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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA
HAMMOND DIVISION

UNITED STATES OF AMERICA, Plaintiffs, v. MIDWEST SOLVENT RECOVERY, INC., et al., Defendants, and AMERICAN CAN COMPANY, INC., et al., Third Party Plaintiffs, v. ACCUTRONICS, et al., Third Party Defendants.	CIVIL ACTION NO. H-79-556 Judge Kanne

NOTICE OF LODGING

Pursuant to 28 C.F.R. Section 50.7, a proposed Partial Consent Decree is being lodged with the Court in this civil action. After the requisite Federal Register Notice is published, the time period for public comment has run, and the comments, if any, have been evaluated, the Court will be further advised as to any action

Edward D. Conley, Helga C. Conley, Robert J. Dawson, Jr., and John and Mary Miletich for the clean up of the Midco I and Midco II hazardous waste disposal sites in Gary, Indiana; and

WHEREAS, on January 19, 1984, the United States filed its First Amended Complaint adding claims for injunctive relief under § 106 of the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9606, and for the recovery of Response Costs incurred by the United States in connection with the Midco I and Midco II sites under § 107 of CERCLA, 42 U.S.C. § 9607, and by adding defendant Penn Central Corporation as an owner of a portion of the Midco II site, and defendants Insilco Corporation, Rust-Oleum, Inc., Zenith Radio Corporation, Standard T Chemical Company, Inc., American Can Company, Inc., Pre Finish Metals, Inc., Premier Coatings Inc., Motorola, Inc., and DeSoto, Inc. as generators of hazardous substances that were disposed of at the Midco I and II sites; and

WHEREAS, U.S. EPA has caused to be removed and disposed of certain hazardous substances from the surface of the Midco I and II sites pursuant to its authority under 42 U.S.C. § 9604, and in a manner not inconsistent with the National Contingency Plan, 40 C.F.R. Part 300 et seq; and

WHEREAS, on January 17, 1985, defendants Penn Central Corporation, John and Mary Miletich, Insilco Corporation, Rust-Oleum, Inc., Zenith Radio Corporation, Standard T Chemical Company, Inc., American Can Company, Inc., Pre Finish Metals, Inc., Premier Coatings Inc., Motorola, Inc., and DeSoto, Inc. filed a Third Party Complaint against 134 persons; and

WHEREAS, a portion of the relief sought by the United States in its First Amended Complaint would require the defendants to reimburse the United States for the costs incurred by it in connection with the Midco I and Midco II sites, to conduct an investigation of the soil and ground water conditions at and near the Midco I and Midco II sites, and to identify remedial alternatives to abate alleged releases and threatened releases of hazardous substances at and from the sites; and

WHEREAS, it is Plaintiff's present intention, subject to its prosecutorial discretion, i) to consider seeking to amend its First Amended Complaint to add as parties defendant certain persons who are not Participants in this Partial Consent Decree and to seek appropriate relief, and ii) to consider executing first on any judgment obtained by Plaintiff in this action against non Participants; and

WHEREAS, the parties to this Partial Consent Decree recognize that the partial settlement of this litigation is in the public interest; and

WHEREAS, the Plaintiff and Participants, by and through their representatives, have each agreed to the execution of this Partial Consent Decree;

NOW THEREFORE, it is Ordered, Adjudged and Decreed as follows:

I.

DEFINITIONS

The following definitions shall apply in this Partial Consent Decree:

A. "Participants" -- means those defendants and Third Party Defendants who have agreed among themselves to enter into this Partial Consent Decree with the United States. The Participants are identified in Exhibit A, which is attached hereto and incorporated herein by reference.

B. "Waste Materials" -- means any hazardous substance, pollutant or contaminant and any solid or hazardous wastes, as defined by CERCLA and RCRA.

C. "Midco I Site" -- means the waste disposal facility which is located at 7400 15th Avenue, Gary, Indiana, and which is described in the United States' First Amended Complaint.

D. "Midco II Site" -- means the waste disposal facility which is located at 5900 Industrial Highway, Gary, Indiana, and which is described in the United States' First Amended Complaint.

E. "Remedial Investigation and Feasibility Study", "RI/FS" or the "Work" -- means the investigation support, site definition activities, detailed site characterization studies, site hazard assessments, remedial investigation reports, evaluation of remedial action alternatives and feasibility reports which are to be performed by the Participants at the Midco I and II sites pursuant to the specifications and schedules in this Partial Consent Decree and in Exhibit B (for the Midco I site), and in Exhibit C (for the Midco II site). Exhibits B and C are attached hereto and incorporated herein by reference.

F. "Response Costs" -- means all costs lawfully recoverable under CERCLA.

II.

JURISDICTION

This Court has subject matter jurisdiction over this matter and has personal jurisdiction over the Participants for the purposes of this Partial Consent Decree. The Participants and Plaintiff agree to be bound by the terms of this Partial Consent Decree and not to contest its validity in any subsequent proceeding arising from it.

III.

PARTIES BOUND

This Partial Consent Decree shall apply to and be binding upon the Participants, their officers, directors, agents, servants, employees, successors, contractors and assigns, and upon all persons, firms, subsidiaries, divisions, and corporations acting under or for them and upon the United States on behalf of U.S. EPA. Each undersigned representative certifies that he or she is fully authorized to enter into this Partial Consent Decree and to execute and to legally bind such signatory to this document. The Participants shall provide a copy of this Partial Consent Decree to each contractor or subcontractor retained to perform the RI/FSs at the Midco I and II sites and shall condition any contract for the RI/FSs on compliance with this Partial Consent Decree.

IV.

OBJECTIVE OF THIS PARTIAL CONSENT DECREE

The objective of the United States and the Participants, through entry of this Partial Consent Decree, is to protect public health and the environment from hazardous conditions which may be presented by any release or threatened release of Waste Materials from the Midco I and II sites by (a) requiring that Participants perform Remedial Investigation and Feasibility Studies necessary to determine the full extent of contamination and to

evaluate remedial alternatives to abate such contamination, if any, at the Midco I and II sites, and reimburse the United States for certain Response Costs incurred by it at the Midco I and II sites, and (b) providing for the deferral of certain discovery and litigation in this case until the Remedial Investigation and Feasibility Studies are completed and there has been an opportunity to attempt to reach a final settlement of this litigation, including a privately-funded remedial action, if necessary. The United States and the Participants agree that the RI/FSs shall be performed in a manner which is consistent with the National Contingency Plan, 40 C.F.R. Part 300 et seq.

V.

COMMITMENT OF THE PARTICIPANTS TO PERFORM REMEDIAL INVESTIGATION AND FEASIBILITY STUDIES AT THE MIDCO I AND II SITES

A. In order to achieve the objective of this Partial Consent Decree, the Participants shall undertake and perform, at their expense, complete Remedial Investigation and Feasibility Studies at the Midco I and II sites, as defined by the work plans for the RI/FSs, which are attached hereto as Exhibit B for the Midco I site and Exhibit C for the Midco II site as modified pursuant to Subparagraph B, below. The Participants shall commence the RI/FSs at the Midco I and II sites within fourteen (14) days of the lodging of this Partial Consent Decree. The RI/FSs shall be implemented pursuant to the time schedules in Exhibits B and C.

B. The Participants and the Plaintiff understand that during the course of reviewing analytical data, draft or final reports and public comments thereon, U.S. EPA may determine that modifications to the Work, including without limitation, additional data collection or evaluation, should be performed. The Participants shall perform all such modifications that are necessary to achieve the objective of this Partial Consent Decree, pursuant to a schedule approved by U.S. EPA. Any dispute concerning the necessity or schedule for such modifications shall be presented to the Court for resolution pursuant to Paragraph XIV, herein. Provided that, in lieu of presenting the matter to the Court for resolution, U.S. EPA shall have the right, without limitation, to perform any modifications that Participants do not agree to perform pursuant to this Subparagraph. Any Response Costs incurred by U.S. EPA in the performance of such modifications shall not be included within the scope of "Covered RI/FS matters" or "Covered Reimbursement Matters" for which the United States covenants not to sue pursuant to Paragraph XII.

C. The Participants agree to have the RI/FSs performed at the Midco I and II sites in compliance with all applicable federal, state and local laws, and all regulations promulgated thereunder. The Participants shall obtain, or cause their contractors to obtain, all permits or approvals necessary under such laws and regulations. U.S. EPA will use its best efforts

to expedite the issuance of all such permits within its jurisdiction. In addition, the Participants shall use quality assurance, quality control and chain of custody procedures in accordance with a U.S. EPA approved plan as required in Exhibits B and C.

D. The Participants shall provide written progress reports to U.S. EPA by the tenth day of every month during the implementation of the RI/FSs which describe in detail the actions which have been taken during the previous month toward achieving compliance with this Partial Consent Decree. Said reports shall, at a minimum, provide the following information:

1) The date any task required to be performed was completed;

2) An identification of any event which may cause delay in achieving any future tasks and a summary of efforts made, if any, to mitigate the delay;

3) The overall progress made toward completing the RI/FSs;

4) The activities which are scheduled for the next month;

5) A summary of analytical results and preliminary evaluations prepared during the preceding month, and of the analytical results or evaluations which will be prepared in the upcoming month; and

6) A summary of the changes in the work plans agreed to by the Participants and U.S. EPA during the preceeding month.

E. In accordance with the schedules set forth in Exhibits B and C, the Participants shall submit the final RI and FS reports to U.S. EPA for review. Within sixty (60) days of its receipt of each RI and FS report, U.S. EPA shall review and comment upon each report. If U.S. EPA takes the position that a RI or FS has not been performed in accordance with the specifications in Exhibits B or C as amended pursuant to this Partial Consent Decree, U.S. EPA shall notify the Participants in writing as to what should be done to complete the RI or FS. If the Participants agree that an RI or FS has not been satisfactorily completed pursuant to the terms of Exhibit B or C as amended by this Partial Consent Decree, then they shall so complete the Work. If Participants do not agree that an RI or FS has not been completed satisfactorily or that additional data collection or evaluation is necessary to complete the RI or FS pursuant to the terms of this Partial Consent Decree, then the matter shall be resolved pursuant to Paragraph XIV., herein. Where the Participants agree, or are ordered by the Court, to perform additional work pursuant to this Subparagraph, they shall commence such work within ten (10) days of notice from U.S. EPA or an order from the Court, whichever is later, and complete such work in accordance with a schedule approved by U.S. EPA or the Court.

F. Upon U.S. EPA approval of a final FS report, U.S. EPA shall make available to the public each such report for review and comment for a period of, at a minimum, twenty-one (21) days, pursuant to U.S. EPA Community Relations Policy. Within fourteen (14) days following the expiration of the public comment period, U.S. EPA will notify the Participants of any modifications to the final report which must be made. The Participants agree to make these modifications in the report.

G. Upon satisfactory completion of the final modifications required to be performed, if any, pursuant to Subparagraphs V. B., E. and F., U.S. EPA will approve the completion of the RI/FSs.

H. The United States and the Participants recognize that, by entering into this Partial Consent Decree, U.S. EPA has approved the implementation of the RI/FSs pursuant to the terms of this Partial Consent Decree. The Plaintiff agrees, and the Court finds, that upon approval by U.S. EPA of the activities completed in the performance of the RI/FS pursuant to this Partial Consent Decree, such activities will be deemed to be consistent with the National Contingency Plan, 40 C.F.R. Part 300 et seq.

I. The Participants shall be responsible for completion of the RI/FSs and shall assume any and all liability arising from

their acts or omissions in the performance of them. Beginning with the commencement and ending upon U.S. EPA or Court approval of completion of the RI/FSs, the Participants shall be responsible, pursuant to this Partial Consent Decree, for addressing any releases or threatened releases of Waste Materials which may occur at or from the Midco I and II sites which are determined by the On Scene Coordinator ("OSC"), whose duties are set forth in Paragraph X herein, to be caused by the Participants' performance of the RI/FSs. Further, the Participants shall take such action in the performance of the RI/FSs as is reasonably necessary to assure that further contamination of soil and ground water at the Midco I and II sites does not occur as a result of the performance of the RI/FSs.

J. 1) Within fourteen (14) days of the lodging of this Partial Consent Decree, the Participants shall obtain a performance bond in the amount of two (2) million dollars, which bond shall assure Plaintiff the complete performance of the RI/FSs pursuant to the terms of this Partial Consent Decree. The bond shall provide in the event of default, that the RI/FSs shall be completed satisfactorily and fully. The bond shall not in any manner authorize the surety to avoid its obligations to have the RI/FSs completed.

2) The Participants or their contractor shall maintain in force insurance policies for liability arising out

of the acts or omissions of the Participants in the performance of the RI/FSs in the following amounts:

a) Comprehensive General Liability Insurance (including broad-form contractual liability and completed operations, explosion, collapse and underground hazards) in the amount of One Million Dollars ($1,000,000) covering personal injury, bodily injury and property damages.

b) Worker's Compensation - Statutory

c) Public Liability -

Bodily Injury -	$500,000/occurrence
	$500,000/aggregate
	$500,000/accident
Property Damage -	$500,000/occurrence
	$500,000/aggregate

d) Automobile Liability -

Bodily Injury -	$300,000/person
	$500,000/accident
	$500,000/accident

VI.

REIMBURSEMENT

A. Within fourteen (14) days of the entry of this Partial Consent Decree, the Participants shall pay a total of three million one hundred thousand dollars ($3,100,000) to the United States in reimbursement of Response Costs incurred by the United States with respect to the Midco I and II sites prior to April 1, 1985. This amount shall be made payable by certified or cashiers check to the "EPA Hazardous Substances Response Fund", and shall be delivered to U.S. EPA Superfund, P. O. Box 371003 M, Pittsburgh, Pennsylvania 15251.

B. In addition to the amounts identified in Subparagraph A herein, the Participants shall reimburse the United States in an amount not to exceed $100,000 for the costs incurred by U.S.

EPA in connection with its oversight of the Participants' performance of the RI/FSs. Payment shall be made to the United States as provided above within thirty (30) days of the Participants' receipt of a demand for a sum certain for such costs from the United States after entry of this Partial Consent Decree. Participants' liability, if any, for any such oversight costs incurred by the United States in excess of $100,000 shall not be included within the scope of "Covered Reimbursement Matters" for which the United States covenants not to sue pursuant to Paragraph XII, hereof.

C. Payments made pursuant to this Paragraph VI shall not be considered payments of a civil or criminal fine or penalty.

VII.

PARTIAL STAY OF THE LITIGATION

Upon the lodging of the Partial Consent Decree, and except as otherwise provided in this Paragraph, all proceedings in this litigation shall be stayed and suspended until that date upon which the stay is lifted pursuant to Paragraph VIII, below. The process of discovery and litigation between Participants and non-Participants shall not be stayed hereby, and such discovery and litigation may continue. Without in any manner impairing the foregoing right of Participants to pursue their action against non-

Participants, it is expressly provided that during the pendency of the stay, (i) Plaintiff shall not be considered a party to the third party litigation or cross claims for purposes of discovery or otherwise (although Plaintiff shall receive service copies of all papers filed with the Court); and (ii) Plaintiff shall have the right to file memoranda with respect to legal issues raised in the third party litigation or cross claims. Furthermore, no Participant shall be prohibited from filing, pursuing or otherwise continuing a cross-claim against anyone not a party to this Partial Consent Decree. Subject to the foregoing, the rights and remedies of Plaintiff and the Participants against any non-Participants shall not be compromised, waived, released or affected, except as expressly provided in subparagraph XII.A.

VIII.

NEGOTIATION OF SOIL AND GROUND WATER REMEDY

Following U.S. EPA approval of the final reports for the Midco I and II FSs pursuant to Paragraph V. above, U.S. EPA shall notify the Participants which remedial action alternative(s) is approved for the Midco I and the Midco II sites. The Participants and the United States shall thereafter attempt in good faith to reach an agreement involving all potentially responsible parties which resolves all outstanding issues in this action, including a

privately-funded remedial action, if necessary, and reimbursement of outstanding Response Costs of the United States. If such an agreement is not reached within sixty (60) days of the commencement of negotiations, or such additional time as may be mutually agreed, the Participants and Plaintiff shall jointly move the Court to lift the stay of this litigation and set the matter for trial within two hundred and seventy (270) days after the stay is lifted.

IX.

SUBMISSION OF DOCUMENTS; ACCESS; SAMPLING AND ANALYSIS

A. The Participants shall direct their contractors to submit copies of all documents containing technical information prepared or received by their contractor, including sample analyses, chain of custody records, contracts, bills, receipts, correspondence, reports, and other documents, produced during or as a result of the performance of the RI/FSs, in the monthly report immediately following their preparation.

B. U.S. EPA employees and their authorized representatives and contractors shall have unrestricted access to the Midco sites for any purpose which U.S. EPA deems appropriate, including observation and monitoring of the progress of the RI/FSs, obtaining samples, conducting response work, and performing its own investigations relating to the soil, surface and ground water contamination at and near the Midco sites. In all such

instances, Plaintiff's employees, representatives and contractors shall announce their presence and display their credentials to Participants' Project Coordinator and shall abide by all safety and health regulations. The Participants shall not assume any liability arising from the acts or omissions of U.S. EPA employees, representatives or contractors in the course of such activities. In addition, U.S. EPA employees and their authorized representatives shall have the authority to inspect laboratories utilized by the Participants' contractors for analyses. This provision shall be in addition to, and not in substitution of, U.S. EPA's right of entry and access under applicable federal laws.

C. The Participants shall take such samples as are required in Exhibits B and C. All sampling and analysis shall be done pursuant to U.S. EPA protocols and chain of custody procedures, or as otherwise specified by the OSC. The OSC shall have the authority to select the locations of wells and sampling points during the implementation of the RI/FSs.

D. U.S. EPA employees and authorized representatives shall have the right to take splits of any samples obtained by the Participants at the Midco sites during the implementation of the RI/FSs. It is agreed that the expenses incurred by Plaintiff in connection with such split sampling are not oversight costs for which Participants are liable to reimburse the Plaintiff pursuant

to Paragraph VI. B., and shall not be included within the scope of "Covered Reimbursement Matters" for which the United States covenants not to sue pursuant to Paragraph XII hereof. The Participants shall give U.S. EPA seven (7) days notice of sampling conducted by them at the Midco I and II sites, or where such is not possible, as much notice as is possible under the circumstances. Before the disposal of any sample by the Participants, U.S. EPA shall be given thirty (30) days notice and an opportunity to take possession of such samples.

X.

ON-SCENE COORDINATOR

A. U.S. EPA shall designate an on-scene coordinator ("OSC") to observe and to monitor the progress of the RI/FSs and to coordinate communication between U.S. EPA and the Participants. The U.S. EPA OSC shall have the authority vested by 40 C.F.R. § 300 et seq., including but not limited to the authority to ensure that the RI/FSs are performed in accordance with all applicable statutes and regulations, and the authority to require a cessation of the performance of the RI/FSs or the cessation of any other activity at the sites which, in the opinion of the OSC, may present or contribute to an endangerment to public health, welfare of the environment or cause or threaten to cause the release of hazardous substances from the sites. In the event the OSC does require such a cessation, the OSC shall have the authority

to require the Participants to continue the RI/FSs in accordance with the instructions of the OSC, in a manner which avoids or mitigates the endangerment which the OSC believes may occur. All schedules, deadlines and milestone dates that Participants are subject to shall be adjusted by agreement between Plaintiff and the Participants to reflect any cessation of work or changes in the scope of work ordered by the OSC pursuant to this paragraph.

1) The Participants shall designate a "Project Coordinator" to observe and to monitor the progress of the RI/FSs and to coordinate communication between U.S. EPA and the Participants.

2) The Participants shall notify the OSC immediately upon discovery of any significant spill or release of a Waste Material. Such notice shall be followed by written notification from the Participants within ten (10) days which explains the event, any actions taken to eliminate any threat, and each precaution taken to avoid occurrence of any similar threat.

XI.

STIPULATED CIVIL PENALTIES

Unless excused by the provisions of paragraph XVIII, or modified by the Court pursuant to paragraph XIV, the Participants shall pay to the United States stipulated civil penalties in the amount of $1,000 for each day after the seventh day of non-compliance with the major milestones identified in Exhibit D hereto. These stipulated civil penalties shall be paid

to the United States within fourteen (14) days following demand by the United States, and shall be in addition to, and shall not preclude the use of, any other remedies or sanctions which may be available to the United States, including, but not limited to, civil penalties for non-compliance with Exhibit D for periods of less than seven days and penalties for failure to meet other schedules set forth in this Partial Consent Decree.

XII.

COVENANT NOT TO SUE

A. Upon payment by Participants to Plaintiff of the amounts described in Articles VI.A and VI. B., the United States covenants not to take any civil judicial or administrative action on behalf of U.S. EPA for "Covered Reimbursement Matters" against the Participants.

B. Except as provided in Subparagraph E herein, "Covered Reimbursement Matters" shall include any and all liability for the reimbursement of Response Costs incurred by the United States up to and including April 1, 1985, and, upon their payment, for the Response Costs identified in Subparagraph VI.B.

C. Upon approval of completion of the RI/FSs pursuant to Paragraph V.G., the United States covenants not to sue or to take any civil judicial or administrative action on behalf of U.S. EPA for "Covered RI/FS Matters."

D. Except as provided in Subparagraph E herein, "Covered RI/FS Matters" shall include any and all liability to the United States to perform the RI/FSs at the Midco I and Midco II sites which are to be performed pursuant to the terms of this Partial Consent Decree.

E. "Covered RI/FS Matters" and "Covered Reimbursement Matters" shall, without limitation, not include the following:

1) Any and all liability which the Participants or any other person may possess with respect to a release or a threatened release of Waste Materials at or from the Midco I and II sites which may occur during the performance, or after completion, of the RI/FSs.

2) Any and all liability which the Participants or any other person may possess for the remediation of soil, surface water and ground water contamination at or near the Midco I and II sites, except for such remediation as is performed by Participants, or performed by and reimbursed to Plaintiff by Participants, pursuant to the terms of this Partial Consent Decree.

3) Any and all liability which the Participants or any other person may possess with respect to recovery of Response Costs incurred by the United States after April 1, 1985, and not reimbursed to Plaintiff by the Participants pursuant to Paragraph VI. B.

4) Any and all liability which the Participants or any other person may possess to the United States for the recovery of its Response Costs associated with the completion of the Midco II partial clean-up which are incurred after March 15, 1985.

5) Any and all liability which the Participants or any other person may possess to the United States for the Recovery of its Response Costs associated with the U.S. EPA RI/FS preparatory site work incurred up to and including April 1, 1985.

6) Any and all liability which the Participants or any other person may possess with respect to any damages to natural resources.

F. The United States and the Participants expressly recognize that this Partial Consent Decree, the successful completion and approval of the RI/FSs, and the covenants not to sue, do not represent full satisfaction of, waiver or release of, covenant not to sue for, or otherwise prejudice the United States' claims against the Participants relating to matters other than "Covered RI/FS Matters", or "Covered Reimbursement Matters". Any claim or any defense which the Plaintiff on the Participants may have against any person or entity not a party to this Partial Consent Decree, including without limitation, claims for indemnity or contribution is expressly reserved.

G. The Participants and United States agree that nothing herein shall prevent the United States from itself undertaking any

work that the Participants have been requested to, but do not timely and satisfactorily perform. The Participants further agree that any and all liability they may possess with respect to such work activities undertaken by the United States, shall not be included in the scope of "Covered RI/FS Matters" or "Covered Reimbursement Matters" for which the United States covenants not to sue pursuant to Paragraph XII.

H. The United States and the Participants intend that this covenant not to sue shall not be considered a release of any kind.

I. In consideration of the entry of this Partial Consent Decree, the Participants agree not to make any claims against the Hazardous Substances Response Trust Fund established by CERCLA, including claims pursuant to Section 112 of CERCLA, 42 U.S.C. § 9612, for expenses related to performance of the Work or reimbursement of Response Costs pursuant to this Partial Consent Decree.

XIII.

ENFORCEMENT

A. The Court shall retain jurisdiction of this matter for the purposes of interpreting, implementing, and enforcing the terms and conditions of this Partial Consent Decree, and for adjudicating all matters of dispute among the parties.

XIV.

DISPUTE RESOLUTION

Unless otherwise provided in this Partial Consent Decree, any dispute which arises under this Partial Consent Decree shall in the first instance be the subject of informal negotiations. If the United States and the Participants cannot resolve the dispute within thirty (30) days, it shall be presented to the Court for appropriate resolution upon written notice by the Plaintiff or any Participant. The period for negotiations may be extended by mutual agreement. In an emergency, any such party may present the matter to the Court prior to the expiration of the 30 day period. Unless the United States is seeking a stipulated penalty or enforcement of this Decree, it shall be the responsibility of the Participants to notify the Court of the dispute and to bear the burden of proof. Thereafter, the Court shall order the parties to file such pleadings and shall hold such hearings as the Court deems necessary and proper.

XV.

FORM OF NOTICE

When notification to the United States or the Participants is required by the terms of this Partial Consent Decree, it shall be in writing and addressed to:

As to the United States:

Assistant Attorney General
Land and Natural Resources
Division
United States Department of Justice
Washington, D.C. 20530
Ref: DOJ 90-7-1-1

Director, Waste Management
Division
Attn: Midco On Scene Coordinator
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604

As to the Participants:

Mr. William Klettke
Vice President, Finance
The Enterprise Companies
1191 S. Wheeling Road
Wheeling, Illinois 60090

Robert Olian, Esq.
Sidley & Austin
1 First National Plaza
Chicago, IL 60603

Mr. Timothy Harker, Esq.
~~Kadison, Phaelzer, Woodard,~~
Quinn ~~& Rossi~~
~~2000 Pennsylvania Avenue, NW~~
Washington, D.C. 20006

2021 K Street N.W.
Suite 310
Washington, D.C. 20006

XVI.

MODIFICATION

The Plaintiff and the Participants may jointly agree in writing to modify Exhibits B and C. The Plaintiff and the Participants intend that, unless otherwise ordered by the Court, no modifications shall be made in this Partial Consent Decree without written approval of Plaintiff and Participants.

XVII.

NON-ADMISSION

This Partial Consent Decree and performance hereunder shall not constitute an admission, adjudication, or waiver of any right or defense of the Plaintiff or any Participant with respect to any allegation of the United States' First Amended Complaint or the Third Party Complaint or any fact or conclusion of law with respect to any matter alleged in or arising out of the First Amended Complaint or Third Party Complaint or evidence of any wrongdoing or misconduct or liability to any person, on the part of any Participant, its officers, directors, agents, servants, employees, successors, contractors and assigns, and any persons, firms, subsidiaries, divisions and corporations acting under or for them. Nothing in this Paragraph shall prohibit the use of this Partial Consent Decree by Plaintiff or any Participant as evidence to establish its existence or its terms.

XVIII.

FORCE MAJEURE

A. If a delay in meeting one or more requirements of this Partial Consent Decree is caused by circumstances beyond the control of Participants, the time for performance of such requirements shall be extended for a period equal to the delay resulting from such circumstances. In that event, the Participants shall not be liable for stipulated penalties. Participants shall use their best efforts to minimize any delay. If any event occurs which causes or may cause delay in the timely achievement of one or more requirements of this Partial Consent Decree, Participants shall notify U.S. EPA in writing as soon as possible after discovery by Participants of such event, but in any event, no later than ten (10) days after discovery by Participants. Such written notice to U.S. EPA shall describe in detail the anticipated length of the delay, the cause or causes of delay, the measures taken and to be taken by Participants to prevent or minimize the delay and the time table by which these measures will be implemented. In the event Participants fail to give such timely notice, this Paragraph shall not apply.

B. If Plaintiff and Participants agree that a delay is or was beyond the control of Participants and also agree upon the duration of such delay, the parties shall, with approval of the

Court, modify the schedule of work to be performed to the extent necessary to enlarge the schedule for completion of the requirements affected by such delay. If Plaintiff and Participants cannot agree that the reason for the delay is or was beyond the control of Participants, or cannot agree upon the duration of such delay, the provisions of Paragraph XIV shall apply, and the Participants shall submit the matter to the Court if necessary.

XIX.

RESPONSE AUTHORITY

Nothing in this Partial Consent Decree shall be deemed to limit the response authority of U.S. EPA under 42 U.S.C. § 9604 or the authority of the United States under 42 U.S.C. § 9606 with respect to matters other than "Covered RI/FS Matters" and "Covered Reimbursement Matters," or to alter the applicable legal principles governing the judicial review of any action taken by U.S. EPA pursuant to such authority.

XX.

RETENTION OF RECORDS

All parties shall preserve all records and documents now in their possession or control which relate in any manner to the Midco I and II sites despite any document retention policy to the contrary for one year after the completion of the Work.

XXI.

TERMINATION

Except for the covenants and promises herein, this Partial Consent Decree shall terminate upon the lifting of the stay of this litigation pursuant to Paragraph VIII herein.

APPROVED AND SO ORDERED THIS ___ DAY OF _____ 1985.

_____
Michael Kanne
United States District Judge

The Parties Enter Into This Partial Consent Decree and Submit It To The Court, That It May Be Approved And Entered.

THE UNITED STATES OF AMERICA:

By: _____

F. HENRY HABICHT II
Assistant Attorney General
Land and Natural Resources Division
United States Department of Justice
Washington, D.C. 20530

By: _____

ANDREW B. BAKER, JR.
Assistant United States Attorney
Northern District of Indiana
Federal Building
507 State Street
Hammond, Indiana 46320

By: _____

COURTNEY M. PRICE
Assistant Administrator for
Enforcement and Compliance Monitoring
United States Environmental Protection
Agency
401 M Street, S.W.
Washington, D.C. 20460

By: _____

VALDAS V. ADAMKUS
Regional Administrator
United States Environmental Protection
Agency, Region V
230 South Dearborn Street
Chicago, Illinois 60604

JAMES C. DRAGNA
Environmental Enforcement Section
United States Department of Justice
Washington, D.C. 20530

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FINAL

WORK PLAN

RI/FS

MIDCO II SITE

GARY, INDIANA

PARTIAL CONSENT DECREE - EXHIBIT C

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INTRODUCTION

This work plan defines the scope and activities for the performance of a Remedial Investigation and Feasibility Study (RI/FS) at the Midco II site in Gary, Indiana. The RI/FS will be carried out by Participants, as defined in the attached Partial Consent Decree, in accordance with the requirements of this work plan and of the Partial Consent Decree. Participants will also make reference to EPA's Remedial Investigations Guidance Document and EPA's Guidance Document for Feasibility Studies under CERCLA.

OBJECTIVES

The objectives of the Remedial Investigation for the Midco II site are to collect the data needed to evaluate the full extent of the hazards arising from the Midco II site so as to allow for the evaluation of remedial alternatives in the Feasibility Study. Tasks that will be undertaken include:

- Identifying specific contaminants that pose a danger to the public or the environment;
- Determining the nature of and extent of contamination on the project site;
- Identifying pathways of contamination migration from the site;
- Identifying the impact of contaminants on potential receptors;
- Determining and describing physical features that could affect migration of

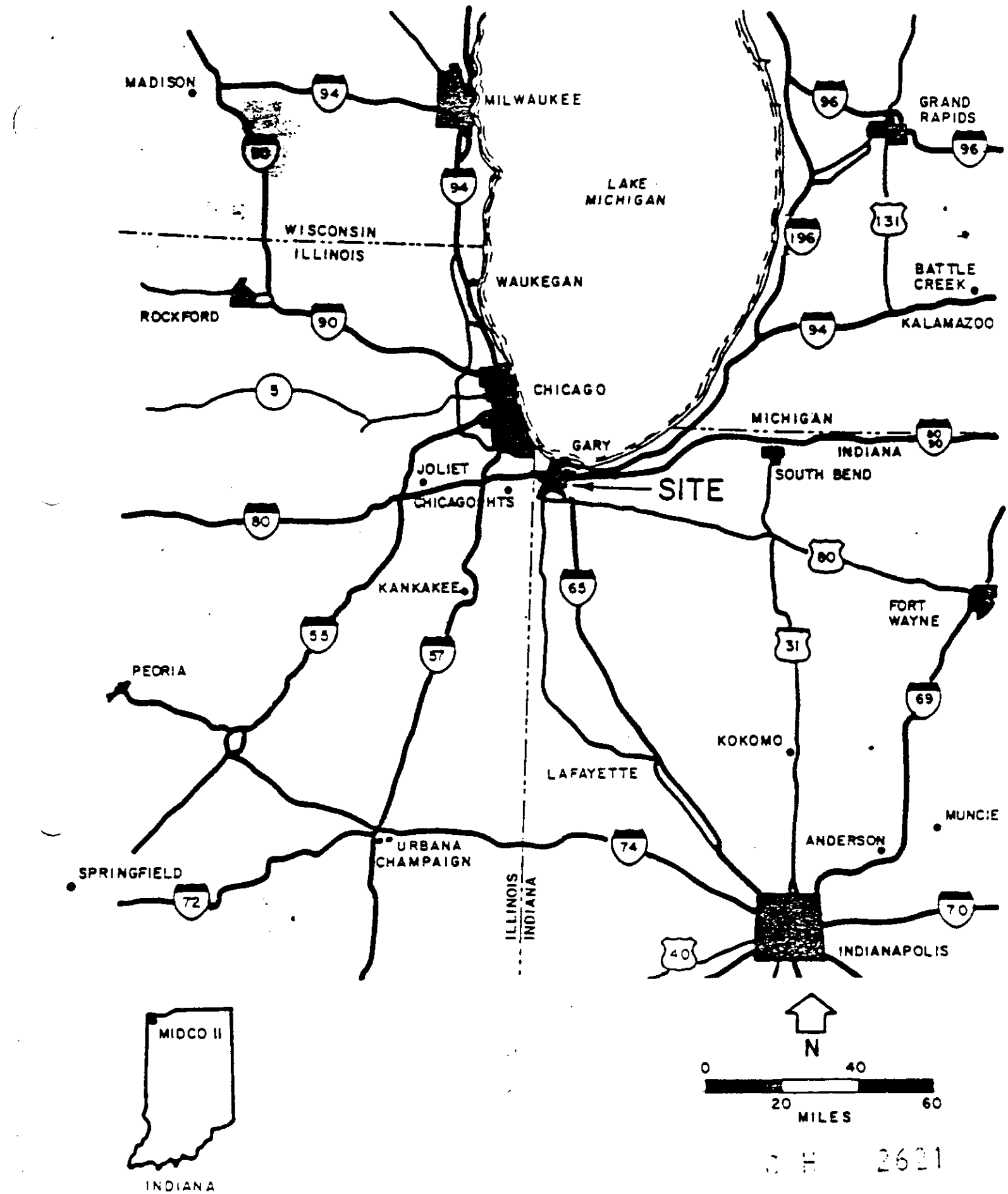
contaminants, methods of containment, or methods of remedial action cleanup.

The objectives of the Feasibility Study for the Midco I site are to:

- Develop and evaluate remedial action alternatives.

BACKGROUND

The Midco II site is located at 5900 Industrial Highway (U.S. Route 12) in the northwest quarter of Section 36, T37N, R9W, in the western portion of the City of Gary, Indiana (Figures 1 and 2). The site is situated on the northeast side of the highway, across from the Gary Municipal Airport. The site is bordered on the north/northwest by an auto salvage yard, on the east/northeast by a Penn Central Railroad right-of-way, on the south/southeast by vacant, private land, and on the west/southwest by Industrial Highway (Figure 3). The site covers approximately seven acres of level sandy soil situated on the Calumet Lacustrine Plain, a major physiographic unit of generally low relief characterized by numerous low sand dunes. The site stratigraphy is shown in Figure 4. Although this figure indicates that as many as three aquifers (one at the surface, one between 80 and 140 feet and one in the bedrock formations) may be present in the area, newly obtained information suggests that the deep unconsolidated aquifer may not exist at the site.



C H 2621

FIGURE 1
LOCATION MAP
MIDCO II SITE

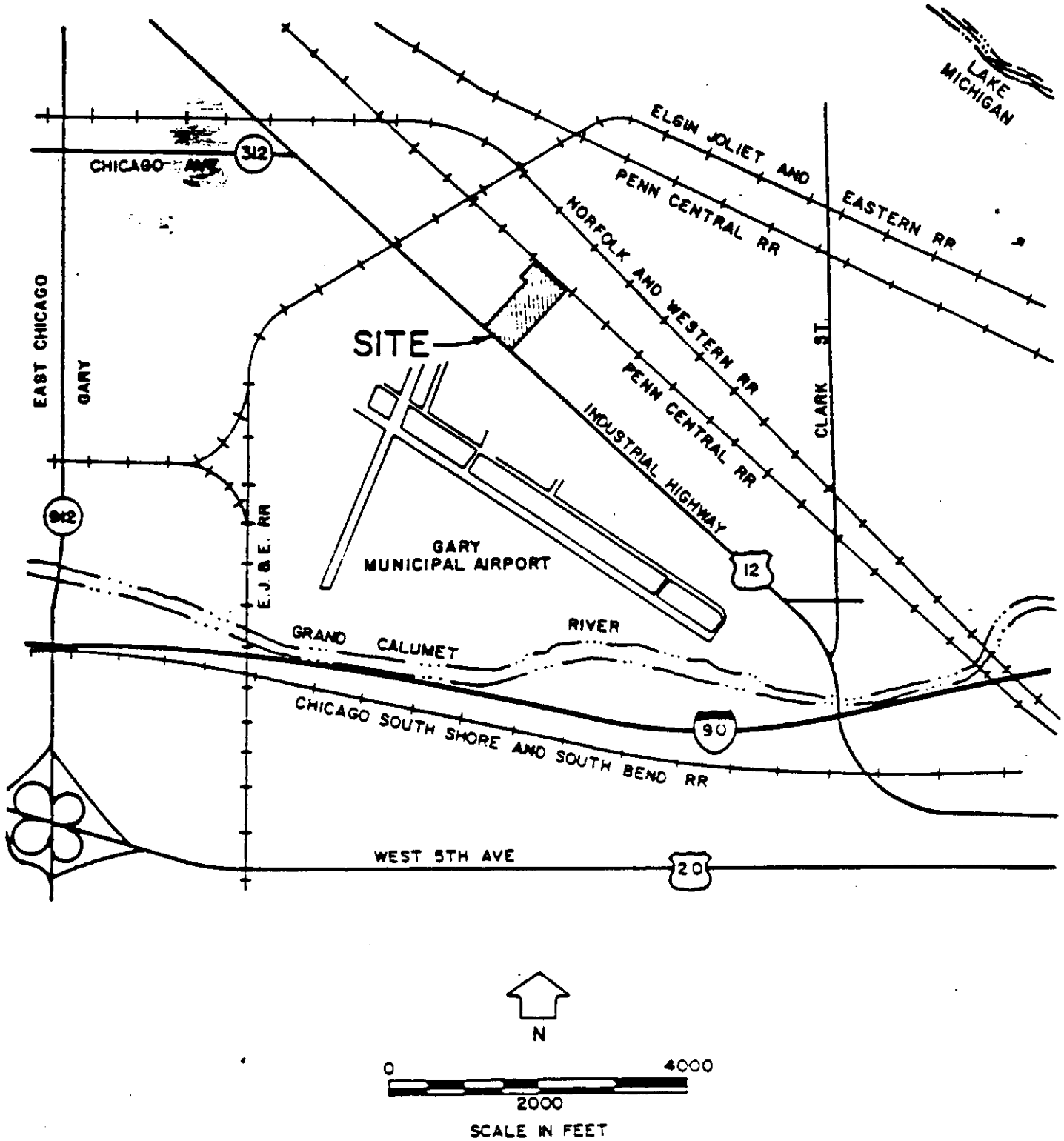


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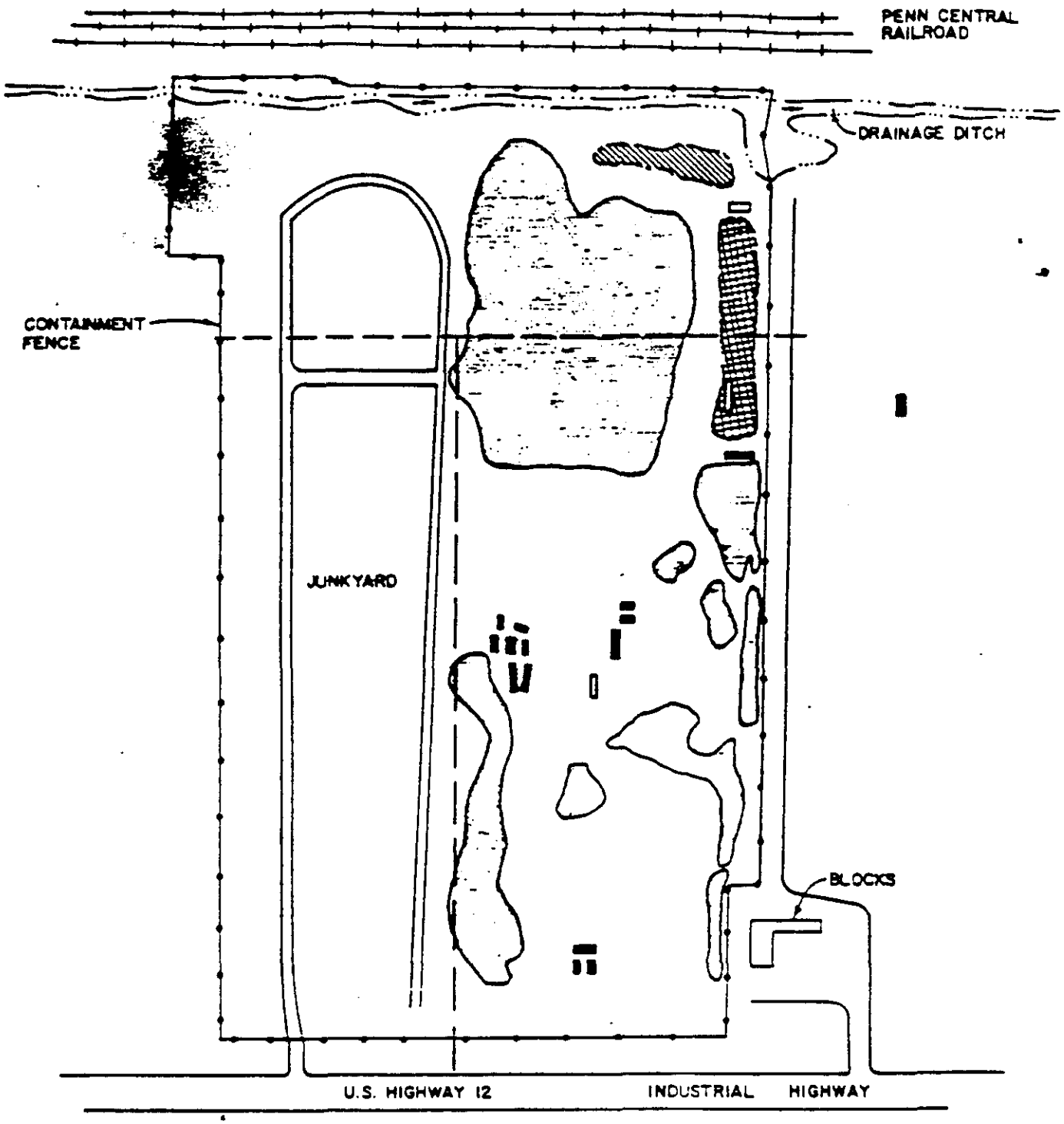
FIGURE 2
VICINITY MAP
MIDCO II SITE



LEGEND
- DRUM STORAGE
- DISPOSAL PIT
- TANK
- TRAILER
- APPROXIMATE LOCATION OF FILTER BED
- -- APPROXIMATE PROPERTY LINES

N

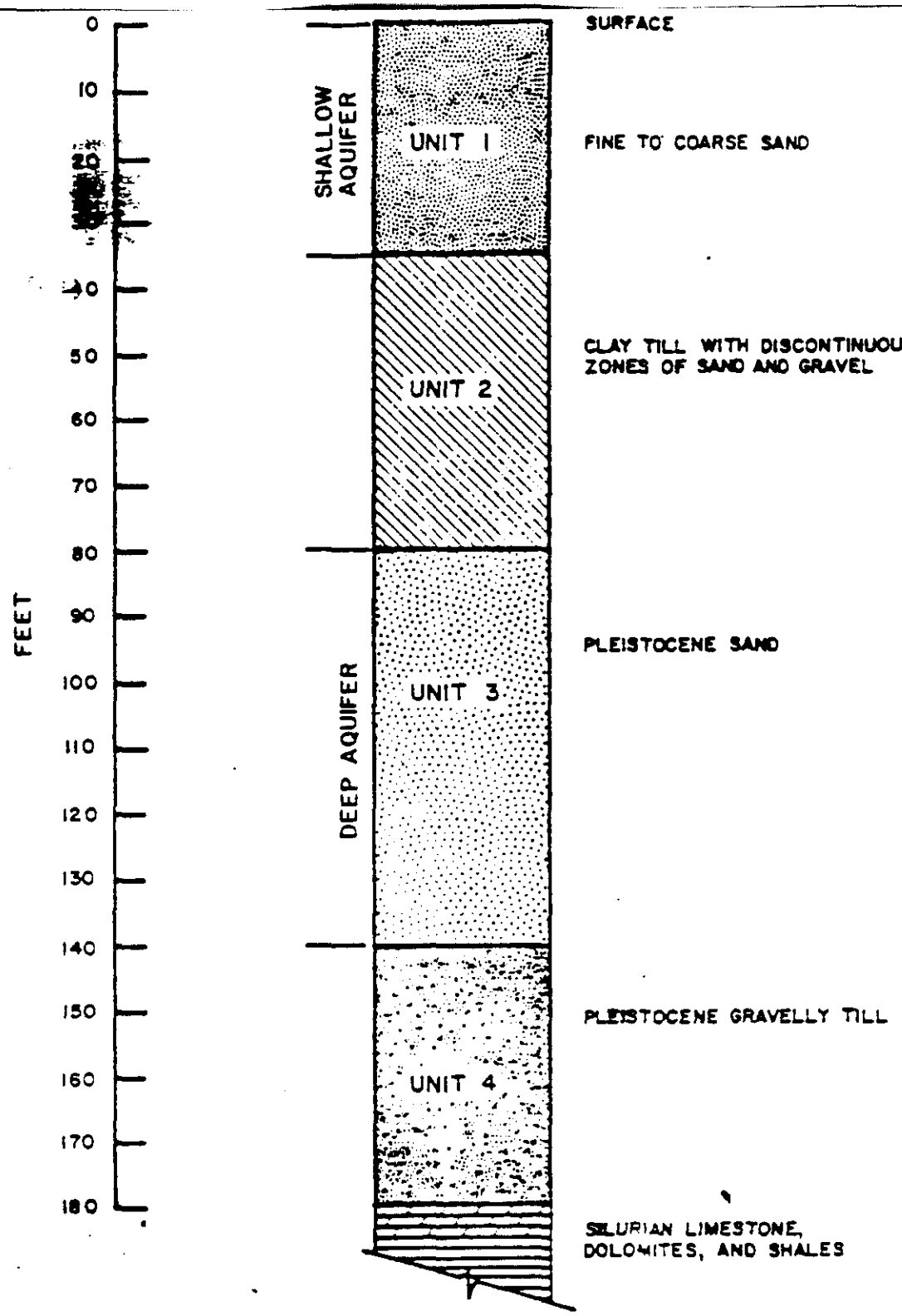
0 100

50 200

SCALE IN FEET

0 H 2634

FIGURE 3
SITE MAP
MIDCO II SITE



SOURCE: "Hydrogeologic Report on the Midco I Facility", September 1982; Ecology and Environment, Inc.

NOTE: This profile presents a typical section; however, continuity across the site has not been defined.

C H 2615

FIGURE 4
SITE STRATIGRAPHIC PROFILE
MIDCO II SITE

Midwest Industrial Waste Disposal Company, Inc. was incorporated on January 17, 1977 and began solvent recycling, storage and disposal operations at the site shortly thereafter. Waste handling methods at the site included temporary bulk liquid and drum storage of wastes and reclaimable materials, neutralization of acids and caustics, and onsite disposal by open dumping. The open dumping was done using a subsurface filter bed and a surficial pit, both located in the northeastern corner of the site, and possibly trenches in the northern half of the site (the exact location and number of the trenches is presently unknown). Site operations continued until August 17, 1977 when a large fire destroyed most of the wastes on the property; the site was abandoned without any clean-up activities. An estimated 60,000 drums were present at the site prior to U.S. EPA's surface removal in April-May 1984 and January-March 1985. Most were burned and/or rusted and many still contained waste residues. There were also some intact drums, and several large bulk liquid tanks.

Sampling by various agencies has indicated the presence of numerous organic compounds, heavy metals, and cyanide in the wastes, soils, surface water and groundwater at the site. Sampling done on November 11 and 12, 1981 showed evidence of napthalene, toluene and several other organic compounds in the soil at one well installation site. Sampling done on December 1, 1981 indicated cyanide, arsenic, dichloroethanes, benzene and

numerous other organic compounds in the groundwater at the southeastern and southwestern edges of the site. Sampling done on November 3, 1982 detected several organic compounds in surface water both upstream and downstream of the site, and some metals in excess of recommended standards in both ground and surface water. Sampling done on January 4 and 5, 1983 indicated significant organic and inorganic contamination of soil and groundwater in the area of the filter bed, and lower levels of contamination at locations on the northwestern and northeastern edges of the site.

REMEDIAL INVESTIGATION (RI)

TASK 1 - INVESTIGATION SUPPORT

Subtask 1.1 Prepare Quality Assurance Project Plan

A site specific Quality Assurance Project Plan (QAPP) for field investigation activities and laboratory analyses will be developed in accordance with the Interim Guidelines and Specifications for preparing a Quality Assurance Plan, QAMS-005-086 U.S. EPA, December 29, 1980. The QAPP shall include all environmental monitoring and measurement methods to be used for the investigation including but not limited to requirements for analytical precision and accuracy, spiking and preparation of soil extracts (including maximum holding times for samples). The plan will include any needs specific to the work assignment.

Copies of the QAPP will be provided to appropriate U.S. EPA personnel for comment and approval and sample collection shall not commence until the QAPP has been approved by U.S. EPA.

Subtask 1.2 - Prepare Site Health and Safety Plan

A site specific Health and Safety Plan will be developed based on a review of health and safety plans from prior EPA response actions at the site and the results of an onsite health and safety assessment. The plan will indicate the type of protective gear site personnel should wear in order to minimize their exposure (either through inhalation or direct contact) to hazardous materials on the site. The level of protection required may vary with the type and location of field testing being conducted. The Health and Safety Plan will also describe possible physical hazards that the field team, and nearby workers and residents may face; decontamination procedures; an emergency response plan; the work schedule; and any onsite monitoring requirements including action levels for evacuation of an area of the site or the entire site. Modifications of this plan may be made as additional data are gathered during subsequent site visits. Copies of the plan will be provided to appropriate U.S. EPA personnel for comment and approval. The site Health and Safety procedures must be in accordance with OSHA requirements (29 C.F.R. 1910 and 1926) and the U.S. EPA Office of Emergency and Remedial Response, Interim Standard Operating Safety Guide. This will include a respiratory protection plan, adequate safety training equipment and supervision.

Subtask 1.3 - Prepare Site Sampling Plan

A Sampling Plan will be developed addressing all sampling to be conducted during the RI/FS activities at the Midco II site. The Sampling Plan will use as source material the site Quality Assurance Project Plan developed in Subtask 1.1 and appropriate U.S. EPA monographs. The plan will include discussion of:

- Types of samples to be taken;
- Monitoring well specifications;
- Sample sites and basis for site selection;
- Sampling equipment required including containers to be used and methods of sample preservation;
- Site specific sampling methodology including decontamination requirements;
- Number of samples to be taken and analytical procedures to be used;
- Sample numbering system;
- Sample screening procedures including the use of HNU/OVA and field gas chromatograph;
- Sample storage and shipping methods;

- Documentation and sampling and chain of custody procedures;
- Estimated duration of each sampling activity;
- Allocation of personnel resources including number of persons participating in field tasks and respective functions;
- Agency roles.

Copies of this plan will be provided to appropriate U.S. EPA personnel for comment and approval. After incorporation of review comments, copies of the Final Sampling Plan will be distributed to appropriate personnel.

TASK 2 - SITE DEFINITION ACTIVITIES

The purpose of this task is to define the physical characteristics of the site and relevant surrounding area. The main activities of this task include preparation of a base map of the site and relevant surrounding areas, geophysical surveys, and a brief hydrologic study of the interdunal wetlands. Support facilities for activities to be carried out in Task 3 will also be established.

Subtask 2.1 - Additional Data Gathering

A detailed data search will be performed to compile additional data relevant to the site and surrounding areas. Information on geology, hydrology, hydrogeology, soils, climatology, and ecology will be obtained to clarify details of site physical systems.

This information may be in the form of maps, reports, surveys, photographs, etc. Data sources may include the USGS, Soil Conservation Service (SCS), ISBH, Indiana State Geological Survey (ISGS), and other agencies at the federal, state, county, and local levels. Such information is part of the public record and thus should be readily available. Historical sampling and analytical data will be summarized in a technical memorandum that will be included in the RI report. This summary will indicate the dates on which samples were taken, sample locations, date of testing, testing procedures and results, QA/QC results and the name of the agency or firm that performed the testing.

Subtask 2.2 - Establish Field Office

Site characterization studies outlined in Task 3 will involve extensive onsite operations. Therefore, it will be necessary to establish an onsite field office as a base of operations. The facility will include a sample processing area which will assure quality control in sample preparation and shipment. The field office will provide all necessary facilities and materials to carry out the Health and Safety Plan developed in Subtask 1.2 and will also serve as a general equipment storage area. Establishment of a field office is also necessary for sample preparation, site security, proper implementation of Level C safety program, and site management functions. Specifications will be developed

for space requirements, decontamination equipment, furnishings, and utilities and a supplier will be selected.

A security officer will be onsite for the duration of the field sampling program whenever field team personnel are not present. It is assumed that Level C protection will be required for a portion of the drilling and sampling activities and that Level D protection will be required for all other operations. It is not anticipated that Level B will be necessary.

Subtask 2.3 - Site Mapping

A base map of the site and surrounding area shall be prepared based on aerial photographs. The total area that will be mapped is about 35 acres (see Figure 6). A contour interval of 1 foot will be used, and the horizontal scale will be 1 inch = 50 feet. The large areal coverage relative to the site is needed so that all sampling points can be shown. The scale of the map is necessary because of the small size of the site itself and the small contour interval is required by the low site relief. Features shown on the map will include but are not limited to:

- Creeks, drainage ways, ponds, marshes, etc.;
- Locations of roads, buildings, fences, culverts, drains and other man-made features;
- Location and elevation of groundwater monitoring wells;
- Sampling locations.

Subtask 2.4 - Geophysical Studies

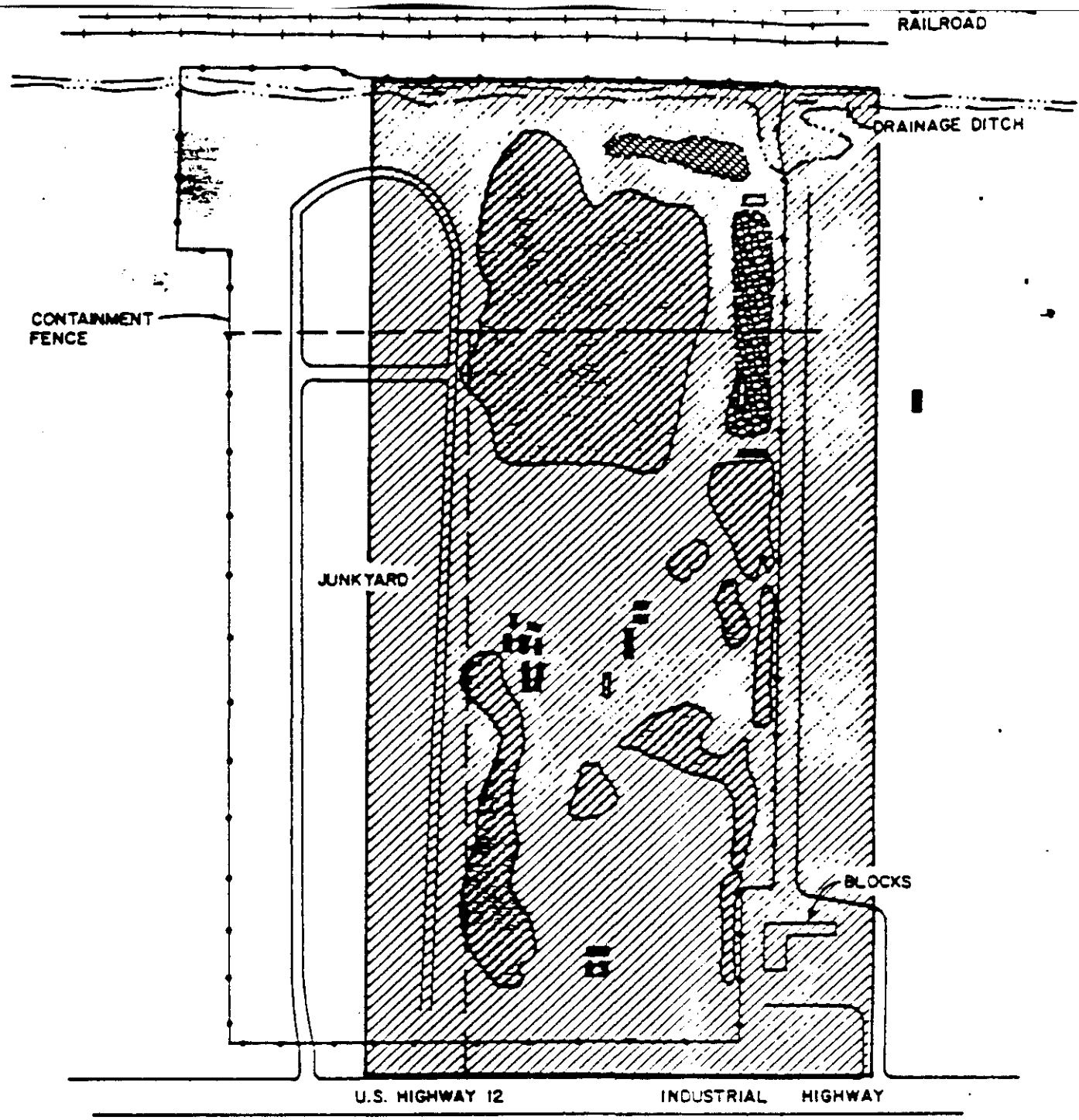
Geophysical studies will be performed at the Midco II property to further characterize the site and relevant surrounding areas. The area to be investigated is shown in Figure 7.

The purpose of the survey is to obtain preliminary information on the site and surrounding area prior to the drilling program to be conducted under Task 3. This specifically includes:

- Detection and delineation of bulked waste concentrations. (This knowledge is necessary so that these can be avoided during drilling operations);
- Subsurface and geologic aquifer conditions;
- Identification of the lateral distribution of leachate plume(s).

The techniques to be used to achieve these objectives are magnetometry, electromagnetics (EM) and electrical resistivity.

Magnetometry is based on the disturbance of the earth's magnetic field near a metallic object. The survey method consists of establishing a grid on the site, and then obtaining a magnetometry reading at each point. These readings are later used to generate



LEGEND
- DRUM STORAGE
- DISPOSAL PIT
- TANK
- TRAILER
- APPROXIMATE LOCATION OF FILTER BED
- APPROXIMATE PROPERTY LINES
- GEOPHYSICAL STUDY AREA

N

0 100

50 200

SCALE IN FEET

C H 2637

FIGURE 7
GEOPHYSICAL STUDY AREA
MIDCO II SITE

an isogamma map (a contour map where each contour represents equal magnetic field intensities).

The density of a survey grid is based upon the expected amplitudes of the magnetic anomalies, which in turn are based upon:

- The size of the objects;
- Their depth of burial;
- Their magnetic susceptibility.

The magnetometer survey at Midco II will be based on a ten-foot grid separation to facilitate detection of individual bulked units. Detection of such units will also be enhanced by use of the more sensitive proton precessor magnetometer rather than the less sensitive fluxgate type.

Electromagnetics (EM) is based on the induction of a current in the ground by a transmitter and a measurement of the EM field by a receiver. The EM instrument is a direct reading meter (i.e., no data reduction is necessary) and the results can be contoured in the field or inputted to a computer graphics package for contour map generation. The EM survey will be conducted along profile lines spaced 50 feet apart. The horizontal loop mode will be used with loop separations of 10 and 20 meters. The survey will provide data on the properties of subsurface geologic features including the continuity of the clay till,

and locate any conductive, contaminant plumes.

Vertical electrical resistivity soundings will be made at five to six locations where mappable conductivity changes have been found with the EM survey.

If the contaminant plume cannot be traced using the above methods, a soil gas survey will be conducted in accordance with subtask 2.5.

A technical memorandum summarizing the surveys and describing the results will be prepared upon completion of the field work and data analysis. This document will be made available to appropriate U.S. EPA personnel. If possible locations of bulked waste concentrations are identified, the memorandum will recommend locations for conducting test pit excavations to visibly verify the type and extent of contamination.

Subtask 2.5 - Soil Gas Survey

The purpose of the soil gas survey is to identify the movement and distribution of volatile organic chemicals from the land surface to the ground water reservoir, from buried waste to the land surface and/or horizontal distribution of ground water contamination in the unsaturated zone above the ground water. The method provides a rapid inexpensive field technique that can be used to optimize the number and location of subsequent test

borings and monitoring wells. The locations of these soil gas sites can be adjusted in the field to track suspected plumes or evaluate the limit of inferred underground contamination. Subsequent sampling and monitoring well locations may then be judiciously chosen for further VOC quantification. The soil gas survey is based on the partitioning of volatile organics between aqueous and gaseous phases. At a given temperature the relationship between phases can be determined; thus ground water VOC concentrations can be inferred based on the soil gas survey.

The soil gas samples will be obtained by driving a stainless steel probe 3-5 feet into the ground. The soil gas will be pumped out of the hole and into a portable field gas chromatograph or into a clean ACE gas sample container and analyzed on-site or at a nearby laboratory by means of a gas chromatograph. Alternatively, the soil gas can be pumped through an adsorption tube and the tube thermally desorbed for analysis by a gas chromatograph. It is assumed that a Photovac 10A10 or similar instrument that is capable of measurement in the part per billion range will be used.

Target VOC's chosen for on-site measurement will be based on analtyical results from previous sampling. The soil gas borings will focus on areas of suspected high contamination. Borings will begin in areas of highest contamination and proceed outward until no contamination is detected. Borings will be made in a closely spaced uniform grid over the site.

This task is estimated to take five days if successful. It is expected to require one chemist and three crew members, and that 100 soil gas samples will be collected. A technical memorandum summarizing the survey and describing the results will be prepared upon completion of field work.

Subtask 2.6 - Hydrologic Study

A hydrologic study will be conducted to define surface flow characteristics on the site and adjacent areas. Of particular interest is the magnitude of surface run-off and in-flow from the ditch along the northeast edge of the site. The study will include:

- Review of existing data (as part of Subtask 2.1);
- Measurement and evaluation of surficial drainage patterns to define flow direction and velocity in the interdunal areas during wet and dry weather periods.

Two weirs will be installed toward either end of the site to obtain surficial flow measurements.

TASK 3 - DETAILED SITE CHARACTERIZATION STUDIES

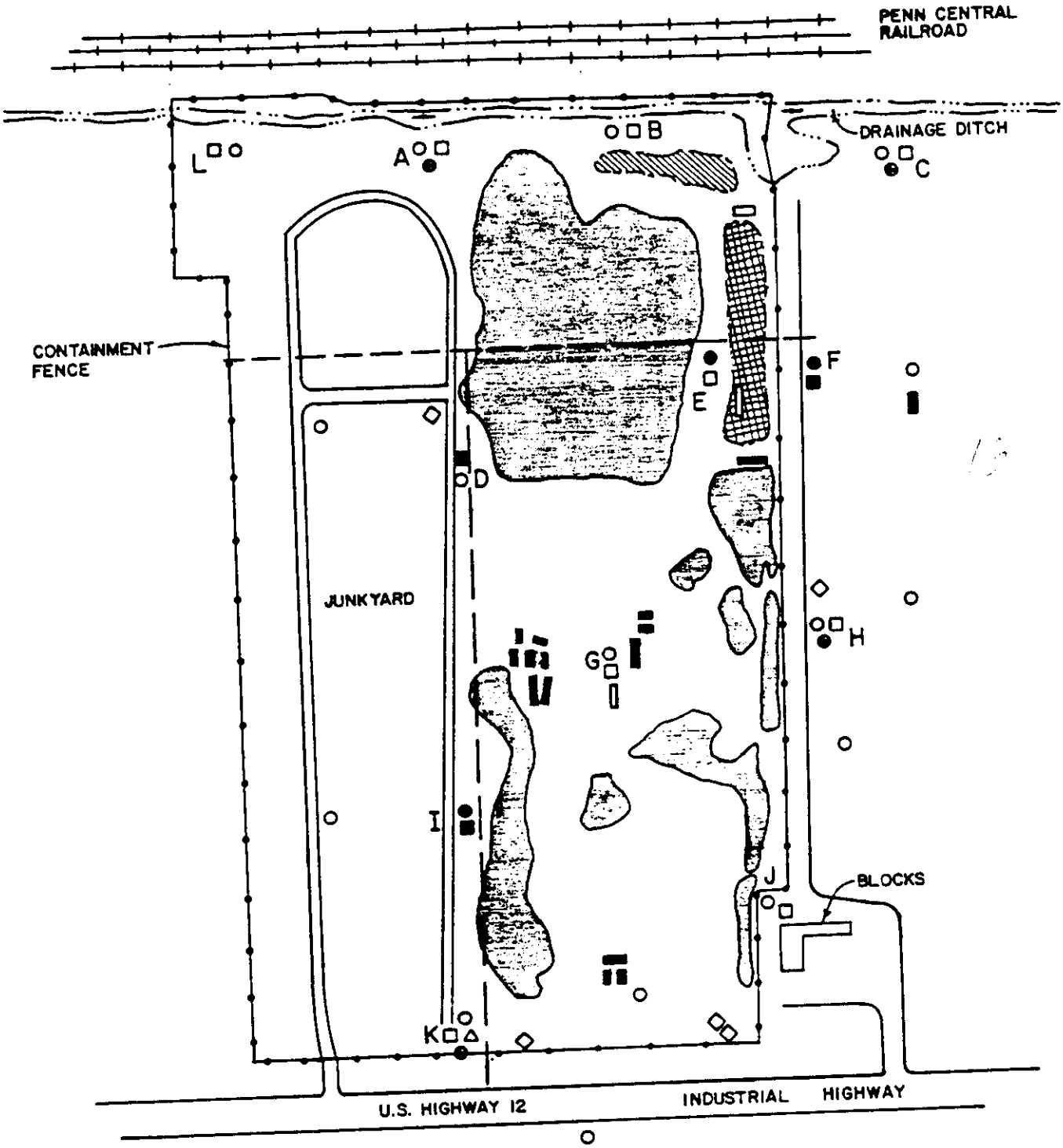
Site investigations carried out as part of this task will provide data which will be used to evaluate site hazards and to support detailed evaluation of alternatives during the Feasibility Study.

Subtask 3.1 - Selection of Monitoring Well and Sampling Locations

Prior to beginning Task 3, a one day visit to the Midco I site will be made to determine the exact locations where additional monitoring wells will be placed and where soil, sediment, and surface water samples will be taken. This site visit will be a fully cooperative effort, involving appropriate agency and state personnel. It is anticipated that representatives from the Participant's contractor, U.S. EPA, the Indiana State Board of Health and possibly the U.S. Fish and Wildlife Service will be present. The results of this site visit will be documented and made available to appropriate U.S. EPA personnel. U.S. EPA will make the final decision on well locations and locations for sample collections.

Subtask 3.2 - Hydrogeologic Investigation

The objective of this task is to obtain information on the hydrogeologic conditions at the Midco II site and surrounding areas. This will be accomplished in two ways: a survey of existing wells within a 3-mile radius of the site will be made, and the existing monitoring well network will be expanded to more fully monitor the upper sand aquifer and to include monitoring of the deep sand aquifer (if it is present at the site). The existing well survey will be concentrated on bedrock wells so that the groundwater flow directions between and in the bedrock aquifer



LEGEND
- DRUM STORAGE
- DISPOSAL PIT
- TANK
- TRAILER
- APPROXIMATE LOCATION OF FILTER BED
- APPROXIMATE PROPERTY LINES
- EXISTING WELL TO BE ABANDONED
- 10' EXISTING WELL
- 30' EXISTING WELL
- 10' PROPOSED WELL
- 30' PROPOSED WELL
- 90' PROPOSED WELL
- 200' PROPOSED WELL
- MONITORING WELL CLUSTER

N

0 100

50 200

SCALE IN FEET

FIGURE 8
PROPOSED MONITORING WELL NETWORK
MIDCO II SITE

and the deeper sand unit can be determined. The existing well survey will include, as necessary, house to house canvassing. Installation of multiple wells in the bedrock for the purpose of detecting contamination will be required if the deep sand aquifer is contaminated and there is flow from the sand aquifer to the bedrock aquifer, or if there is any other evidence that the bedrock aquifer has been contaminated.

The expanded groundwater monitoring well network installed during this task will:

- Produce hydrogeologic data needed to evaluate groundwater flow conditions in the unconsolidated hydrostratigraphic units;
- Help to detect if any contaminants have migrated into these units, monitor future movement of any contaminant plume and assess the results of potential future remedial actions.

Monitoring Well Installation

Thirty additional monitoring wells will be installed. In addition, two existing monitoring wells have been destroyed and will have to be replaced. Some of the additional wells will be installed in clusters while others will be installed individually. Existing wells will be used to the maximum extent possible. However, five existing wells will be abandoned. The

breakdown of the new or replacement wells is as follows:

- 17 - 10-foot wells (10 will be clustered with other wells and 7 will be placed individually);
- 10 - 30-foot wells (all will be part of a well cluster);
- 4 - 90-foot wells (all part of a well cluster);
- 1 - 200 foot well (part of a well cluster).

The need for the four 90 foot wells will be dependent on the existence of a deep sand aquifer. If the aquifer does not exist, these wells will not be installed.

After installation of the new monitoring wells, a total of 12 well clusters will exist around the Midco II site. The approximate location of the proposed monitoring well network is shown in Figure 8. The composition of the clusters is as follows:

- Cluster A - is in the northern corner of the Midco II site and provides data from two levels in the upper sand aquifer and one level in the deep sand aquifer.
- Cluster B - is midway along the northeast edge of the Midco II site and provides data from two depths in the upper sand aquifer.

- Cluster C - is at the eastern corner of the Midco II site and provides data from two depths in the upper sand aquifer and one depth in the deep sand aquifer.

- Cluster D - utilizes one existing well, is situated along the northwestern edge of the Midco II site, and provides data for two depths in the upper sand aquifer.

- Cluster E - is near the filter bed and provides data from two depths in the upper sand aquifer.

- Cluster F - utilizes two existing wells, is near the filter bed and along the southeastern edge of the Midco II site, and provides data from two depths in the upper sand unit. These monitoring wells have been destroyed and will have to be replaced.

- Cluster G - is in the middle of the Midco II site and provides data from two depths in the upper sand aquifer.

- Cluster H - is midway along the northeastern edge of the Midco II site, and provides data from two depths in the upper sand aquifer and one depth in the deep sand aquifer.

- Cluster I - utilizes two existing wells, is situated along the northwestern edge of the site, and provides data from two depths in the upper sand aquifer.

- Cluster J - is near the southern corner of the site and provides data from two depths in the upper sand aquifer.

- Cluster K - is at the western corner of the site and provides data from two depths in the upper sand aquifer, one depth in the deep sand aquifer and one depth in bedrock.

- Cluster L - is at the northern corner of the site and provides data from two depths in the upper sand aquifer.

The locations of five of the individually installed 10-foot wells were selected to provide data from what appears to be the downgradient side of the site -- southeast and southwest. The remaining two wells will be installed northwest of the site to provide offsite water levels and get a better areal distribution of water table data.

The 10 and 30 foot wells will be drilled using hollow stem augers. The 90 and 200 foot wells will be drilled using rotary techniques and temporary casing. Selected boreholes will be sampled using a

3-inch diameter split-spoon sampler as described fully in Subtask 3.5. All work will comply with relevant state and local well regulations. The sequence of drilling and sampling is as follows:

- The sampler will be driven 1.5 feet into undisturbed soil and sample obtained.
- Casing will be driven to the top of the next sampling interval;
- The inside of the casing will be cleaned out using a tricone bit and clean water to lift out the cuttings;
- The next sample will be taken, and so on.

This procedure minimizes the amount of drilling water that can enter the subsurface materials. A source of clean water will be identified and all water used for drilling will be obtained from that source. The cleanliness of the source will be verified in advance and periodically throughout the field program. A sample will be submitted for full organic and inorganic analysis.

Boreholes drilled in the former drum areas and immediately adjacent to those areas will not recirculate the drilling water: clean water will always be pumped down the inside of the drill-stem and all cuttings and water collected for future disposal. Boreholes drilled offsite (i.e. clusters A and C and six of the individual shallow wells) will recirculate the drilling water; but a complete

change of water and a cleaning of the drill-stem and circulating system (hoses, pipes, pump and tank) will take place when the till is encountered at the bottom of the upper aquifer. Changing the drilling water reduces the possibility of incidentally contaminating any lower aquifers with material from the upper aquifer. Again, all water and cuttings will be collected for future disposal.

The 10- and 30-foot borings will use 4-inch diameter casing; the deeper borings will use 6-inch diameter casing through the upper aquifer and into the till and then use 4-inch diameter casing, telescoped inside the 6-inch casing, to the bottom of the boring. This telescoped casing provides additional protection for any lower aquifers by reducing the possibility of contaminant carry-down or migration in the borehole.

Monitoring wells will be installed in each borehole at the depths indicated below. Each monitoring well will be constructed of 2-inch inside diameter, flush-threaded, schedule 80 PVC pipe fitted with a 5-foot length of 2-inch inside diameter, 0.010 inch continuous-slot stainless steel screen. A gravel pack will be installed around the screen, a 3-foot bentonite pellet seal will be placed above the gravel pack, and the remainder of the hole will be tremie grouted with a bentonite/cement slurry. The upper three feet of each bore hole will be grouted with an expanding neat cement and a four inch diameter protective steel casing with a

hinged and locking steel cap will be installed. A sloping cement apron will be placed around the protective casing and the elevations of inner and outer casings surveyed. Each well will be developed by surging or diaphram pumping to ensure good hydraulic connection with the surrounding formation. Schematic representations of well construction is presented in Figure 9. Wells will be allowed to equilibrate over a suitable time period and measurements of static head will be taken. Static head measurements will continue to be taken on a monthly basis for six months.

During installation, development and monitoring of the wells at the Midco II site, the following procedures and practices will be observed:

- All necessary permits required for installation of monitoring wells (as per State of Indiana regulations) will be obtained prior to arriving onsite;
- Drilling tools, sampling equipment, and drill rigs will be steam cleaned prior to entering the site;
- All pipe to be used for well installation will be steamed cleaned onsite prior to well construction;
- Drilling tools and equipment will be steam

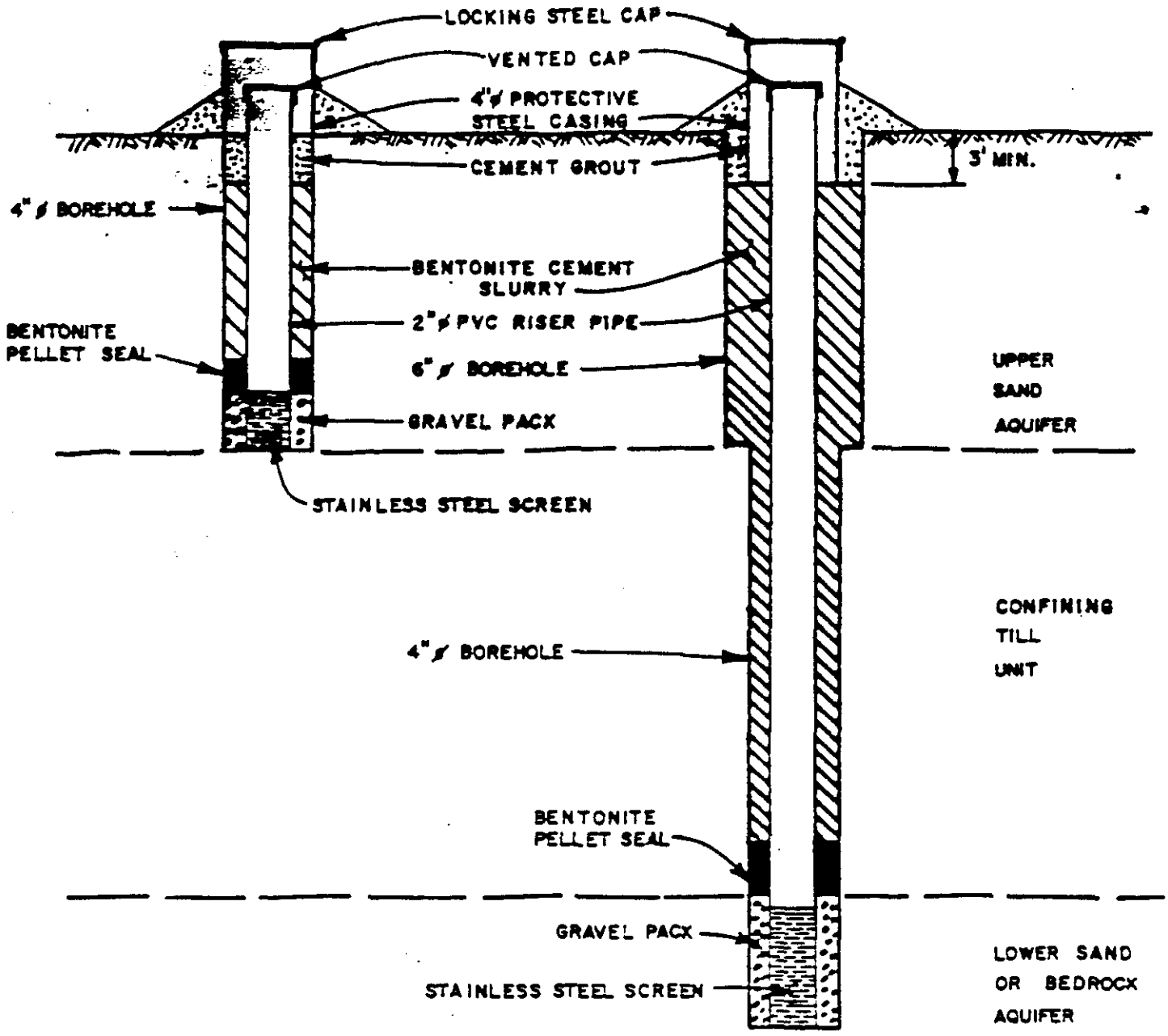


FIGURE 9
TYPICAL WELL CONSTRUCTION
MIDCO II SITE

cleaned between each boring;

- All soil samplers will be decontaminated between each use;
- All drill cuttings, all water used for drilling and all used decontamination solution will be contained in a secure area onsite until disposed of, and shall be stored and disposed of in an environmentally sound manner in accordance with all environmental laws and regulations;
- All boreholes will be drilled as described in the above text;
- All wells will be constructed, finished and developed as described in the above text;
- Three trips will be required to the site to obtain water level measurements; other monthly readings can be obtained during sampling activities.

Field Permeability Testing

Tests to determine the hydraulic conductivity of each aquifer unit will be performed on all newly installed wells. Either falling or rising head tests will be used. These tests involve

either adding a stainless steel slug or removing a known volume of water from the well and measuring the subsequent decline or rise in water level over time. No water will be introduced to the well. Measurement will probably be made with electric tape and stopwatch. However, if aquifer response is so rapid that water level changes cannot be made within an accepted degree of accuracy, it may be necessary to use a pressure transducer and a strip chart recorder.

The change in water level is plotted against time and an analytical solution (e.g. Horslev) for hydraulic conductivity is obtained. Results of the aquifer tests will be used to calculate the average velocities of groundwater in the two aquifers. This will help in establishing migration rates of any contaminants issuing from the disposal area.

Gamma Ray Logging

The 200 foot monitoring well will be gamma ray logged in order to further define the thickness and continuity of subsurface geological formations.

Technical Memorandum

A technical memorandum describing the well installations and aquifer tests will be prepared following completion of Subtask 3.2. Data incorporated into the memorandum will include boring logs, cross sections, water level and casing elevations, detailed well construction diagrams, a map locating each well and well

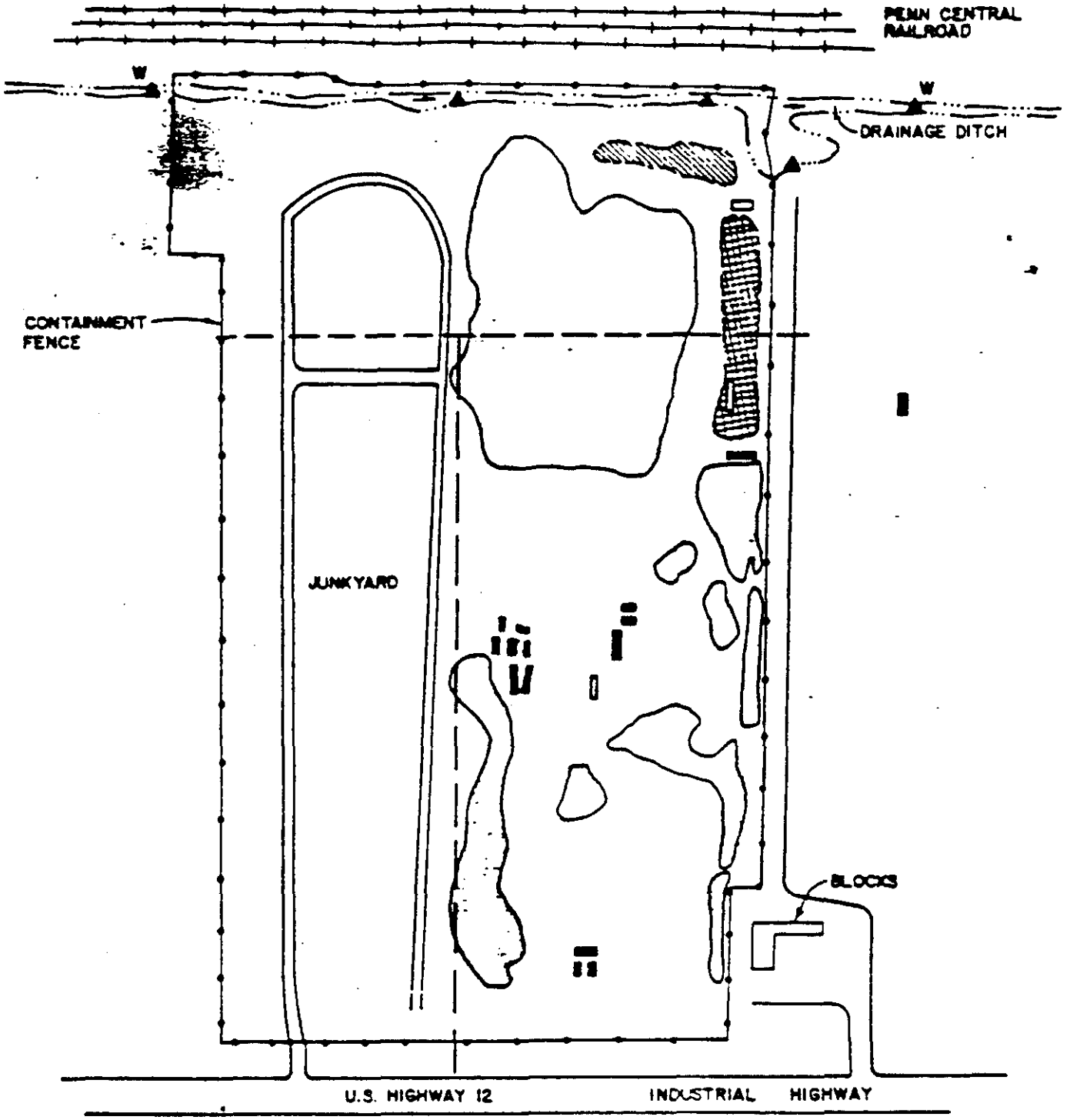
nest, and the results of the existing-well survey and aquifer tests.

Subtask 3.3 - Surface Water and Sediment Sampling and Analysis

Because contaminated runoff has reportedly discharged to the adjacent drainage ditch, surface water and associated sediment samples will be taken from five locations along the northeastern edge of the Midco II site. In addition one sediment sample will be collected upstream from the site and two will be collected downstream. The objective of this subtask is to determine if and to what extent contamination of the surrounding surface waters and associated soils and sediment has occurred. Results of these tests will help to guide the selections of alternative remedial actions at the Midco II site.

Exact sampling locations will be decided during the site visit performed in Subtask 3.1. Tentative sampling locations are shown in Figure 10. Sampling will be carried out in two phases: one reflecting wet weather or runoff conditions and one reflecting dry conditions. During each phase, one sediment sample and one surface water sample will be obtained at each of the five locations. In addition, during the first phase one sediment sample will be obtained upstream from the site and two will be obtained downstream.

All samples and testing will conform to guidelines established in the Users Guide to the U.S. EPA Contract Lab Program (CLP) and the site specific Sampling Plan prepared during Subtask 1.3. All



LEGEND
- DRUM STORAGE
- DISPOSAL PIT
- TANK
- TRAILER
- APPROXIMATE LOCATION OF FILTER BED
- -- APPROXIMATE PROPERTY LINES
- ▲ APPROXIMATE LOCATION OF SAMPLING STATION
- W APPROXIMATE LOCATION OF WIER

N

0 100

50 200

SCALE IN FEET

C H 2654

FIGURE 10
TENTATIVE SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS
MIDCO II SITE

samples are expected to be low to medium concentration samples according to CLP criteria.

A total of 10 surface water samples, 10 associated sediment samples, and three additional sediment samples, and 4 duplicates and field blanks will be submitted for analysis for the parameters listed in Table 2. Field measurements of pH, specific conductance, temperature and dissolved oxygen will also be obtained from the water samples.

A technical memorandum describing the sampling procedures and activities will be prepared shortly after completion of the field work.

Subtask 3.4 - Groundwater Sampling and Analysis

Groundwater sampling will be carried out in two phases. Phase I will coincide with Phase I surface water and sediment sampling. Phase II will coincide with Phase II surface water and sediment sampling and will commence 12 weeks after the completion of Phase I sampling. Coordinating groundwater and surface water sampling is intended to minimize labor and travel expenses.

Thirty-six groundwater samples will be collected during each phase (6 from existing wells and 30 from wells installed in Subtask 3.2) for a total of 72 investigative samples. In addition, 15 residential wells will be sampled during the Phase I sampling. All groundwater samples will be removed, preserved, documented,

and shipped in accordance with the guidelines established in the Sampling Plan (Subtask 1.3) and provisions of the QAAP (Subtask 1.1). This includes the purging of at least five well volumes at each well prior to taking the sample, and the preparation of the necessary duplicates and field blanks. Purged water shall be drummed, stored and disposed of in an environmentally sound manner in accordance with all environmental laws and regulations. All samples are expected to be low concentration samples according to CLP criteria.

Monitoring well and domestic well samples will be analyzed for the following parameters:

- Temperature (field);
- Ammonia, nitrate and flouride;
- pH (field);
- Specific conductance (field);
- Each parameter listed in Table 2. This may be reduced, upon U.S. EPA approval following submission of a report of the Phase I sampling, for Phase II depending on Phase I sample results. Domestic well samples will be analyzed for the same parameters as monitoring well samples.

It is anticipated that these data will provide adequate information to define the nature of any contaminant plume in the horizontal and

vertical directions in the upper aquifer unit and to determine if any contamination has migrated into the lower confined aquifer.

A technical memorandum describing the sampling procedures and activities will be prepared shortly after completion of the field work.

Subtask 3.5 - Soil Sampling and Analysis

The feasibility of various remedial action alternatives will depend on the kinds and concentrations of contaminants present and their horizontal and vertical distribution. There is also a need to know the extent to which contaminants are becoming attenuated by or absorbed on the subsurface materials. Further, the physical characteristics of the soils at the site need to be defined so that migration can be evaluated and so that construction and excavation related remedial alternatives can be adequately assessed. Thus the objectives of this task are to:

- Collect data on the spatial extent, characteristics and concentration of any hazardous constituents present at the site;
- Determine the horizontal and vertical distribution of any such soil contamination;
- Determine physical characteristics of the subsurface soils of the Midco II site;
- Determine mobility of soil contaminants.

Samples will be obtained as described below. For the purposes of this discussion it will be helpful to refer to Figures 8 and 11.

At each of the seven new monitoring well clusters, the deepest boring will be sampled continuously (1 sample = 1-1/2 feet of soil) to 30 feet or until the till interface is encountered. If the boring is a 90- or 200-foot boring, the sampling interval will change to one sample in each 5 feet of boring. Each of the seven individually installed ten-foot wells will also be sampled continuously. The number of samples to be collected at each location is given below:

Cluster	Description	Samples Collected
A	90 ft boring	
	0-30 ft boring, continuous	20
	30-90 ft, 5-ft centers	12
B	30 ft boring, continuous	20
C	90 ft. boring	
	0-30 ft., continuous	20
	30-90 ft., 5 ft. centers	12
D	10 ft. boring, continuous	6
E	30 ft. boring, continuous	20
F	30 ft. boring, continuous	20
G	30 ft. boring, continuous	20
H	90 ft. boring	
	0-30 ft., continuous	20
	30-90 ft., 5 ft. centers	12
I	No new wells	0
J	30 ft. boring, continuous	20

K	200 ft. boring 0-30 ft., continuous 30-200 ft., 5 ft. centers	 20 34
L	30 ft. boring, continuous	20
Individual	7-10 ft. boring, continuous	42
	TOTAL	318

A total of 318 investigative samples will be collected for possible physical and chemical analysis during the drilling program for groundwater monitoring well installation. A total of 45 blanks and duplicates will also be obtained. The investigative samples include three Shelby tube samples from each of the 90- and 200-foot borings; these will be obtained from the top, middle, and bottom of the till confining unit.

The investigative samples will be screened in a two-tier system. Initially all samples will be screened in the field with a HNU/OVA as the sample is collected. All samples with a positive reading and selected samples with a negative reading will again be screened with a gas chromatograph (GC) and other appropriate methods as set forth and approved by U.S. EPA in the QAPP. At least 115 samples will be screened with the GC as follows:

- 1-200 foot boring:

0-30' - (upper aquifer)	7 samples x 1 =	7
30-75' - (till)	2 samples x 1 =	2
75-140' - (lower aquifer)	1 samples x 1 =	1
140-200' - (till)	1 samples x 1 =	1

°	3-90 foot borings:	
	0-30' - (upper aquifer)	7 samples x 3 = 21
	30-75' - (till)	2 samples x 3 = 6
	75-90' - (lower aquifer)	1 samples x 3 = 3
°	6-30 foot borings:	
	0-30' - (upper aquifer)	7 samples x 6 = 42
°	8-10 foot borings:	
	0-10' - (upper aquifer)	4 samples x 8 = 32
		TOTAL SAMPLES 115

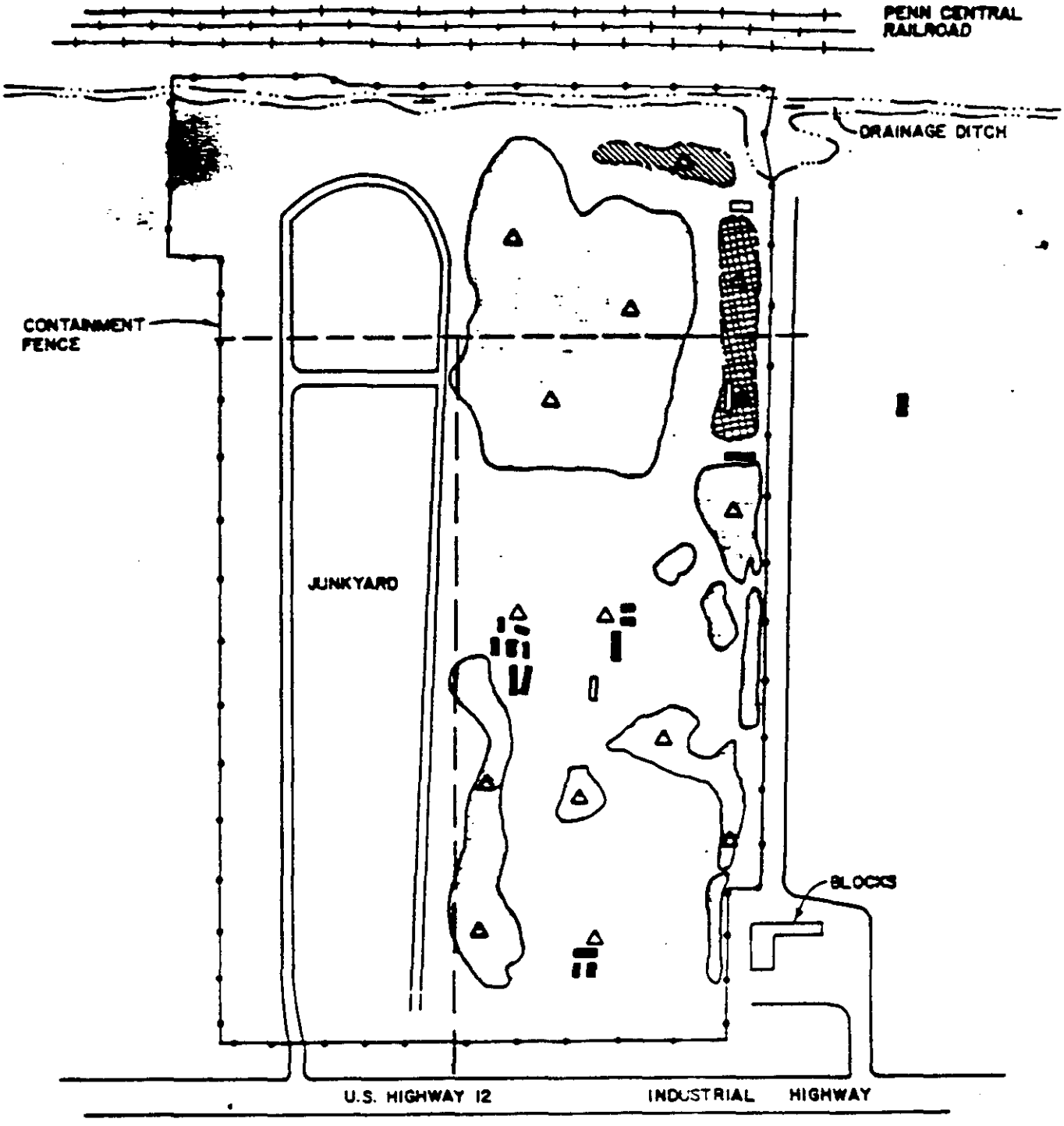
Approximately six target compounds will be selected for the screening based on a review of existing sample results. Soil samples will be solvent extracted, injected into the GC column and measured using flame ionization detection (FID) or other appropriate detector as set forth in the QAPP and approved by U.S. EPA. A chemist must be available to help in running and interpretating the GC screening. 26 soil samples, including 2 blanks, 2 duplicates, and at least 2 showing negative results in both screenings, will be submitted for full organic and inorganic analysis. All samples are expected to be low to medium concentration samples according to CLP criteria.

Additionally, 16 samples from the upper sand aquifer, 12 samples from the till confining unit (the Shelby tube samples) and eight samples from the deep sand aquifer will be submitted to a geo-technical laboratory to determine the physical characteristics of the soil. These include laboratory permeability testing of one Shelby tube sample from each of the four deep borings, and

determinations of geotechnical index properties--including grain size, Atterberg limits and natural water content--for all samples.

Fifteen test pits will also be dug in the former waste storage and disposal areas of the Midco II site proper for the purpose of characterizing the soils closest to the original sources of contamination and locating bulk or containerized waste. Precise locations will be determined during the site visit carried out in Subtask 3.1. Tentative locations are given in Figure 11. The test pit will be dug to a depth of approximately 10 feet or the water table, whichever comes first, by a tractor backhoe that will be decontaminated between test pits. Five grab samples will be collected from each pit. Samples will be collected at visibly differentiated soil horizons or at the following depths: 6 inches (below the temporary cap if present), 12 inches, 18 inches, one from the middle of the pit, and one from the bottom, for a total of 75 investigative samples. The close sampling interval near the surface is necessary to provide data to evaluate attenuation of the contaminants.

All 75 test pit samples will be screened using the HNU/OVA and the screening procedures for the soil samples. Thirty-four samples (including 2 blanks and 2 duplicates) will be selected for analysis and will be analyzed for the parameters listed in Table 2. During digging operations, the soils will also be photographed, visually classified and a log maintained indicating



LEGEND
- DRUM STORAGE
- DISPOSAL PIT
- TANK
- TRAILER
- APPROXIMATE LOCATION OF FILTER BED
- APPROXIMATE PROPERTY LINES
- △ APPROXIMATE LOCATION OF TEST PIT

N

0 100

50 200

SCALE IN FEET

FIGURE II
TENTATIVE ON SITE
SOIL SAMPLING LOCATIONS
MIDCO II SITE

vertical extent of contamination. Test pits will be backfilled after sampling and covered with a clean clay cap. Additional test pits may be dug to locate bulk or containerized wastes. If such wastes are uncovered, the pit will be filled in after the extent of burial is known.

Mobility of soil contaminants will be investigated with column leach tests. Five soil samples will be submitted for analysis. The parameters to be evaluated and the test procedures to be used shall be set forth in the QAPP, as approved by U.S. EPA.

A technical memorandum describing the soil sampling program will be prepared shortly after completion of the field work.

TASK 4 - SITE HAZARD ASSESSMENT

The purpose of this task is to organize and evaluate the data generated in the Remedial Investigation so that the environmental/public health risks posed by the site are clearly understood. Based on this site hazard assessment, remedial action objectives and criteria to be used in evaluating alternative remedial action measures will be developed. This task will be divided into the following three parts: analysis of site data; preparation of the exposure/risk assessment; refinement of objectives and criteria for remedial action.

Analysis of Site Data

The site investigation data will be analyzed to fully define

contaminant concentrations found in each of the environmental pathways (both at the source and offsite), and the results will be presented graphically to depict average and/or "hot-spot" concentrations of critical indicator parameters. Tabular presentations of the data will include comparison of upgradient, control, and background concentrations with downgradient and onsite results. Comparisons with applicable EPA/State standards or criteria will also be included. Where applicable, analytical or numerical models for air or water transport will be used to calculate or predict future dispersion and dilution of contaminants.

Based upon the available data for the Midco II site, critical issues to focus upon for the data analysis include:

- Amount, location and character of sources in the former drum areas.
- Definition of contaminated groundwater plume(s) and evaluation of the direction of gradients and flow.
- Concentration of contaminants in soils on the site and in surface waters and sediment adjacent to the site.
- Migration potential for contaminants due to fugitive dust emissions, direct contact, surface water (direct runoff, flooding and

erosion), and leachate generation.

- Determination of background, upgradient groundwater, surface water and sediment quality.

Exposure/Risk Assessment

Based on the analysis of the site data, an exposure/risk assessment will be conducted to determine the extent of cleanup required effectively to mitigate adverse environmental impacts and the risk of adverse human health effects resulting from the presence of hazardous wastes on the site. Exposure/risk assessments compare the monitored or predicted level of exposure at ecological and human receptors (exposure assessment) to the concentrations of contaminants known to cause a toxic effect (risk assessment). Studies performed by the Department of the Interior will be incorporated in the risk analysis. The difference in the two levels constitutes the level of cleanup required at a site.

An exposure/risk assessment involves the following work elements:

- Identifying the contaminants of concern on the basis of a toxicological characterization of major contaminants and an identification of their adverse ecological effects and physical/chemical properties.

- Evaluating the measured or predicted receptor exposure levels for contaminants of concern in

terms of location, pathway, magnitude, frequency, and duration of exposure.

- Identifying the population at risk on the basis of predictive modeling of the extent of contaminant migration at or above detection limits, taking into consideration unusually susceptible or sensitive groups within the general population.

- Evaluating dose/response relationships on the basis of existing exposure standards such as threshold limit values (TLVs), suggested no adverse response levels (SNARLs) and acceptable daily intakes (ADIs).

- Completing the exposure/risk assessment using U.S. EPA-approved methodologies and guidelines for human health hazard assessment including consideration of mitigating effects, such as existing background levels, and recognizing inherent limitations of the selected methods.

Refinement of Objectives and Criteria

The results of the exposure/risk assessment will be used to refine the preliminary objectives and criteria for evaluating alternative remedial action measures. It is anticipated that these objectives will still be qualitative in nature, involving the desire to

protect the public health and the environment with minimal disruption to adjacent land use. Upon selection of response objectives, criteria for measurement of the degree to which remedial alternatives meet these objectives will be developed. They will include EPA and state requirements, consideration of present and background levels of contamination, and risk factors for all identified pathways.

A technical memorandum will be prepared summarizing the hazard evaluation process and presenting the results of the hazard assessment. A meeting will be held at EPA offices in Chicago upon completion of U.S. EPA review of the technical memorandum. At this meeting the project team will receive Agency comments, and problems relating to the site hazard assessment will be resolved. Prompt resolution of any problems will help ensure that the draft RI report is appropriately focused. A summary of this review meeting will be prepared and made available to appropriate project team and U.S. EPA personnel.

TASK 5 - REMEDIAL INVESTIGATION REPORT

A Draft Remedial Investigation Report will be prepared consolidating and summarizing the data and documentation of the remedial investigation technical memoranda. The draft report will include a discussion of the remedial actions considered, recommendations regarding whether or not to proceed with the evaluation of the

remedial action alternatives, and the recommended remedial actions alternatives that should be included during the evaluation. This report will be submitted to the U.S. EPA for review.

Following submittal of the Draft RI report, and a four week period for U.S. EPA comments, a review meeting will be held with U.S. EPA and other appropriate personnel, at EPA offices in Chicago, to:

- Confirm the remedial action objectives refined in Task 4;
- Identify alternative level operable units and associated remedial actions to be addressed in the Feasibility Study;
- Discuss the content of the draft RI report and any additional data collection or evaluation that may be necessary;
- Review and, if necessary, revise the scope of work planned for Task 6.

Following the review meeting, a final report incorporating the results of the meeting will be prepared and submitted for U.S. EPA approval in accordance with Paragraph V(E) of the Partial Consent Decree.

FEASIBILITY STUDY (FS)

The Feasibility Study will evaluate alternative remedial actions that will effectively minimize or mitigate the threat or harm to public health, welfare or the environment. The alternatives will be evaluated based on cost, engineering feasibility and environmental impacts and the FS will recommend the cost effective and environmentally sound solutions, as defined in the National Oil and Hazardous Substances Contingency Plan in effect at that time, for implementation at the Midco II site.

TASK 6 - EVALUATION OF REMEDIAL ACTION ALTERNATIVES

The objective of this activity is to evaluate alternative remedial actions that will effectively minimize or mitigate the threat or harm to public health, welfare or the environment. The alternatives will be evaluated on the basis of economic, environmental and engineering criteria. The level of detail used in these evaluations only identifies comparative or relative differences among alternatives.

Subtask 6.1 - Develop Preliminary Alternatives

A preliminary list of potential remedial actions that will reduce the environmental threat caused by the Midco I site will be developed as the first step in the evaluation.

The preliminary remedial actions presented in Task 5 will serve as a starting point. Key project members and U.S. EPA personnel will confer and collectively select alternatives and decide upon preliminary evaluation criteria in accordance with the National Oil and Hazardous Materials Contingency Plan guidelines. The preliminary remedial actions agreed upon will form the basis for subsequent Feasibility Study activities. This list will not be fixed but could be added to or subtracted from as additional data become available. The no-action alternative will also be included in the evaluation and will serve as a base line to which all other alternatives can be compared.

Subtask 6.2 - Prescreen Preliminary Alternatives

The preliminary list of remedial action alternatives will be prescreened to reduce the number of alternatives to a working group. In order to assess the alternatives, site specific screening criteria are prepared by addressing the following factors:

- Economic - the present worth (30 year life) of the estimated stream of payments for implementation, and the capital and operating and maintenance costs of each alternative will be considered;

- Environmental Effects - any adverse impacts on public health and/or welfare or the surrounding environment which might be associated with an alternative will be considered;

- Engineering - each alternative must be technically feasible in light of site location and conditions, must be applicable to project needs, must be a reliable method of solving the problem and should have a relatively short implementation period.

Initial site screening is based primarily on engineering judgment. Reasons for accepting or rejecting alternatives will be fully documented and submitted to U.S. EPA and the prescreening will be subject to U.S. EPA approval.

Subtask 6.3 - Refine Remaining Alternatives

Once the list of remedial action alternatives has been reduced to a workable number, the project team will carefully evaluate the remedial investigation data compiled as part of Task 5. Additional engineering studies may be necessary to fully evaluate the cost, constructability, applicability or reliability of any alternative. These studies may include gathering additional data on the hydrologic system or distribution of soil materials.

If treatment of contaminated materials is included in the list of potential remedial action alternatives, a technical assessment of these alternatives will be conducted and applicable processes identified.

The working group of alternative remedial actions will be more fully defined to include the following:

- Basic component diagrams for each alternative to be considered, including criteria, quantities of material to be handled, efficiency of contaminant removal and other appropriate information;
- Major equipment needs and utility requirements;
- Conceptual site layout drawings;
- Preliminary implementation schedule including procurement, construction, permitting, and operating time required to achieve objectives;
- A description of the special engineering considerations required to implement each alternative (e.g., for a pilot treatment facility, any additional studies that may be needed to proceed with the conceptual design);
- A description of operation, maintenance, and monitoring requirements;
- A description of transportation plans;
- A description of temporary storage requirements;
- A description of safety requirements associated with implementing each alternative, including both onsite and offsite health and safety considerations;

- A description of how any of the other alternatives could be combined and how any of the combinations could best be implemented to produce significant environmental improvements or cost savings; and,

- For offsite incineration, a description/review of potential offsite incineration facilities which could be utilized, and methodology that would be used to ensure compliance with applicable requirements of the Resource Conservation and Recovery Act, the ISBH hazardous waste rules, and the U.S. and Indiana Departments of Transportation rules.

Subtask 6.4 - Evaluation of Alternatives

The refined, narrowed range of remedial action alternatives will undergo a final assessment for overall viability at this stage. These options will be evaluated on the following basis.

Engineering Assessment

The engineering aspects of the alternatives will be assessed on the basis of acceptable engineering practices. Specific factors to be evaluated include:

- Reliability;

- Established technology;

- Suitability to control the problem;
- Risks to the health and safety of construction and operational personnel;
- Constructibility and operability in light of site conditions;
- Maintainability and sensitivity to offsite upset;
- Offsite transportation and disposal capacity requirements.

Economic Assessment

Order-of-magnitude capital and operation and maintenance (O&M) costs will be estimated for each remedial action alternative. The comparative cost impacts of health and safety requirements on construction and continuing operation and maintenance will be included in the cost estimates.

After completion of the order-of-magnitude cost estimates, a present worth analysis will be conducted.

Environmental Assessment

The remedial action alternatives will be evaluated based on the environmental screening criteria. The comparative assessment will consider:

- The known adverse environmental effects of the alternatives on the environment and the public

health and welfare;

- The effectiveness of measures to mitigate any adverse effect on the environment and the public health and welfare;
- The adequacy of source control measures;
- The effectiveness of offsite control measures;
- The institutional and legal (environmental permits) constraints.

Subtask 6.5 - Ranking of Alternatives

After completing Subtask 6.4, the final set of alternatives will be compiled and ranked within each of the three assessment categories discussed in Subtask 6.4. The rankings will be based on the previous subtasks and professional judgement. A draft report summarizing the rankings in matrix form will be prepared and submitted for U.S. EPA review and comment. A meeting will be held at EPA offices in Chicago to receive U.S. EPA and ISBH comments on the rankings and resolve any problem with the rankings that may arise. A revised ranking matrix and a memorandum summarizing the review meeting will be prepared and made available to appropriate personnel.

TASK 7 - FEASIBILITY REPORT

A draft Feasibility Study report summarizing data developed during the evaluation of alternatives and documenting the alternative

remedial actions assessment process will be prepared. This draft report will be submitted to the U.S. EPA for review and comment. The report will include a narrative summary of the evaluation criteria for each alternative. A four week period will be provided for U.S. EPA review of the draft report.

A review meeting with U.S. EPA will be held at EPA offices in Chicago to review the draft report.

Following receipt of review comments, the final Feasibility Study report will be submitted for U.S. EPA approval in accordance with paragraph V(E) of the Partial Consent Decree. This final report will incorporate the review comments.

The final Feasibility Study will be made available for public review during a public comment period conducted by the U.S. EPA pursuant to its Community Relations Policy. Following the expiration of the public comment period, modifications will be made to the final Feasibility Study in accordance with Paragraph V(F) of the Partial Consent Decree.

TASK 8 - COMMUNITY RELATIONS SUPPORT

U.S. EPA will assume primary responsibility for community relations activities during the RI/FS phase of the site work. As a result, the community relations role of the Participants' and their contractor will be limited to providing advice or assistance to the EPA when requested to do so. Such assistance may involve: briefing local agency personnel and officials on the progress of

the RI/FS study and preparation of written or graphic material for use in public meetings. All prepared or written material will be submitted to U.S. EPA for review prior to release.

SCHEDULE

Included in this section is a schedule for the project (Table 1). U.S. EPA personnel will respond to draft submittals within 30 days.

Table 1

MIDCO II PROJECT SCHEDULE

Description	Task	Deadline
Submit the following reports to U.S. EPA: Quality Assurance Project Plan, Health and Safety Plan, Sampling Plan, Data Gathering Technical Summary,	 1.1 1.2 1.3 2.1	May 15, 1985
Review meeting with U.S. EPA on the: Quality Assurance Project Plan, Health and Safety Plan, Sampling Plan		June 14, 1985
Submit, if necessary, the following revised reports to U.S. EPA: Quality Assurance Project Plan, Health and Safety Plan, Sampling Plan		June 28, 1985
Complete geophysical survey and submit memorandum	2.4	June 28, 1985
Submit Site Map to U.S. EPA	2.3	June 30, 1985
Complete soil gas survey (if required) and submit technical memorandum	2.5	July 28, 1985, or 30 days after U.S. EPA approval of the soil gas survey portion of the QAPP, whichever is later
Sampling locations field meeting	3.1	July 19, 1985 or 21 days after the dat of submission of the soil gas survey memorandum (if required), whichever is later
Initiate monitoring well installation, hydrogeological testing and soil sampling	3.2	The latest of the following: i) August 23, 1985 ii) 28 days after U.S. EPA approval of the QAPP, or iii) 21 days from the date of the sampling locations field meeting.

Description	Task	Deadline
Hydrologic Studies	2.6	July-December 1985
Complete the following tasks and submit the required technical memoranda:		October 18, 1985 or 12 weeks after the date of U.S. EPA approval of the QAPP, whichever is later
Hydrogeologic Study	3.2	
Soil sampling	3.5	
Phase I surface sampling	3.3	
Phase I groundwater sampling	3.4	
Submit analytical results for soil sampling, and phase I surface and ground water sampling	3.3 3.4 3.5	November 30, 1985
Complete phase II surface and ground water sampling and submit technical memorandum	3.3 3.4	December 31, 1985
Submit Site Hazard Assessment Technical Memorandum	4	January 31, 1986
Site Hazard Assessment Review Meeting	4	February 23, 1986
Submit Draft RI Report	5	March 15, 1986
Submit analytical results for phase II surface and ground water sampling	3.3 3.4	March 15, 1986
Draft RI Report review meeting	5	April 15, 1986
Submit Final RI Report	5	April 30, 1986
Submit Draft Ranking of Alternatives	6.5	May 31, 1986
Ranking of Alternative Review Meeting	6.5	June 21, 1986
Submit Revised Ranking of Alternatives	6.5	June 30, 1986
Submit Draft FS Report	7	July 21, 1986
Draft FS review meeting	7	August 21, 1986

Description	Task	Deadline
Submit Final FS report	7	September 7, 1986
Submit required modifications to final FS Report following public comment period		30 days after notice by U.S. EPA of required revisions

Table 2

LIST OF PARAMETERS FOR FULL ORGANIC AND INORGANIC ANALYSIS

Volatiles

1. Chloromethane
2. Bromomethane
3. Vinyl Chloride
4. Chloroethane
5. Methylene Chloride
6. Acetone
7. Carbon Disulfide
8. 1,1-Dichloroethene
9. 1,1-Dichloroethane
10. trans-1,2-Dichloroethene
11. Chloroform
12. 1,2-Dichloroethane
13. 2-Butanone
14. 1,1,1-Trichloroethane
15. Carbon Tetrachloride
16. Vinyl Acetate
17. Bromodichloromethane
18. 1,1,2,2-Tetrachloroethane
19. 1,2-Dichloropropane
20. trans-1,3-Dichloropropane
21. Trichloroethene
22. Dibromochloromethane
23. 1,1,2-Trichloroethane
24. Benzene
25. cis-1,3-Dichloropropene
26. 2-Chloroethyl Vinyl Ether
27. Bromoform
28. 2-Hexanone
29. 4-Methyl-2-pentanone
30. Tetrachloroethene
31. Toluene
32. Chlorobenzene
33. Ethyl Benzene
34. Styrene
35. Total Xylenes

Semi-Volatiles

36. N-Nitrosodimethylamine
37. Phenol
38. Aniline
39. bis(2-Chloroethyl) ether
40. 2-Chlorophenol

41. 1,3-Dichlorobenzene
42. 1,4-Dichlorobenzene
43. Benzyl Alcohol
44. 1,2-Dichlorobenzene
45. 2-Methylphenol
46. bis(2-Chloroispropyl) ether
47. 4-Methylphenol
48. N-Nitroso-Dipropylamine
49. Hexachloroethane
50. Nitrobenzene
51. Isophorone
52. 2-Nitrophenol
53. 2,4-Dimethylphenol
54. Benzoic Acid
55. bis(2-Chloroethoxy) methane
56. 2,4-Dichlorophenol
57. 1,2,4-Trichlorobenzene
58. Naphthalene
59. 4-Chloroaniline
60. Hexachlorobutadiene
61. 4-Chloro-3-methylphenol (para-chloro-meta-cresol)
62. 2-Methylnaphthalene
63. Hexachlorocyclopentadiene
64. 2,4,6-Trichlorophenol
65. 2,4,5-Trichlorophenol
66. 2-Chloronaphthalene
67. 2-Nitroaniline
68. Dimethyl Phthalate
69. Acenaphthylene
70. 3-Nitroaniline
71. Acenaphthene
72. 2,4-Dinitrophenol
73. 4-Nitrophenol
74. Dibenzofuran
75. 2,4-Dinitrotoluene
76. 2,6-Dinitrotoluene
77. Diethylphthalate
78. 4-Chlorophenyl Phenyl ether
79. Fluorene
80. 4-Nitroaniline
81. 4,6-Dinitro-2-methylphenol
82. N-nitrosodiphenylamine
83. 4-Bromophenyl Phenyl ether
84. Hexachlorobenzene
85. Pentachlorophenol
86. Phenanthrene
87. Anthracene
88. Di-n-butylphthalate
89. Fluoranthene
90. Benzidine

91. Pyrene
92. Butyl Benzyl Phthalate
93. 3,3'-Dichlorobenzidine
94. Benzo(a)anthracene
95. bis(2-ethylhexyl)phthalate
96. Chrysene
97. Di-n-octyl Phthalate
98. Benzo(b)fluoranthene
99. Benzo(k)fluoranthene
100. Benzo(a)pyrene
101. Indeno(1,2,3-cd)pyrene
102. Dibenz(a,h)anthracene
103. Benzo(g,h,i)perylene
104. alpha-BHC
105. beta-BHC
106. delta-BHC
107. gamma-BHC (Lindane)
108. Heptachlor
109. Aldrin
110. Heptachlor Epoxide
111. Endosulfan I
112. Dieldrin
113. 4,4'-DDE
114. Endrin
115. Endosulfan II
116. 4,4'-DDD
117. Endrin Aldehyde
118. Endosulfan Sulfate
119. 4,4'-DDT
120. Endrin Ketone
121. Methoxychlor
122. Chlordane
123. Toxaphene
124. AROCLOR-1016
125. AROCLOR-1221
126. AROCLOR-1232
127. AROCLOR-1242
128. AROCLOR-1248
129. AROCLOR-1254
130. AROCLOR-1260
131. 2,3,7,8 Tetrachlorodibenzo-p-dioxin

Metals

1. Aluminum
2. Antimony
3. Arsenic
4. Barium
5. Beryllium
6. Cadmium
7. Calcium
8. Chromium
9. Cobalt
10. Copper
11. Iron
12. Lead
13. Magnesium
14. Manganese
15. Mercury
16. Nickel
17. Potassium
18. Selenium
19. Silver
20. Sodium
21. Thallium
22. Tin
23. Vanadium
24. Zinc

Other

Cyanide

In addition to the foregoing, GC/MS analysis shall be used to identify the major components not listed above, including up to 10 compounds per volatile fraction and 20 compounds per semi-volatile fraction.

Major Milestones for Midco I and Midco II
Remedial Investigations and Feasibility Studies

Midco I

a. Initiate monitoring well installation, hydrogeological testing and soil sampling	August 2, 1985 or 21 days after U.S. EPA approval of the QAPP whichever is later
b. Submit Draft RI Report	March 15, 1986
c. Submit Final RI Report	April 30, 1986
d. Submit Draft FS Report	July 21, 1986
e. Submit Final FS report	September 7, 1986
f. Submit required modifications to final FS Report following public comment period	30 days after notice by U.S. EPA of required revisions

Midco II

a. Initiate monitoring well installation, hydrogeological testing and soil sampling	The latest of the following: i) August 23, 1985 ii) 28 days after U.S. EPA approval of the QAPP, or iii) 21 days from the date of the sampling locations field meeting
b. Submit Draft RI Report	March 15, 1986
c. Submit Final RI Report	April 30, 1986
d. Submit Draft FS Report	July 21, 1986
e. Submit Final FS Report	September 7, 1986
f. Submit required modifications to final FS Report following public comment period	30 days after notice by U.S. EPA of required revisions