

[Title -- Please Type]

[Address -- Please Type]

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

Name:

Elaine Mills

[Please Type]

Title:

Counsel

Address:

3 Parklane Blvd., Dearborn, MI 48126

Tel. Number:

313-594-0096

THE UNDERSIGNED PARTY enters into this Consent Decree in the matter of United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio) relating to the Old Mill Superfund Site.

FOR Millennium Holdings, Inc.** COMPANY, INC.:

Date:

May 3, 2001

Samuel Friedman
[Signature]

Samuel Friedman, Esquire

[Name -- Please Type]

Authorized Representative

[Title -- Please Type]

11111 Hidden Trail Drive

[Address -- Please Type]

Owings Mills, MD 21117

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

Name: Bonnie A. Barnett
[Please Type]

Title: Esquire

Address: One Logan Sq., 18th & Cherry Sts., Phila. PA 19103

Tel. Number: 215-988-2916

** on behalf of and for the benefit of SCM Corporation, the Glidden Company and their respective predecessors (including Glidden-Durkee Company and SCM Chemicals, Inc.).

APPENDIX A
STATEMENT OF WORK

United States v. Norrell E. Dearing et al. v. First
Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and
State of Ohio v. Norrell E. Dearing et al. v. First Nationwide
Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio).

**STATEMENT OF WORK FOR LONG-TERM
OPERATION AND MAINTENANCE AT THE OLD
MILL SUPERFUND SITE
ROCK CREEK, OHIO**

prepared for
The Old Mill PRP Group

June 2001

27-18172.001

**STATEMENT OF WORK FOR LONG-TERM
OPERATION AND MAINTENANCE
AT THE OLD MILL SUPERFUND SITE
ROCK CREEK, OHIO**

Prepared for

The Old Mill PRP Group

Prepared by

**Brown and Caldwell
501 Great Circle Road, Suite 150
Nashville, TN 37228**

June 2001

501 Great Circle Road, Suite 150
Nashville, TN 37228

Tel: (615) 255-2288
Fax: (615) 256-8332

June 1, 2001

27-18172.001



Ms. Linda A. Kern
Remedial Project Manager
USEPA Region 5
77 West Jackson Boulevard, SR-6J
Chicago, IL 60604

RE: Old Mill Superfund Site
Rock Creek, Ohio

Dear Ms. Kern:

Enclosed for your review are two copies of the revised *Statement of Work (SOW) for Long-Term Operation and Maintenance at the Old Mill Superfund Site*. Two copies have also been transmitted to Mike Eberle at the Ohio EPA. This SOW has been revised from the most recent version dated December 17, 1999.

This revised SOW reflects modifications to the schedule and the addition of some text. Revisions to the schedule were requested by the USEPA and were necessary to reflect the current status of the project. In addition, two paragraphs (Sections 1.1.5 and 3.10.1) have been inserted into the SOW that address the shut-down period for the groundwater collection and treatment system, and the evaluation of monitored natural attenuation as a future option for the site. These paragraphs contain the language agreed upon by the PRP Group and the Agencies.

Lastly, minor revisions to other portions of the SOW have been made to reflect comments received from the USEPA and Ohio EPA on the *Work Plan for Long-Term Operation and Maintenance at the Old Mill Superfund Site*. Specifically, these include the fact that Ohio EPA and its contractor have assumed responsibility of the O&M activities (see the Introduction and Purpose sections), correction of a well identifier on Figure 1, and the addition of a fifth proposed new monitoring well (see Section 7.2.3.1 and Figure 1).

It is our understanding that the final approved SOW will be attached as an exhibit to the Consent Decree currently being negotiated between the agencies and the PRPs. As such, it would be in the best interest of all parties if the Agencies could quickly review and approve this revised SOW.

Ms. Linda Kern
June 1, 2001
Page 2

Please give me a call at (615) 250-1241 if you have any questions or wish to discuss the enclosed revised document. In the meantime, I will await your approval.

Sincerely,

BROWN AND CALDWELL



Dale R. Showers, P.E.
Project Manager
Design & Solid Waste

cc: Mike Eberle/Ohio EPA

Jerome C. Muys, Esq./Swidler, Berlin, Shereff & Friedman

William E. Coughlin, Esq./Calfee, Halter & Griswold

John E. Sullivan, Esq./Baker & Hostetler

Ralph E. Cascarilla, Esq./Walter & Haverfield

Mike Watkins/Brown and Caldwell

**STATEMENT OF WORK FOR
LONG-TERM OPERATION AND MAINTENANCE
AT THE OLD MILL SUPERFUND SITE
ROCK CREEK, OHIO**

INTRODUCTION

The Old Mill Superfund Site is located in the village of Rock Creek, Ohio in Ashtabula County. The site consists of two parcels of land: the 3-acre Henfield property and the 10-acre Kraus property. The area is a rural setting with the closest residences about 75 feet from the site boundary. Land use in the vicinity of the site is a mixture of residential, agricultural, and commercial/light industrial developments.

Response activity at the site began in 1979 and some removal activities were performed during the period November 1981 to November 1982. The site was proposed for inclusion on the National Priorities List (NPL) in December 1982 and was included in September 1983. A Remedial Investigation (RI) was conducted at the site from August 1983 to December 1984. In the 1985 Record of Decision (ROD), the USEPA selected a final site remedy that included removal and off-site disposal of impacted soil, collection and on-site treatment of impacted groundwater, implementation of aquifer use restrictions, and provision of an alternative water supply for one local residence. The ROD calls for collection and treatment of impacted groundwater until 10^{-5} risk levels are attained. During the feasibility study phase of the remedial action, the USEPA estimated that the collection and treatment systems would be required to operate for 30 years. This estimate was later revised to 22 years. Construction of this remedy was completed in August 1989 and operation of the collection and treatment system was implemented by a contractor to the USEPA (Roy F. Weston, Inc.). Additional groundwater collection features were installed at different times during 1992 to 1994.

Roy F. Weston, Inc., as a USEPA contractor, performed operation and maintenance (O&M) at the site from August 1989 until September 2000. Per an agreement with the USEPA, the State of Ohio assumed O&M responsibilities beginning in January 2001. IT Corporation, as a contractor to Ohio EPA, is performing O&M activities. It is expected that the Ohio EPA will continue to be responsible for O&M until the transfer of responsibilities to the Old Mill Potentially Responsible Parties (PRPs) Group in accordance with the requirements of the Consent Decree.

PURPOSE

The purpose of this Statement of Work (SOW) is to set forth the framework for implementing the long-term operation and maintenance (O&M) requirements for the site, including performance monitoring and reporting, in accordance with the objectives of the remedial action and the ROD. This SOW has been prepared assuming that the PRPs assume O&M responsibilities and retain a contractor to perform the required duties in accordance with the requirements of the Consent Decree. The PRPs assume that the existing system will be transferred in proper operating condition.

In general, the operator of the facility will be required to operate and maintain the collection and treatment system and monitor its performance to ensure compliance with the requirements of the ROD. Monitoring will include the collection and analysis of groundwater samples, collection and analysis of treatment facility influent and effluent samples, periodic evaluation of system data, and preparation of reports for delivery to the regulatory agencies. These requirements are discussed in greater detail in the following sections of this SOW.

STATEMENT OF WORK

This section addresses the activities necessary to provide the long-term O&M tasks to meet the requirements of the ROD. This SOW has been prepared using the outline and format set forth by the USEPA in its Statement of Work dated March 6, 1998. Eleven tasks were identified by the USEPA and are addressed in more detail in this document. Some tasks and subtasks are not applicable to this SOW. Those activities are marked as such in the relevant task descriptions.

TASK 1 - Project Planning and Support

The purpose of this task is to set forth some of the initial activities that will take place as part of continuing long-term O&M at the site and to plan for the execution and management of the SOW.

1.1 Project Planning

1.1.1 Kick-off Meeting. A kick-off meeting will be conducted for this phase of the long-term remedial action. The meeting may include representatives of the PRPs, USEPA, Ohio EPA, and the O&M contractor for the PRPs. A date and time will be established that is mutually agreeable to all parties. In general, the topics considered for the meeting will include a review of the responsibilities of each party, lines of communication, and a review of critical elements of the project.

1.1.2 Site Visit. A site visit for this phase of the remedial action will be performed in conjunction with the kick-off meeting described above. Representatives for the PRPs, including the O&M contractor, will have visited the site and adequately familiarized themselves prior to assuming operation.

1.1.3 Evaluation of Existing Information. The O&M contractor will be responsible for reviewing existing information relative to the history of the site. This information will also be evaluated, as necessary, with information and data to be obtained during this phase of operation. The PRPs have assumed that the historical information for the site, specifically, the groundwater elevations, groundwater monitoring data, and treatment system influent and effluent data, will be made available by the USEPA (preferably in electronic format) to allow future use of the information.

1.1.4 Develop Work Plan. The PRPs will develop and prepare a site work plan that addresses the requirements outlined in this SOW. The work plan will consist of the applicable plans or components addressed by Task 3 of this SOW and will include additional

detail, as appropriate, to allow the O&M contractor to properly operate the site. In general, the work plan will identify the various project elements, discuss the technical approach, identify the required project deliverables and associated due dates, and identify key project team members. The work plan will be a concise document, abbreviated in the manner used and approved for the nearby New Lyme Superfund Site O&M Work Plan. The PRPs do not anticipate including cost information in this work plan.

Prior to implementation, the work plan will be transmitted to the appropriate regulatory agencies for review and comment. Comments received will be discussed via a telephone conference and, as necessary, the work plan will be revised to incorporate comments received from the agencies.

1.1.5 Monitored Natural Attenuation Evaluation. The Agencies have agreed to evaluate the site to determine if a Monitored Natural Attenuation (MNA) approach would be appropriate, in lieu of the current groundwater collection and treatment system. The PRPs will develop a scope of work for evaluation of the applicability of MNA at the site for the Agencies' review, comment, and approval (MNA SOW). If approved by the Agencies, the MNA SOW will be incorporated into the approved Work Plan for Long-Term Operation and Maintenance. If the initial evaluation demonstrates that MNA would be a viable remedial alternative, in accordance with the NCP, then the next step will be the PRP's development of a scope of work for full- or pilot-scale testing.

1.2 Project Management

1.2.1 Monthly Reporting. The PRPs will prepare and transmit to the regulatory agencies monthly reports that briefly summarize the operation and/or technical information generated during the previous month. The monthly reports will generally follow the format established by Weston for the USEPA and will include observed flows and a discussion of any problems encountered and the resolution thereof. However, the USEPA has agreed that financial information associated with operation of the system is not required to be included in this monthly report.

1.2.2 Subcontractors. At this time, the PRPs anticipate that an O&M contractor will be retained by the group to perform the required duties at the site. This contractor will be responsible for providing all services related to proper operation and maintenance of the associated site equipment and facilities. As necessary, specialty subcontractors (e.g., drillers) will be retained to perform support tasks. O&M responsibilities will include preventive maintenance of equipment to minimize the potential for shut down of the system and proper response time to address a shut down condition should one occur. Additional information regarding procurement of subcontractors is discussed in Task 4.

1.2.3 Meetings. As necessary, meetings will be held during the course of the long-term operation of the system. The regulatory agencies will be kept apprised of the status of the system via the various reports to be generated by the PRPs. However, in addition, the PRPs will maintain contact with the agencies via periodic telephone conferences. Also, the appropriate regulatory agencies will be notified as soon as practicable of deviations or excursions from normal operating conditions at the site. As appropriate, the PRPs will document these meetings in the form of meeting minutes or follow-up letters.

1.2.4 Coordination with Local Emergency Response Teams. Hazardous materials are not expected to be used or stored at the site in significant quantities (i.e., above typical household products) and, therefore, notification to local emergency planning and response teams is not necessary. However, the site health and safety plan (discussed in Task 3) will address this topic in more detail.

TASK 2 - Community Relations Technical Support

This task is not applicable to this SOW.

TASK 3 - Development and Update of Site Specific Plans

Site-specific plans were previously prepared by Weston for the USEPA and IT Corp. for Ohio EPA. The purpose of this task is to review the existing plans and update them, as necessary, or prepare additional plans. If appropriate, the existing plans will be utilized in the preparation of plans to be used by the PRPs in continuing long-term O&M activities at the site.

3.1 Update Management Plan

This subtask is not applicable to this SOW.

3.2 Update Health and Safety Plan

A Health and Safety Plan (HASP) will be prepared as part of the overall work plan for the site. The HASP will address health and safety considerations for all personnel on site, including contractors, subcontractors, and visitors. If appropriate, the existing HASP for the site may be used as is or modified for continued use. The HASP will be reviewed for relevancy on an annual basis and updated, if necessary. In addition, the HASP will address the necessary coordination with the local emergency response teams (see Task 1.2.4).

3.3 Update Sampling and Analysis Plan

A Sampling and Analysis Plan (SAP) will be prepared and implemented as part of the overall work plan for the site. As appropriate, the existing SAP will be utilized. The components of the sampling and analysis plan will include a Quality Assurance Project Plan (QAPP) and a Field Sampling Plan (FSP). The information provided in the SAP will adhere to the requirements set forth in Task 7 of this SOW.

3.4 Develop Quality Assurance Project Plan

A Quality Assurance Project Plan (QAPP) will be prepared to address data collection at the site, including analysis of collected samples. Appropriate guidance documents will be utilized to prepare the QAPP. The QAPP will be included as part of the SAP, which, in turn, will be part of the overall work plan for the site.

3.5 Develop Field Sampling Plan

A Field Sampling Plan (FSP) will be prepared to address the collection of samples at the site. Samples to be collected at the site will include groundwater from monitoring wells and/or piezometers, collection wells and sumps, as well as treatment facility influent and effluent samples. The sampling associated with the site is generally described in Task 7 of this SOW. Appropriate guidance documents will be utilized to prepare the FSP. The FSP will be included as part of the SAP, which will be part of the overall work plan for the site.

3.6 Update Data Management Plan

Data collected from the performance of O&M tasks at the site will be maintained by the PRPs in a useable format that will allow evaluation of the data by the PRPs, contractor, and regulatory agencies. As appropriate, the historical data generated for the site will be incorporated into a database for use with future data. Appropriate files will be maintained on site, while copies of all files will be maintained by the O&M contractor in its project files. A Data Management Plan will be prepared as part of the overall work plan to be prepared for the site.

3.7 Update Pollution Control and Mitigation Plan

A Pollution Control and Mitigation Plan is not applicable to this phase of remedial action. However, a Contingency Plan will be prepared as part of the overall work plan for the site (see Task 3.10).

3.8 Update Transportation and Disposal Plan (Waste Management Plan)

Operation of this site does not include the disposal of wastes other than general refuse (i.e., paper and trash), with the exception of spent granular activated carbon (GAC). Historical operation of the groundwater treatment system has shown that change out of the GAC occurs very infrequently. When change out does occur, the operation will be performed by a qualified supplier of fresh GAC who will be contracted to also haul off the spent GAC for proper disposal or regeneration.

3.9 Update Construction Quality Assurance Plan

Construction at the site is complete; therefore, a Construction Quality Assurance Plan is not required for this SOW.

3.10 Develop Contingency Plan

A Contingency Plan will be prepared as part of the overall work plan for the site. In general, the Contingency Plan will identify the steps to be taken in the event of an excursion at the site. The USEPA and Ohio EPA shall be notified immediately in the event of an excursion. Such excursions may include, but are not limited to, a shut down of the collection and/or treatment systems, irregular water level measurements in the groundwater monitoring wells and/or piezometers, evidence of breakthrough or other bypass of the downgradient

collection systems, detection of a confirmed constituent concentration in the downgradient wells where a detection has not previously occurred, or a significant increase of a confirmed constituent concentration at a required monitoring location.

It is in the interest of the PRPs to act quickly to respond to excursions that may occur at the site. Therefore, steps will be set up in the Contingency Plan and implemented by the PRPs that will allow appropriate actions to occur in a timely manner. The steps will include the requirement for preparation of a specific plan of action to address an excursion(s) for submission to the USEPA and Ohio EPA for review and approval. If necessary, the PRPs will modify the existing remedy to maintain adequate protection of human health and the environment. As appropriate, this may include the implementation of steps prior to receiving final approval for such actions from the regulatory agencies.

3.10.1 Effect of System Shutdown Evaluation. The groundwater collection and treatment system was deactivated by the Agencies from September 15, 2000 to January 11, 2001. If an exceedance is observed in a downgradient well where no exceedance has been observed to date, then additional monitoring will be performed, in accordance with the Contingency Plan. The additional monitoring will be performed to determine if it is a sustainable exceedance or if it is a transient exceedance that may have resulted as an artifact of the shutdown of the groundwater collection and treatment system. If the excursion is determined through monitoring to be sustainable, then a written plan of action would be proposed as described in the Work Plan (i.e., Contingency Plan). If the excursion is determined through monitoring to be transient, then the scheduled monitoring would continue and no further action would be proposed. These excursion distinctions will be incorporated into the Contingency Plan.

3.11 Develop Other Plan(s)

No plans other than those identified in this SOW are anticipated for this site. However, should it become apparent that additional plans are necessary for proper O&M at the site, the PRPs will discuss such plans with the regulatory agencies at that time.

TASK 4 - Procurement of Subcontractors

The PRPs anticipate that the selected O&M contractor will be responsible for all aspects of normal O&M activities. However, some subcontractors may be required. These may include the analytical laboratory, drillers (if necessary), refuse pick up and disposal, disposal of any investigation-derived wastes, and the GAC and air stripper vendors. The agencies will be notified of the selected subcontractors at the appropriate time.

TASK 5 - Subcontract Management Support

Subcontractors that may be retained for work associated with the site will be retained directly by the PRPs or through the O&M contractor. In either instance, the O&M contractor will be required to be present during and perform observation of any on site activities. The PRPs will manage the O&M contractor to ensure compliance with the ROD and this SOW.

TASK 6 - Detailed Resident Inspection

This task is not applicable to this SOW.

TASK 7 - Cleanup Validation

The purpose of this task is for the O&M contractor to collect and evaluate data to verify the effectiveness of the collection and treatment systems. This verification process will consist of monitoring flows, collecting groundwater samples and treatment plant influent and effluent samples, analyzing the samples, monitoring groundwater levels, validating data, evaluating data, and reporting.

7.1 Mobilization/Demobilization

This task is not applicable to this SOW.

7.2 Field Investigation

The O&M contractor will conduct a field investigation consisting of additional monitoring well installation, periodic collection of groundwater and treatment plant samples at selected points, and periodic collection of groundwater elevation data on all new and existing monitoring wells and piezometers. All phases of the field investigation will be performed according to procedures set forth in the overall work plan for the site.

7.2.1 Conduct Geological Investigations (Soils and Sediments). This subtask is not applicable to this SOW.

7.2.2 Conduct Air Investigations. This subtask is not applicable to this SOW.

7.2.3 Conduct Hydrogeological Investigations - Groundwater. The O&M contractor will conduct hydrogeological monitoring as described below.

7.2.3.1 Well Systems Installation. The O&M contractor will be responsible for the installation of five new monitoring wells at the site. Two of the new wells (RWSH-5 and RWDH-5) will be installed on the Henfield property to supplement monitoring of the shallow and deep aquifers, respectively, in the area south of the groundwater collection trench associated with the Martin Sump (Figure 1). Another two new wells (RWSK-11 and RWSK-12) will be installed on the Kraus property to supplement monitoring of the shallow aquifer downgradient and side gradient to the groundwater collection trench associated with the Kraus Additional Sump (Figure 1). The fifth well (RWSK-13) will be installed in the area north-northeast of the Kraus Sump to provide a non-detect boundary for this area of the site (Figure 1). Each of the wells will be surveyed for location and elevation.

7.2.3.2 Collect Samples. The O&M contractor will collect groundwater samples on an annual basis from the network of wells, piezometers, and sumps listed in Tables 1 and 2. Samples from the influent (S1) and effluent (S5) ports of the treatment plant will be sampled quarterly. The locations for the well/piezometer monitoring points are shown on Figure 1. Sample points P-6, P-9, and an additional point proposed approximately 120 feet southwest

of P-8 have been eliminated, along with others, from the sampling network; however, if significant expansion of the plume is observed at monitoring points P-5, RWSK-6, or P-8, these locations may be reinstated into the sampling program.

7.2.3.3 Collect Samples During Drilling. This subtask is not applicable to this SOW.

7.2.3.4 Conduct Tidal Influence Study. This subtask is not applicable to this SOW.

7.2.3.5 Perform Hydraulic Tests. This subtask is not applicable to this SOW.

7.2.3.6 Measure Groundwater Elevations. The O&M contractor will collect groundwater elevation data on a quarterly basis from the network of wells and piezometers listed in Tables 1 and 2.

7.2.4 Conduct Hydrogeological Investigations - Surface Water. This subtask is not applicable to this SOW.

7.2.5 Conduct Waste Investigation. This subtask is not applicable to this SOW.

7.2.6 Conduct Geophysical Investigation. This subtask is not applicable to this SOW.

7.2.7 Conduct Ecological Investigation. This subtask is not applicable to this SOW.

7.2.8 Collect Contaminated Building Samples. This subtask is not applicable to this SOW.

7.2.9 Disposal of Investigation-Derived Waste. The O&M contractor will be responsible for disposal of investigation derived waste in accordance with appropriate procedures and rules regulating such disposal and dependent upon classification of the wastes.

7.3 Sample Analysis

7.3.1 Screening Type Laboratory Sample Analysis. This subtask is not applicable to this SOW.

7.3.2 CLP-Type or SAS Laboratory Sample Analysis. The O&M contractor will analyze all samples collected for the purpose of monitoring the collection and treatment systems in accordance with contract laboratory program (CLP)-equivalent procedures as set forth in the QAPP.

7.3.2.1 Analyze Air and Gas Samples. This subtask is not applicable to this SOW.

7.3.2.2 Analyze Groundwater Samples. Samples of groundwater collected from monitoring wells, piezometers, and sumps will be analyzed annually for volatile organic compounds (VOCs). In addition, selected samples, as indicated in Tables 1 and 2, will be analyzed annually for phthalates. Every two years, all samples will be analyzed for

phthalates. Samples of the treatment plant influent and effluent will be analyzed quarterly for VOCs and phthalates.

The detections of phthalates in groundwater samples collected at this site to date have been characterized by inconsistency, extreme variability in concentrations, and the frequent occurrence of phthalates in blanks. This coupled with the fact that phthalates such as bis (2-ethylhexyl) phthalate are common laboratory and/or field artifacts suggest that the phthalate concentrations in the monitoring record are not representative of groundwater conditions. The O&M contractor will investigate and implement, as appropriate and reasonable, further quality assurance measures to determine whether phthalates are present in groundwater at the site at concentrations exceeding maximum contaminant levels (MCLs).

7.3.2.3 through 7.3.2.9 Analyze Various Sample Types. These subtasks are not applicable to this SOW.

7.3.2.10 Perform Bioaccumulation Studies. This subtask is not applicable to this SOW.

7.4 Analytical Support and Data Validation

The O&M contractor will be responsible for supporting the collection of analytical data and validating that data as described below.

7.4.1 Prepare and Ship Environmental Samples. The O&M contractor will be responsible for appropriately preparing samples in the field and shipping them to the laboratory. Sample preparation, preservation, and transfer will be conducted in accordance with the FSP and the QAPP.

7.4.1.1 Groundwater Samples. The O&M contractor will prepare all groundwater samples and treatment plant influent and effluent samples in the field, including appropriate labeling, preservation, and packaging for shipment to the designated laboratory. Shipping schedules will adhere to required holding times for the designated analyses. The O&M contractor will be responsible for coordinating schedules with the laboratory and implementing appropriate chain-of-custody procedures on all sample transfers.

7.4.1.2 through 7.4.1.6 Various Sample Types. These subtasks are not applicable to this SOW.

7.4.2 Coordinate with Appropriate Sample Management Personnel. This subtask is not applicable to this SOW.

7.4.3 Implement USEPA-Approved Laboratory QA Program. This subtask is not applicable to this SOW.

7.4.4 Provide Sample Management (Chain of Custody, Sample Retention, and Data Storage). This subtask is included above in Section 7.4.1.

7.4.5 Perform Data Validation. The O&M contractor will validate the monitoring data as follows:

- Review the monitoring analytical results with respect to the validation criteria set forth in the QAPP.
- Provide to the USEPA, as part of the annual deliverables, written documentation of the validation results.

7.5 Data Evaluation

The O&M contractor will be responsible for evaluating the data for usefulness and for validation of the effectiveness of the collection and treatment systems based upon the work described below.

7.5.1 Data Usability Evaluation/Field QA/QC. In accordance with the FSP and the QAPP, the O&M contractor will collect field quality assurance/quality control (QA/QC) samples during each sampling event. Field QA/QC samples will include trip blanks, field blanks, and field duplicates for analyses. These data will be evaluated with respect to criteria set forth in the QAPP for acceptability of the associated data. Field QA/QC samples will be collected in an aggregate amount equal to 5 to 10 percent of monitoring samples.

7.5.2 Data Reduction, Tabulation, and Evaluation. The O&M contractor will reduce the analytical data and water level data to tabular formats and maintain these data in an electronic data base. The contractor will use the reduced data to evaluate the collection and treatment systems.

7.5.2.1 Evaluate Geological Data (Soils and Sediments). This subtask is not applicable to this SOW.

7.5.2.2 Evaluate Air Data. This subtask is not applicable to this SOW.

7.5.2.3 Evaluate Hydrogeological Data - Groundwater. The O&M contractor will collect and review annually the analyses of groundwater samples. Water level measurements and treatment plant influent and effluent samples will be collected and reviewed quarterly. The data, as a whole, will be reviewed to assess the progress of the remedial action. In addition, the groundwater analytical data will be evaluated for indications that the constituents of concern have bypassed the groundwater collection system. Water level data will be evaluated for indications that the directions of groundwater flow have changed to the degree that the groundwater collection system may not effect capture of the constituent plumes. The treatment plant influent and effluent sample analyses will be evaluated for indications of significant changes in concentrations that may affect the effectiveness of the treatment system.

7.5.3 Modeling. This subtask is not applicable to this SOW.

7.5.4 Develop Data Evaluation/Cleanup Status Report. The PRPs and their O&M contractor will report the status of the performance of the collection and treatment systems in annual reports to the regulatory agencies.

7.5.4.1 Semi-annual Groundwater Evaluation Reports. This subtask is not applicable to this SOW.

7.5.4.2 Annual Performance Evaluation Reports. Annual reports to the regulatory agencies will include the results of annual groundwater samples, the results of quarterly treatment plant influent and effluent samples, and quarterly groundwater level measurements. The report will also summarize the treatment and operational performance of the treatment plant for the preceding year. Analytical data will be presented as laboratory reports, including validation documentation, field procedure documentation, and chain-of-custody documentation. Analytical results will also be provided in tabular format. Groundwater level measurements will be provided in tabular format supported by copies of field notes, and will be provided on four maps, one for each quarter, contoured to illustrate the configuration of the potentiometric surface at the time of monitoring. Treatment and operational performance will be presented in tabular summaries of groundwater volumes extracted and treated.

In addition to annual reporting, if quarterly evaluations of groundwater level data or treatment plant influent and effluent sampling indicate significant deviations from expected behavior at the site, these will be reported to the regulatory agencies in supplemental written notifications.

7.5.4.3 Monthly Operating Reports. The O&M contractor will provide the regulatory agencies abbreviated monthly reports that address operational and technical considerations of the collection and treatment systems. Each report will include groundwater extraction and treatment system flow data for the month and a discussion of operational problems encountered during that month. These reports will not address financial aspects of the operation.

7.5.5 Update the GRITS/STAT Database for Semi-annual and Annual Sampling Results. This subtask is not applicable to this SOW.

TASK 8 - Remedial Action Implementation

Upon successful negotiation of the transfer of site responsibility for long-term O&M of the groundwater collection and treatment systems at the site to the PRPs, the PRPs will be responsible for implementation of this SOW and compliance with the ROD. A brief overlap period has been assumed to allow orientation of the PRP contractor. A schedule outlining the activities associated with the transition is included herein as Figure 2.

Performance of the systems will be summarized and transmitted to the regulatory agencies in the form of the various reports and meetings described in this SOW. Other subtasks associated with this task (e.g., remedial action subcontract cost and reserve) are not applicable to this SOW.

TASK 9 - Project Performance (Operation & Maintenance)

9.1 Operation and Maintenance

The PRPs will continue long-term O&M of the site in accordance with the tasks outlined in this SOW and in accordance with the O&M manual for the site. In general, the tasks will include maintenance of the structures, equipment, and grounds (including mowing and snow removal); system monitoring; recordkeeping; and reporting. As stated earlier in this SOW, the PRPs anticipate that a contractor will be retained to perform the long-term O&M tasks associated with the site. As necessary, subcontractors will also be retained to perform specialized tasks. At this time, the actual amount of time spent on site by the O&M contractor is unknown (i.e., full-time or part-time). However, the time spent on site will be adequate to ensure performance of the collection and treatment systems in compliance with the ROD and this SOW. Information related to O&M of the collection and treatment systems (i.e., field notes, maintenance logs, etc.) will be maintained on site by the O&M contractor.

9.2 System Performance

The performance of the groundwater collection and treatment systems will be monitored by the O&M contractor and the PRPs. This monitoring will consist of the tasks outlined previously in this SOW. The monitoring tasks outlined herein are expected to be adequate for maintaining compliance with the requirements of the ROD. Should revisions be required of any of the tasks for long-term O&M, the PRPs will discuss those revisions with the regulatory agencies and, if necessary, the overall work plan for the site will be modified.

9.3 Report Project Performance

Reports of system performance will be transmitted to the regulatory agencies in accordance with the tasks described in this SOW. In addition, if necessary, the agencies will be notified as soon as practicable if evaluations of site data indicate significant deviations from expected behavior at the site.

TASK 10 - Project Completion and Close Out

During the feasibility study phase of the remedial action, the USEPA estimated that the collection and treatment systems would be required to operate for 30 years. This estimate was later revised to 22 years. The PRPs will evaluate the data collected at the site, both historical data and that to be collected in the future, to estimate whether this time estimate is maintained or must be revised. Such discussions may be addressed, when appropriate, in the annual reports and/or during the 5-year review process. At the appropriate time, the PRPs will address project completion and close out with the regulatory agencies.

TASK 11 - Work Assignment Close Out

This task is not applicable to this SOW.

TABLE 1
HENFIELD PROPERTY
SAMPLE POINTS AND SCHEDULE

Sampling Point	Water Levels	VOCs	Phthalates
RWSH-1	Q	A	BA
RWDH-1	Q	A	BA
RWSH-2	Q	A	A
RWDH-2	Q	A	A
RWSH-3	Q	A	A
RWDH-3	Q	A	A
RWSH-4	Q	A	A
RWDH-4	Q	A	A
RWSH-5 ^a	Q	A	A
RWDH-5 ^a	Q	A	A
Martin Sump	--	A	BA
Henfield Sump	--	A	BA
Henfield Well	--	A	BA

^aMonitoring wells RWSH-5 and RWDH-5 have not been installed at present.

Q – Quarterly
A – Annually
BA – Once per two years
-- Not monitored

TABLE 2
KRAUS PROPERTY
SAMPLE POINTS AND SCHEDULE

Sampling Point	Water Levels	VOCs	Phthalates
RWSK-1	Q	A	BA
RWDK-1	Q	A	BA
RWSK-2	Q	A	BA
RWDK-2	Q	--	--
RWSK-3	Q	A	BA
RWDK-3	Q	--	--
RWSK-4	Q	A	BA
RWDK-4	Q	--	--
RWSK-5	Q	A	BA
RWDK-5	Q	A	BA
RWSK-6	Q	A	BA
RWDK-6	Q	A	BA
RWSK-7	Q	A	BA
RWDK-7	Q	A	BA
RWSK-8	Q	A	BA
RWDK-8	Q	A	BA
RWSK-9	Q	A	A
RWSK-10	Q	A	A
RWSK-11*	Q	A	A
RWSK-12*	Q	A	A
P-1	Q	--	--
P-2	Q	--	--
P-3	Q	--	--
P-4	Q	A	BA
P-5	Q	A	BA
P-6	Q	--	--
P-8	Q	A	A
P-9	Q	--	--
Kraus Sump	--	A	BA
Kraus Well	--	A	BA
Kraus Modified Sump	--	A	BA
Kraus Modified Well	--	A	BA
Kraus Additional Sump	--	A	BA

*Monitoring wells RWSK-11 and RWSK-12 have not been installed at present.

Q – Quarterly
A – Annually
BA – Once per two years
-- Not monitored

SCHEDULE OF O&M ACTIVITIES OLD MILL SITE ROCK CREEK, OHIO

ROW #	Task Name	Duration	Start	End	2001							2002						
					Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar				
1	Work Plan	59.00 d	Jun/22/01	Sep/17/01														
2	Submit Revised Draft to USEPA	0.00 d	Jun/22/01	Jun/22/01														
3	USEPA Review	50.00 d	Jun/25/01	Sep/04/01														
4	Respond to Comments	4.00 d	Sep/04/01	Sep/07/01														
5	Submit Final to USEPA	0.00 d	Sep/10/01	Sep/10/01														
6	USEPA Approval	0.00 d	Sep/17/01	Sep/17/01														
7	Finalize Agreement with O&M Contractor	24.00 d	Aug/27/01	Sep/28/01														
8	Consent Decree	92.00 d	Jun/04/01	Oct/15/01														
9	Obtain Signatures	20.00 d	Jun/04/01	Jun/29/01														
10	Lodge Consent Decree	0.00 d	Sep/14/01	Sep/14/01														
11	Enter Consent Decree	0.00 d	Oct/15/01	Oct/15/01														
12	Notification of Proposed O&M Contractor	5.00 d	Oct/01/01	Oct/05/01														
13	USEPA Approval of O&M Contractor	4.00 d	Oct/09/01	Oct/12/01														
14	USEPA Authorization to Proceed	0.00 d	Oct/15/01	Oct/15/01														
15	PRP/O&M Contractor Transition	24.00 d	Oct/01/01	Nov/02/01														
16	Prepare H&S Plan	19.00 d	Oct/01/01	Oct/26/01														
17	Prepare O&M Manual	19.00 d	Oct/01/01	Oct/26/01														
18	Mobilize to Site	5.00 d	Oct/29/01	Nov/02/01														
19	Kick-Off Meeting/Site Visit	5.00 d	Oct/29/01	Nov/02/01														
20	Operator Site Training	5.00 d	Oct/29/01	Nov/02/01														
21	PRPs Begin O&M per Work Plan	0.00 d	Nov/05/01	Nov/05/01														
22	Monitoring Well Installation/Abandonment	9.00 d	Oct/01/01	Oct/12/01														
23	MNA Evaluation	85.00 d	Oct/22/01	Feb/22/02														
24	Sampling/Field Studies	10.00 d	Oct/22/01	Nov/02/01														
25	Evaluation/Draft Report	56.00 d	Nov/05/01	Jan/25/02														
26	Project Meeting	4.00 d	Feb/19/02	Feb/22/02														
27	Year 2001 Monitoring	48.00 d	Oct/22/01	Dec/28/01														
28	Sampling Event	10.00 d	Oct/22/01	Nov/02/01														
29	Report	39.00 d	Nov/05/01	Dec/28/01														
30	Begin Scheduled Site Monitoring	5.00 d	Mar/25/02	Mar/29/02														

NOTES:

- The Work Plan consists of a Sampling and Analysis Plan (including a Field Sampling and Analysis Plan), Data Management Plan, Contingency Plan, Quality Assurance Project Plan, and a plan for a Monitored Natural Attenuation Evaluation.
- An initial draft of the Work Plan was transmitted to the agencies in January 2000. Comments were received in April 2000 and a revised version reflecting revisions made to address those comments was transmitted in March 2001. Additional comments were received in May 2001 and a revised Work Plan submitted in June 2001. Final comments were received in September 2001 and a final Work Plan was submitted that same month.
- This schedule assumes that the Consent Decree will stipulate (directly or indirectly) that the date for transition to the PRPs is November 5, 2001 or later.
- Site monitoring and associated reporting will be performed as outlined in the Statement of Work and the Work Plan. Monitoring tasks will generally be scheduled near the end of March, June, September, and December each year with the associated Annual Report anticipated to be transmitted in early March the following year.

Milestone Δ Summary \blacksquare
Fixed Delay -----

APPENDIX B
RECORD OF DECISION

United States v. Norrell E. Dearing et al. v. First
Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and
State of Ohio v. Norrell E. Dearing et al. v. First Nationwide
Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio).

116440

EPA

Superfund Record of Decision:

Old Mill, OH



116441

K.9
8/7/85

Record of Decision
Remedial Alternative Selection

001321

SITE: Old Mill, Rock Creek, Ohio

DOCUMENTS REVIEWED

The following documents describing the analysis of the cost-effectiveness of the remedial action alternative for the Old Mill site, Rock Creek, Ohio have been reviewed:

- Old Mill Remedial Investigation Report, December, 1984
- Old Mill Addendum to Remedial Investigation Report, May, 1985
- Old Mill Feasibility Study, May, 1985
- Summary of Remedial Alternative Selection, Old Mill site, July, 1985
- Responsiveness Summary, Old Mill site, July, 1985

DESCRIPTION OF SELECTED REMEDY

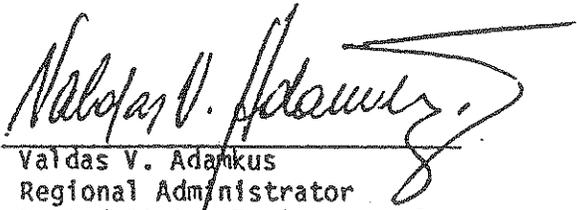
- Removal and off-site disposal of 95 percent of contaminants in soil - constitutes removal to levels which are adequate to protect public health and the environment (4,300 cubic yards).
- Groundwater extraction and treatment (using Granular Activated Carbon) to a target groundwater contaminant concentration of 10^{-5} carcinogenic risk level.
- Aquifer use restrictions imposed by the State of Ohio for as long as concentrations in the plume are above 10^{-6} carcinogenic risk levels.
- Public water supply to those residences potentially affected by contaminated ground water.

DECLARATIONS

Consistent with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), and the National Oil and Hazardous Substances Contingency Plan (NCP), 40 CFR, Part 300, it has been determined that taking source control action by removal and off-site disposal of a select volume of contaminated soil (4,300 cubic yards), and taking management of migration action by extraction and treatment of contaminated groundwater to a target carcinogenic risk level of 10^{-5} at the Old Mill site is a cost-effective remedy that provides adequate protection of public health, welfare and the environment. The State of Ohio has been consulted and agrees with the remedial action. The action will require future operation and maintenance activities to ensure the continued effectiveness of the remedy. These activities will be considered part of the approved action and eligible for Trust Fund monies for a period not to exceed one year.

It has also been determined that the action being taken is appropriate when balanced against the availability of Trust Fund monies for use at other sites. In addition, the off-site transport and secure disposition is more cost-effective than other remedial actions and is necessary to protect public health, welfare or the environment.

August 7th, 1985.
Date


Valdas V. Adankus
Regional Administrator
United States Environmental
Protection Agency
Region V

SUMMARY OF REMEDIAL ALTERNATIVE SELECTION

OLD MILL SITE, ROCK CREEK, OHIO

SITE LOCATION AND DESCRIPTION

The Old Mill site is in the Village of Rock Creek, Ashtabula County, Ohio. The site consists of two parcels of land; the Henfield property and the Kraus property. The Henfield property is approximately 3 acres, and includes four dilapidated wooden buildings and four concrete silos. Surface water flow from the property drains to the southwest corner and then to a ditch which discharges to the Rock Creek. The Kraus property is approximately 10 acres, is partially covered with piles of railroad ballast, and has one empty abandoned bulk liquid tank. Surface water flow from the Kraus property drains toward the northwest to a ditch which discharges to Badger Run and to the Grand River. Land use in the vicinity of the site is represented by a mixture of residential, agricultural, and commercial/industrial developments. The site is in a rural village setting with the closest residences approximately 75 feet from the property boundary (Figure 1).

The site geology for both properties includes clayey silt over 10 feet of glacial till that overlies 2 feet of weathered shale. The groundwater surface is 3 to 5 feet below ground surface. Groundwater movement at the Henfield property is toward the west, and at the Kraus property is toward the northwest, and occurs principally in the glacial till and weathered shale above the bedrock. The area is considered poor for domestic well supply development. Although most residents are using an available municipal drinking water source, there are two identified downgradient residences using the groundwater. The estimated horizontal linear velocity of groundwater is 20 feet per year at the site.

SITE HISTORY

Response activity at the Old Mill site began in 1979 when U.S. EPA and Ohio EPA found approximately 1,200 drums of toxic waste, including solvents, oils, resins, and PCBs, stored on both the Henfield and Kraus properties. The Henfield property was considered to be an immediate hazard because a significant quantity of the drummed waste was flammable. Access to the site was not controlled. Superfund emergency removal activities and enforcement actions resulted in drum removal that began in November 1981 and was completed by October 1982. In addition, approximately 2 inches [80 cubic yards (yd³)] of soil from the drum storage areas on the Henfield property were removed in November 1982. A six foot cyclone fence was installed around a portion of the Henfield property in April 1984 under the authority of Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), in order to minimize the potential for direct contact with the remaining soil contaminants.

CURRENT SITE STATUS

A remedial investigation (RI) was conducted at the Old Mill site from August 1983 to December 1984. The activities performed included installation of groundwater

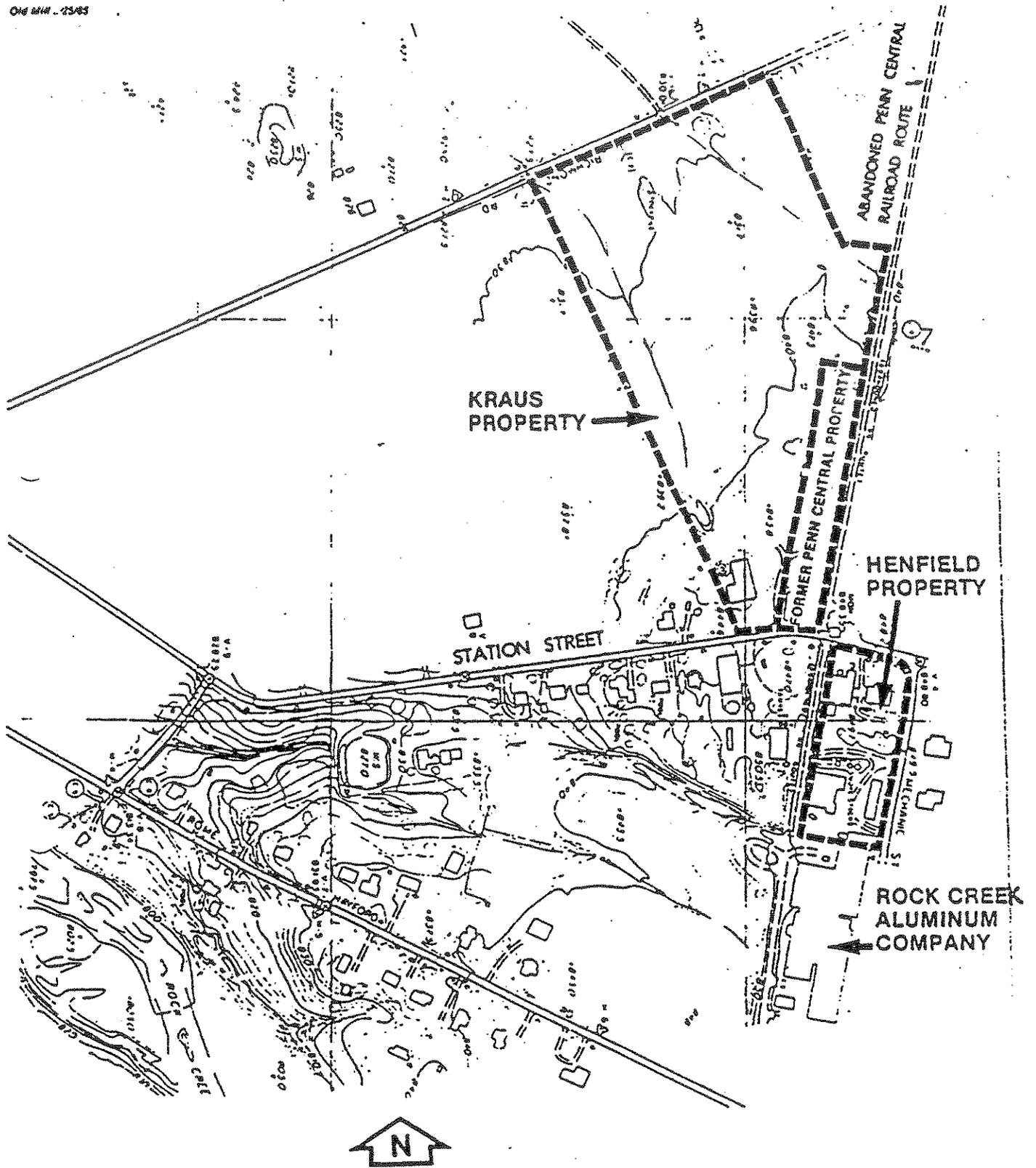


Figure 1
SITE MAP
Old Mill Site

monitoring wells, and collection, analysis, and evaluation of private well water samples, soil and sediment samples, surface water and groundwater samples, railroad bed samples, and railroad ballast samples. In addition, geophysical studies were conducted, and topographic maps were prepared for both the Henfield and Kraus properties.

Results of the RI are summarized according to environmental medium in Tables 1 and 2 and Figures 2 through 5. Concentration ranges are displayed for each contaminant detected.

Potential risks from contaminated soil and groundwater on the site are based on the assumption that the site would be used in the future for both residential and industrial/commercial development. These risks are theoretical quantifications, and are reported as excess lifetime cancer risks. Excess lifetime cancer risk is defined as the incremental increase in the probability of getting cancer compared to the probability if no exposure occurred. For example, a 10^{-6} excess lifetime cancer risk represents the exposure that could increase cancer by one case per million people exposed. The risk levels were calculated using U.S. EPA Carcinogen Assessment Group cancer potency values.

Soil Contamination

The Henfield property soil has elevated levels of organic and inorganic contamination. Organic contaminants were identified down to 6 feet below ground surface. Ingestion of 0.1 to 1 gram per day for seventy years of contaminated soil would result in a calculated excess lifetime cancer risk between 10^{-3} and 10^{-4} . The Kraus property soil has significantly lower levels of contamination with ingestion risk levels between 10^{-5} and 10^{-6} . The volume of contaminated soil is estimated to be 18,300 yd³.

Groundwater Contamination

Groundwater at the Henfield property is contaminated with volatile organic compounds (VOCs), mainly trichloroethene, with lower concentrations of tetrachloroethene, trans-dichloroethene, 1,1-dichloroethene, vinyl chloride, and 1,1,1-trichloroethane. Ingestion of 1 to 2 liters per day for 70 years of contaminated groundwater on the Henfield property site would result in a calculated excess lifetime cancer risk greater than 10^{-3} .

Groundwater at the Kraus property is contaminated with VOCs, mainly ethylbenzene and xylene. The VOC plume appears confined to a small onsite area on the east side of the property. Ingestion of contaminated groundwater on the Kraus property would not result in a calculated excess lifetime cancer risk but would result in a toxic risk because the concentration of ethylbenzene exceeds the Acceptable Daily Intake value.

There are at least two residences within 1/4 mile of the site that presently use groundwater wells for a drinking water source. These wells are not presently affected by the site, however it is projected that local water supplies may be affected in the future by movement of contaminants offsite.

Table 1
 RANGE OF CONTAMINANT CONCENTRATIONS AND DISTRIBUTION,
 HERFIELD PROPERTY, OLD HILL SITE

Contaminant	Onsite Soil (mg/kg)		Offsite Soil (mg/kg)		Drainage		Groundwater (ug/L)	
	Surface	>1	Surface	>1	Sediment (mg/kg)	Surface Water (ug/L)	Offsite ³ Wells	Onsite ⁴ Wells
ORGANIC								
PVAs	7.4-13,440	0.106-196	1.7-9.29	1.18-36.8	U	U	U	U
Phenols	13-180	2.7-5.4	2.65	U	U	U	U	U
TCAs	0.0025-0.0173	0.003-11	0.0088	0.0814-0.19	0.069-0.248	U	U	U
Phthalates	3.70-3,700	0.91-11.68	0.610	0.66-120	2.9%	U	U	56
Pesticides	U	U	0.192-0.735	U	0.0057-7.955	U	U	U
Trichloroethene	1.56-1,220	0.017-570	0.414-3.3	0.0019-0.22	U	22-97	89.9-6,100	1,100
Acetone	U	U	U	0.0518-18	0.032	49-280	U	127-1,000
Other Chlorinated								
Ethene	0.405-554	U	0.005	0.016-0.099	U	7-135	14.9-490	U
Ethyl Benzene	0.019-1,420	U	U	U	U	U	22.2	U
INORGANIC								
Arsenic	102	31	*	*	*	U	122	U
Calcium	0.47-152	8.7	0.99-1.93	0.57	0.63-1.54	1.1	U	1
Chromium	64-221	*	*	*	*	U	100	11
Lead	59-8,370	72-984	82-153	80	85.1	U	59	U
Nickel	22-353	24-59	21	26.3-29.5	24.7-26.6	U	U	40-45
Selenium	35	2.5-16	0.27-0.74	0.3-1.86	0.3-0.5	U	<2	2
Zinc	110-8,630	147-963	272	119-154	109-165	19-73	U	14-96

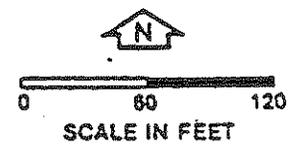
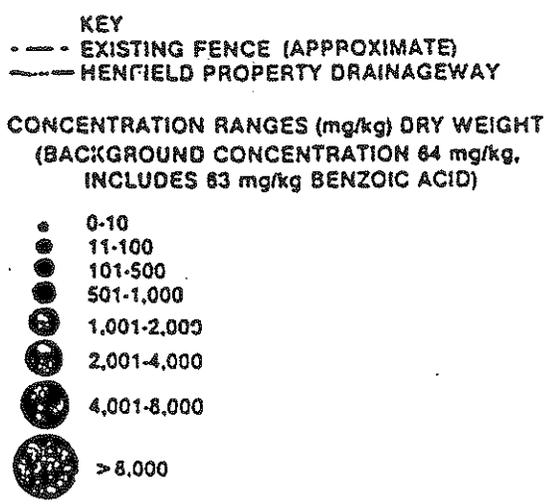
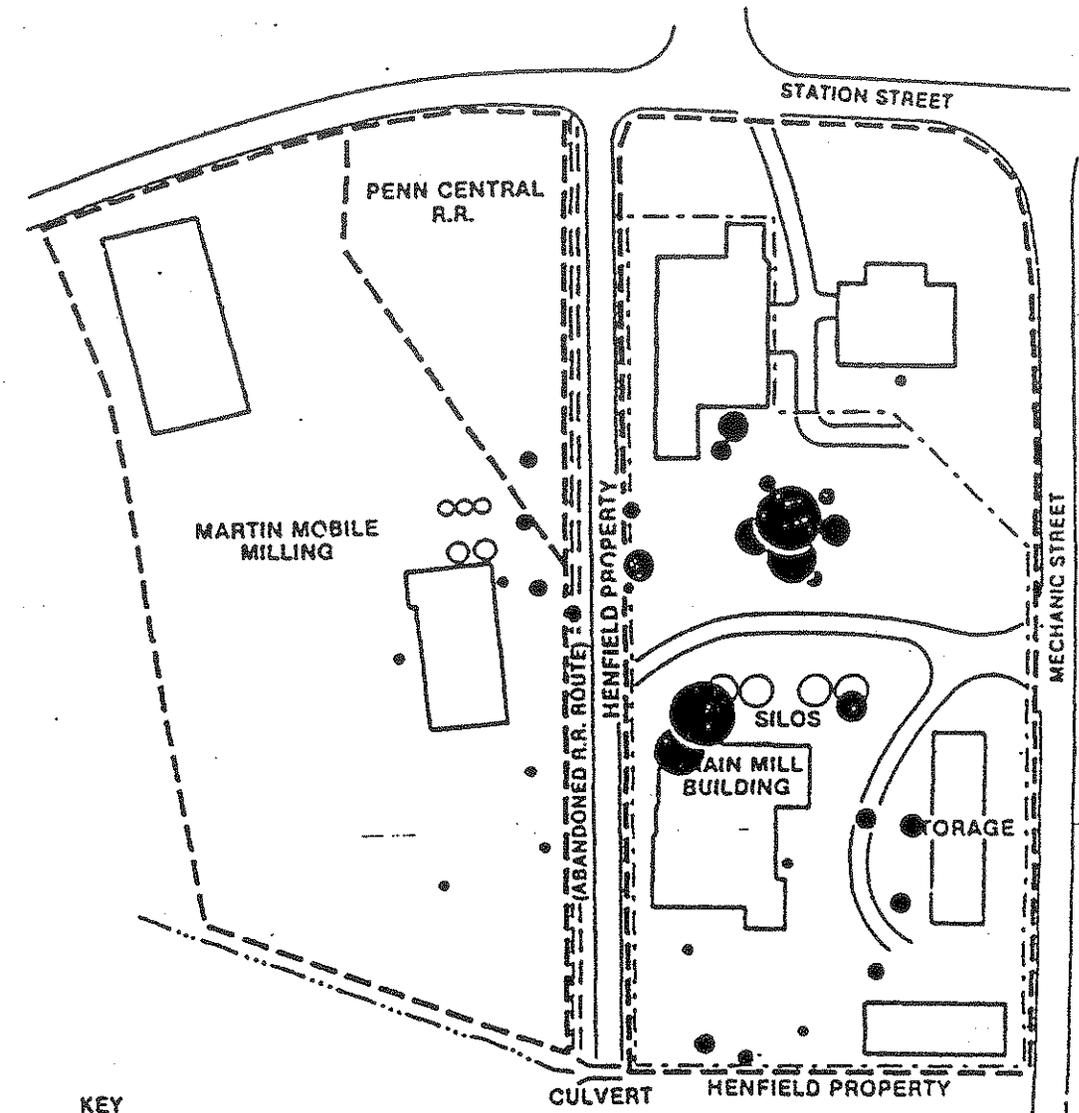
U = Undetected.
 * = Detected but not above background.
 Values reported are of dissolved contaminants.

NOTE: Where only one value is given, contaminant was detected in only one sample above background or standard at the concentration shown. Contaminants are those that exceed the upper limit of the 95-percent confidence interval for background concentrations in soil or drinking water standards and criteria in water. Values for soil and sediment reported on a dry weight basis.

Table 2
 RANGE OF CONTAMINANT CONCENTRATIONS AND DISTRIBUTION,
 KRAUS PROPERTY, OLD MILL SITE

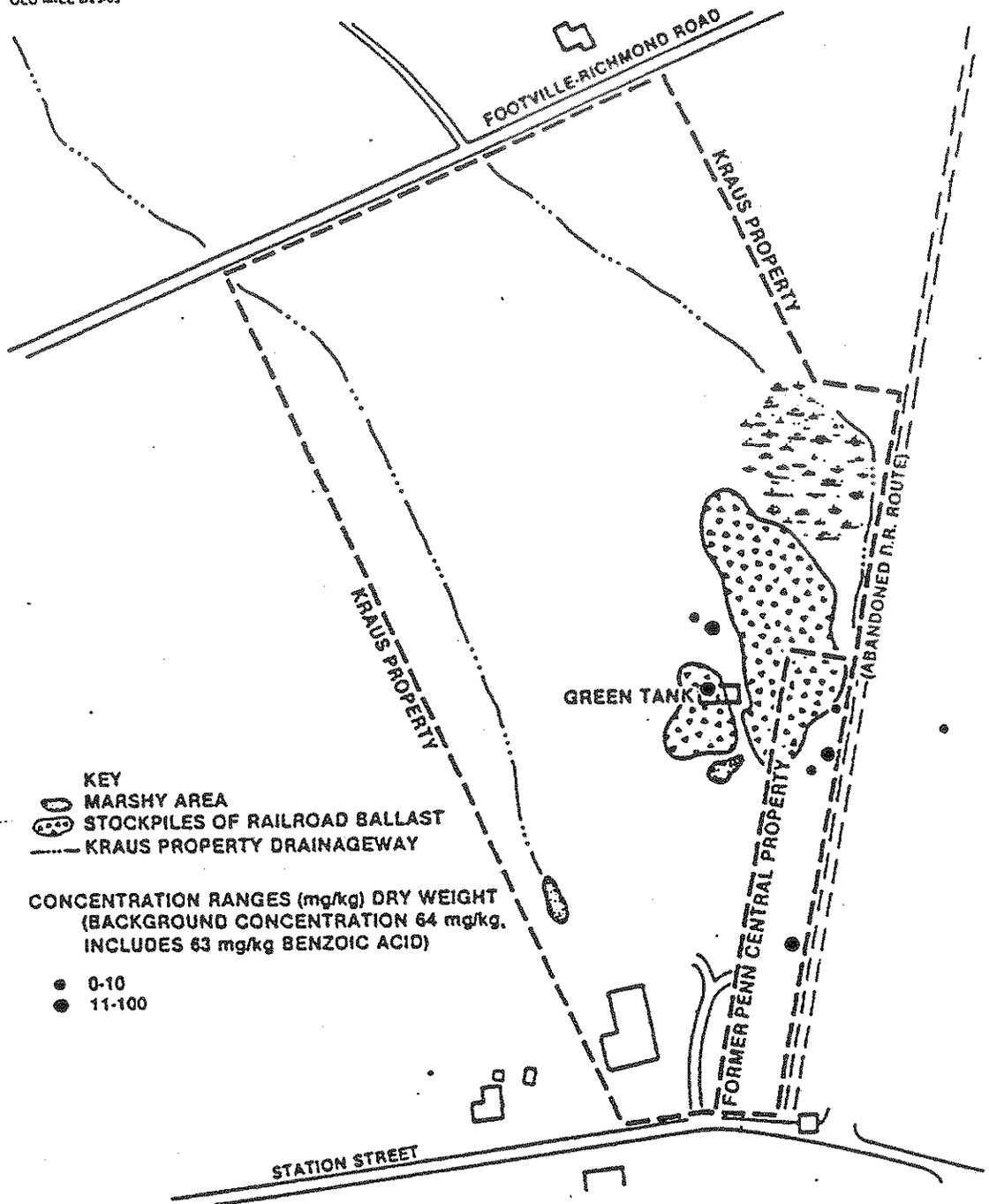
Contaminant	Onsite Soil (mg/kg) ^a		Drainingsway		Ground-water ^b (ug/L)
	Surface	>1 ^c	Sediment ^a (ug/kg)	Surface Water (ug/L)	
ORGANIC					
THAs	0.809-10	53.884	17.19-23.13	U	0.27-45.75
Phenols	5.5	U	U	U	10-580
PCBs	U	U	0.031	U	U
Phthalates	U	U	U	U	<0.2-<10
Pesticides	U	U	U	U	NA
Benzic Acid	2.503	U	U	U	NA
Trichloroethene	<0.001	0.0068-0.11	U	U	<5-<100
Acetone	0.0055	0.003-0.125	U	U	<5-800
Chlorinated Ethenes	U	0.0465	U	U	<5-<100
Ethyl Benzene	U	0.0526-0.0686	U	U	<5-8,900
Total Xylenes	U	U	U	U	100-1,000
INORGANIC					
Arsenic	29	37-59	8.2-13.6	10	6-7
Cadmium	0.5-430	0.43	0.18-0.39	U	NA
Chromium	*	*	9.3-18.5	U	<20
Lead	64	110	13.3-20.8	U	<100
Nickel	23-27	24-48	18.8-47.1	U	NA
Selenium	0.25-1.0	0.5-0.7	0.14-0.36	U	<5-6
Zinc	115-274	300	74-138	11-35	8-37

*Detected but below background concentration.
 a) values are reported on a dry-weight basis.
 b) values reported are of dissolved contaminants.
 K - Compound detected but below quantification limit.
 U - Undetected.
 NOTE: Value before K is quantification limit.
 Where only one value is given, contaminant was detected in only one sample above background or standard at the concentration shown. Contaminants are those that exceed the upper limit of the 95-percent confidence interval for background concentrations in soil or drinking water criteria or standards in water.
 NA - Not analyzed for.



(PROPERTY BOUNDARIES ARE APPROXIMATE)

Figure 2
CUMULATIVE CONCENTRATION (mg/kg)
OF VOLATILE AND SEMIVOLATILE
ORGANICS IN ONSITE AND OFFSITE
SURFACE SOIL
 Henfield Property
 Old Mill Site



KEY
MARSHY AREA
STOCKPILES OF RAILROAD BALLAST
KRAUS PROPERTY DRAINAGEWAY

CONCENTRATION RANGES (mg/kg) DRY WEIGHT
(BACKGROUND CONCENTRATION 64 mg/kg.
INCLUDES 63 mg/kg BENZOIC ACID)

- 0-10
- 11-100

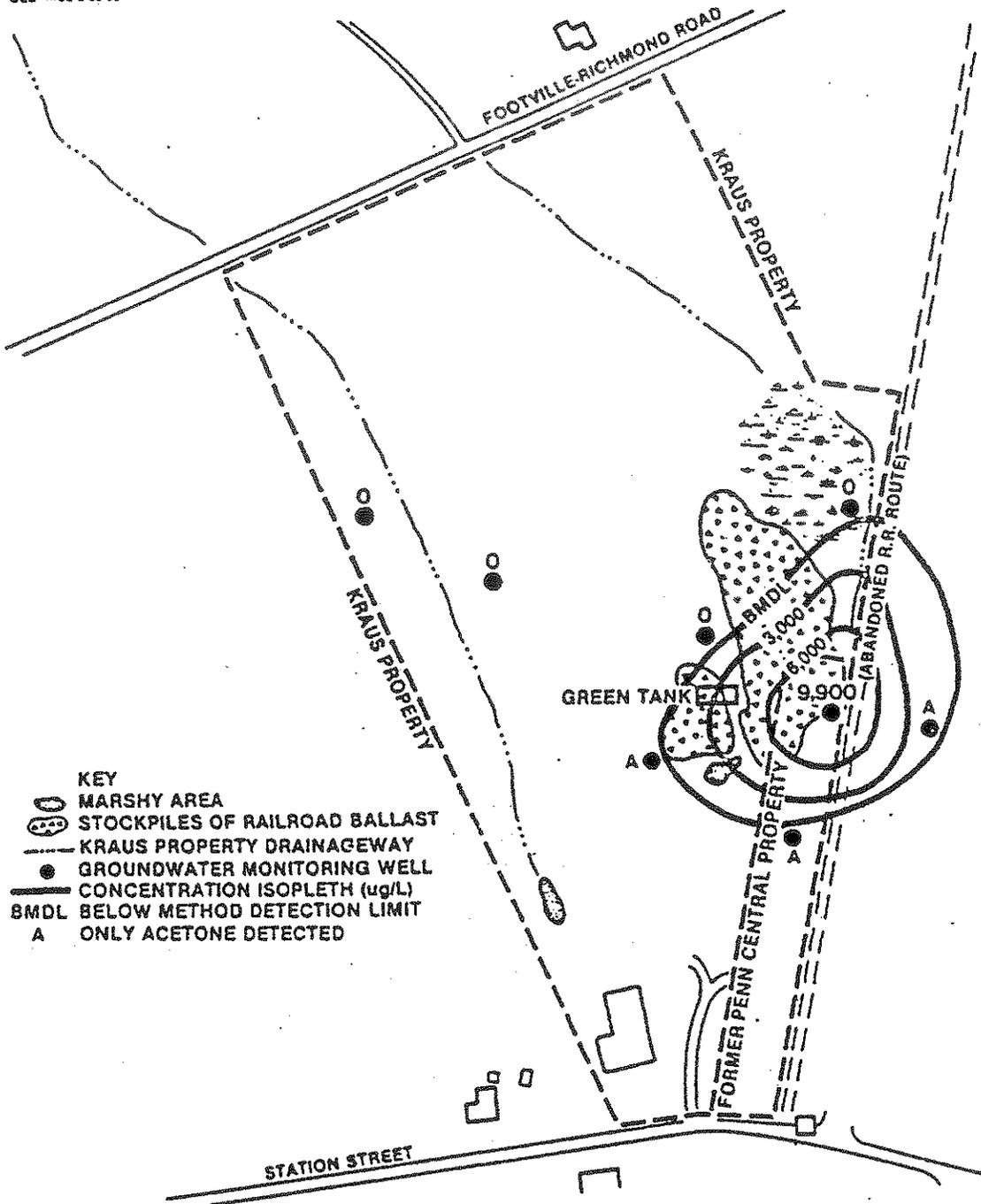


0 200 400

SCALE IN FEET

(PROPERTY BOUNDARIES
ARE APPROXIMATE)

Figure 3
CUMULATIVE CONCENTRATION (mg/kg)
OF VOLATILE AND SEMIVOLATILE
ORGANICS IN SURFACE SOIL
Kraus Property
Old Mill Site



- KEY
- MARSHY AREA
 - STOCKPILES OF RAILROAD BALLAST
 - KRAUS PROPERTY DRAINAGEWAY
 - GROUNDWATER MONITORING WELL
 - CONCENTRATION ISOPLETH (ug/L)
 - BMDL BELOW METHOD DETECTION LIMIT
 - A ONLY ACETONE DETECTED

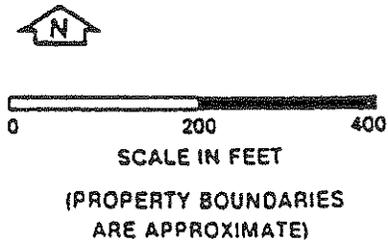


Figure 5
CUMULATIVE CONCENTRATION OF
VOLATILE ORGANICS IN SHALLOW
WELLS, DECEMBER 1984
Kraus Property
Old Mill Site

Surface Water and Sediment Contamination

The drainageway originating at the southwest corner of the Henfield property has only limited organic contamination. In the Kraus property drainageway, low levels of organic contamination are present in the sediment. There is a low probability of human health risks from exposure to surface water because there are few potential receptors, and the drainageways only intermittently contain water. Ingestion of 0.1 to 1.0 grams per day for 70 years of contaminated sediment on the Kraus property would result in a potential excess lifetime cancer risk of about 10^{-4} .

ENFORCEMENT (See Attachment)

ALTERNATIVES EVALUATION

The major objective of the FS was to evaluate remedial alternatives using a cost-effective approach consistent with the goals and objectives of CERCLA. The National Oil and Hazardous Substances Contingency Plan (NCP), 40 CFR Part 300.68, defines a cost-effective remedial action as "the lowest cost alternative that is technologically feasible and reliable and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare or the environment". The NCP outlines the procedures and criteria to be used in selecting the cost-effective alternative.

An environmental assessment presented in Chapter 2 of the FS determined that both source control and offsite (management of migration) measures are necessary. A comprehensive list of appropriate remedial response technologies was identified for source and migration control, and these technologies were screened based on the characteristics of the site, the characteristics of the waste materials at the site, and the ability of the technology to address criteria such as adequate protection of human health and the environment and minimization of contaminant migration. These technologies were further screened on the basis of technical feasibility, including an assessment of performance, reliability, implementability and safety, and on the basis of order of magnitude costs. The following technologies were considered applicable to site conditions and problems.

o Soil/Sediment

- Multimedia cap
- Clay cap (non-infiltration reduction cap)
- Landfill
- Incineration

o Groundwater

- Extraction system
- Carbon adsorption
- Publicly owned treatment works (POTW)
- Public water supply
- Direct discharge

Based on the applicable technologies that were carried forward from this initial screening, alternatives were developed to address the overall contamination at the site (see Table 3). This initial screening is consistent with 300.68(h) of the NCP. These alternatives were generally evaluated and compared to public health and environmental criteria. No alternatives were eliminated from further consideration based on this step.

DETAILED ANALYSIS OF ALTERNATIVES

All alternatives (except the limited and no-action alternatives) involve groundwater treatment (offsite measures) and soil removal or containment (source control measures). The effectiveness and ramifications of each alternative were evaluated on the basis of technical and environmental considerations.

For the technical analysis, each alternative was evaluated on performance, reliability, effectiveness, and implementability. For the environmental and public health analysis, each alternative was evaluated for compliance with Federal and State environmental laws and regulations, protection of human health and welfare, and effects on institutional parameters in order to screen out those alternatives which may not meet public health and environmental goals. The detailed cost analysis for each alternative includes estimates of operation and maintenance (O&M) costs, capital costs, and development of present worth costs (Tables 4 through 11). The expected accuracies for cost estimates are within +50 and -30 percent of the actual cost. This detailed analysis of a limited number of alternatives is consistent with Section 300.68(i) of the NCP.

Using the information developed in the detailed analysis, alternatives were compared within categories to eliminate those which were less cost-effective. Twelve of the twenty alternatives were eliminated from further consideration including:

Alternatives involving direct discharge or treatment of the groundwater at a POTW. Direct discharge of contaminated extracted groundwater to the drainageways at the site, to Rock Creek, and/or to the Grand River is unacceptable from an environmental, institutional, and public health viewpoint because of the effluent concentrations. Contaminants would be transferred from one environmental medium (groundwater) to another (surface water). Treatment of extracted groundwater would remove the contaminants from the environment, however, treatment at a POTW is more expensive than onsite treatment: annual O&M costs are about \$340,000 per year for the POTW and only about \$8,000 per year for onsite treatment. The transportation requirements of this technology are also a major disadvantage.

Alternatives involving offsite soil incineration. The capital cost to transport and incinerate the soil is much greater (order of magnitude greater) than all other alternatives. Although removal and subsequent destruction of organic contaminants is permanent and irreversible, the metals which may be physically bound to the ash may require that the ash be disposed of at a RCRA-licensed landfill. The only RCRA incineration facility identified within the geographical area (300 mile radius) of the site will only accept soil which is packed in drums. Also, the facility can process 160 drums per month (45 yd³ per month), and has no storage capacity. To incinerate 95 percent (4,300 yd³) or 100 percent

Table 3
ASSEMBLED ALTERNATIVES FOR OLD HILL SITE

Alternative Category	Number	Technology For:		
		Soil/Sediment ^a	Groundwater ^b	Surface Water
1. Complete Removal	1A	Offsite landfill	RCRA treatment facility	No action
	1B	Offsite incineration	RCRA treatment facility	No action
2. Attains Standards	2A	Multimedia cap	Onsite treatment ^c	No action
	2B	Multimedia cap	Direct discharge	No action
	2C	Multimedia cap	POTW	No action
3. Exceeds Standards	3A	Onsite incineration	Onsite treatment ^c	No action
	3B	Onsite incineration	Direct discharge	No action
	3C	Onsite incineration	POTW	No action
	3D	Onsite landfill	Onsite treatment ^c	No action
	3E	Onsite landfill	Direct discharge	No action
	3F	Onsite landfill	POTW	No action
4. CERCLA	4A	Clay cap	Public water supply	No action
	4B	Clay cap	Direct discharge	No action
	4C	Clay cap	POTW	No action
	4D	Clay cap	Onsite treatment ^c	No action
5. Limited Action	5	Fence	Monitor	Monitor
6. No Action	6	No action	No action	No action

^aLandfill and incineration technologies will be preceded by excavation of soil.
^bGroundwater treatment will be preceded by installation of French drains and/or extraction wells.
^cOnsite treatment technologies are air stripping and/or direct contact carbon adsorption.

Table 4 Cost Breakdown for Assembled Alternative 1A

Remedial Action	Cost Estimates			
	Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (b)
Soil				
Surveying	\$408,000	\$563,000	\$0	\$563,000
Mobilization	\$479,000	\$662,000	\$0	\$662,000
Excavation	\$385,000	\$532,000	\$0	\$532,000
Transport/Manifest	\$581,000	\$802,000	\$0	\$802,000
Disposal	\$3,123,000	\$4,309,000	\$0	\$4,309,000
Backfill and Revegetate	\$211,000	\$291,000	\$0	\$291,000
Demolition	\$433,000	\$598,000	\$0	\$598,000
Closure	\$10,000	\$14,000	\$0	\$14,000
Groundwater				
Surveying	\$94,000	\$130,000	\$0	\$130,000
Mobilization	\$26,000	\$36,000	\$0	\$36,000
Construct Extraction System	\$118,000	\$163,000	\$0	\$163,000
Extraction System (O & M)	\$0	\$0	\$2,000	\$21,000
Transport/Manifest (O & M)	\$0	\$0	\$6,728,000	\$63,424,000
Groundwater Monitoring	\$24,000	\$32,000	\$0	\$32,000
Closure/Monitoring	\$10,000	\$14,000	\$37,000	\$365,000
	SUBTOTAL	\$5,903,000	\$8,146,000	\$6,767,000
	Replacement Costs (c)			\$71,559,000 \$26,000
	TOTAL			\$78,326,000

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs, indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.39, 0.15, and 0.06 respectively. The cost of cap replacement at 30 years is included.

Table 5 Cost Breakdown for Assembled Alternative 21

Assembled Alternative 2A : Multimedia Cap, No Removal, Onsite Groundwater Treatment

Reedial Action	Cost Estimates			
	Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (b)
Soil				
Surveying	\$410,000	\$545,000	\$0	\$655,000
Mobilization	\$622,000	\$859,000	\$0	\$858,000
Fencing	\$9,000	\$12,000	\$0	\$12,000
Stouring	\$13,000	\$19,000	\$0	\$19,000
Cap Construction	\$224,000	\$310,000	\$4,000	\$345,000
Demolition	\$433,000	\$598,000	\$0	\$598,000
Closure/Monitoring	\$1,000	\$1,000	\$0	\$1,000
Groundwater				
Surveying	\$69,000	\$95,000	\$0	\$95,000
Mobilization	\$47,000	\$65,000	\$0	\$65,000
Construct Extraction System	\$118,000	\$163,000	\$0	\$163,000
Extraction System (O & M)	\$0	\$0	\$2,000	\$21,000
Treatment System	\$55,000	\$76,000	\$0	\$76,000
Treatment System (O & M)	\$0	\$0	\$6,000	\$55,000
Groundwater Monitoring	\$24,000	\$32,000	\$0	\$32,000
Closure/Monitoring	\$13,000	\$18,000	\$37,000	\$367,000
	SUBTOTAL	\$2,038,000	\$49,000	\$3,272,000
	Replacement Costs (c)			\$106,000
	TOTAL			\$3,378,000

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs, indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.39, 0.15, and 0.06 respectively. The cost of cap replacement at 30 years is included.

Table 6 Cost Breakdown for Assembled Alternative 20

Remedial Action	Cost Estimates			
	Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (c)
Soil				
Surveying	\$408,000	\$363,000	\$0	\$563,
Mobilization	\$479,000	\$662,000	\$0	\$662,
Excavation	\$246,000	\$340,000	\$0	\$340,
Transport/Manifest	\$140,000	\$193,000	\$0	\$193,
Disposal	\$752,000	\$1,037,000	\$0	\$1,037,
Backfill	\$44,000	\$61,000	\$0	\$61,
Fencing	\$9,000	\$12,000	\$0	\$12,
Demolition	\$433,000	\$598,000	\$0	\$598,
Closure/Monitoring	\$1,000	\$1,000	\$0	\$1,
Groundwater				
Surveying	\$69,000	\$75,000	\$0	\$75,
Mobilization	\$47,000	\$65,000	\$0	\$65,
Construct Extraction System	\$118,000	\$163,000	\$0	\$163,
Extraction System (O & M)	\$0	\$0	\$2,000	\$21,
Treatment System	\$55,000	\$76,000	\$0	\$76,
Treatment System (O & M)	\$0	\$0	\$6,000	\$53,
Groundwater Monitoring	\$24,000	\$32,000	\$0	\$32,
Closure/Monitoring	\$13,000	\$18,000	\$37,000	\$167,
	SUBTOTAL	\$2,838,000	\$45,000	\$4,721,
	Replacement Costs (c)			\$45,
	TOTAL			\$4,439,

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs, indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.79, 0.15, and 0.66 respectively. The cost of cap replacement at 30 years is included.

Table 7 Cost Breakdown for Assembled Alternative 2F

Remedial Action	Cost Estimates			
	Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (b)
Soil				
Surveying	\$408,000	\$563,000	\$0	\$563,000
Mobilization	\$479,000	\$662,000	\$0	\$662,000
Fencing	\$9,000	\$12,000	\$0	\$12,000
Excavation	\$246,000	\$340,000	\$0	\$340,000
Transport/Manifest	\$14,000	\$20,000	\$0	\$20,000
Landfill Construction	\$564,000	\$779,000	\$0	\$779,000
Backfill	\$44,000	\$61,000	\$2,000	\$80,000
Desolition	\$433,000	\$598,000	\$0	\$598,000
Closure	\$10,000	\$14,000	\$0	\$14,000
Groundwater				
Surveying	\$69,000	\$95,000	\$0	\$95,000
Mobilization	\$47,000	\$65,000	\$0	\$65,000
Construct Extraction System	\$118,000	\$163,000	\$0	\$163,000
Extraction System (O & M)	\$0	\$0	\$2,000	\$21,000
Treatment System	\$55,000	\$76,000	\$0	\$76,000
Treatment System (O & M)	\$0	\$0	\$6,000	\$55,000
Groundwater Monitoring	\$24,000	\$32,000	\$0	\$32,000
Closure/Monitoring	\$13,000	\$18,000	\$37,000	\$567,000
	SUBTOTAL	\$2,535,000	\$3,498,000	\$3,741,000
	Replacement Costs (c)			\$106,000
	TOTAL			\$4,047,000

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs. Indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.39, 0.15, and 0.06 respectively. The cost of cap replacement at 30 years is included.

Table 8 Cost Breakdown for Assembled Alternative 3D

Assembled Alternative 3D : Onsite Landfill, 100% Removal, Onsite Groundwater Treatment		Cost Estimates		
Remedial Action	Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (b)
Soil				
Surveying	\$408,000	\$543,000	\$0	\$563,
Mobilization	\$479,000	\$642,000	\$0	\$662,
Fencing	\$9,000	\$12,000	\$0	\$12,
Excavation	\$385,000	\$532,000	\$0	\$532,
Transport/Manifest	\$59,000	\$81,000	\$0	\$81,
Landfill Construction	\$2,340,000	\$3,229,000	\$0	\$3,229,
Backfill & Revegetate	\$116,000	\$160,000	\$2,000	\$164,
Demolition	\$433,000	\$598,000	\$0	\$598,
Closure	\$10,000	\$14,000	\$0	\$14,
Groundwater				
Surveying	\$69,000	\$95,000	\$0	\$95,
Mobilization	\$47,000	\$65,000	\$0	\$65,
Construct Extraction System	\$118,000	\$163,000	\$0	\$163,
Extraction System (O & M)	\$0	\$0	\$2,000	\$21,
Treatment System	\$55,000	\$76,000	\$0	\$76,
Treatment System (O & M)	\$0	\$0	\$6,000	\$55,
Groundwater Monitoring	\$24,000	\$32,000	\$0	\$32,
Closure/Monitoring	\$13,000	\$18,000	\$37,000	\$337,
	SUBTOTAL	\$4,566,000	\$6,300,000	\$47,000
	Replacement Costs (c)			\$6,748, \$190,
	TOTAL			\$6,258,

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs. Indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.37, 0.15, and 0.06 respectively. The cost of cap replacement at 30 years is included.

Table 9 Cost Breakdown for Assembled Alternative 40

Remedial Action		Cost Estimates			
		Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (b)
Soil					
Surveying		\$410,000	\$565,000	\$0	\$565,000
Mobilization		\$622,000	\$838,000	\$0	\$838,000
Fencing		\$9,000	\$12,000	\$0	\$12,000
Contouring		\$13,000	\$19,000	\$0	\$19,000
Construction		\$164,000	\$226,000	\$4,000	\$261,000
Demolition		\$433,000	\$598,000	\$0	\$598,000
Closure/Monitoring		\$1,000	\$1,000	\$0	\$1,000
Groundwater					
Surveying		\$69,000	\$95,000	\$0	\$95,000
Mobilization		\$47,000	\$63,000	\$0	\$63,000
Construct Extraction System		\$118,000	\$163,000	\$0	\$163,000
Extraction System (O & M)		\$0	\$0	\$2,000	\$21,000
Treatment System		\$35,000	\$76,000	\$0	\$76,000
Treatment System (O&M)		\$0	\$0	\$6,000	\$35,000
Groundwater Monitoring		\$24,000	\$32,000	\$0	\$32,000
Closure/Monitoring		\$13,000	\$18,000	\$37,000	\$367,000
	SUBTOTAL	\$1,977,000	\$2,728,000	\$49,000	\$3,188,000
	Replacement Costs (c)				\$106,000
	TOTAL				\$3,294,000

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs. Indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.39, 0.15, and 0.06 respectively. The cost of cap replacement at 20 years is included.

Table 10 Cost Breakdown for Assembled Alternative 3

Remedial Action	Cost Estimates			
	Construction	Capital (a)	Annual Operation and Maintenance	Present Worth (b)
Soil				
Surveying	\$1,000	\$2,000	\$0	\$2,000
Fencing	\$9,000	\$12,000	\$0	\$12,000
Surface Water Control	\$0	\$0	\$0	\$0
Safety	\$4,000	\$5,000	\$0	\$5,000
Groundwater Monitoring	\$24,000	\$32,000	\$24,000	\$259,000
	SUBTOTAL	\$38,000	\$24,000	\$278,000
	Replacement Costs (c)			\$19,000
	TOTAL			\$297,000

(a) Capital cost is calculated as construction cost multiplied by 1.38 to include indirect capital costs, indirect capital costs include 13 percent for engineering and design, 5 percent for legal fees/permit costs, and 20 percent for contingencies.

(b) Present worth at 10 percent interest over 30 years. Uniform series present worth factor 9.4269.

(c) Replacement cost at 10, 20, and 30 years calculated by using present worth factors 0.39, 0.15, and 0.06 respectively. The cost of cap replacement at 30 years is included.

Table 11 Cost Breakdown for Assembled Alternative 6

Remedial Action	Cost Estimates			
	Construction	Capital	Annual Operation and Maintenance	Present Worth
Soil	\$0	\$0	\$0	\$0
Groundwater	\$0	\$0	\$0	\$0
TOTAL	\$0	\$0	\$0	\$0

(18,300 yd³) of the soil contaminants would require 10 or 20 years. Therefore, although the long term effectiveness may be beneficial, the length of time for implementation of such action and the cost of incineration do not make this an acceptable alternative.

Alternatives involving on-site incineration. The capital cost is greater than twice the cost of all other on-site alternatives. The ash itself may be a hazardous substance, and may therefore have to be disposed of at a RCRA facility. The additional cost of landfilling the resulting ash has not been included in this estimate. This cost will substantially increase the overall cost if landfilling is necessary. The effectiveness and availability of an on-site incinerator is questionable. Presently there are few mobile incinerators. It is estimated that incineration of 100 percent of the contaminated soil would require 32 months of continuous operation after the incinerator becomes available. Incineration of 95 percent of the soil contamination would require 16 months after the incinerator becomes available.

Treatment of groundwater on site was assessed for air stripping and activated carbon. Both are demonstrated, effective treatment technologies, both remove the contaminants of concern at the site, and both have comparable capital costs. Because the O&M cost and effort necessary to maintain the air stripper exceed that of the activated carbon system, the preferred treatment technology is activated carbon.

DETAILED DESCRIPTION/EVALUATION OF ALTERNATIVES

A comparative evaluation of the remaining alternatives is presented below and is summarized in Table 12. The environmental laws which may be applicable or relevant to the remedial alternatives are discussed in the section entitled Consistency With Other Environmental Laws.

Alternative 1A

This alternative consists of removal and off-site disposal of contaminated soil and groundwater. This alternative exceeds relevant and applicable standards.

To remove soil to background levels would require the removal of 18,300 yd³ of soil over 2.3 acres down to an average depth of 5 feet. In addition, approximately 78 yd³ of contaminated sediment would have to be removed. Approximately 760 million gallons of groundwater will be extracted over a period of 90 years to obtain groundwater background concentration levels. The buildings on the site will be demolished and transported to an appropriate offsite disposal facility. All excavated soil will be transported to a permitted hazardous waste landfill and contaminated groundwater will be extracted and transported to a permitted treatment facility. All contaminated soils will be placed in cells which meet RCRA requirements. (The cost estimate includes the incremental cost of construction of a double-lined versus a single-lined cell at a licensed landfill). The transportation costs of liquid and soil to off-site facilities are estimated by assuming the facility to be within a 300-mile radius of the site. There are at least three hazardous waste landfills within this area.

Removal and disposal of all solids can be implemented quickly and easily with conventional construction methods. The technical feasibility of groundwater extraction and offsite disposal is well established, however, because the shallow aquifer at the Old Mill site exhibits low hydraulic conductivity and permeability, groundwater extraction will be a prolonged process. The length of time required to extract groundwater limits the implementability of this option.

The exposure pathways of direct contact and ingestion for soil and groundwater are eliminated through source control (removal and disposal of 18,300 yd³ of contaminated soil) and offsite or management of migration measures (removal and treatment of 760 million gallons of contaminated groundwater). All contaminants will be removed to background levels. Because it entails the greatest amount of off-site hauling, this alternative presents the greatest possibility of human exposure during hauling. No post-closure institutional restrictions will be necessary.

Of the final alternatives evaluated, this has the highest cost (total estimated capital cost \$8,145,000 and present worth cost \$72,020,000). The greatest portion of this capital cost is associated with transportation and disposal of the contaminated materials (\$5,934,000).

Alternative 2A

This alternative consists of construction of a multimedia RCRA compliant cap over the contaminated portions of the site, and extraction and on-site groundwater treatment using granular activated carbon (GAC). This alternative will comply with applicable and relevant standards.

The groundwater extraction system for this alternative is the same as for Alternative 1A. Contaminated groundwater will be pumped to a sump and then through a series of columns packed with GAC. Water leaving the bottom of the last column would flow by gravity to an offsite drainage ditch.

Following building demolition and disposal, offsite contaminated soil adjacent to the Henfield property and contaminated sediment in the drainageways will be excavated and consolidated on the site to fill the voids left by removal of the buildings. The site will be compacted and graded (both properties) to promote runoff from the finished cap, and to provide clearance so the edge of the four foot thick cap is approximately level with the surrounding ground surface. Site closure involves fencing the capped areas, setting land use restrictions on the properties, and installing post-closure monitoring wells. Capping contaminated soil in accordance with RCRA standards minimizes the potential for direct exposure. The cap will last indefinitely if properly maintained. However, contaminants would still be present for possible future release to groundwater. Carbon adsorption can effectively remove all the organic contaminants of concern found in groundwater at the Old Mill site. Contaminants are removed from the environment and are destroyed in the process of carbon regeneration.

The exposure pathway of direct contact and ingestion for soil and groundwater will be decreased by this alternative. The groundwater quality will not be restored to background or 10^{-6} levels, and the source of contamination and possible leaching of contaminants into the groundwater remains indefinitely. Because of the low transmissivity and yield of this aquifer, flushing occurs slowly. Infiltration through the cap and horizontal flow through the contaminated soil will slowly leach contaminants indefinitely. The groundwater seasonally rises to the ground surface and comes in contact with the contaminated soil. This causes leachate production from the unsaturated zone.

The present worth cost of this alternative is \$3,375,000.

Alternative 2D

This alternative consists of removal and off-site disposal in a RCRA compliant facility of 95 percent of the contaminant mass in the soil, and extraction and on-site groundwater treatment using GAC. This alternative will comply with applicable and relevant federal standards.

The groundwater extraction and treatment system is the same as for Alternative 2A.

This option requires removal of 75 percent less soil as that removed in the complete soil removal alternative ($4,300 \text{ yd}^3$), but this would effectively remove the majority of contaminant mass in the soil. The 5 percent contaminant mass remaining in the soil will produce no impact on groundwater cleanup during the extraction period, and is representative of background or 10^{-6} carcinogenic risk levels for soil ingestion.

The exposure pathway of direct contact and ingestion will be greatly reduced by this alternative. Removal of 95% of the soil contamination will effectively prevent exposure to hazardous material at the site.

The present worth cost of this alternative is \$4,440,000.

Alternative 2F

This alternative consists of excavation and on-site containment of 95 percent of the contaminant mass in the soil, and extraction and on-site groundwater treatment using GAC. This alternative complies with applicable and relevant standards.

The groundwater extraction and treatment system is the same as for Alternative 2A.

This option requires the same soil excavation as Alternative 2D. The difference is that the soil will be fully contained in a landfill which will be constructed on the site (Kraus property). The landfill will be constructed to meet RCRA criteria including double-lined bottoms and sides, a double-leachate collection system and a multimedia cap. Collected leachate will be treated on-site using the GAC system. Site closure involves fence construction around the landfill, implementation of land use restrictions, and installation of monitoring wells.

On-site landfilling prevents the spread of and exposure to hazardous materials. The double liner and cap effectively contain contaminated materials. However, the presence of a Class 2 (groundwater currently used or potentially available for drinking water or other beneficial use) aquifer may limit the feasibility of locating such a landfill. Since the groundwater table seasonally rises to the ground surface, the integrity and effectiveness of an on-site landfill may become questionable. In addition, it is not recommended that a landfill be located in an area of fractured bedrock. The bedrock in the vicinity of the site is known to be fractured.

The present worth cost of this alternative is \$4,050,000.

Alternative 3D

This alternative consists of removal and on-site containment of all contaminated soil, and extraction and on-site groundwater treatment using GAC. This alternative exceeds all applicable and relevant standards.

This alternative is the same as Alternative 2F except that 100 percent rather than 95 percent of the soil is removed and contained on the Kraus property.

The present worth cost of this alternative is \$6,850,000.

Alternative 4D

This alternative consists of construction of a permeable cap over the contaminated portions of the site, and extraction and on-site groundwater treatment. Implementation of this alternative will meet the goals of CERCLA, but may not comply with applicable and relevant standards.

The environmental and public health aspects of this alternative are the same as Alternative 2A except that the cap does not reduce infiltration into the soil. This results in a greater infiltration rate and subsequently greater leachate produced to enter the groundwater. The groundwater must be extracted for over 700 years in order to restore groundwater quality to 10^{-6} levels for constituents of concern, and the source of contamination remains indefinitely.

The present worth cost of this alternative is \$3,290,000.

Alternative 5

This alternative includes construction of a site fence, and installation of a groundwater monitoring system and is considered a limited action alternative.

Total fencing is estimated to be 1,400 linear feet. Migration of groundwater will be monitored. The rate and direction of migration will be determined, and an extensive pollutant fate analysis will be performed to determine the potential for adversely affecting receptors.

This alternative will temporarily minimize the direct contact threat. The contaminated groundwater will continue to migrate.

The present worth cost of this alternative is \$390,000.

Alternative 6

Under this alternative no further remedial actions will be taken at the site. The threats to public health and the environment will remain.

COMMUNITY RELATIONS

There has been considerable public interest in the Old Mill site throughout the RI/FS. Several public meetings have been held, and there have been numerous letters and phone calls related to the site. Generally, the meetings have drawn about 50-75 people (Rock Creek has a population of about 650) and have lasted about three hours, with most of the time devoted to questions and answers. Media coverage has been in the county papers and on the local radio station.

The most intense concern has been expressed by the Rock Creek Hazardous Waste Committee. Three members (one is also a member of the town council) have generated the majority of inquiries, although other residents and local officials have occasionally inquired about the status of the RI/FS or about specific technical issues. The committee also directs numerous inquiries to the county health department, the county disaster services office, and the local office of the U.S. Congressional Representative.

Many issues of concern have evolved during the RI/FS, however, the quality of local drinking water has been and continues to be an issue of primary concern. In addition, many people have expressed frustration with the length of time required for the RI/FS.

Specifically, some residents have requested that immediate actions be taken to restrict access to the entire site, that the on-site buildings be demolished, that a tank on-site be removed (the site owner has since removed the tank), and that the site receive "no less than total cleanup." The last request was expressed as a demand for U.S. EPA action. Many people have also expressed concern about potential for future migration of contamination.

Many of these concerns were expressed during the public comment period for the RI/FS, and have been addressed by the U.S. EPA in the "Responsiveness Summary". The public comment period was extended to last over 4-1/2 weeks due to the high level of citizen concern and involvement. The citizens appear to still believe that this period was inadequate and indications are such that the community does not feel that the recommended cleanup will be adequate.

CONSISTENCY WITH OTHER ENVIRONMENTAL LAWS

It is the recommendation of this document that the technical aspects of the remedial alternative implemented at the Old Mill site be consistent with other applicable and relevant environmental laws. Other environmental laws which may be applicable or relevant to the remedial alternatives evaluated in the FS are the Resource Conservation and Recovery Act (RCRA), the Clean Water Act, the Safe Drinking Water Act and the National Environmental Policy Act (NEPA).

TABLE 12
FINAL COMPARISON MATRIX

Alternative	BIOLOGICAL						ENVIRONMENTAL						Total (\$ MIL) Capital Cost	FIRM Rank
	Performance	Reliability	Implementability	Safety	Short Term (Construction)	Long Term (Operation)	Restrictions	Public Health	Permanent Marsh	Cost (\$ MIL)				
Complete Removal 1A: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to operation of units during construction and normal safety pro- cedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	0.165	72,020	69				
Alternative 2B: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to building and operation of units during equip- ment. Normal safety procedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	2,280	3,375	69				
Alternative 2C: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to building and operation of units during equip- ment. Normal safety procedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	3,920	6,540	65				
Alternative 2D: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to building and operation of units during equip- ment. Normal safety procedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	3,190	6,020	68				
Alternative 2E: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to building and operation of units during equip- ment. Normal safety procedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	6,320	6,320	68				
Alternative 2F: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to building and operation of units during equip- ment. Normal safety procedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	2,230	2,230	69				
Alternative 2G: Leachate treated in effluent treatment plant.	Lowest cost alternative. Removal to background levels.	Technology demonstrated. Proven performance.	Short implementation time for cap. Removal to background levels.	Concern due to building and operation of units during equip- ment. Normal safety procedures sufficient.	Wide and short gener- ated-effects ad- justed. Increased truck traffic.	Long term operation.	Leachate treated in effluent treatment plant.	66	66	72				

The provisions of RCRA applicable to remediation at Old Mill would be the 40 CFR Part 264 technical standards for closure, and the Subpart F, Groundwater Protection standards. RCRA requires that contaminated soil either be removed to background or other standard protective of human health and environment (closure as a storage unit by removal), or capped (closure in place as a landfill).

The capping alternatives evaluated in the FS are consistent with those actions which would be taken during "closure" of a RCRA land disposal facility. The alternatives which fully contain the contaminated soil on-site are consistent with those actions necessary to build a new hazardous waste landfill, and to close such a landfill. The complete soil removal alternative evaluated in the FS is consistent with those actions which would be taken during closure of a RCRA storage facility. The 95% removal alternative evaluated in the FS is also consistent with those actions which would be taken during closure of a RCRA storage facility, because even though all hazardous waste residues will not have been removed, they will have been removed to levels adequate to protect public health and the environment.

It has been determined that removal of 100 percent of the soil contaminant mass would constitute removal to background levels and that removal of 95 percent of the contaminant mass would constitute removal to levels adequate to protect public health and the environment. With the 95 percent removal option, for the volatile compounds, the average concentrations remaining are below the 10^{-6} carcinogenic risk value for soil ingestion and contact but above background values. For the base/neutral (B/N) compounds, the average concentrations remaining are within the range of the 10^{-4} to 10^{-5} carcinogenic risk levels depending on the compound. Background concentration in the near vicinity of the site (e.g. adjacent railroad bed) also fall within this range (1.1-1.7 mg/kg). For example, for Benzo(a)Pyrene, a B/N compound of concern, the average concentration remaining in the soil will be at background levels. This level is greater than the 10^{-6} risk level for soil ingestion. Although contamination will be removed to background, some risk remains for this compound. Benzo(a)Pyrene is an immobile compound and thus will not readily leach into the groundwater.

From a transport based approach, the 5 percent of contamination remaining in the soil is not expected to cause any discernable change in the groundwater quality during the first 30 years of operation. Overall, from both a risk and contaminant transport based approach, the levels remaining may be considered adequate to protect public health and the environment.

The groundwater protection standards of RCRA will be applicable to the level of groundwater cleanup to be attained by a groundwater extraction system. 40 CFR Section 264.94 states that the concentration of a hazardous constituent must not exceed the background level of that constituent in the groundwater, or an alternate concentration limit (ACL) for that constituent which will not pose a substantial present or potential hazard to human health or the environment as long as that ACL is not exceeded. The hazardous constituents of concern are those hazardous substances which were detected in the groundwater and soils at the site during the RI. Although a variety of organics were found in the ground-

water, the compounds trichloroethene and tetrachloroethene are the constituents of concern because of the potential carcinogenicity and the high concentrations. From the leachate/soil model in the FS, it is estimated that Benzo(a)Pyrene will slowly leach from the soil into the groundwater over a very long period of time (5,000 years) and still not have exceeded levels of concern for drinking water. Any low levels of B/N compounds that may be in the groundwater will be removed by treatment using Granular Activated Carbon. Some low levels of other B/N compounds were found in the groundwater both upgradient of and on the Kraus property, indicating a source other than the Kraus site for these compounds.

It is proposed that the contaminant plume be contained by pumping and be treated to a risk based "target" ACL of 10^{-5} excess cancer risk value. It is estimated that this concentration can be attained in the aquifer after 30 years of extraction and treatment. Subsequent to this 30 year period, it is estimated that contaminant concentrations will eventually attenuate to the soil and disperse to levels that do not exceed 10^{-5} excess cancer risk levels. Institutional constraints on aquifer use will be necessary until the groundwater has reached 10^{-5} levels. The U.S. EPA has established that 10^{-6} is an acceptable level for groundwater remediation. This level is considered an acceptable level for human drinking water consumption. Under certain circumstances, levels other than 10^{-6} can be considered target ACLs. At the Old Mill site, reaching 10^{-5} levels is cost and time prohibitive. It is estimated that with complete source removal, to reach 10^{-6} levels will take about 90 years. For any alternative with less than complete removal, the time increases. The groundwater plume has migrated a short distance offsite (225 feet downgradient of the site).

Transport modeling of the groundwater plume through the aquifer at the Old Mill site has indicated that, between the site and a short distance downgradient (1/4 to 1/2 mile), if the plume (extraction and treatment to 10^{-5} level) were allowed to migrate, the concentration in the plume may exceed 10^{-6} values for about 100 years. After that time, at all places in the aquifer downgradient from the site, the aquifer would not be adversely affected by site activities. Aquifer restrictions will protect all potential future users until acceptable levels have been restored over the affected area. Although initially the levels of contaminants in the groundwater will be greater than 10^{-6} , by means of attenuation and dispersion, acceptable (10^{-6}) levels will eventually not be exceeded anywhere in the aquifer. Therefore, the proposed extraction and treatment scenario (10^{-5}) is considered to be equally and adequately protective of human health and the environment. Since full documentation of the aquifer characteristics has not been obtained, the effectiveness of this extraction and treatment system will be confirmed after operational performance data has been evaluated. At that time the actual determination of an ACL will be made. It is estimated that two to five years of operational performance data will be required to make such a determination.

Any discharge of extracted groundwater at the site to the offsite drainageway will comply with substantive requirements of the Clean Water Act. A National Pollution Discharge Elimination System (NPDES) permit will be issued by and to the State of Ohio. The provisions of the NPDES permit will be established by the Ohio EPA and U.S. EPA. During construction, care will be taken to avoid stormwater runoff from the site.

Under the Safe Drinking Water Act, Maximum Contaminant Levels for tetrachloroethene and trichloroethene will soon be proposed in the Federal Register. Depending on the results of this proposal, these levels may be met in the groundwater.

This alternative meets NEPA functional equivalency. The necessary and appropriate investigation and analysis of environmental factors as they specifically relate to the Old Mill site and the recommended alternative were considered and evaluated in the RI/FS. In addition, an opportunity for public comment on environmental issues was provided.

COMPARISON OF ALTERNATIVES

Using the information presented in Table 12, the relative advantages and disadvantages of each resulting alternative are compared in order to recommend a "cost-effective alternative" as defined in the NCP.

Since the no action (Alternative 6) and limited action (Alternative 7) alternatives do not adequately remediate present and future groundwater and soil contamination, and do not address the human health concerns of direct contact or ingestion of contaminated groundwater or soil, these alternatives are not recommended for implementation at the site.

The present worth cost of Alternative 1A (100 percent contaminant removal) is more than an order of magnitude greater (16 times) than Alternative 2D (95 percent contaminant removal). Implementation of either of these alternatives will achieve similar environmental benefits (groundwater remediation, soil removal). Contaminated soil removal and both offsite and onsite groundwater treatment will remove contamination from the site and reduce exposure risks. The time required to meet target groundwater cleanup levels of 10^{-6} is approximately the same for these alternatives. Therefore, Alternative 1A is not recommended, because it would not be cost-effective.

Alternatives 2F and 3D differ only in the amount of soil contaminants contained in an onsite landfill, 95 percent in Alternative 2F and 100 percent in Alternative 3D. As discussed earlier, the 95 percent removal effectively removes most of the contaminant mass in the soil to levels adequate to protect public health and the environment and requires removing only 25 percent as much soil as is necessitated in the complete soil removal alternative. Alternative 2F is more cost-effective (similar environmental protection and benefits at lower cost) than Alternative 3D. Therefore, Alternative 3D is not recommended.

Alternatives 2A and 4D will prevent direct exposure to contaminated soil through construction of a cap. The multimedia cap required by Alternative 2A is more effective at reducing infiltration and leachate production into the groundwater than is the cap required by Alternative 4D. The greater infiltration rate of the clay cap required by Alternative 4D results in an increase in groundwater contaminant concentration during the initial years of groundwater extraction. Although the present worth costs for the alternatives are similar, the environmental benefits, as measured by the leachate production during the initial operating years of Alternative 2A are greater than for Alternative 4D. Therefore, Alternative 4D is not recommended for implementation at the site.

Three alternatives remain for comparison. These are:

- ° 2A--Multimedia cap, groundwater extraction with onsite GAC adsorption treatment.
- ° 2D--95-percent contaminant removal, disposal in offsite RCRA-licensed landfill, groundwater extraction with onsite GAC adsorption treatment
- ° 2F--95-percent contaminant removal, disposal in onsite RCRA-licensed landfill (to be built on the Kraus property), groundwater extraction with onsite GAC adsorption treatment.

Alternative 2A will minimize the human contact exposure, and decrease the concentration of contaminants in the groundwater plume. The groundwater will not be restored to background or 10^{-6} levels because the source of contamination (contaminated soil) remains onsite, and slow leaching of contaminants into the groundwater will continue indefinitely. The contaminant plume will need to be contained and treated by operating and maintaining an active groundwater extraction system far into the future (hundreds of years). The reliability and implementability of maintaining such a system into the indefinite future are less than if the source of contamination is removed. Much of the contamination is adsorbed to the soil in the saturated zone (aquifer structure). Low transmissivity of the aquifer results in a slow rate of flushing. Even if a cap were placed on the site, a slow rate of infiltration would occur. Also, since the water table seasonally rises to the ground surface, contaminants are leached slowly into the groundwater. Therefore, both horizontal and vertical infiltration through the contaminated soil would occur at this site. Since the other remaining alternatives will eventually achieve a more effective level of groundwater cleanup and greater public health benefits, and since the reliability of this alternative is questionable because of the high water table and because of the indefinite containment and treatment time, this alternative, which does not far exceed the cost of the other remaining alternatives, is not recommended for implementation at the site.

Implementation of Alternatives 2D and 2F involves groundwater treatment and removal or onsite containment of soil (95 percent of the contaminant mass). The present worth cost of Alternative 2D, soil removal, is slightly higher than Alternative 2F, soil containment (\$4,440,000 versus \$4,050,000).

The environmental benefit as measured by groundwater remediation is the same for both assembled alternatives. The environmental benefit gained by removing the soil contamination from the site exceeds the benefit of containing the contaminated soil in an onsite landfill because there remains the possibility for release of contaminants at the site. If the contaminated soil is removed from the site, the possibility of exposure to the local community is eliminated at the site. If an onsite landfill is created, permanent institutional constraints will be needed at the site. The aquifer in the area of the site is presently being used for drinking water. It is considered a Class II, current use aquifer. Citing requirements discourage location of a landfill above this type of aquifer. Citing requirements also discourage locating above fractured bedrock. The shale in the area of the site is known to be fractured. Therefore, the long term reliability of removal is greater than that of on-site containment.

Therefore, since the environmental, institutional, and public health and welfare benefits of Alternative 2D are greater than those of Alternative 2F, and since the cost to implement either is essentially the same, Alternative 2D is recommended as the cost-effective remedial alternative for implementation at the site.

RECOMMENDED ALTERNATIVE

It is recommended that FS Alternative 2D be selected as the cost-effective remedial alternative in accordance with Section 300.68 of the National Contingency Plan (NCP). This alternative is not the lowest cost alternative which provides a minimally adequate remedy, but it is the cost-effective alternative which adequately protects public health and the environment from the risks of further exposure to contaminated soil and groundwater at the site. This alternative substantially complies with all other environmental laws, and has a total present worth cost of \$4,440,000.

DESCRIPTION OF THE PROPOSED REMEDY

The recommended alternative involves offsite disposal of 4,300 yd³ of contaminated soil and sediment; groundwater containment, extraction, and treatment using direct contact GAC; and the opportunity for connection of downgradient residences within 0.5 mile of the site to the currently available public water supply. Two downgradient residences have been identified. Although these wells are not presently affected by contamination from the site, as a precautionary measure it is recommended that these wells be taken out of service and that the residences be connected to the public water supply. This alternative will remove the source of contamination, and will reduce contaminant concentrations in groundwater to acceptable levels.

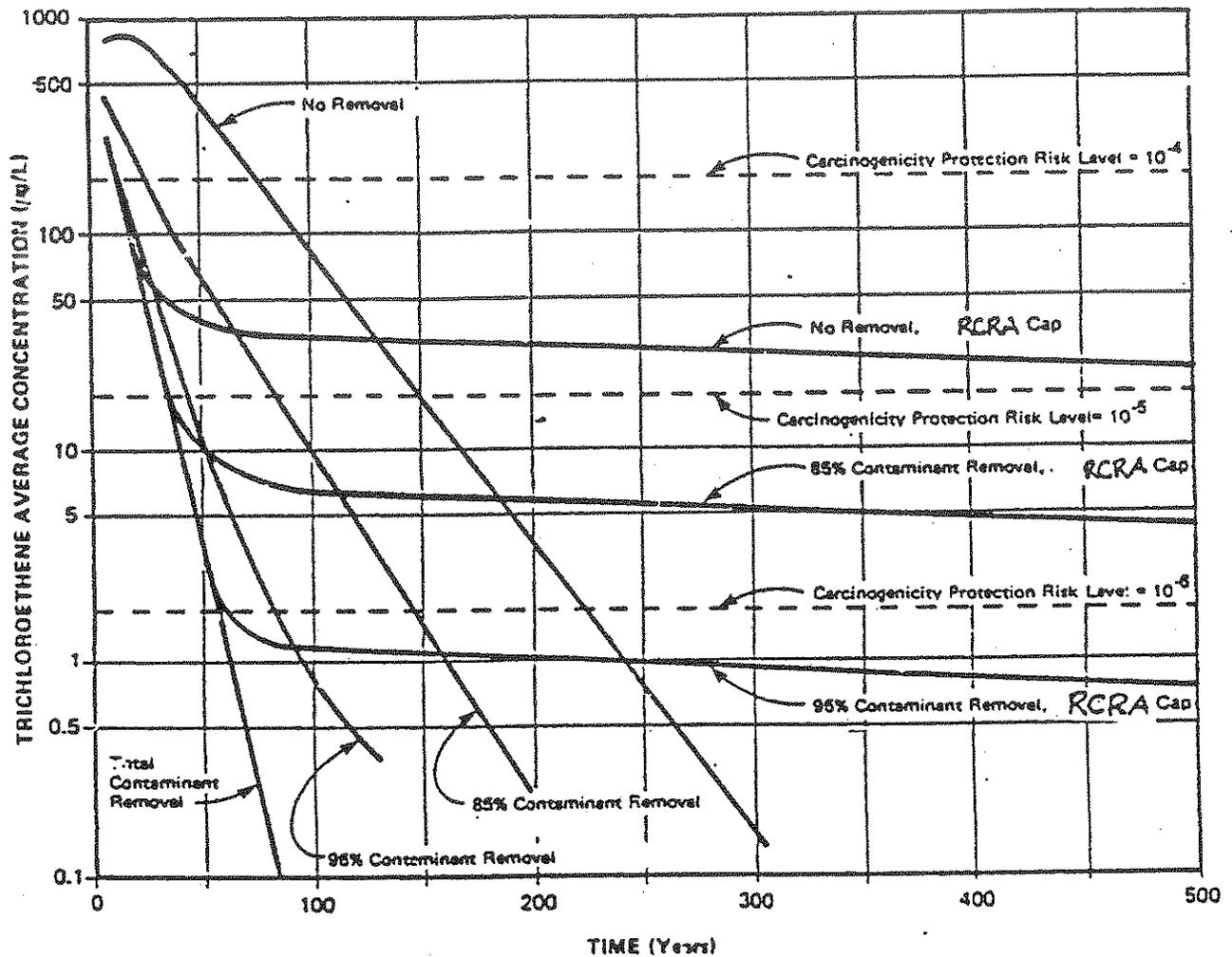
OFF-SITE REMEDIAL ACTION (FOR THE PROPOSED REMEDY)

(i) Groundwater Extraction System

A number of groundwater extraction wells will be placed downgradient from the site in order to capture the plume before further migration from the site. Each well will have a pumping rate of 1 gallon per minute to provide a capture zone of approximately 100 feet, and groundwater velocity of approximately 20 feet per year.

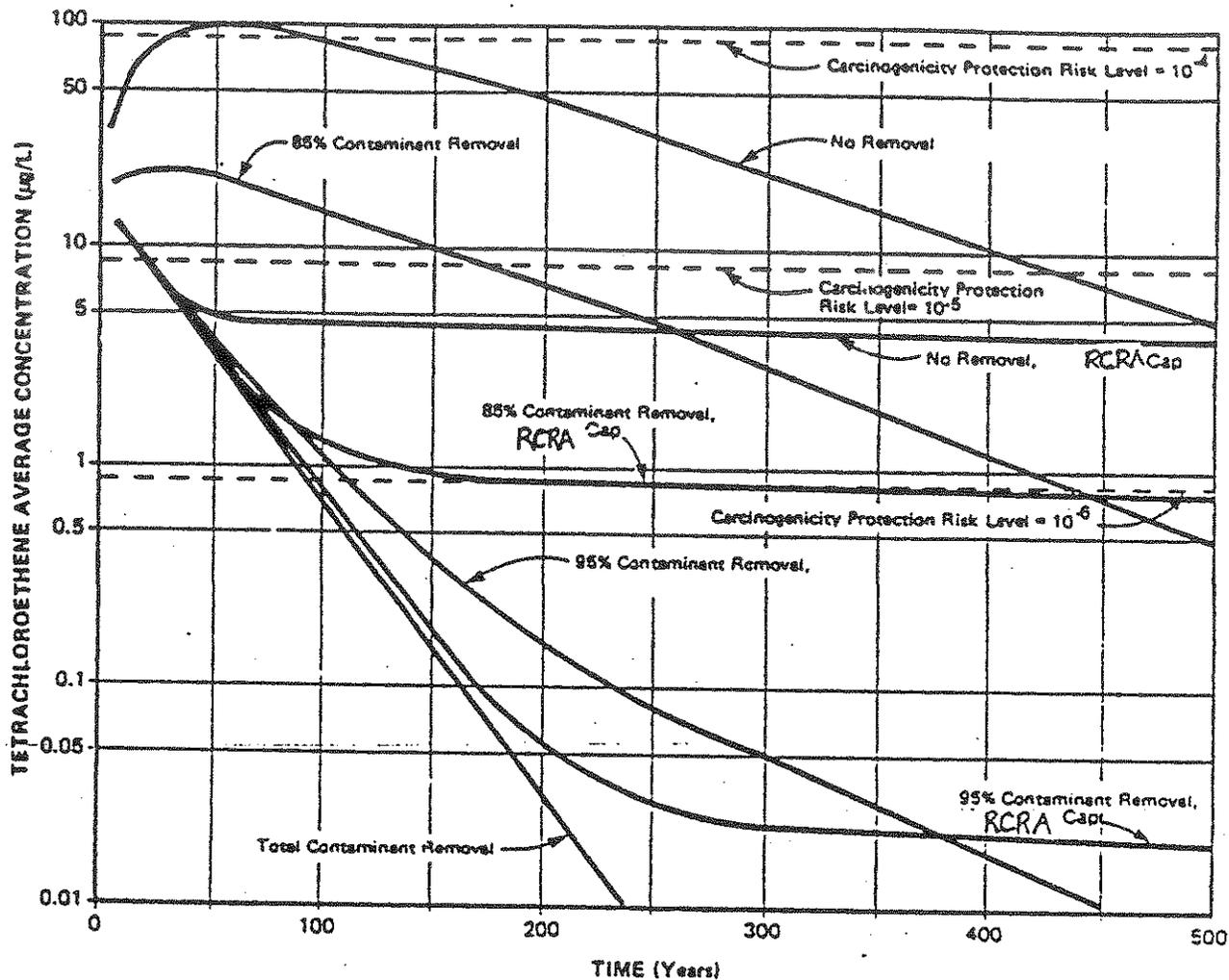
According to the analysis performed on the groundwater system, and as demonstrated in Figures 6 and 7, meeting a cleanup goal of 10⁻⁶ carcinogenic risk levels in groundwater is time prohibitive (about 100 years). In these figures, the line which corresponds to this alternative is the 95 percent contaminant removal. Thus, a cleanup risk based "target" concentration of 10⁻⁵ is proposed. It is estimated that the average concentration of contaminants in the plume can be reduced to this level within 30 years. The extraction wells will be placed to contain the contamination at concentrations greater than the 10⁻⁶ carcinogenic risk level isopleth.

The analysis in the FS, considering groundwater flow rates, flow-path lengths, porewater velocities, and retardation coefficients of the



NOTE: The analysis of leachate groundwater interaction involves estimation of recharge rates, the quantity of contaminants available for leaching, concentrations of those contaminants in water percolating through the unsaturated zone, rates of contaminant contribution to the groundwater or saturated zone and groundwater extraction rates. Estimates of this kind are tentative and limited in accuracy because of the uncertainties associated with sample data, site characterization, and the developmental nature of the science; however, they are presented here as a practical tool for assessing the relative impacts associated with various remedial actions.

FIGURE 5
 IMPACT OF TARGET CLEANUP CRITERIA ON
 ESTIMATED DURATIONS OF GROUNDWATER
 EXTRACTION FOR TRICHLOROETHENE
 HENFIELD PROPERTY
 OLD MILL SITE



NOTE: The analysis of leachate groundwater interaction involves estimation of recharge rates, the quantity of contaminants available for leaching, concentrations of those contaminants in water percolating through the unsaturated zone, rates of contaminant contribution to the groundwater or saturated zone and groundwater extraction rates. Estimates of this kind are tentative and limited in accuracy because of the uncertainties associated with sample data, site characterization, and the developmental nature of the science; however, they are presented here as a practical tool for assessing the relative impacts associated with various remedial actions.

FIGURE 7
 IMPACT OF TARGET CLEANUP CRITERIA
 ON ESTIMATED DURATIONS OF
 GROUNDWATER EXTRACTION FOR
 TETRACHLOROETHENE
 HENFIELD PROPERTY
 OLD MILL SITE

compounds detected at the Old Mill site, estimates that extraction of VOCs for approximately 30 years will be required to achieve to 10^{-5} cleanup levels in the entire plume. Any contamination present at lower levels when this cleanup level is attained will be allowed to migrate and disperse, and will naturally attenuate to the soil. Three contaminant transport models were used to estimate the fate of allowing the plume (10^{-5}) to migrate. It is estimated that, 1/4 to 1/2 mile downgradient from the site, after the extraction system is shut down, the contamination levels will not exceed the 10^{-6} carcinogenic risk level anywhere in the aquifer after about 100 years. Institutional constraints will need to be placed on the contaminated aquifer plume, and a short distance downgradient from the plume, until it is determined, through monitoring, that such constraints are no longer necessary.

(ii) Groundwater Treatment System

The treatment system for contaminated groundwater, prior to discharge to the offsite drainage ditch, consists of a series of GAC columns. Removal efficiency would be sufficient to meet discharge limitations set by the NPDES requirements. Limitations will call for an effluent which meets Water Quality Standards after the effluent mixes with existing flow (low flow is zero during parts of the year). The NPDES permit will be applied for and issued by the State of Ohio.

(iii) Aquifer Restrictions and Public Water Supply

Aquifer use restrictions will be required as long as concentrations in the plume are above 10^{-6} carcinogenic risk levels. Because of uncertainties involved in extraction and containment of groundwater, those residences within 0.5 miles downgradient from the site, which may potentially be affected, will be given the opportunity to be connected to the currently available public water supply. These actions will adequately protect all current receptors. Since a comparatively small cost is involved in this particular aspect of the alternative (\$12,000), and since the cost of a continuous monitoring program of these private wells would exceed the cost for a permanent connection, this action is both cost-effective and protective of public health.

SOURCE CONTROL REMEDIAL ACTION

(i) Building Demolition

The buildings at the site are known to have been used for storage of hazardous wastes. In addition, sampling and visual observations have identified a number of spills of hazardous substances inside the buildings. It is recommended that contaminated portions (assumed to be those portions which have come into contact with contaminated soil) of the buildings be demolished, and that contaminated waste materials be transported off-site to a U.S. EPA approved hazardous waste disposal

facility. Uncontaminated waste materials will be transported to a sanitary landfill. Sampling to confirm contamination will occur prior to or during the demolition of the buildings. The selection of an off-site RCRA facility will be made in coordination with the RCRA regional office where the facility is located.

(ii) Soil Removal

Soil contamination at the Old Mill site has been documented surficially over the majority of the site, and throughout portions of the unsaturated zone to the water table at a 5 foot depth. The results of the RI indicate that contamination of soils with base/neutral (B/N) and volatile organic compound (VOC) priority pollutants exists primarily within the top 2 feet of the soil profile. Selected areas of soil removal from the site would result in approximately 95 percent removal of both B/N and VOC contamination. This removal would result in residual concentrations that constitute levels which are adequate to protect public health and the environment in the soils. B/N compounds will be removed to U.S. EPA contract laboratory detection limits or background, and volatiles will be removed to 10^{-6} carcinogenic risk levels for ingestion of contaminated soil. The estimated areas of soil removal are shown on Figures 8 and 9.

The leachate-groundwater analyses presented in Appendix G and Chapter 5 of the FS indicate that this soil removal scenario will substantially reduce the total amount of contaminants transported from soils (unsaturated zone) to the aquifer (saturated zone). This removal is also necessary to eventually restore the aquifer to 10^{-6} carcinogenic risk levels. Limited land use restrictions will be necessary to protect the monitoring and treatment system, and to restrict aquifer use in the plume. It will not be necessary to cap the site because the site will be closed as a storage unit [40 CFR Part 264 (k)] and the contamination will have been removed to levels adequate to protect public health and the environment. Confirmational soil testing will be done during the remedial action to assure that adequate cleanup levels are reached.

This remedial action will require use of an offsite land disposal facility. No hazardous substances from the Old Mill site will be taken to an offsite RCRA facility unless it is in compliance with the U.S. EPA "Procedures for Planning and Implementing Off-site Response Actions". These procedures preclude use of a facility that has significant RCRA violations or other environmental conditions that affect the satisfactory operation of the facility. Among other things, the procedures also require that the facility have an applicable permit or interim status and have been inspected within six months prior to disposal. The land disposal facility will meet the minimum RCRA technical requirements. Three facilities within the geographical area (300 mile radius) of the site were considered for disposal in developing cost estimates.

OPERATION AND MAINTENANCE (O&M)

Each alternative was evaluated for O&M as shown in Tables 4 through 11. The O&M costs were estimated on an annual basis over 30 years. The O&M for the recommended

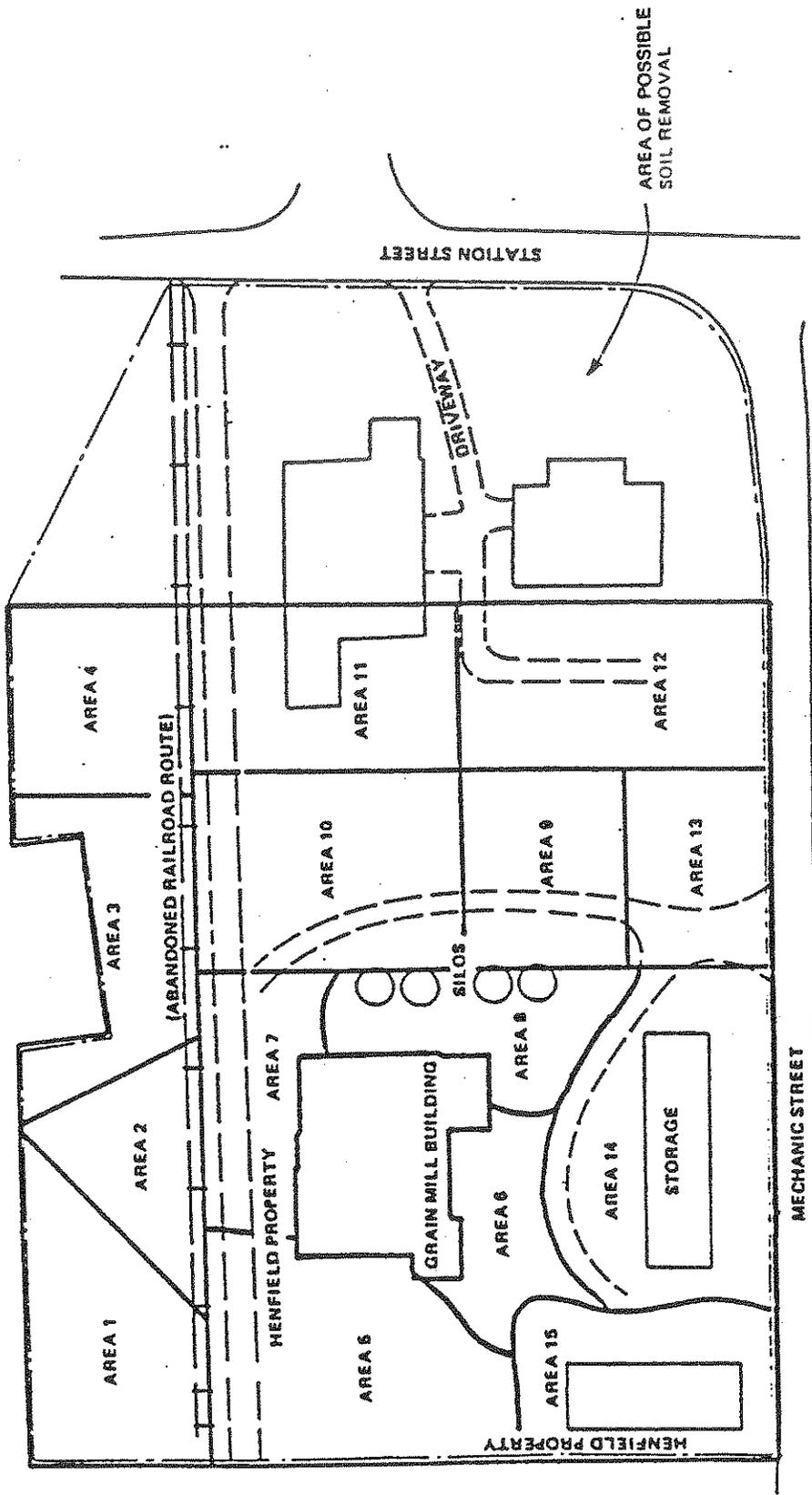


FIGURE 8
AREAS DELINEATED FOR SOIL AND LEACHATE-GROUNDWATER ANALYSIS
 HENFIELD PROPERTY
 OLD MILL SITE



KEY

- ▭ AREAS OF PROPOSED SOIL REMOVAL (PROPERTY BOUNDARIES ARE APPROXIMATE.)
- - - BOUNDARY OF PROPOSED CAPPING AND FENCED AREA

- 5 feet of soil removed in areas 8 and 10.
- 2 feet of soil removed in area 9
- 1 foot of soil removal in areas 2, 5, 6, 7, 11, 13, and 14.

alternative will require an offsite groundwater monitoring program consistent with RCRA closure regulations, and extraction and treatment of contaminated groundwater. The O&M period will last until such time as either applicable or relevant standards or ACLs are met. The period for O&M is expected to last for 30 years. The State of Ohio will assume responsibility for long term O&M of the remedial action. The U.S. EPA will enter into a State Superfund Contract with the State of Ohio to formalize this agreement.

SCHEDULE

<u>MILESTONES</u>	<u>DATE</u>
Approve Remedial Action (ROD)	7-31-85
Approve REM II Design Workplan	7-31-85
Amend REM II Work Assignment	7-31-85
Award IAG (design assistance)	7-31-85
Begin design	8-01-85
Complete design	9-09-85
Award Superfund State Contract (construction)	9-13-85
Award IAG (construction)	9-13-85

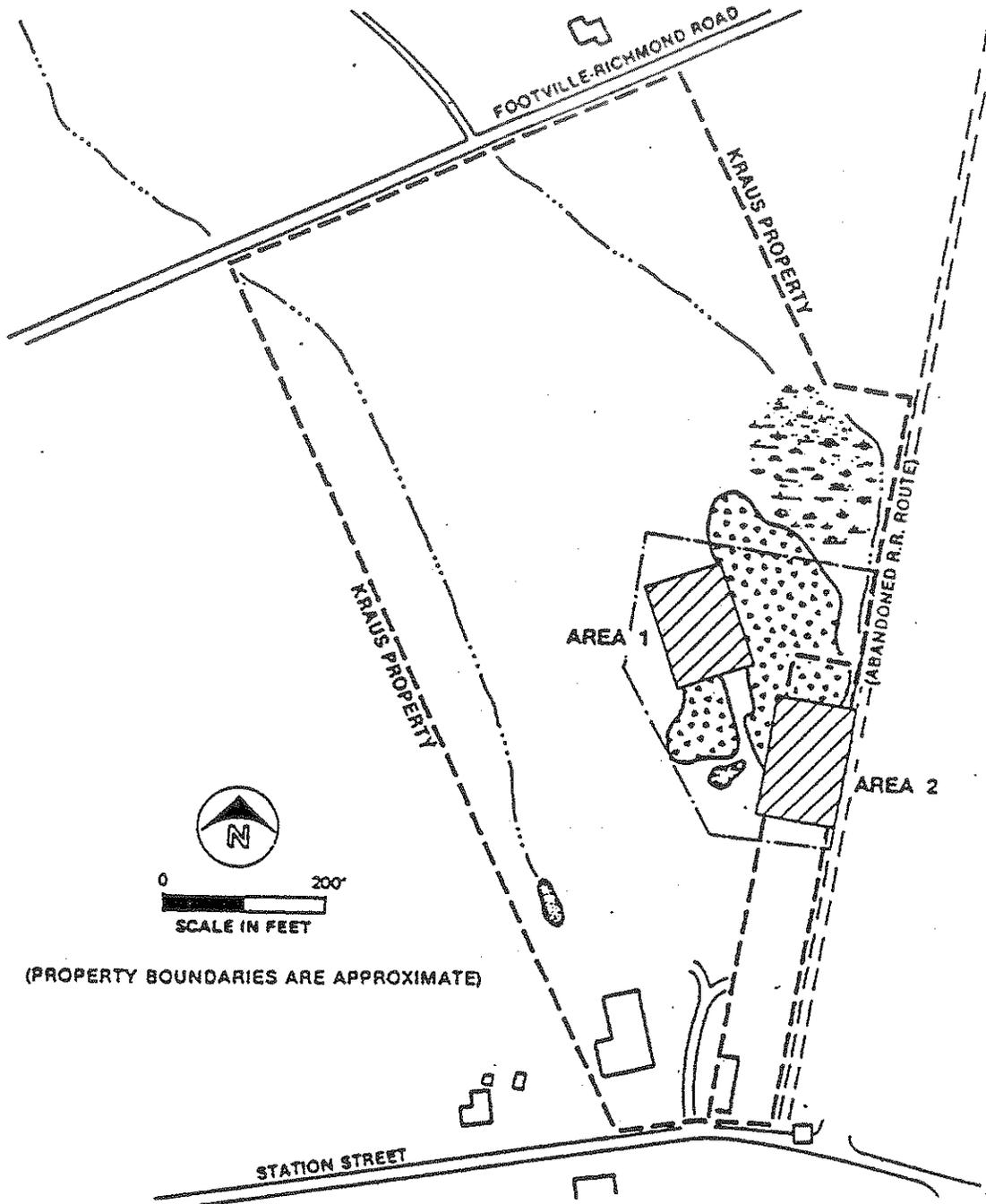
FUTURE ACTIONS

Uncertainty exists as to the contaminant removal efficiency physically attainable in the aquifer at the Old Mill site. Although our final remedial goal is to restore the groundwater to safe (10^{-5}) levels, the actual performance of the extraction system and the natural attenuation capacity of the aquifer must be monitored before an Alternate Concentration Level (ACL) can be set. A groundwater protection standard will be set with the goal of protecting the public health and the environment both now and in the future. Two major variables for setting a final cleanup standard are data adequacy and treatment reliability. Although the analytical data for the groundwater at the Old Mill site adequately defines the areal extent of contamination, information on the physical characteristics of the aquifer system is limited. This limits the assessment of the treatment reliability of the extraction system. It is predicted that the extraction time will be prolonged due to the low yield of the aquifer (30 years to attain 10^{-5} levels). It is further predicted that, if the treated plume (10^{-5}) is allowed to migrate and naturally attenuate, after about 100 years, 10^{-6} levels will not be exceeded in the aquifer. Thus, it is expected that after 130 years, the groundwater will be restored to acceptable (10^{-6}) levels. Therefore, the actual ACL determination will be deferred until operational data is available to make this determination. The U.S. EPA and Ohio EPA will monitor the performance of the extraction system. This will provide a greater certainty that the groundwater management objectives can be met within a reasonable period of time. After the performance of the extraction system is more fully assessed, and after consultation with the Ohio EPA, an actual ACL will be set. Therefore, this remedy will be considered an interim remedy until the ACL has been set. The State of Ohio will be responsible for assuring that institutional constraints will be honored for that portion of the aquifer which is contaminated until 10^{-5} levels are not exceeded, and for long term monitoring of the aquifer and O&M of the extraction and treatment system.

Specifics of the monitoring frequency and the mechanism for controlling ground-water use in contaminated portions of the aquifer will be defined in the O&M plan which will be developed during design and may be refined as operational data becomes available.

APPENDIX C
MAP OF THE SITE

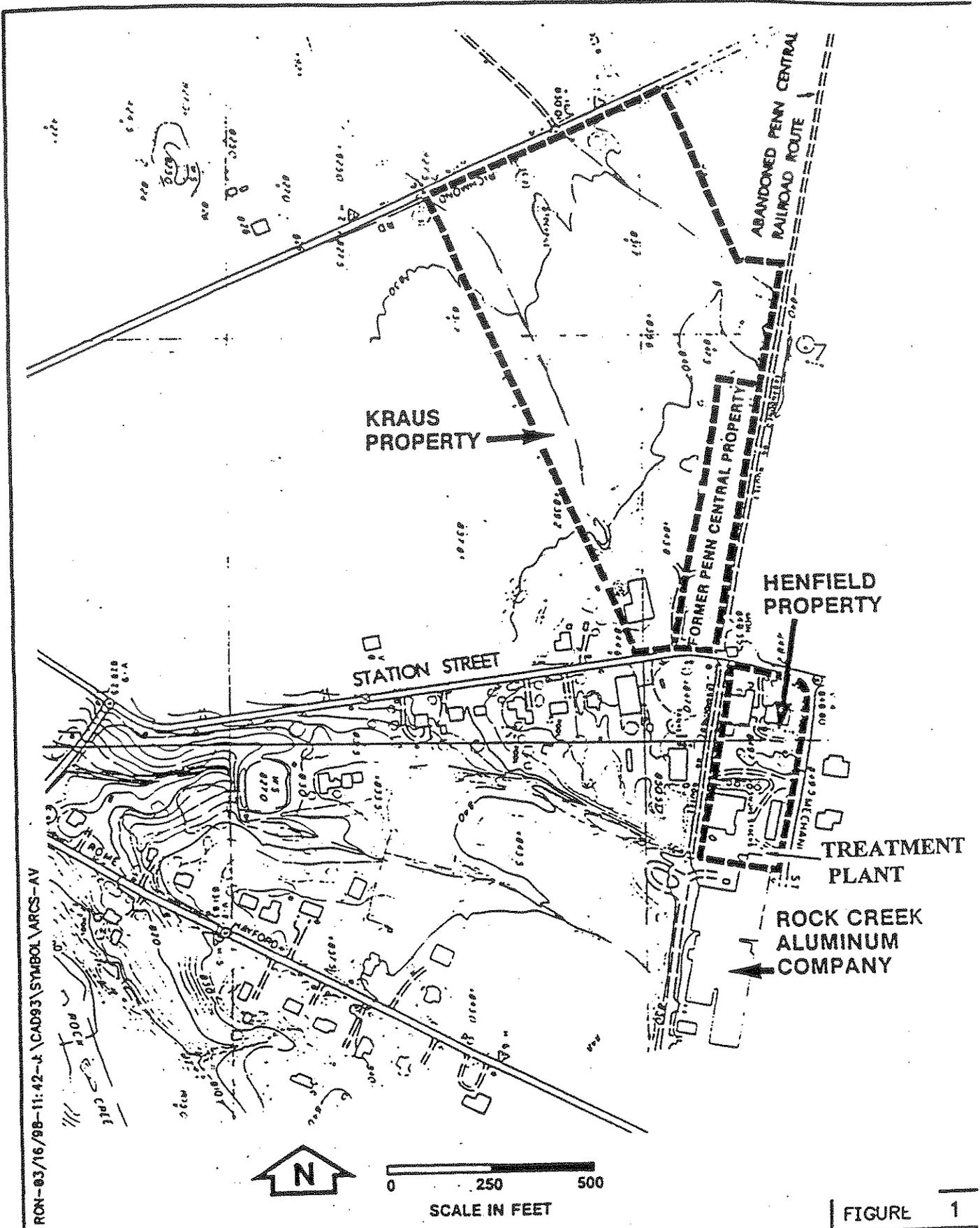
United States v. Norrell E. Dearing et al. v. First
Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and
State of Ohio v. Norrell E. Dearing et al. v. First Nationwide
Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio).



(PROPERTY BOUNDARIES ARE APPROXIMATE)

- KEY**
-  MARSHY AREA
 -  STOCKPILES OF RAILROAD BALLAST
 -  KRAUS PROPERTY DRAINAGEWAY
 -  APPROXIMATE AREA OF PROPOSED SOIL REMOVAL AND/OR CAPPING (250 yd³)
 -  PROPOSED FENCED AREA

FIGURE 9
 LOCATION OF SOIL REMOVAL
 AND/OR CAPPING
 KRAUS PROPERTY
 OLD MILL SITE



R01-03/16/98-11:42-J \ CAD93 \ SYMBOL \ ARCS-AV

FIGURE 1

ALTERNATIVE REMEDIAL CONTRACTING STRATEGY
 U.S. EPA CONTRACT No. 68-W8-0089
 WORK ASSIGNMENT No. 017-5R25
 DOCUMENT CONTROL No. RFW006-2B-ADNC

SITE LOCATION MAP
 OLD MILL SITE
 Rock Creek, Ohio

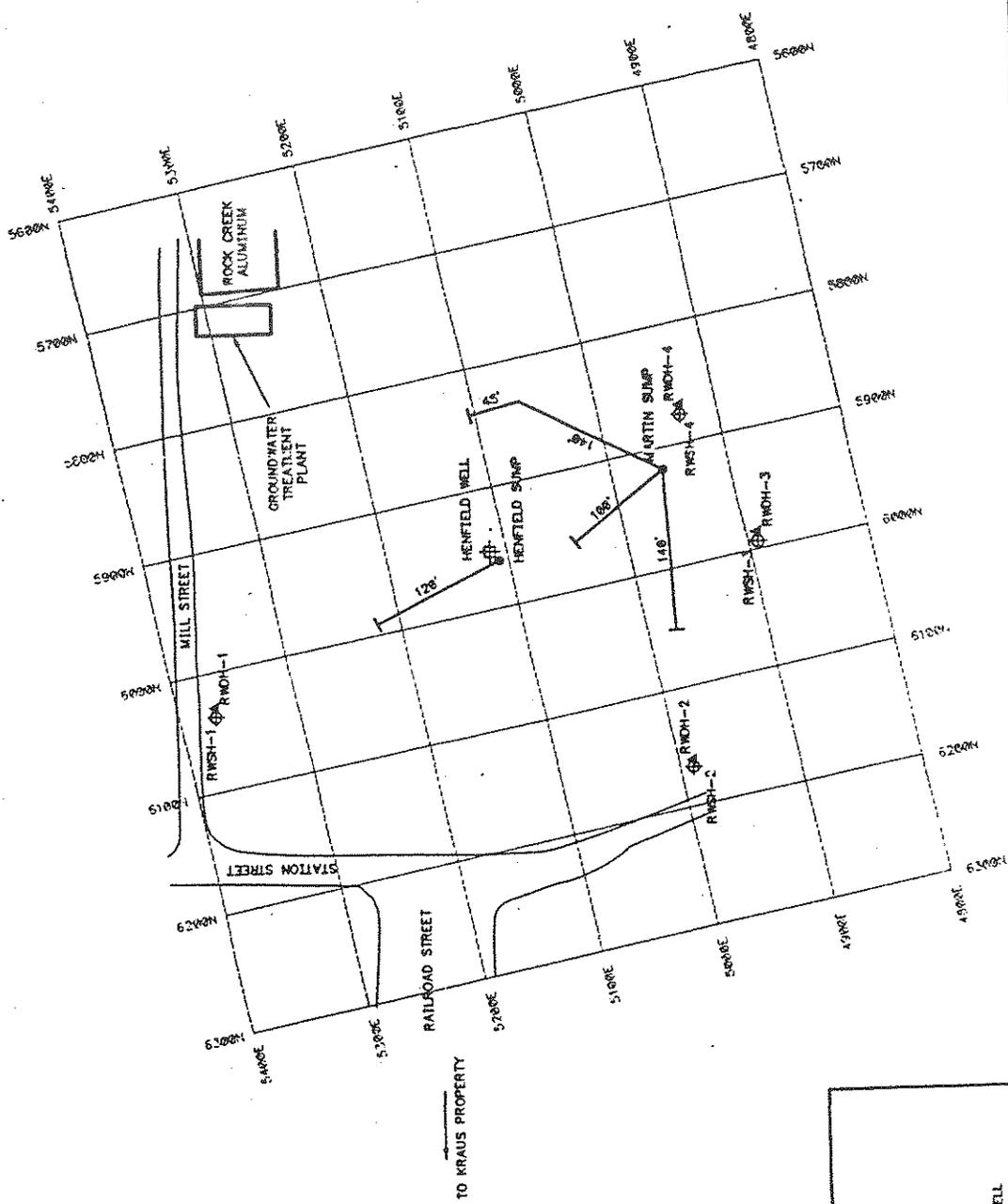


FIGURE 2

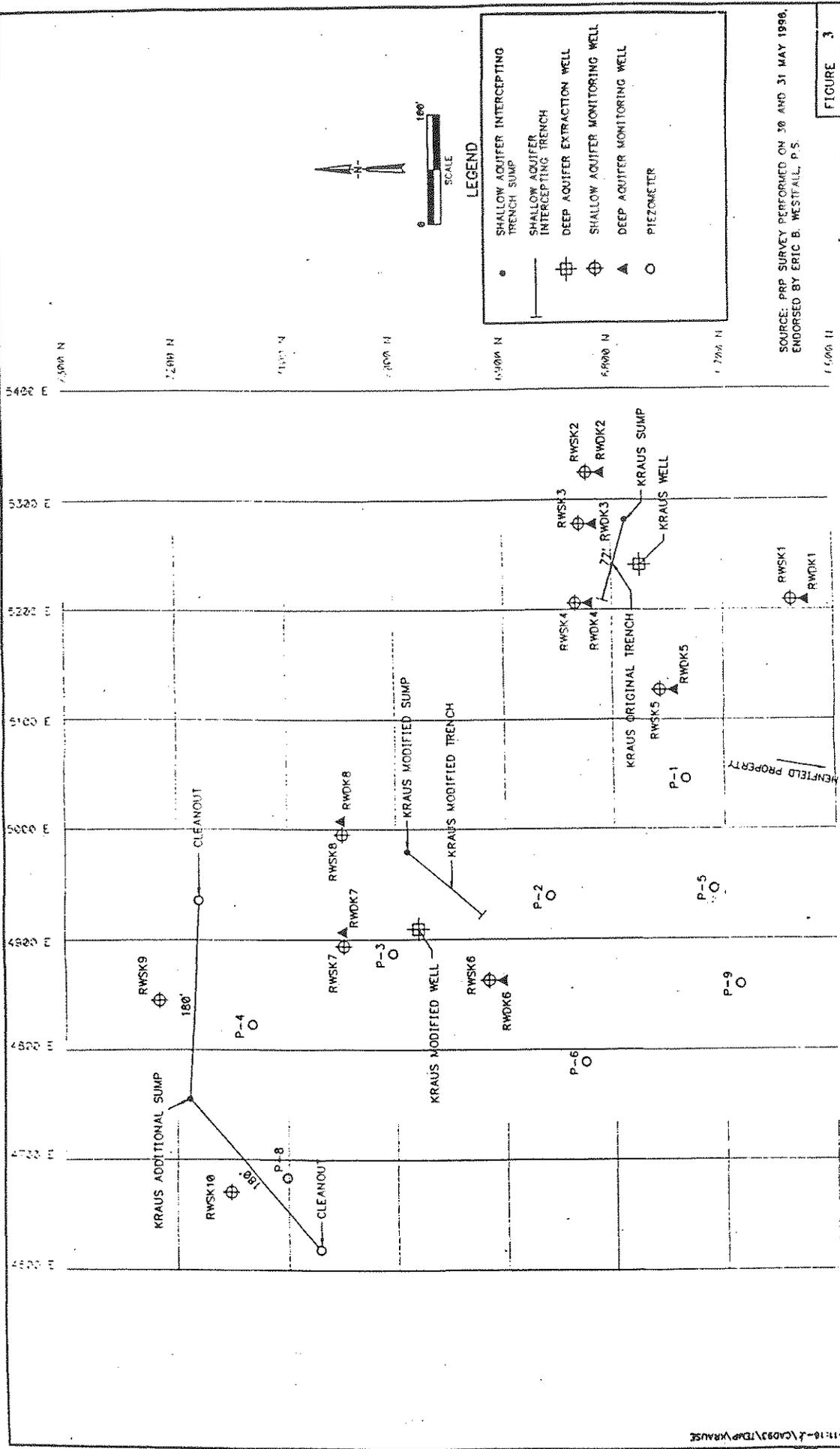
LOCATION OF EXTRACTION SUMPS/WELL AND MONITORING WELLS
HENFIELD PROPERTY, CLOMILL SITE
Rock Creek, Ohio

ALTERNATIVE REMEDIAL CONTRACTING STRATEGY
U.S. EPA CONTRACT No. 68-W8-0089
WORK ASSIGNMENT No. 017-5725
DOCUMENT CONTROL No. RFW008-2B-ADNC

TO KRAUS PROPERTY

LEGEND

- SHALLOW ACQUIFER INTERCEPTING TRENCH SUMP
- SHALLOW ACQUIFER INTERCEPTING TRENCH
- ⊕ DEEP ACQUIFER EXTRACTION WELL
- ⊗ SHALLOW ACQUIFER MONITORING WELL
- ▲ DEEP ACQUIFER MONITORING WELL



SOURCE: PRP SURVEY PERFORMED ON 30 AND 31 MAY 1996,
 ENDORSED BY ERIC B. WESTFALL, P. S.

FIGURE 3

ALTERNATIVE REMEDIAL CONTRACTING STRATEGY
 U.S. EPA CONTRACT No. 88-WB-0089
 WORK ASSIGNMENT No. 017-SR25
 DOCUMENT CONTROL No. RFW006-2B-ADNC

LOCATION OF EXTRACTION SUMPS/WELLS,
 MONITORING WELLS AND PIEZOMETERS
 KRAUS PROPERTY, OLD MILL SITE
 Rock Creek, Ohio

APPENDIX D
SETTLING PERFORMING PARTIES

United States v. Norrell E. Dearing et al. v. First
Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and
State of Ohio v. Norrell E. Dearing et al. v. First Nationwide
Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio).

Lord Corporation.

Meritor Automotive, Inc. (successor to Rockwell International
Corporation).

Molded Fiberglass Companies.

Premix, Inc.

The Stackpole Corporation.

Counsel of Record

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APPENDIX E
SETTLING NON-PERFORMING PARTIES

United States v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 4:89 CV 2001 (N.D. Ohio) and State of Ohio v. Norrell E. Dearing et al. v. First Nationwide Financial Corp., Civ. No. 1:92 CV 1364 (N.D. Ohio).

Aardvark Associates, Inc.

Combustion Engineering, Inc.

First Nationwide National Bank.

Formica Corporation.

Jack Webb.

Millenium Holdings, Inc. on behalf of and for the benefit of SCM Corporation, the Glidden Company and their respective predecessors (including Glidden-Durkee Company and SCM Chemicals, Inc.).