

willing to enter into this Consent Decree (Decree) in order to enable remedial measures at its Springfield plant to be undertaken without delay and with the approval of the Ohio EPA. Defendant also desires to resolve this matter constructively and without the time and expense which would be required by litigation. Accordingly, Defendant and Plaintiff have each agreed to a settlement and the making and entry of this Decree before the taking of any testimony; without trial, admission or adjudication of any issue of fact or law; and without any admission of liability or fault as to any allegation or matter arising out of any allegation of the Complaint.

NOW, THEREFORE, the Court having considered this matter, been duly advised, and solely for the purpose of settlement of this action, it is ADJUDGED, ORDERED AND DECREED as follows:

I.

This Court has jurisdiction over the parties and the subject matter of this action. Venue is proper in this Court.

II.

This Decree shall apply to and be binding upon the State of Ohio and Defendant, and the successors and assigns of each of them as well as any agencies, instrumentalities, officers, directors, agents, or employees thereof. Defendant shall provide a copy of this Decree to each contractor which it obtains to perform work contemplated in this Decree.

III.

The mutual objective of the parties bound by this Decree is to attain compliance with Chapters 6111. and 3734. of the Ohio Revised Code and regulations adopted thereunder and any other applicable law and in furtherance of this objective, Defendant shall prepare and implement work plans which (1) identify the extent of alleged soil and groundwater contamination at Defendant's Springfield plant; (2) examine alternatives for permanently and significantly reducing the volume, toxicity or mobility of the contaminants in order to protect human health and the environment; and (3) utilize permanent, on-site solutions to the maximum extent practical. The work plans shall be prepared and implemented through performance of the tasks described in the "Statement of Work For Remedial Investigation/Feasibility Study" (RI/FS Study) appended to this Decree and labelled Attachment A, and in accordance with the timetable appended hereto as Attachment B and (titled "RI/FS Study Milestone Dates") and the guidance documents appended hereto as attachment C. All attachments appended to this Decree are incorporated by reference.

IV.

As part of the Feasibility Study Final Report to be submitted to Plaintiff as Task 14 of Attachment A to this Decree, Defendant shall: identify to the Ohio EPA the lowest cost alternative that is technologically feasible and reliable and which meets the objective set forth in Section III of this Decree. The

total cost of each alternative shall be calculated to include long-term operation and maintenance expenses.

V.

Following receipt and review of the Feasibility Study Final Report required under Task 14 of Attachment A to this Decree, the Ohio EPA shall notify Defendant by certified mail of the preferred alternative selected for remediation of the Springfield plant site. Should Defendant disagree with the Ohio EPA's selection, Defendant may petition this Court for review within fifteen (15) days following receipt of the Ohio EPA's written notification of the selected remedy. Failure to petition this Court in the manner prescribed herein bars Defendant from further challenging Ohio EPA's remedy selection in this or other proceeding. Defendant shall demonstrate that Ohio EPA'S selection of the preferred alternative was unreasonable or unlawful. If either Ohio EPA or Defendant believes that a dispute is not a good faith dispute, or that delay would pose or increase the threat of harm to the public or the environment, either party may petition the Court for relief without following the dispute resolution procedures of this paragraph.

VI.

Unless Ohio EPA states as part of its selection of the preferred alternative that a workplan is not necessary, Defendant shall, within ninety (90) days of selection of the preferred alternative for remediation in accordance with Section V above, prepare and submit to the Ohio EPA a remedial action workplan

describing the manner in which Defendant will implement the preferred alternative remedial action. The workplan shall include general plans, design criteria, and a schedule for preparation of detailed engineering plans, specifications and construction drawings as necessary to implement the approved remedial action, a schedule for selection of contractors, commencement of work, and completion of work, including a final completion date. Following Ohio EPA approval of the workplan, Defendant shall implement the workplan in accordance with the schedule contained therein.

After the preferred alternative has been in operation for the amount of time required to demonstrate its capability to accomplish the standards contained in the remedial action plan, but, at a minimum at least three years of operation of the preferred alternative, and the operations have shown that further reductions in contaminant levels cannot be achieved, Defendant may petition Ohio EPA to establish an alternative standard relating to the remedial action plan. Ohio EPA shall review and consider the information in the petition submitted and shall make a determination in accordance with applicable laws and regulations in effect at the time of the petition, as to whether an alternative standard shall be established, and whether operation of the remedial action plan shall be modified. This paragraph is not subject to the dispute resolution procedure provided in this Decree.

VII.

With regard to each report, study, workplan or other document that Defendant is required under this Decree to submit to Ohio EPA for review and approval, Ohio EPA agrees to notify Defendant in writing of its approval, disapproval, or approval with special terms and conditions ("conditional approval") of the document, or a part thereof. The notice shall specify the deficiencies in the event of any disapproval or conditional approval and state the reasons for the disapproval or conditional approval.

VIII.

Except as provided in Section V above regarding a petition to this Court for review of Ohio EPA's selection of the preferred alternative for remediation, Defendant may request a meeting with Ohio EPA within five (5) business days of its receipt of the written notice required by Section VII of this Decree, to discuss or dispute any deficiencies specified in a notice of disapproval or conditional approval of the document under review. Such meeting shall be held within five (5) business days of such request, or within such additional times as the parties may agree, and may be conducted by telephone unless one of the parties requests a face-to-face meeting, which shall be held in Columbus, Ohio, or other location agreed to by the parties. If Defendant fails to request such a meeting within this time period, Defendant shall be deemed to have agreed to the position taken by Ohio EPA, and shall submit to Ohio EPA, within

thirty (30) days of receipt of the written notice, revisions to the documents that address the deficiencies identified or respond to the special terms and conditions added by the Ohio EPA. To facilitate such meetings, Ohio EPA and Defendant each shall appoint a project coordinator, who shall make reasonable efforts to resolve all disputes or disagreements informally. The project coordinator for the Ohio EPA shall be:

Greg Buthker (or his successor)
Ohio EPA
Southwest District Office
40 South Main Street
5th Floor
Dayton, Ohio 45402

The project coordinator for Defendant shall be:

James A. Nooks
Project Coordinator
6125 Urbana Road
Springfield, Ohio 45501

If agreement can be achieved informally by conference of the project coordinators, the agreement shall be memorialized in a joint memorandum between the parties, which shall specify the date by which the disputed document, or part or further refinement thereof, shall become final. Within thirty (30) days of that date, Defendant shall submit to Ohio EPA such corrections or additions to the document, if any, agreed to by the parties.

If agreement concerning the disputed document, or any part or further refinement thereof, cannot be achieved informally by the parties, Defendant may petition this Court to determine whether the corrections or additions to the document proposed by the Ohio EPA are necessary to accomplish the objectives of this

Decree set forth in Sections III and IV above. The parties agree to move for an expedited hearing of such petition. Within thirty (30) days of entry of a determination by this Court, Defendant shall submit to Ohio EPA such corrections or additions to the document, if any, necessary to comply with the decision of this Court. Defendant shall demonstrate to the Court that Ohio EPA's decision as to the disputed matter was unreasonable or unlawful. If either Ohio EPA or Defendant believes that a dispute is not a good faith dispute, or that delay would pose or increase the threat of harm to the public or the environment, either party may petition the Court for relief without following the dispute resolution procedures of this paragraph.

IX.

Defendant shall provide Ohio EPA with at least five (5) business days advance notice of any sampling event and shall upon Ohio EPA's request, make split samples available to Ohio EPA at the time of sampling.

X.

Until Defendant completes the remedial action activities required by this Decree, Defendant is hereby enjoined to pay a stipulated civil penalty of Five Hundred Dollars (\$500.00) per day for each day the Defendant is late in meeting a milestone date set forth in Attachment B hereto, or is late in completing the remedial action activity at the Springfield plant by the final completion date set forth in an approved remedial action work plan prepared pursuant to Section VI of this Decree.

XI.

Except as provided herein, Defendant shall pay to the State of Ohio a civil penalty of One Hundred Sixty Thousand Dollars (\$160,000) and shall reimburse the State of Ohio for past response costs in the amount of Ten Thousand (\$10,000.00) Dollars. The civil penalty and response costs required by this Section shall be paid within thirty (30) days of entry of this Decree by delivering to Plaintiff's counsel, at 30 East Broad Street, 25th floor, Columbus, Ohio 43266-0410, two checks, payable to the order of the "Treasurer of the State of Ohio", for deposit in the Hazardous Waste (623) Account created by R.C. 3734.28.

Defendant further agrees to reimburse the Ohio EPA for response costs incurred by the Ohio EPA to oversee Defendant's implementation of remedial actions in accordance with this Decree. Defendant shall be obligated to immediately reimburse the Ohio EPA for future response costs once Ohio EPA provides Defendant with an itemized invoice of Ohio EPA's costs, unless Defendant contests such costs pursuant to the dispute resolution provision of Section VIII. Defendant shall pay future response costs within thirty (30) days of receipt of the itemized invoice, or in the event the Defendant invokes the dispute resolution procedure, within thirty (30) days of a decision of this Court. Future response costs shall include any costs not inconsistent with the National Contingency Plan. The Defendant is not obligated to immediately reimburse Ohio EPA for those response costs

incurred by Ohio EPA for the purpose of contracting with an outside party to complete or perform those portions of the RI/FS study which Defendant is obligated to perform under this Decree, unless the parties agree that an outside contractor is necessary. If Ohio EPA hires such a contractor without agreement of Defendant, the State reserves all rights it may have to amend or supplement this action or bring another action to recover such costs.

The Court may not suspend the stipulated penalties in part or in whole. Defendant waives any right it may have to contest the imposition of the stipulated penalties for violations of this Decree, except the defense that Defendant did, in fact, comply with said Decree.

XII.

In any action to enforce the provisions of the Decree, Defendant may raise at that time the question of whether they are entitled to a defense that the conduct at issue was caused by reasons beyond their control such as, by way of example and not limitation, act of God, unusually severe weather conditions, strikes, acts of war or civil disturbances, or orders of any judicial body or regulatory agency. While Plaintiff does not agree that such a defense exists, it is, however, agreed by the parties that it is premature at this time to raise and adjudicate the existence of such a defense and that the appropriate point at which to adjudicate the existence of such a defense is at the time that an enforcement action, if any, is commenced. Accep-

tance of this Decree without a force majeure clause does not constitute a waiver by Defendant of any rights or defenses it may have under applicable law.

XIII.

Defendant shall transmit copies of all reports submitted to the Ohio EPA pursuant to this Decree to the Ohio Attorney General, Environmental Enforcement Section, attention: Karen S. Cleveland or her successor.

XIV.

For the specific purpose of overseeing Defendant's compliance with this Decree, the Ohio EPA, its employees and agents shall have full access to the site without the necessity of a warrant. This Decree shall not be interpreted to limit the rights of entry onto Defendant's facility which the Ohio EPA may otherwise have under existing laws, rules, orders, permits, or other documents that are binding upon Defendant.

XV.

This Decree constitutes a full and complete settlement, discharge and release between and among the parties to this Decree, including Defendant's past or current officers, directors and employees, of all civil claims which have been asserted against Defendant, including but not limited to all claims for civil penalties, and response costs which were raised against Defendant in the Complaint. Nothing herein shall be construed to limit the authority of the State of Ohio to undertake any action against any persons, including the Defendant, to eliminate or

control conditions which may present an imminent endangerment to the public health or the environment.

XVI.

The Decree shall not constitute evidence in another judicial or administrative proceeding, an admission or adjudication with respect to any allegation of the complaint, or any wrongdoing or misconduct or liability on the part of Defendant or any director, officer, employee or affiliated person of Defendant. Except as stated in this Decree, nothing contained herein shall affect the rights or liabilities of any person who is not a party to this Decree.

XVII.

The terms of this Decree in no way affect, alter or diminish the right of the State of Ohio to pursue further enforcement action and/or penalties for violations of this Decree or for violations not alleged in this complaint.

XVIII.

Should any inconsistency occur between the terms of this Decree and those of any submittals required herein, the terms of this Decree shall take precedence over such submittals.

XIX.

The Court shall retain jurisdiction of this matter for the purpose of enabling the parties to this Decree to apply to the Court for any further orders that may be needed to construe, carry out, or enforce compliance with the terms of this Decree until completion of the work required by this Decree.

XX.

Defendant shall pay all court costs.

Dated and entered _____ day of _____, 1989.

Judge, Common Pleas Court

SIGNED AND AGREED TO BY:

ANTHONY J. CELEBREZZE
ATTORNEY GENERAL OF OHIO

NAVISTAR INTERNATIONAL
TRANSPORTATION CORP.

BY: _____

BY: Karen Cleveland
PAUL D. HANCOCK
KAREN S. CLEVELAND
ASSISTANT ATTORNEYS GENERAL
ENVIRONMENTAL ENFORCEMENT SECTION
30 East Broad Street, 25th Floor
Columbus, Ohio 43266-0410
(614) 466-2766

BY: Robert M. Shaughnessy
Name: Robert M. Shaughnessy
Title: Senior Vice President,
Marketing & Sales

APPROVED BY:

Robert Styduhar
ROBERT J. STYDUHAR
VORYS, SATER, SEYMOUR AND
PEASE
52 East Gay Street
P. O. Box 1008
Columbus, OH 43216-1008
(614) 464-8299

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ATTACHMENT A

STATEMENT OF WORK
FOR THE
REMEDIAL INVESTIGATION/
FEASIBILITY STUDY
AT THE
NAVISTAR INTERNATIONAL
TRANSPORTATION CORP.
ASSEMBLY PLANT
SPRINGFIELD, OHIO

Prepared
for
Navistar International Transportation Corp.
6125 Urbana Road
Springfield, Ohio 45501

Job J-190-01

April, 1989

Prepared
by
ERM-Midwest, Inc.
450 W. Wilson Bridge Road
Columbus, Ohio 43085

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INTRODUCTION

Background

The Navistar International Transportation Corp. (Navistar) operates a truck assembly facility north of Springfield, Ohio, on U.S. Route 68. The facility utilizes two underground tank farms, referred to as the north and south areas, for storage of petroleum products, antifreeze, solvents, and paint. Groundwater sampling conducted by OEPA in 1983 revealed the presence of several organic constituents in the vicinity of the south tank farm.

Navistar subsequently contracted a consultant to install monitor wells to be used to identify and track the contaminant plume. Between 1983 and the fall of 1987, at least 13 additional wells were installed in the vicinity of the tank farms and around the perimeter of the property.

Numerous samples have been obtained from the wells since 1983, and have been analyzed for the organic constituents present in the materials stored at the tank farms. Analytical results from the latest well sampling conducted jointly by Navistar and OEPA (February 18, 1988), indicated the presence of benzene, bis-(2-ethylhexyl) phthalate, chloroethane, ethylbenzene, naphthalene, toluene, trichloroethane, xylenes, 1,1-dichloroethane, and 1,1-dichloroethene in two of the wells ("B" and "C") in the immediate vicinity of the south tank farm.

Since the source of the contaminants was interpreted to be historic occurrences of tank overfills, Navistar retained O.H. Materials to perform initial tank pit remediation activities in 1985. Contaminated backfill material at the south tank pit was removed, and replaced with clean fill. The south tank pit presently has a diked concrete fill pad which prevents problems with product losses due to tank overflow.

Several summary reports of these activities have been submitted to OEPA, and have been judged unsatisfactory by the agency. During a settlement meeting with Navistar on October 29, 1987, representatives of Ohio Attorney General (OAG), and OEPA concluded that Navistar should conduct a timely, principled RI/FS study of the site, and subsequently implement an appropriate remedial action.

As an initial step of this process, the OAG requested that Navistar prepare a draft Statement of Work (SOW) for the RI/FS. Navistar submitted the draft SOW document on January 15, 1988, based upon a generic statement of work document provided by the OAG. OEPA comments concerning the draft submittal were issued in correspondence dated July 22, 1988. Navistar has recently retained ERM-Midwest to review and

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refine the draft SOW document for resubmittal to the OAG, and to perform the RI/FS following finalization of the Administrative Consent Order. This Statement of Work document is the result of the former activity.

This Remedial Investigation/Feasibility Study (RI/FS) Statement of Work (SOW) has been adapted from the draft SOW submitted to the OEPA on January 15, 1988. As part of the revision process, the July 22, 1988 agency comments have been reviewed, and addressed within the document. The purpose of the SOW is to provide a document that defines the anticipated scope of RI/FS activities at the Navistar Assembly Facility near Springfield, Ohio.

This revised SOW outlines an investigation designed to provide data necessary to evaluate and implement remedial action(s) at the site. The investigation consists of fifteen well defined tasks structured to accomplish the following:

- o Identification of the nature and extent of contamination at the site.
- o Definition of on-site physical features and facilities that may affect contaminant migration and contaminant cleanup.
- o Definition of the pathways of migration from the site, as well as the impact of contaminants on potential receptors.
- o Identification and evaluation of potential remedial action alternatives.
- o Identification, and preliminary design of appropriate, cost-effective remedial action(s) for the site.

Project Objectives

The primary objective of the RI/FS is to establish the nature and extent of contamination problems at the Navistar facility. Once the problem has been delineated, available remedial alternatives will be evaluated, and the most appropriate remedial action(s) will be identified. This investigation will lead to the implementation of the chosen remedial alternative, and eventual resolution of the present contaminant problem.

Project Approach

Navistar has collected a significant amount of data concerning the alleged groundwater contamination problem. However, additional data gathering will be necessary in order to accomplish the objectives of this investigation. Existing data indicate that there is an alleged groundwater

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contamination problem at the site. Based on available information, the problem appears to be confined to the Navistar property at this time. Additional data gathering will be performed during the RI/FS to more fully document the subsurface conditions and the extent of contamination.

Once this additional information is available, the following objectives will be achieved:

- o Identification of contaminant source areas.
- o Definition of potential pathways of migration from the site, as well as the impact of contaminants on potential receptors.
- o Assessment of whether the site poses an imminent health hazard or environmental problem.
- o Identification and evaluation of potential remedial action alternatives.
- o Identification of cost-effective remedial action(s) for the site.
- o Design and implementation of the chosen remedial action(s).

The scope of the RI/FS includes fifteen tasks, each of which requires one or more specific activities (sub-tasks). These tasks include:

Remedial Investigation

- TASK 1: Description of Current Situation
- TASK 2: Investigation Support (preparation for site investigations)
- TASK 3: Site Investigation
- TASK 4: Site Investigation Data Analysis
- TASK 5: Laboratory and Bench-Scale Studies
- TASK 6: Remedial Investigation Report
- TASK 7: Additional Requirements

Feasibility Study

- TASK 8: Description of Current Situation
- TASK 9: Feasibility Study Work Plan
- TASK 10: Development of Remedial Alternatives

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TASK 11: Initial Screening of Remedial Alternatives

TASK 12: Analysis of Remedial Alternatives

TASK 13: Evaluation and Selection of Remedial
Alternative

TASK 14: Feasibility Study Final Report

TASK 15: Additional Requirements

The following sections of this SOW describe the work necessary to accomplish the above tasks.

REMEDIAL INVESTIGATION

TASK 1: DESCRIPTION OF CURRENT SITUATION

The purpose of this task will be to compile available data concerning the site background, nature and extent of contaminant presence, and the history of response actions at the site. Based on this data, the purpose and need for conduct of a Remedial Investigation at the site will be summarized. The information compiled during these activities will be presented in a Project Status Summary Report (an RI/FS deliverable), which will provide a baseline for subsequent activities associated with the RI/FS.

Collection of Task 1 data to be presented in the Project Status Summary Report will be performed as a series of three subtasks described in the following subsections:

Subtask 1.1: Site Background Review

A large volume of background data is available from reports of previous site investigations, analytical results from numerous sampling events conducted by Navistar and OEPA, site records, and from the general literature. The objective of this subtask will be to prepare a summary of existing information and data pertinent to the site, with emphasis on site hydrogeology, physiography, and current and historic land and water use.

The general site and facility history relative to the handling of hazardous substances will be defined. Specifically addressed will be:

1. A history of solid and hazardous waste treatment, storage and disposal activities at the Facility, if any such activities have taken place.
2. Available details of past and present product and/or raw material storage and handling, including a chronology of documented product spills and releases (which have for the most part been confined to the tank pit area) including date, volume, nature, location, and cleanup activities .
3. A description of current operations at the site.

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Subtask 1.2: Nature and Extent Assessment

The objective of this subtask will be to prepare a summary of actual (if known) and potential on-site and off-site effects of contaminant release at the site. The summary will include an audit of:

- the types, physical states, and amounts of hazardous substances present at the site;
- the existence and condition of drums, tanks, and other containers;
- the existence of landfills, or surface ponding;
- potentially affected media, and pathways of exposure;
- any known releases of contaminants;
- any known human or environmental exposure.

The emphasis of this summary will be placed on describing to the extent possible, the threat or potential threat to public health and the environment.

Subtask 1.3: Response Action Review

The objective of this subtask will be to prepare a historical summary of the response actions and investigations which have been conducted by Federal, State, and local agencies; or by private parties in response to the problem. The summary will encompass the reported procedures of all technical investigations, field inspections, sampling events, and clean up activities. A list of reference documents and their location will be included.

TASK 2: INVESTIGATION SUPPORT

The objective of this task will be to perform the preliminary work necessary for the planning and conducting of site investigations and feasibility study. Task 2 consists of several subtasks:

Subtask 2.1: Site Health and Safety Plan

The objective of this subtask will be the preparation of a site health and safety plan (HASP) based on a preliminary assessment of existing site information, and anticipated field activities. The plan will include information regarding potential site hazards, and protective practices and equipment to be used by on-site personnel. As the site investigation activities proceed and additional information is obtained, the HASP will be revised and updated as necessary.

The major elements of the HASP will include:

- o Site description including availability of resources such as roads, water supply, electricity and telephone service;
- o Hazard evaluation;
- o Monitoring requirements;
- o Levels of protection;
- o Work limitations;
- o Authorized personnel and restricted access;
- o Decontamination; and,
- o Emergency information.

The HASP will be consistent with:

- o OSHA regulations as cited in 29 CFR 1910 - 1926;
- o EPA Order 1440.3 - Respiratory Protection;
- o EPA Order 1440.2 - Health and Safety Requirements for Employees engaged in Field activities;
- o EPA Occupational Health and Safety Manual;
- o EPA Interim Standard Operating Safety Procedures;
- o Site conditions.

Subtask 2.2: Boundary Conditions Definition

The objective of this subtask will be the establishment of facility boundary conditions that will serve to define and limit the area of remedial investigations. Analytical data from samples collected from the perimeter set of monitor wells at the site will be utilized for this purpose. The boundary conditions will be set so that subsequent investigations will cover the contaminated media in sufficient detail to support the feasibility study.

These boundary conditions will also be used to identify boundaries for site access control and site security. At this time, the contaminant plume appears to be situated entirely on fenced Navistar property, therefore site access control and security should not be a major consideration.

Subtask 2.3: Preparation of Site Maps

In the performance of this subtask, a facility/site topographic map, or set of maps will be prepared showing wetlands, surface water features, tanks, buildings, utilities, paved areas, easements, right-of-ways, and other pertinent features. The map will be of sufficient detail and accuracy to locate all current and future work performed at the facility.

1. The map(s) will depict:
 - A. General geographic location of the site;
 - B. All active solid or hazardous waste treatment, storage or disposal areas;
 - C. Navistar property lines and any adjacent property line with the owners of all adjacent property clearly indicated;
 - D. All known past solid or hazardous waste treatment storage or disposal areas;
 - E. All known past and present underground tanks and lines used for the storage or conveyance of product or wastes;
 - F. All wetlands, surface water features, tanks, buildings, utilities, paved areas, easements, right-of-ways, and other features; and,
 - G. Topographic contours at a five foot interval.

Subtask 2.4: Community Relations Plan

1. Tier I: As long as the extent of any contamination appears to affect only the Navistar property, a Community Relations Plan is not needed. However, representatives of Navistar shall periodically apprise a representative of the City of Springfield Water Department of the status and significant developments regarding the RI/FS.

2. Tier II: If detectable contaminant levels are identified in the downgradient property boundary wells, and are then confirmed by an additional set of sample analyses, a Community Relations Plan shall be developed along the lines specified in the OEPA generic SOW.

Subtask 2.5: Pre-Investigation Evaluation

Prior to initiating on-site investigations, the site conditions will be assessed to identify potential remedial technologies applicable to the site and associated data needed to evaluate alternatives based on these technologies for the feasibility study. A report will be prepared for OEPA review identifying broad categories of remedial technologies that may be applicable to the site and data needs.

TASK 3: SITE INVESTIGATIONS

The objective of this task will be to conduct the on-site investigations necessary to characterize the site, and its actual or potential hazard to public health and the environment. Additionally, these investigations will produce sufficient data to identify and assess potential remedial alternatives, and support the detailed evaluation of those alternatives during the Feasibility Study.

These investigations will be conducted in accordance with the plans developed during Task 2 activities, as well as a site investigation Work Plan prepared as the first subtask of Task 3. The second subtask of Task 3 will be the actual conduct of site investigations.

Subtask 3.1: Site Investigation Work Plan Preparation

A detailed site investigation work plan will be prepared and submitted for OEPA review and approval. The specific objectives of the Work Plan will be:

1. To outline the data needs for site characterization and support of the Feasibility Study;
2. To outline proposed investigation activities designed to meet those needs ;
3. To outline personnel and equipment requirements for the proposed investigation;
4. To detail the scope of and schedule for the proposed investigation; and,
5. To detail how supporting technical information and data will be gathered, maintained, and presented during the investigation;

Two major components of the Work Plan will be a Sampling Plan, and a Quality Assurance Project Plan (QAPP).

The Sampling Plan will outline rationales for sampling activities, location, quantity, and frequency of sampling, sampling and analysis methods, and constituents for analysis. Included in the plan will be specific discussions of rationales for sampling activities, location, quantity, and frequency of sampling, sampling and analysis methods, constituents for analysis, and a listing of quality assurance procedures (which will be described in detail in the QAPP).

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The current and future integrity and adequacy of samples from existing monitor wells for use in plume detection and definition will be addressed within the Sampling Plan.

All sample analyses will be conducted at laboratories that participate in the U.S. EPA Contract Laboratory Program. Strict chain-of-custody procedures will be followed.

The QAPP will be prepared in accordance with "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" (QAMS-005/80, U.S. EPA, December 1980), and the requirements of U.S. EPA's Contract Laboratory Program. The plan will address the following points:

1. QA objectives for measurement data in terms of precision, accuracy, completeness, representativeness, and comparability;
2. Sampling procedures;
3. Sample custody;
4. Calibration procedures, references, and frequency;
5. Internal quality control checks and frequency;
6. QA performance audits, systems audits, and frequency;
7. Preventative maintenance procedures and schedules;
8. Specific routine procedures to be used to assess data precision, representativeness, comparability, accuracy, and completeness of specific measurement parameters involved; and,
9. Corrective action.

A draft version of the Work Plan will be submitted to the OEPA for comment and concurrence, prior to the commencement of the Subtask 3.2 site investigations activities.

Subtask 3.2: Site Investigations

This subtask involves the performance of the on-site activities as outlined in the Work Plan. A phased approach will be recommended, proceeding in a step-wise manner to subsequent phases. The necessity of additional phases will be based on analysis of data generated by initial phases of the site investigation.

At this time, we anticipate the following site investigation tasks:

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Subtask 3.2.1: Hazardous Waste/Substance Characterization

A sampling and analysis program to supplement existing data for physical and chemical characterization of all potentially hazardous waste and/or substances existing at the site will be performed, as developed and outlined in the Subtask 3.1 Work Plan. The materials of interest will include:

- A. Hazardous wastes or substances stored above or below ground in tanks, containers, lagoons, piles or other structures;
- B. Hazardous wastes or substances treated or disposed of onsite; and,
- C. Hazardous wastes or substances treated or disposed of offsite.

The characterization program may be completed in phases dependent upon the current availability of records pertaining to past treatment, storage and disposal activities. Sufficient data will be collected to characterize the waste/substances completely, including type, quantity, physical form, degree of contamination, disposition (contaminant or nature of deposits), and facility characteristics affecting release (e.g., site security, and engineered barriers).

Subtask 3.2.2: Hydrogeologic Investigation

The purpose of this subtask will be to develop and conduct a program to determine the present and potential horizontal and vertical extent of groundwater contamination at the site. The program will be geared towards providing information concerning contaminant nature and extent, migration, and the control of subsurface geologic and man-made features on migration.

Long-term disposition of contaminants will be evaluated based on contaminant mobility, attenuation capacity of local soils and other geologic features, regional groundwater flow conditions, effects of local groundwater withdrawal, and the presence of discharge/recharge areas.

A number of interpretive tools may be utilized in this evaluation, some of which may include:

- o Potentiometric mapping;
- o Contaminant iso-concentration mapping;
- o Construction of interpretive hydrogeologic cross-sections; and,

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- o Groundwater modeling based on observed and measured aquifer characteristics.

Subtask 3.2.3: Soil Investigation

The purpose of this subtask will be to conduct all investigations necessary to determine the nature, and vertical and horizontal extent of contamination of surface and subsurface soils at the site. One or more remote sensing techniques (e.g., soil gas, geophysical, etc.) may be utilized during the investigation where appropriate. The soil investigation program will be designed as part of Subtask 3.1 activities, and will be detailed in the Work Plan.

The samples collected during this investigation will be submitted for laboratory analysis for parameters that will be specified in the Work Plan. These analyses will be used in the assessment of contaminant nature and extent, as well as the potential applicability of biological and other soil treatment methods of remediation.

Subtask 3.2.4: Surface Water and Sediments Investigation

A program designed to determine the nature and extent of contamination of surface water and sediments at the site will be developed as part of Task 3.1 activities, and will be implemented during this subtask.

Subtask 3.4: Air Investigation

Existing data indicate that a site air quality investigation is not needed. However, a program designed to determine the nature and extent of contamination of air at the site will be developed and implemented during this subtask if deemed necessary based on review of existing data during Task 1, or new data collected during Task 3.2.

TASK 4: SITE INVESTIGATION ANALYSIS

The objective of this task will be to ensure that sufficient data has been collected to adequately describe the nature and extent of contamination as well as to support the feasibility study. Data analysis will be performed pertaining to the following three areas:

Contaminant Nature and Extent

All site investigation data will be reviewed and analyzed in order to develop a summary and description of the nature and extent of contamination at the site. The analysis will include all significant pathways of contamination and an exposure assessment as described below.

Endangerment Assessment

The endangerment assessment (EA) will be performed to identify and describe any actual or potential threats to public health, welfare, and the environment. It will discuss all significant contaminant migration pathways, receptors and routes of exposure. The EA will be conducted in accordance with CERCLA/SARA and the following USEPA documents:

- o The Endangerment Assessment Handbook (August 1985)
- o Toxicity Handbook - Principles Related to Hazardous Waste Site Investigations (August 1985)
- o Superfund Public Health Evaluation Manual (EPA/540/1-86/060, October 1986)
- o Superfund Exposure Assessment Manual - OSWER Directive 9285.5-1 (January, 1986)
- o IRIS Data Base

Application of Potential Remedial Technologies

The results of the site investigations will be reviewed in relation to the potential remedial technologies applicable to the site identified in Subtask 2.5. This analysis will determine the adequacy of data quality and quantity to support the feasibility study and will identify any additional data needs.

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TASK 5: LABORATORY AND BENCH-SCALE STUDIES

Based on the results of the previous tasks, any laboratory and/or bench scale studies deemed necessary to determine the applicability of remedial technologies to site conditions and problems will be performed. The technologies will be analyzed based on a literature review, vendor contacts, and past experience to determine data requirements. A work plan identifying the type(s) and goal(s) of the study(ies), the level of effort needed, the data management and interpretation guidelines will be developed and submitted to Ohio EPA for concurrence.

TASK 6: REMEDIAL INVESTIGATION FINAL REPORT

Upon completion of all activities described in the previous portions of this plan (ie. Task 1 - Task 5), a Remedial Investigations report will be prepared. This report will consolidate and summarize the following information:

- o The objectives of each of the completed tasks
- o The methods and procedures utilized for the completion of each task
- o Data and other information obtained from the investigation
- o Technical analyses of available data
- o Results, conclusions, and recommendations

Copies of the report will be submitted to the OEPA in draft form for review. Comments received concerning the draft submittal will be addressed, and any necessary changes will be incorporated into a final report, that will be submitted for OEPA approval.

TASK 7: MONTHLY TECHNICAL PROGRESS REPORTS

During the performance of Tasks 1 through 6, monthly technical progress reports will be submitted to OEPA. The following elements will be included in each report (as appropriate):

1. Identification of activity
2. Status of site work, and progress to date
3. Percentage of completion
4. Difficulties encountered during the reporting period
5. Actions being taken to rectify any problems which occur
6. Activities planned for the upcoming month
7. Changes in project personnel

The monthly progress reports will list target and actual completion dates for each element of activity including project completion, and provide an explanation of any deviation from the milestones in the work plan schedule.

SCOPE OF WORK FOR A FEASIBILITY STUDY
NAVISTAR INTERNATIONAL TRANSPORTATION CORP.

PURPOSE

The purpose of this Feasibility Study is to develop and evaluate remedial action alternatives and to identify the corrective action(s) to be taken at the Navistar Assembly Plant.

SCOPE

The feasibility study consists of ten tasks:

Task 8 -- Description of Current Situation

Task 9 -- Work Plan

Task 10 -- Development of Alternatives

Task 11 -- Initial Screening of Alternatives

Task 12 -- Detailed Analysis of Alternatives

Task 13 -- Evaluation and Selection of Preferred
Alternative

Task 14 -- Final Report

Task 15 -- Additional Requirements

These tasks are further described in the following material.

TASK 8: DESCRIPTION OF CURRENT SITUATION

Any changes to the description of the current situation from Task 1 will be identified during performance of this Task. Justification for changes will be based on results of the remedial investigation.

Additionally, a site-specific statement of purpose for the response, based on the results of the remedial investigation, will be prepared. The statement of purpose will identify the actual or potential exposure pathways that will be addressed by the chosen remedial alternatives. This statement of purpose will be submitted as part of the Feasibility Study Report (that will be prepared and submitted during Task 14).

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TASK 9: WORK PLAN

A work plan that includes a detailed technical approach, personnel requirements, and schedules shall be submitted to the Ohio EPA for review and concurrence for the proposed feasibility study.

TASK 10: DEVELOPMENT OF ALTERNATIVES

Based on the results of the Remedial Investigation, a limited number of alternatives for source control and/or off-site remedial actions will be developed. These alternatives will be based on the objectives established for the response and will be developed as described in the following subtasks.

Subtask 10.1: Establishment of Remedial Response Objectives

Site-specific objectives for the Feasibility Study will be developed. These objectives shall be based on public health and environmental concerns, information gathered during the remedial investigation, Section 121 of SARA, Section 300.68 of the National Contingency Plan (NCP) as amended, U.S. EPA OSWER Directive 9355.0-19 entitled "Interim Guidance on Superfund Selection of Remedy", the requirements of any other applicable Federal or State statutes and rules adopted thereunder, including Chapters 3734 and 6111 of the Ohio Revised Code. These objectives shall be consistent with those of the Consent Decree entered into between the State of Ohio and Navistar. Preliminary cleanup objectives shall be developed in consultation with and for concurrence by the OEPA.

Subtask 10.2: Identification of Remedial Technologies

Based on the remedial response objectives established above and the statement of purpose identified in Task 8, appropriate remedial technologies will be identified as a basis for the development of remedial alternatives. These technologies shall be identified on a media-specific basis, although consideration will be given to the interrelationship of the media. The technologies shall be able to meet the response objectives.

The technologies developed in Subtask 2.5 and Task 4 shall be considered a master list of applicable technologies and shall be screened based on site conditions, waste characteristics, and technical requirements, to eliminate or modify those technologies that may prove extremely difficult to implement, will require unreasonable time periods to implement, or will rely on insufficiently developed technology.

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Subtask 10.3: Identification of Remedial Alternatives

Remedial alternatives will be identified and developed. These alternatives will incorporate applicable remedial technologies, response objectives, and other appropriate considerations into comprehensive, site-specific approaches. The alternatives will include the following:

- 1) Alternatives for source control actions including:
 - (i) Alternative that eliminates the need for long-term management (including monitoring) and
 - (ii) Alternative that utilizes treatment as a principal element to reduce the toxicity, mobility, or volume of waste;
- 2) Alternatives for off-site treatment or disposal;
- 3) Alternatives which attain applicable or relevant Federal and State public health or environmental standards (ARARS);
- 4) No action alternative.

There may be overlap among the remedial alternatives that are developed. All alternatives except the no action alternative will meet the requirements of all applicable State and Federal environmental laws including permitting requirements. The remedial alternatives will be developed in close consultation with the OEPA.

TASK 11: INITIAL SCREENING OF REMEDIAL ALTERNATIVES

The remedial alternatives that are developed in Task 10 will be screened in Task 11 to eliminate those alternatives, prior to detailed analysis, that are clearly not feasible or appropriate. However, the no action alternative will be carried through this screening to the detailed analysis for purpose of comparison. All decisions made as a part of this screening of alternatives will be documented.

The following considerations will be used as a basis for the initial screening (not listed in order of importance.)

1. Effects of the Alternative - The alternatives will be screened on their ability to attain Federal and State ARARS. Only those alternatives that effectively contribute to protection of public health, welfare, and the environment will be considered further. Any alternatives that inherently present significant adverse effects will be excluded from further consideration. The screening criteria will include the use of treatment as a means to significantly and permanently reduce the toxicity, mobility, or volume of wastes.
2. Acceptable Engineering Practices - Alternatives that may prove extremely difficult to implement, will not achieve the remedial objectives in a reasonable time period, or that rely on unproven technologies will be excluded from further consideration.
3. Cost - Alternatives that far exceed the cost of most other alternatives that are evaluated, and that do not provide substantially greater public health or environmental benefits will be excluded from further consideration.
4. Innovative technologies shall be contemplated during the initial screen if there is reasonable belief that they offer potential for:
 - o Better treatment performance or implementability;
 - o Fewer or lesser adverse impacts than other available approaches;
 - o Lower costs for similar levels of performance than demonstrated treatment technologies.

TASK 12: DETAILED ANALYSIS OF ALTERNATIVES

Task 12 activities involve the preparation of a detailed analysis of the alternatives that pass through the initial screening in Task 11. This analysis will consist of the following elements:

1. Technical Analysis - A detailed description of each remaining alternative will be prepared, and will include:
 - a. A description of appropriate treatment, storage, and disposal technologies.
 - b. A description of any special engineering considerations required to implement the alternative, e.g., pilot treatment facility, additional studies needed to proceed with final remedial design, etc.
 - c. A description of the operation, maintenance, and monitoring requirements of the completed remedy.
 - d. A description of off-site disposal needs and transportation plans, if appropriate.
 - e. A description of temporary storage requirements, if appropriate.
 - f. An enumeration of the safety requirements necessary for remedial implementation, including both on-site and off-site health and safety considerations.
 - g. An analysis of how the alternative could be phased into individual operations, and a discussion of how these operations could best be implemented, individually or in groups, to produce significant environmental improvement.
 - h. A review of any off-site treatment or disposal facilities to ensure compliance with applicable RCRA, TSCA and State requirements, both current and proposed.
 - i. An analysis of the projected performance and expected results of the alternative with emphasis on potential for further future release of hazardous substances.
2. Environmental Analysis - An Environmental Analysis will be performed for each alternative including an evaluation of each alternative's environmental

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effects, an analysis of measures planned to mitigate adverse effects, physical or legal constraints, and compliance with Federal and State regulatory requirements.

Each alternative will be assessed in terms of the extent to which it will mitigate damage to, or protect, public health, welfare, and the environment, in comparison to the other remedial alternatives.

The no action alternative will be fully evaluated to describe the current site conditions and anticipate environmental conditions if no actions are taken. The no action alternative will serve as the baseline for the Environmental Analysis throughout the RI/FS process. The no action alternative will not be considered in the remedy selection process if its selection would not be protective of public health or safety or the environment.

3. Cost Analysis - The present worth cost of implementing each remedial alternative (and each phase of the alternative), as well as the annual operating and maintenance cost will be calculated and presented. The cost will be provided as a total cost and on an annual cost basis.

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TASK 13: EVALUATION AND SELECTION OF PREFERRED ALTERNATIVE

The results of the detailed analysis of alternatives prepared under Task 12 will be submitted to OEPA for review. A cost-effective alternative will be selected. The lowest cost alternative that is technologically feasible and reliable and which effectively mitigates and minimizes damage to and provides adequate protection of public health, welfare, or the environment will be considered the cost-effective alternative.

The following considerations shall be used as the basis for selecting the alternative (no particular order of significance is implied.)

- a. Reliability Alternatives that minimize or eliminate the potential for release of hazardous substances, pollutants, and contaminants into the environment will be considered more reliable than other alternatives. For example, recycling of wastes and off-site incineration would be considered more reliable than land disposal.
- b. Implementability The requirements for implementing the alternatives will be considered, including phasing alternatives into operable units and segmenting alternatives into project areas on the site. The requirements for permits, zoning restrictions, rights of way and public acceptance are also examples of factors to be considered. Institutional concerns such as management requirements may also be considered.
- c. Effects of the Alternative The alternative posing the greatest improvement to (and least negative impact on) public health, welfare, and environment will be favored. The degree to which an alternative meets State and Federal ARAR and laws shall also be considered.
- d. Safety Requirements The alternatives with the lowest adverse safety impacts and associated costs will be favored.
- e. Cost Whenever two or more alternatives are identified as meeting the Remedial Response Objectives, established under Subtask 10.1, above, the lowest cost alternative that is technologically feasible and reliable and which effectively mitigates and minimizes damage to and provides adequate protection of public health, safety, and the environment will be the favored alternative. Total cost will include implementation of the alternative and the operation and maintenance of the proposed alternative. Cost will not be used to choose between a treatment and a non-treatment alternative.

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The selection of the appropriate remedy will reflect the following:

- o The extent to which toxicity, mobility, or volume of hazardous constituents is reduced and
- o The extent to which long term management of residuals is minimized.

As stated in "Superfund Selection of Remedy: Draft NCP Language" the alternative will not have to meet applicable or relevant and appropriate requirements (ARARs) under the following conditions:

- o Alternative is an interim remedy;
- o Greater risk to human health and environment would occur;
- o Compliance is technically impractical.

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TASK 14: FEASIBILITY STUDY FINAL REPORT

Upon completion of Tasks 8 through 13, a Feasibility Study Report will be prepared. This report will consolidate and summarize the following information:

- o The objectives of each of the completed FS tasks
- o The methods and procedures utilized for the completion of each task
- o Data and other information obtained from the study
- o Technical analyses of available data
- o Results, conclusions, and recommendations

Copies of the report will be submitted to the OEPA for review and approval.

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TASK 15: ADDITIONAL REQUIREMENTS

Reporting Requirements

During the performance of Tasks 8 through 14, monthly technical progress reports will be submitted to OEPA. The following elements will be included:

1. Identification of site activity.
2. Status of work at the site and progress to date.
3. Percentage of completion.
4. Difficulties encountered during the reporting period.
5. Actions being taken to rectify problems.
6. Activities planned for the next month.
7. Changes in personnel.

The monthly progress report will list target and actual completion dates for each activity including project completion and provide an explanation of any deviation from the milestones in the work plan schedule.

ATTACHMENT B

RI/FS MILESTONE DATES

<u>MILESTONE</u>	<u>SCHEDULE</u>
1. Commence RI Task 1	April 10, 1989
2. Submit Draft Task 1 Report	45 days after start of Task 1
3. Submit Draft Task 2.5 Pre-Investigation Evaluation Report	45 days after start of Task 1
4. Commence Task 3. 1 RI Work Plan Development	Within 15 days of receipt of written OEPA approval of Task 1 and Task 2.5 reports
5. Submit Draft RI Work Plan	45 days after start of Task 3.1
6. Commence Task 3.2 Site Investigation	Within 15 days of receipt of written OEPA approval of RI Work Plan
7. Complete RI and submit Draft RI Report (Task 6)	In accordance with schedule in approved RI Work Plan
8. Commence Task 9 Feasibility Study Work Plan	Within 15 days of receipt of written OEPA approval of RI Report
9. Submit Draft FS Work Plan	45 days after start of Task 9
10. Commence FS	Within 15 days after receipt of written OEPA approval of FS Work Plan
11. Complete FS and submit Draft FS Report (Task 14)	In accordance with schedule in approved FS Work Plan

ATTACHMENT C
RI/FS GUIDANCE DOCUMENTS

1. Draft Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA
OSWER 9355.3-01
October, 1988
2. Superfund Public Health Evaluation Manual
EPA/540/1-86/060
OSWER 9285.4-1
October, 1986
3. Superfund Exposure Assessment Manual
OSWER 9285.5-1
EPA/540/1-88/001
April, 1988
4. RCRA Groundwater Monitoring Technical Enforcement Guidance Document (TEGD)
OSWER 9950.0
September, 1986
5. Remedial actions for Contaminated Groundwater at Superfund Sites
OSWER 9283.1-2
August, 1988
6. Data Quality Objectives for Remedial Response Activities
Volume I EPA/540/G-87/003 Development Process
Volume II EPA/540/G-87/004 Example Scenario
7. Superfund Remedial Design and Remedial Action Guidance
OSWER 9355.0-4A
8. The Endangerment Assessment Handbook
USEPA August, 1985
9. Toxicology Handbook
USEPA August, 1985
10. Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans
QMAS - 005/80
11. CERCLA Compliance with Other Laws Manual
OSWER 9234.1-01
March 6, 1988

12. Preparation of Federal Lead Remedial Investigation Quality Assurance Project Plans for Region V
December 20, 1985
13. Interim Guidance on Superfund Selection of Remedy
J. Winston Porter December 24, 1986