



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 04 2003

REPLY TO THE ATTENTION OF:
C-14J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Peter V. Palena, Jr.
Corporate Remediation Manager
The Rohm and Haas Co.
Engineering Division
P.O. Box 584
Route 413 and State Road
Bristol, PA 19007

Re: Morton International, Inc., West Alexandria, Ohio
Administrative Order on Consent for
Corrective Measures Implementation
under Section 3008(h) of RCRA
OHD 045 566 098

RCRA-05-2003-0013

Dear Mr. Palena:

Enclosed is one original copy of an Administrative Order on Consent ("AOC") issued under the authority of Section 3008(h) of the Resource Conservation and Recovery Act ("RCRA"), relating to the conduct of RCRA Corrective Measures Implementation at the above-referenced facility. The AOC was signed by U.S. EPA on August 1, 2003. Please note that the effective date of the AOC is the date that it is signed by U.S. EPA.

Your cooperation in this matter is appreciated. If you have any future questions about the AOC, feel free to contact me at (312) 353-6181, or Dan Patulski at (312) 886-0656.

Sincerely,

Kevin C. Chow
Associate Regional Counsel

Enclosure

cc: Dan Patulski (DW-8J) (w/o enclosures)

RECEIVED JUL 17 2003

U.S. Environmental Protection Agency

RCRA 3008(h) Consent Order

For

Morton International Inc.

U.S. EPA I.D. # OHD 045 566 098

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TABLE 1 Property Owners Within An Area Of Groundwater Impact
Above Health-Based Level

FIGURE 1 Property Ownership In Area Of Impacted Groundwater,
West Alexandria, Ohio

ATTACHMENTS

- ATTACHMENT I - RCRA FINAL DECISION
- ATTACHMENT II - REFERENCES
- ATTACHMENT III - ACKNOWLEDGMENT OF TERMINATION
- ATTACHMENT IV - ADMINISTRATIVE ORDER ON CONSENT (9/25/98)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

RECEIVED
REGIONAL HEARING
CLERK

IN THE MATTER OF:)
)
Morton International Inc.)
10 S. Electric & 93 E. Dayton St.)
West Alexandria, Ohio 45301)
)
OHD 045 566 098)
)
RESPONDENT.)

ADMINISTRATIVE ORDER
ON CONSENT

U.S. ENVIRONMENTAL
PROTECTION AGENCY
U.S. EPA Docket No.:

RCRA-05-2003-0013

Proceeding under Section
3008(h) of the Resource
Conservation and Recovery
Act, as amended,
42 U.S.C. §6928(h).

I. JURISDICTION

A. This ADMINISTRATIVE ORDER ON CONSENT (Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The authority vested in the Administrator has been delegated to the Chief of the Enforcement and Compliance Assurance Branch of the Waste, Pesticides and Toxics Division, U.S. EPA Region 5.

US ENVIRONMENTAL
PROTECTION AGENCY
REGION 5

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RECEIVED
REGIONAL HEARING
CLERK

- B. This Order is issued to Morton International Inc. (Morton), Respondent, owner and operator of a chemical blending facility (the Facility) located at 10 S. Electric and 93 E. Dayton Streets in West Alexandria, Ohio.
- C. Respondent consents to and agrees not to contest U.S. EPA's jurisdiction to issue this Order and to enforce its terms. Further, Respondent will not contest U.S. EPA's jurisdiction to:
1. compel compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial;
 2. require Respondent's full or interim compliance with the terms of this Order; or
 3. impose sanctions for violations of this Order.

II. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the definitions given to them in RCRA or in such regulations.

Acceptable, in the phrase "In a manner acceptable to U.S. EPA..." shall mean that submittals or completed work meet the terms and

conditions of this Order, attachments, scopes of work, approved workplans and/or U.S. EPA's written comments and guidance documents.

Additional work shall mean any activity or requirement that is not expressly covered by this Order or its attachments but is determined by U.S. EPA to be necessary to fulfill the purposes of this Order as presented in Section III: Statement of Purpose.

Administrative Record shall mean the record compiled and maintained by U.S. EPA supporting this Order.

Comply or compliance may be used interchangeably and shall mean the performance of work required by this Order of a quality approvable by U.S. EPA and in the manner and time specified in this Order or any modification thereof, its attachments or any modification thereof, or written U.S. EPA directives.

Respondents must meet both the quality and timeliness components of a particular requirement to be considered in compliance with the terms and conditions of this Order.

Contractor shall include any contractor, subcontractor, consultant or laboratory retained to conduct or monitor any portion of the work performed pursuant to this Order.

Corrective measures shall mean those measures or actions necessary to control, prevent, or mitigate the release or potential release of hazardous waste or hazardous constituents into the environment.

Corrective Measures Implementation or CMI shall mean those activities necessary to initiate, complete, monitor, and maintain the remedies U.S. EPA has selected to protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from the Facility. The CMI requirements are detailed in the RCRA Final Decision included as Attachment 1 and the CMI Workplan.

Corrective Measures Study or CMS shall mean the investigation and evaluation of potential remedies which will protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment from the Facility.

Day shall mean a calendar day unless expressly stated to be a business day. Business day shall mean a day other than a Saturday, Sunday, or Federal Holiday. In computing any period of time under this Order, where the last day would fall on a

Saturday, Sunday, or Federal Holiday, the period shall run until the end of the next business day.

EPA or U.S. EPA shall mean the United States Environmental Protection Agency, and any successor Departments or Agencies of the United States.

Facility or site shall mean all contiguous property located at 10 S. Electric and 93 E. Dayton Streets in West Alexandria, Ohio, owned, operated, or otherwise under the control of Respondent.

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

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

Hazardous Waste Management Unit or HWMU shall mean a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a

waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system, and a container storage area. A container alone does not constitute a hazardous waste management unit; the unit includes containers and the land or pad upon which they are placed.

Interim Measures or IM shall mean those actions, which can be initiated in advance of implementation of the final corrective action for a facility, to achieve the goal of stabilization. Interim Measures initiate cleanup at a facility and control or eliminate the release or potential release of hazardous wastes at or from the Facility.

RCRA Facility Investigation or RFI shall mean the investigation and characterization of the source(s) of contamination and the nature, extent, direction, rate, movement, and concentration of the source(s) of contamination and releases of hazardous waste, including hazardous constituents, that have been or are likely to be released into the environment from the Facility.

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

Release shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of hazardous wastes or hazardous constituents into the environment.

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

Stabilization shall mean controlling or abating immediate threats to human health and/or the environment from releases and/or preventing or minimizing the spread of contaminants while long-term corrective measures alternatives are being evaluated.

Submittal shall include any workplan, report, progress report, or any other written document Respondent is required by this Order to send to U.S. EPA.

Violations of this Order shall mean those actions or omissions, failures or refusals to act by Respondent that result in a failure to meet the terms and conditions of this Order or its attachments.

Work or Obligation shall mean any activity Respondent must perform to comply with the requirements of this Order and its attachments.

Corrective Measures Implementation Workplan or CMI Workplan shall mean the detailed plans prepared by Respondent to satisfy the requirements of this AOC and Final Decision document. The requirements for the workplan are presented in Section VIII: Work to be Performed.

III. STATEMENT OF PURPOSE

In entering into this Order, the mutual objectives of U.S. EPA and the Respondent are:

- A. To implement the Corrective Measure(s) selected by U.S. EPA for the Facility as set forth in the RCRA Final Decision, signed on June 22, 2001 (attached as Attachment I), and incorporated herein by reference.

- B. To perform any other activities necessary to correct or evaluate actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste at or from the Facility.

IV. PARTIES BOUND

- A. This Order shall apply to and be binding upon U.S. EPA, Respondent and its officers, directors, employees, agents, successors and assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors, acting on behalf of Respondent.
- B. No change in ownership or corporate or partnership status relating to the Facility will in any way alter Respondent's responsibility under this Order. Any conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, shall not affect Respondent's obligations under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of Respondent by the terms and conditions of the Order, regardless of Respondent's use of employees, agents, or contractors, to perform any such tasks. At least sixty (60) days prior to any change in ownership, control, or corporate or partnership status of any portion of the Facility,

Respondent shall give written notice of the conveyance to U.S. EPA and the State of Ohio, including the name and address of the prospective purchaser and the date on which the notice of the Order was given to the prospective purchaser. Prior to transfer of the Facility, or a portion thereof, Respondent shall ensure that the proposed owner or operator is able to perform the Order's obligations and has entered into an agreement enforceable by U.S. EPA to comply with the Order. Respondent may petition U.S. EPA to permit the transfer of all or a portion of the Respondent's responsibilities under this Order to the new owner, corporation, or partnership. U.S. EPA in its sole and unreviewable discretion may agree to such transfer of responsibility and amend this Order accordingly. Respondent shall submit to U.S. EPA an updated title search within sixty (60) days of any change in any property interest which may affect implementation of this Order on the property.

- C. Respondent shall provide a copy of this Order to all contractors and laboratories retained to conduct or monitor any portion of the work performed pursuant to this Order within fourteen (14) days of the issuance of this Order or the retention of such person(s), whichever occurs later, and

shall condition all such contracts on compliance with the terms of this Order.

- D. Respondent shall give written notice of this Order to any successor in interest prior to transfer of ownership or operation of the Facility or a portion thereof.
- E. Respondent agrees to undertake all actions required by the terms and conditions of this Order, including any portions of this Order incorporated by reference. Respondent waives any rights to request a hearing on this matter pursuant to §3008(b) of RCRA and 40 CFR Part 24, and consents to the issuance of this Order without a hearing pursuant to §3008(b) of RCRA as a Consent Order issued pursuant to §3008(h) of RCRA.

V. FINDINGS OF FACT

- A. The U.S. EPA incorporates by reference paragraphs A-QQ of Section V. FINDINGS OF FACT, of the Administrative Order on Consent (AOC) for Morton International, Inc., dated September 25, 1998 (U.S. EPA Docket No.: 5-RCRA-012-98), issued under Section 3008(h) of RCRA, as if set forth in full in this paragraph. The September 25, 1998 AOC for Morton is attached as Attachment IV.

- B. At the time the above-referenced AOC was issued, Morton was owner and operator of the Facility. The Rohm and Haas Company purchased Morton in 1999; Morton is now a wholly-owned subsidiary of the Rohm and Haas Company. Morton remains the owner and operator of the Facility. The September 25, 1998 AOC required Morton to perform a RCRA Facility Investigation (RFI), a Corrective Measures Study (CMS), and Interim Measures.
- C. The site-wide RFI was performed in 1999, following the approved RFI Work Plan, to evaluate the extent of impact in soils, groundwater and surface water resulting from releases of hazardous waste/constituents from the Facility. The RFI Report was submitted to the U.S. EPA in March 2000. The RFI Report was approved with comments by the U. S. EPA on May 15th, 2000.
- D. Interim Measures have previously been performed at the site that included the provision for an alternate water supply to affected off-site well owners, the removal of potential release sources, and the implementation of a remediation system (soil vapor extraction) to reduce existing impact to soils. Source removal and control have been conducted over the years that have included removal of underground storage

tanks (USTs) and associated piping systems in the 1980's, and operating improvements to prevent releases to those tank systems. A soil vapor extraction system (SVE system) was installed in October 1997 at the solvent UST tankhold to remove volatile organic compounds (VOCs), including perchloroethylene (PCE) and trichloroethane (TCA), from contaminated soil. The SVE system will continue to operate until the criteria for completion have been met. An alternate water supply system was installed in the mid-1990's after agreement between Morton International, Inc. and the Village of West Alexandria. A water main was installed along a designated route and connected to the existing municipal water system for use by affected water users.

- E. In 2000, a CMS Report, titled Streamlined Corrective Measures Study (Geomatrix 2000), was submitted to U.S. EPA. The CMS Report discussed the selection of a recommended final remedy along with the critical components of the remedy. The RFI Report indicated that levels of impact to soils and groundwater were low in most areas and were declining. In addition, the CMS Report indicated that migration of contaminated groundwater was under control.

The risk assessment also showed that based on current exposure scenarios, risk was within acceptable bounds established by the U.S. EPA. Therefore, the focus of the CMS was on addressing future risks, ensuring that current conditions do not change in a manner that would create an unacceptable exposure scenario. The CMS Report discussed the rationale, approach, and justification for selection of a final remedy that consisted of monitored natural attenuation in groundwater with the continued use of the SVE system along with a restriction on land use. The CMS Report was approved by U.S. EPA on September 26th, 2000.

- F. Based upon information from the Respondent, U.S. EPA expects future land use to be consistent with current land use. Residential development is not considered likely. The exposure pathways presented in the risk assessment are based on these assumptions.
- G. On December 20, 2000, U.S. EPA proposed a remedy for the Facility in a Statement of Basis. U.S. EPA announced a public comment period for the Statement of Basis through newspaper and radio advertisements. Public comments were solicited for forty-five (45) days from December 20, 2000, through February 23, 2001.

H. On June 22, 2001, the Chief of the Enforcement and Compliance Assurance Branch, U.S. EPA, Region 5, signed a RCRA Final Decision for the Facility. In the RCRA Final Decision (Attachment I), U.S. EPA selected a final remedy to address contaminated media at the Facility as proposed in the Statement of Basis. The remedy is summarized as follows:

1. Provide and maintain deed/land use restrictions to ensure that future land use is consistent with current land use. These restrictions shall also be used to prohibit the installation of any new shallow domestic water supply wells within the affected area of groundwater contamination. If such restrictions cannot be implemented, Respondent shall offer affected residents a connection to the municipal water supply. Figure 1 shows the affected properties. Table 1 contains a list of the affected properties.
2. Conduct a groundwater monitoring program to verify that the overall area and distribution of contaminated groundwater does not expand or shift direction and the concentrations of constituents are stable and declining. The monitoring program may be terminated

when concentrations of chemicals of concern are below health-based levels for a designated period of time, as defined in Section VIII.B.3.

3. Continue to operate the SVE system to remove volatile organic compounds until criteria, as stipulated in the Statement of Basis, are met or recovery is no longer feasible.

- I. The groundwater monitoring program pursuant to the approved Streamlined CMS was implemented in November, 2000. Five groundwater monitoring events have been conducted.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the foregoing findings of fact and after consideration of the Administrative Record, the Chief of the Enforcement and Compliance Assurance Branch of the Waste, Pesticides, and Toxics Division, U.S. EPA Region 5, has made the following conclusions of law and determinations:

- A. Respondent is a "person" within the meaning of Section 1004(15) of RCRA, 42 U.S.C. §6903(15);
- B. Respondent is the owner or operator of a Facility that has operated, is operating, should be, or should have been operating under interim status subject to §3005(e) of RCRA, 42 U.S.C. §6925(e);

- C. Certain wastes and constituents found at the Facility are hazardous wastes pursuant to §§1004(5) and 3001 of RCRA, 42 U.S.C. §§6903(5) and 6921; 40 CFR Part 261; and 40 CFR Subpart S, §264.501, 55 Fed. Reg. 30874, July 27, 1990;
- D. There is or has been a release of hazardous wastes into the environment from the Facility; and
- E. The actions required by this Order are necessary to protect human health and/or the environment.

VII. PROJECT COORDINATOR

- A. Within fifteen (15) days of the effective date of this Order, U.S. EPA and Respondent shall each designate a Project Coordinator. Respondent shall notify U.S. EPA in writing of the Project Coordinator it has selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in his or her absence. The U.S. EPA Project Coordinator will be U.S. EPA's designated representative for the Facility. To the maximum extent practicable, all communications between Respondent and U.S. EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators.

- B. Respondent may change its Project Coordinator but agrees to provide at least fourteen (14) days written notice prior to changing a Project Coordinator. Respondent shall notify U.S. EPA within five (5) days of any unanticipated change in its Project Coordinator.
- C. The absence of the U.S. EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

VIII. WORK TO BE PERFORMED

- A. Pursuant to §3008(h) of RCRA, Respondent agrees to and is hereby ordered to perform the acts specified in this section, in the manner and by the dates specified herein. All work undertaken pursuant to this Order shall be performed in a manner consistent with, at a minimum: all U.S. EPA-approved workplans or reports, including the CMS workplan and report; RCRA Final Decision; the Corrective Measures Implementation Workplan and reports to be submitted by Respondent pursuant to this Order; RCRA and other applicable Federal laws and their implementing regulations; and applicable U.S. EPA guidance documents. Guidance may include, but is not limited to, documents listed in Attachment II: References.

B. Corrective Measures Implementation

1. Respondent shall submit to U.S. EPA for approval a Corrective Measures Implementation (CMI) Workplan that describes a groundwater monitoring program to be used for evaluating the performance of Monitored Natural Attenuation (MNA) as a means of achieving the groundwater protection goals described in the RCRA Final Decision. Consistent with the RCRA Final Decision document, the workplan shall address the existing and future groundwater monitoring network, constituents for analysis, sampling and reporting schedule, and criteria for termination of the program. Procedural, quality control and administrative functions shall also be addressed in the workplan. The CMI workplan shall include a schedule for implementation of the groundwater monitoring program. The Respondent shall submit the CMI Workplan within sixty (60) days of the issuance of this Order. Respondent shall implement the work required under the approved CMI workplan in accordance with its approved schedule.

2. Respondent shall continue to operate the soil vapor extraction system for removal of volatile organic compounds. Respondent may discontinue operating the soil vapor extraction system when the approved monitoring program demonstrates that VOC removal rates have dropped below 0.1 pounds per day, or when the program demonstrates that the system is no longer effectively removing VOCs from the soils, for three consecutive sampling events, with each event subsequent to the first event being conducted at least one week but not more than four weeks after the preceding event. Approximately 4 months after termination, the SVE system will be reactivated and monitored for rebound of VOC levels. If concentrations rebound and remain at elevated levels for 3 days, the system will remain in operation and the evaluation program will be resumed. If concentrations return to stabilized levels that meet the above criteria within the 3-day period, operation of the SVE system will be permanently terminated.
3. Respondent may terminate the approved monitoring program when concentrations of all constituents of concern are below background or health-based levels for

three consecutive monitoring events in all wells sampled and remain below these levels after two years as confirmed by a fourth sampling event.

4. Respondent shall establish and maintain institutional controls to restrict land use and groundwater use at its Facility. Respondent shall comply with the following conditions:
 - a. On-site land use shall be limited to industrial/commercial purposes until Respondent can demonstrate that levels of contaminants in soil are protective for other land uses;
 - b. Groundwater underlying the Facility within the shallow aquifer shall not be used for consumptive or other purposes until levels of contaminants are stable and below appropriate Maximum Contaminant Levels (MCLs);
 - c. There shall be no use of, or activity at, the Facility that may impair the work performed under this Order. If short-term delays or interruptions in the operation of the SVE system are necessary due to expected repair, construction, and maintenance activities at the Facility, Morton

shall notify the U.S. EPA Project Coordinator in writing as soon as practicable, but at least three business days, prior to the day of the expected delay, and shall request approval of such delay from U.S. EPA. Solely for the purposes of this paragraph, the delay shall be considered to be approved in the absence of a disapproval from U.S. EPA. Morton shall use reasonable efforts to avoid and minimize such delays;

- d. Within sixty (60) days of issuance of this Order, Respondent shall submit for U.S. EPA review and approval, a notice to be filed in the office of the Preble County Recorder for all successors-in-title that the Facility is subject to this Order. The notice shall also summarize the contamination remaining on the Facility, the potential hazards to human health and the environment from such contaminants and the manner in which persons may obtain from U.S. EPA further information. The notice shall also identify the docket number of this Order and the date when the Order was issued. Respondent shall attach a copy of this Order to

the notice. Respondent shall provide U.S. EPA with a certified copy of the recorded notice and a completed title search within thirty (30) days of recording such notice;

- e. Respondent shall use best efforts to obtain from State and local officials, government controls (e.g., State or local laws, regulations, zoning ordinances or other governmental controls which impact the use of the property) which restrict the use of the Facility in a manner consistent with the selected remedy and this Order. Within fifteen (15) days of any change in a governmental control impacting the use of this Facility, Respondent shall notify U.S. EPA of the change. Such notification shall include a copy of the change and an assessment of the impact of work required by this Order and the integrity and protectiveness of the institutional and engineering controls. Within a time specified by U.S. EPA, Respondent shall take reasonable action identified by U.S. EPA to ensure the actions required by this Order are consistent with the

governmental controls, this Order, and the selected remedy.

5. Respondent shall make its best efforts to establish and maintain institutional controls to restrict land use and groundwater use at off-site areas where levels of contaminants in groundwater in the shallow aquifer exceed MCLs. Respondent shall comply with the following:

- a. Morton shall make its best efforts to implement institutional controls to prohibit and discourage the placement of future wells within offsite areas containing groundwater (see Figure 1). These controls will remain in place until the concentrations of contaminants in groundwater are stable and remain below MCLs; and
- b. Offer applicable residents seeking to install a domestic supply well within off-site areas containing groundwater impacted above MCLs with a connection to the municipal water supply if institutional controls to prohibit the placement of new domestic water supply wells within the contaminated zone cannot be implemented.

6. Respondent shall submit CMI status reports to U.S. EPA in accordance with the U.S. EPA-approved CMI Workplan schedule.

C. Additional Work

1. U.S. EPA may determine or Respondent may propose that certain tasks, including investigatory work, engineering evaluation, or procedure/methodology modifications, are necessary in addition to or in lieu of the tasks included in any U.S. EPA-approved workplan, when such additional work is necessary to meet the objectives of the corrective measures for the Facility.
2. U.S. EPA will notify Respondent in writing and specify the basis for its determination that additional work is necessary. If Respondent disagrees with the U.S. EPA's determination of Additional Work, it may exercise the Dispute Resolution provisions.
3. Within thirty (30) days after receipt of such determination, Respondent shall have the opportunity to meet or confer with U.S. EPA to discuss the additional work.

4. If required by U.S. EPA, Respondent shall submit for U.S. EPA approval a workplan for the additional work. U.S. EPA shall specify the contents of such workplan. Such workplan shall be submitted within forty-five (45) days of receipt of U.S. EPA's determination that additional work is necessary, or according to an alternative schedule established by U.S. EPA.
5. Respondent shall implement the work required under any approved workplan for additional work.

IX. ACCESS

- A. U.S. EPA, its contractors, employees, and/or any duly designated U.S. EPA representatives are authorized to enter and freely move about the Facility at all reasonable times pursuant to this Order for the purposes of, inter alia:
 1. Interviewing Facility personnel and contractors;
 2. Inspecting records, operating logs, and contracts related to the Facility as they relate to this Order;
 3. Reviewing the progress of Respondent in carrying out the terms of this Order;
 4. Conducting such tests, sampling, or monitoring as U.S. EPA deems necessary;

5. Using a camera, sound recording, or other documentary type equipment; and
 6. Verifying the reports and data submitted to U.S. EPA by Respondent.
- B. Respondent shall provide U.S. EPA and its representatives access at all reasonable times to the Facility and subject to Paragraph C in this section, to any other property to which access is required for implementation of this Order. Respondent shall provide U.S. EPA with the health and safety procedures for the Facility within thirty (30) days after the effective date of this Order. U.S. EPA personnel or representatives shall familiarize themselves with the health and safety procedures prior to an initial site visit to the Facility. Upon request by U.S. EPA, Morton shall provide U.S. EPA with an update to the health and safety procedures in a timely manner prior to any subsequent visit to the Facility by U.S. EPA personnel or representatives. At the time of the initial site visit and each subsequent visit to the Facility pursuant to this Order, U.S. EPA personnel or representatives shall participate in Respondent's standard health and safety training procedures for Facility visitors prior to entry to the Facility. Respondent shall permit

such persons to inspect and copy all records, files, photographs, or documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or its Contractors. Nothing in this Section shall be construed to limit in any way Respondent's statutory or other legal rights to seek protection, prior to, during, or after any inspection, from U.S. EPA disclosure of any trade secret or confidential information obtained as a result of such inspection.

- C. To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owner(s) of such property within thirty (30) days of the date that the need for access becomes known to Respondent. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondent to the present owner(s) of such property requesting access agreement(s) to permit Respondent and its authorized representatives access to such property, and the payment of reasonable compensation in consideration of granting access.

Any such access agreement shall provide for access by U.S. EPA and its representatives. Respondent shall insure that U.S. EPA's Project Coordinator has a copy of any access agreement(s).

- D. In the event that agreements for access are not obtained within forty-five (45) days of approval of any workplan for which access is required, or of the date that the need for access became known to Respondent, Respondent shall notify U.S. EPA in writing within twenty-one (21) days thereafter of both the efforts undertaken to obtain access and the failure to obtain access agreements.
- E. U.S. EPA may, at its discretion, assist Respondent in obtaining access. In the event U.S. EPA obtains access, Respondent shall undertake U.S. EPA-approved work on such property.
- F. The Respondent agrees to indemnify the United States as provided in Section XVIII: Indemnification of the United States Government, for any and all claims arising from activities on such property.
- G. Nothing in this section limits or otherwise affects U.S. EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.

H. Nothing in this section shall be construed to limit or otherwise affect Respondent's liability and obligation to perform corrective action including corrective action beyond the Facility boundary, notwithstanding the lack of access.

X. RECORD PRESERVATION

A. Respondent shall retain, during the pendency of this Order and for a minimum of six (6) years after its termination, all data, records, and documents now in its possession or control or which come into its possession or control which relate in any way to this Order or to hazardous waste management and/or disposal at the Facility. Respondent shall notify U.S. EPA in writing ninety (90) days prior to the destruction of any such records, and shall provide U.S. EPA with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

Daniel Patulski
Waste Management Branch
Waste, Pesticides and Toxics Division (DW-8J)
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604

- B. Respondent shall within thirty (30) days of retaining or employing any agent, or contractor for the purpose of carrying out the terms of this Order, enter into an agreement with any such agents or contractors whereby such agents or contractors will be required to provide Respondent a copy of all documents produced pursuant to this Order.
- C. All documents pertaining to this Order shall be stored by the Respondent in a centralized location at the Facility to afford ease of access by U.S. EPA or its representatives.

XI. REPORTING AND DOCUMENT CERTIFICATION

- A. Beginning with the first full month following issuance of this Order, and throughout the period that this Order is effective, Respondent shall provide U.S. EPA with progress reports on an annual basis. These reports are due thirty days after Respondent's receipt of the validated sample data from each annual sampling event conducted by Respondent under the approved CMI Workplan. The progress reports shall list work performed to date, data collected, problems encountered, project schedule, and work to be performed within the following year. U.S. EPA may adjust the frequency of progress reports to be consistent with site-specific activities.

- B. Three (3) copies of all documents submitted pursuant to this Order shall be in writing and shall be hand-delivered, sent by certified mail, return receipt requested, or by overnight express mail to the U.S. EPA project coordinator designated pursuant to Section VII of this Order. Other addresses and additional copies (e.g., the Ohio Environmental Protection Agency) can also be designated by the U.S. EPA Project Coordinator.
- C. One (1) copy of all documents submitted pursuant to this Order shall be in writing and shall be hand-delivered, sent by certified mail, return receipt requested, or by overnight express mail to the project document repository located in the West Alexandria, Ohio library.
- D. Any report or other document submitted by Respondent pursuant to this Order which makes any representation concerning Respondent's compliance or noncompliance with any requirement of this Order shall be certified by a responsible corporate officer of Respondent or a duly authorized representative. A responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business

function, or any other person who performs similar policy or decision-making functions for the corporation.

- E. The certification required by paragraph C above, shall be in the following form:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: _____
Name: _____
Title: _____
Date: _____

XII. DELAY IN PERFORMANCE/STIPULATED PENALTIES

- A. Unless there has been a written modification by U.S. EPA of a compliance date, an approved workplan condition, or excusable delay as defined in Section XIV: Force Majeure and Excusable Delay, if Respondent fails to comply with any

term or condition set forth in this Order in the time or manner specified herein, Respondent shall pay stipulated penalties as set forth below upon written demand from U.S. EPA:

1. For failure to commence, perform, and/or complete field work in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$1,000 per day for the first seven days of such violation, \$3,500 per day for the eighth through twenty-first day of such violation, and \$6,500 per day for each day of such violation thereafter;
2. For failure to complete and submit any workplans or reports (other than progress reports) in a manner acceptable to U.S. EPA or at the time required pursuant to this Order, or for failure to notify U.S. EPA of immediate or potential threats to human health and/or the environment, new releases of hazardous waste and/or new solid waste management units not previously identified, as required by this Order: \$1,000 per day for the first seven days of such violation, \$3,500 per day for the eighth through twenty-first day of such

violation, and \$6,500 per day for each day of such violation thereafter;

3. For failure to complete and submit other written submittals not included in paragraph A.2. of this section in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$3,000 per day for each day of such violation thereafter;
4. For failure to comply with any other provisions of this Order in a manner acceptable to U.S. EPA: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$3,000 per day for each day of such violation thereafter.

B. Penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the day of correction of the violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order. Penalties shall continue

to accrue regardless of whether U.S. EPA has notified the Respondent of a violation.

- C. All penalties owed to the United States under this Section shall be due and payable within thirty (30) days of the Respondent's receipt from U.S. EPA of a written demand for payment of the penalties. Such a written demand will describe the violation and will indicate the amount of penalties due.
- D. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first (31) day after Respondent's receipt of U.S. EPA's demand letter. Interest shall accrue at the Current Value of Funds Rate established by the Secretary of the Treasury. Pursuant to 31 U.S.C. §3717, an additional penalty of 6% per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for 90 or more days.
- E. All penalties shall be made payable by certified or cashier's check to the United States of America and shall be remitted to:

U.S. Department of Treasury
Attn: U.S. EPA Region 5
Office of the Comptroller
P.O. Box 70753
Chicago, Illinois 60673

- F. All such checks shall reference the name of the Facility, the Respondent's name and address, and the U.S. EPA docket number of this action. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to the U.S. EPA Project Coordinator.
- G. Respondent may dispute U.S. EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XIII: Dispute Resolution. The stipulated penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. If Respondent does not prevail upon resolution of the dispute, U.S. EPA has the right to collect all penalties which accrued prior to and during the period of dispute. If Respondent prevails upon resolution of the dispute, no penalties shall be payable. Respondent shall pay stipulated penalties and interest, if any, in accordance with the dispute resolution decision and/or agreement. Respondent shall submit such payment to U.S. EPA within 7 days of receipt of such resolution in accordance with Paragraph E of this Section.

- H. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way Respondent's obligation to comply with the terms and conditions of this Order.
- I. The stipulated penalties set forth in this section do not preclude U.S. EPA from pursuing any other remedies or sanctions which may be available to U.S. EPA by reason of Respondent's failure to comply with any of the terms and conditions of this Order.
- J. No payments under this section shall be tax deductible for Federal tax purposes.

XIII. DISPUTE RESOLUTION

- A. The parties shall use their best efforts to resolve informally and in good faith, all disputes or differences of opinion. The parties agree that the procedures contained in this section are the sole procedures for resolving disputes arising under this Order. If Respondent fails to follow any of the requirements contained in this section then it shall have waived its right to further consideration of the disputed issue.
- B. If Respondent disagrees, in whole or in part, with any written decision (Initial Written Decision) by U.S. EPA pursuant to this Order, Respondent's Project Coordinator

shall notify the U.S. EPA Project Coordinator in writing of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.

- C. If the Project Coordinators cannot resolve the dispute informally, Respondent may pursue the matter formally by placing its objections in writing. Respondent's written objections must be directed to the U.S. EPA Project Coordinator and copied to the U.S. EPA's Regional Counsel. This written notice must be mailed to such person(s) within twenty-one (21) days of Respondent's receipt of the Initial Written Decision. Respondent's written objection must set forth the specific points of the dispute, the position Respondent claims should be adopted as consistent with the requirements of this Order, the basis for Respondent's position, and any matters which it considers necessary for U.S. EPA's determination.
- D. U.S. EPA and Respondent shall have twenty-one (21) days from U.S. EPA's receipt of Respondent's written objections to attempt to resolve the dispute through formal negotiations. This time period may be extended by the mutual agreement of the U.S. EPA and the Respondent. During such time period (Negotiation Period), Respondent may request a conference

with the Chief of the Enforcement and Compliance Assurance Branch to discuss the dispute and Respondent's objections. U.S. EPA agrees to confer in person or by telephone to resolve any such disagreement with the Respondent as long as Respondent's request for a conference will not extend the Negotiation Period.

E. If the parties are unable to reach an agreement within the Negotiation Period, Respondent has the right to submit any additional written arguments and evidence, not previously submitted, to the Director of the Waste, Pesticides and Toxics Division. Based on the record, U.S. EPA shall provide to Respondent its written decision on the dispute (U.S. EPA Dispute Decision) which shall include a response to Respondent's arguments and evidence. Such decision shall be incorporated into and become an enforceable element of this Order, but will not be considered final Agency action for purposes of judicial review.

F. Except as provided in Section XII: Delay in Performance/Stipulated Penalties, the existence of a dispute as defined in this section and U.S. EPA's consideration of matters placed into dispute shall not excuse, toll, or suspend any compliance obligation or deadline required

pursuant to this Order during the pendency of the dispute resolution process.

- G. Any agreement to resolve the dispute reached by the parties pursuant to this section shall be in writing and shall be signed by both parties. The written agreement shall specify which provisions of the U.S. EPA Dispute Decision are superseded and/or modified. If the written agreement is not signed by Respondent within seven (7) days after the resolution of the dispute it shall be null and void and the U.S. EPA Dispute Decision shall be incorporated into and become an enforceable element of this Order, but will not be considered final Agency action for purposes of judicial review.

XIV. FORCE MAJEURE AND EXCUSABLE DELAY

- A. Force majeure, for purposes of this Order, is defined as any event arising from causes not foreseen and beyond the control of Respondent or any person or entity controlled by Respondent, including but not limited to Respondent's contractors, that delays or prevents the timely performance of any obligation under this Order despite Respondent's best efforts to fulfill such obligation. The requirement that Respondent exercise "best efforts to fulfill such

obligation" shall include, but not be limited to, best efforts to anticipate any potential force majeure event and address it before, during, and after its occurrence, such that any delay or prevention of performance is minimized to the greatest extent possible.

- B. Force majeure does not include increased costs of work to be performed under this Order, financial inability to complete the work, plant shutdown, work stoppages or other labor disputes.
- C. If any event occurs or has occurred that may delay the performance of an obligation under this Order, whether or not caused by a force majeure event, Respondent shall contact by telephone and communicate orally with U.S. EPA's Project Coordinator, or, in his or her absence, his or her supervisor within forty-eight (48) hours of when Respondent first knew or should have known that the event might cause a delay. If Respondent wishes to claim a force majeure event, then within five (5) days thereafter, Respondent shall provide to U.S. EPA in writing all relevant information relating to the claim, including a proposed revised schedule and a description of the following:
 - 1. The anticipated duration of the delay;

2. All actions taken or to be taken to prevent or minimize the delay;
 3. All other obligations affected by the event, and what measures, if any, taken or to be taken, to minimize the effect of the event on those obligations;
 4. A schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay;
 5. Respondent's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and
 6. A statement as to whether, in the opinion of Respondent, such event may cause or contribute to endangerment to public health or the environment.
- D. Respondent shall include with any notice all available documentation supporting its claim, if any, that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure for that event. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.

- E. If U.S. EPA determines that a delay or anticipated delay is attributable to a force majeure event, U.S. EPA will extend in writing the time to perform the obligation affected by the force majeure event for such time as U.S. EPA determines is necessary to complete the obligation or obligations.
- F. An extension of the time for performance of such obligation affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation, unless Respondent can demonstrate that more than one obligation was affected by the force majeure event.
- G. If U.S. EPA disagrees with Respondent's assertion of a force majeure event, U.S. EPA will notify Respondent in writing and Respondent may elect to invoke the dispute resolution provision, and shall follow the time frames set forth in Section XIII: Dispute Resolution. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or the anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent

complied with the requirements of this section. If Respondent satisfies this burden, the time for performance of such obligation will be extended by U.S. EPA for such time as is necessary to complete such obligation.

XV. RESERVATION OF RIGHTS

- A. U.S. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under §3008(h)(2) of RCRA, 42 U.S.C. §6928(h)(2). This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, and/or authorities, civil or criminal, which U.S. EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
- B. U.S. EPA reserves the right to disapprove of work performed by Respondent pursuant to this Order and to order that Respondent perform additional tasks to fulfill the purposes of this Order as stated in Section III (Statement of Purpose).

- C. U.S. EPA reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and remedial work as it deems necessary to protect human health and/or the environment. Notwithstanding compliance with the terms of this Order, Respondent is not released from liability, if any, for the costs of any response actions taken or authorized by U.S. EPA.
- D. If U.S. EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work ordered, U.S. EPA may order Respondent to stop further implementation of this Order for such period of time as U.S. EPA determines may be needed to abate any such release or threat and/or to undertake any action which U.S. EPA determines is necessary to abate such release or threat.
- E. This Order is not intended to be nor shall it be construed to be a permit. Further, the parties acknowledge and agree that U.S. EPA's approval of any final workplan does not constitute a warranty or representation that the workplan

will achieve the required cleanup or performance standards. Compliance by Respondent with the terms of this Order shall not relieve Respondent of its obligations to comply with RCRA or any other applicable local, State, or Federal laws and regulations.

- F. Notwithstanding any other provision of this Order, no action or decision by U.S. EPA pursuant to this Order, including without limitation, decisions of the Regional Administrator, the Director of the Waste, Pesticides and Toxics Division, or any authorized representative of U.S. EPA, shall constitute final agency action giving rise to any right of judicial review prior to U.S. EPA's initiation of a judicial action to enforce this Order, including an action for penalties or an action to compel Respondent's compliance with the terms and conditions of this Order.
- G. In any action brought by U.S. EPA for a violation of this Order, Respondent shall bear the burden of proving that U.S. EPA's actions were arbitrary and capricious and not in accordance with law.
- H. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Facility, Respondent

shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter.

XVI. OTHER CLAIMS

- A. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, demand, or defense in law or equity, against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken or migrating from the Facility.
- B. The Respondent waives any claims or demands for compensation or payment under §§106(b), 111, and 112 of CERCLA against the United States or the Hazardous Substance Superfund established by 26 U.S.C. §9507 for, or arising out of, any activity performed or expense incurred pursuant to this Order. Additionally, this Order does not constitute any

decision on preauthorization of funds under §111(a)(2) of CERCLA.

XVII. OTHER APPLICABLE LAWS

- A. All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations.
- B. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

XVIII. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

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

XIX. FINANCIAL RESPONSIBILITY

A. Respondent shall provide financial assurance for the implementation of Corrective Measure(s) within ninety (90) days of the issuance of this order. Respondent shall establish the financial assurance from among one or more of the following:

1. A trust fund;
2. A surety bond;
3. A letter of credit;
4. Insurance; or
5. A financial test and corporate guarantee.

B. The wording and terms of the financial assurance instrument(s) shall be subject to approval by the U.S. EPA.

XX. MODIFICATION

A. This Order may only be modified by mutual agreement of U.S. EPA and Respondent. Any agreed modifications shall be in writing, be signed by both parties, shall have as their effective date the date on which they are signed by U.S. EPA, and shall be incorporated into this Order.

B. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon written approval by U.S. EPA, incorporated into this Order.

- C. Unless there is an approved modification as provided in paragraph D of this section, any noncompliance with such U.S. EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Order and shall subject Respondent to the statutory penalty provisions of Section XII: Delay in Performance/Stipulated Penalties.
- D. Any request by Respondent for a compliance date modification and/or revision of an approved workplan requirement must be made in writing and be received by U.S. EPA at least ten (10) days prior to applicable deadline. Such requests must provide justification for any proposed compliance date modification or workplan revision. U.S. EPA has no obligation to approve such requests, but if it does so, such approval and the modification or revision must be in writing from U.S. EPA's Project Coordinator.
- E. Any approved compliance date modification shall be incorporated by reference into the Order. Such a modification would not alter other due dates, unless so stated by U.S. EPA in its written approval, modification, or revision.

- F. No informal advice, guidance, suggestions or comments by U.S. EPA regarding reports, plans, specifications, schedules or any other writing submitted by the Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

XXI. SEVERABILITY

- A. If any provision or authority of this Order or the application of this Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall remain in force and shall not be affected thereby.

XXII. SURVIVABILITY/PERMIT INTEGRATION

- A. Except as otherwise expressly provided in this section, this Order shall survive the issuance or denial of a RCRA permit for the Facility, and this Order shall continue in full force and effect after either the issuance or denial of such permit. Accordingly, Respondent shall continue to be liable for the performance of obligations under this Order notwithstanding the issuance or denial of such permit.

- B. If the Respondent is issued a RCRA permit for this Facility that expressly incorporates all or a part of the requirements of this Order, or expressly states that its requirements are intended to replace some or all of the requirements of this Order, Respondent may request a modification of this Order and shall, with written U.S. EPA approval, be relieved of liability under this Order for those specific obligations.

XXIII. TERMINATION AND SATISFACTION

- A. This Order shall remain in effect until Respondent (or any and all subsequent owners or lessees of the property) can demonstrate that the property is protective for unrestricted use.
- B. The provisions of this Order shall be deemed satisfied upon Respondent's and U.S. EPA's execution of an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" (Acknowledgment). U.S. EPA will prepare the Acknowledgment for Respondent's signature. The Acknowledgment will specify that Respondent has demonstrated to the satisfaction of U.S. EPA that the terms of this Order, including any additional tasks determined by U.S. EPA to be required pursuant to this Order, have been

satisfactorily completed. Respondent's execution of the Acknowledgment will affirm Respondent's continuing obligation:

1. To preserve all records as required in Section X: Record Preservation; and
2. To recognize U.S. EPA's reservation of rights as required in Section XV: Reservation of Rights, after all other requirements of the Order are satisfied.

C. The Acknowledgment required by this section shall be as in Attachment III: Acknowledgment of Termination.

XXIV. EFFECTIVE DATE

A. The effective date of this Order shall be the date on which it is signed by U.S. EPA. Because the Order was entered with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. 6928(b).

IT IS SO AGREED:

MORTON INTERNATIONAL, INC. (RESPONDENT)

BY: John Biele
John Biele
Plant Manager
Morton International, Inc.
West Alexandria, Ohio Facility

7/16/03
DATE

IT BEING SO AGREED, IT IS HEREBY ORDERED THIS 1st DAY OF August, 2003.

BY: Joseph M. Boyle
Joseph M. Boyle, Chief
Enforcement/Compliance Assurance Branch
Waste, pesticides and Toxics Division
U.S. Environmental Protection Agency
Region 5

U.S. EPA I.D. # OHD 045 566 098

RCRA-05-2003-0013 *[Signature]*

CASE NAME: Morton International, Inc.
10 S. Electric & 93 E. Dayton St
West Alexandria, Ohio 45301
OHD 045 566 098

DOCKET NO: RERA-05-2003-0013 

CERTIFICATE OF SERVICE

I hereby certify that today I filed the original of this **Administrative Order on Consent** and this **Certificate of Service** in the office of the Regional Hearing Clerk (E-19J), United States Environmental Protection Agency, Region 5, 77 W. Jackson Boulevard, Chicago, IL 60604-3590.

I further certify that I then caused a true and correct copy of the filed document to be mailed to the following, via **Certified Mail, Return Receipt Requested to:**

John Bieles
Plant Manager
Morton International, Inc.
10 S. Electric and 93 E. Dayton Street
West Alexandria, Ohio 45301

Certified Mail Receipt Number 7001 0320 0006 0202 6285

This is the said person's last address known to the subscriber.

Dated 4th of August, 2003.

RECEIVED
REGIONAL HEARING
CLERK

'03 AUG -4 A9:42

US ENVIRONMENTAL
PROTECTION AGENCY
REGION V

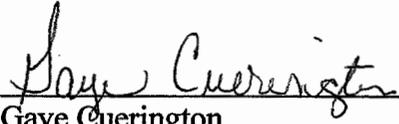

Gaye Cuerington
Administrative Program Assistant
U.S. Environmental Protection Agency
Region V
77 W. Jackson Blvd.
Chicago, IL 60604-3590
WPTD/ECAB
Corrective Action Section

TABLE 1

PROPERTY OWNERS WITHIN AN AREA OF GROUNDWATER IMPACT
ABOVE HEALTH-BASED LEVEL

**PROPERTY OWNERS WITHIN AN AREA OF GROUNDWATER IMPACT
ABOVE HEALTH-BASED LEVEL**

The Rohm and Haas Co.
West Alexandria, Ohio

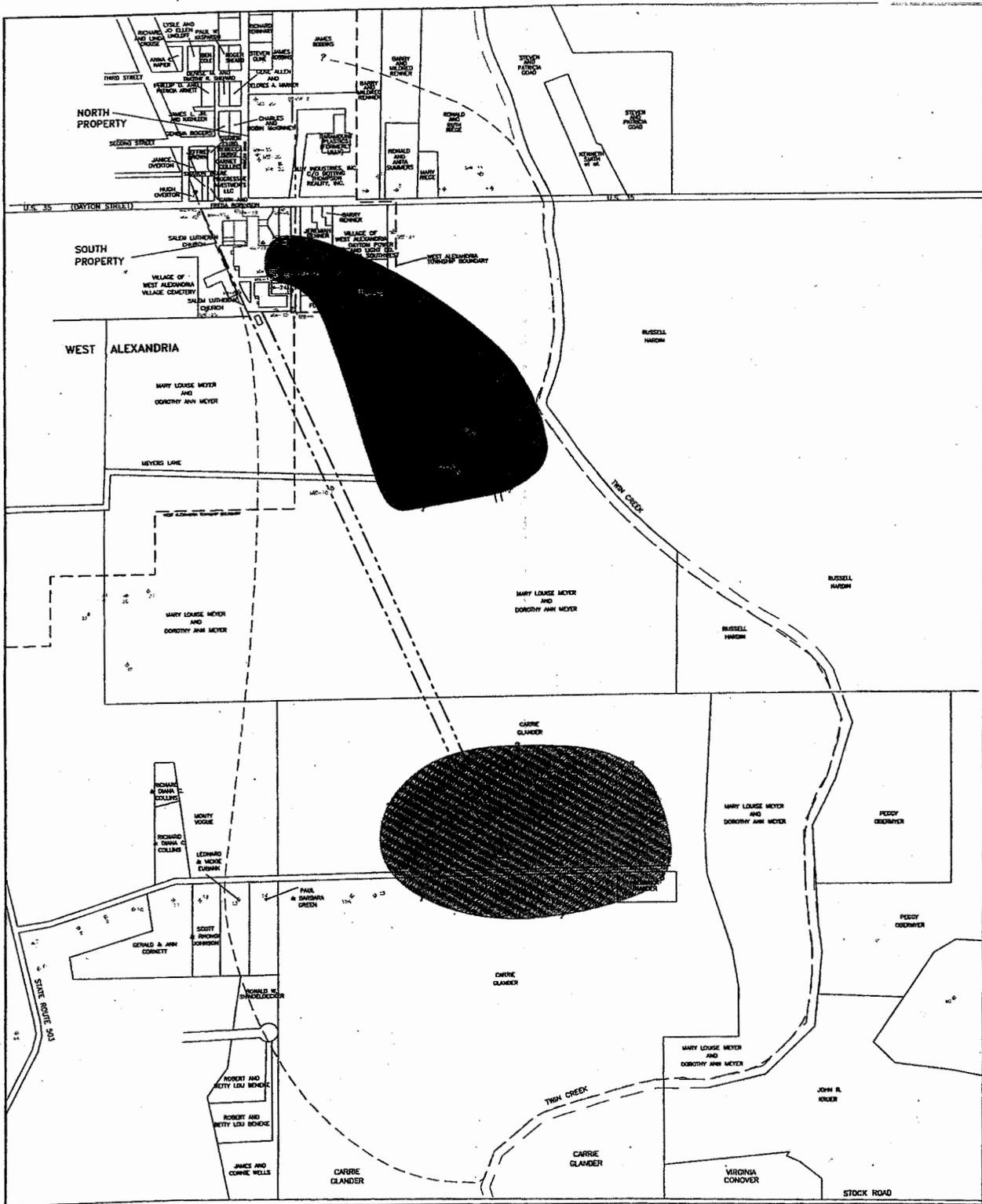
| Owner | Contact Address |
|---|---|
| Dayton Power and Light Co. | P.O. Box 1247, Dayton, Ohio 45401 |
| Carrie Glander | 6436 Black Road, West Alexandria, Ohio 45381 |
| Frederick Glander | 6436 Black Road, West Alexandria, Ohio 45381 |
| Mary Louise Meyer and Dorothy Ann Meyer | 105 Meyer Lane, West Alexandria, Ohio 45381 |
| Jeremiah Renner | 120 East Dayton Street, West Alexandria, Ohio 45381 |
| Barry Renner | 120 East Dayton Street, West Alexandria, Ohio 45381 |
| Forest Rivers | 69 South Main Street, West Alexandria, Ohio 45381 |
| Steven Unger | P.O. Box 25, West Alexandria, Ohio 45381 |
| Village of West Alexandria | 16 North Main Street, West Alexandria, Ohio 45381 |

Source:

Information based on tax records provided by Kramer and Associates.

FIGURE 1

PROPERTY OWNERSHIP IN AREA OF IMPACTED GROUNDWATER,
WEST ALEXANDRIA, OHIO

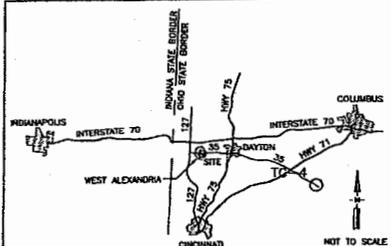
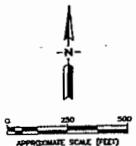


EXPLANATION

- APPROXIMATE GROUNDWATER AREA EXCEEDING MAXIMUM CONTAMINATION LEVEL (MCL)
- APPROXIMATE PLUME BOUNDARY
- ACTIVE WELL, WITH IDENTIFICATION NUMBER
- ABANDONED WELL, WITH IDENTIFICATION NUMBER
- DISCONNECTED EXISTING WELL, WITH IDENTIFICATION NUMBER
- MONITORING WELL, WITH IDENTIFICATION NUMBER

BASEMAP REFERENCE: ROHM & ASSOCIATES, WATERLINE LOCATION MAP, JANUARY 5, 1995.

| NO. | DATE | REVISION | BY | DATE | REVISION | BY | DRAWN BY | DATE | APPROVED BY |
|-----|------|----------|----|------|----------|----|----------|------|-------------|
| | | | | | | | | | |
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**PROPERTY OWNERSHIP
IN AREA OF IMPACTED GROUNDWATER
WEST ALEXANDRIA, OHIO**
PREPARED FOR
ROHM AND HAAS CO.
WEST ALEXANDRIA, OHIO

Project No.
4855K
Figure No.
122

ATTACHMENT I

RCRA FINAL DECISION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

RCRA FINAL DECISION
AND RESPONSE TO COMMENTS
SELECTION OF REMEDIAL ALTERNATIVE

FOR

ROHM AND HAAS COMPANY, MORTON PLANT
WEST ALEXANDRIA, OHIO

JUNE, 2001

FINAL DECISION AND RESPONSE TO COMMENTS
SELECTION OF REMEDIAL ALTERNATIVE
FOR
ROHM AND HAAS COMPANY, MORTON PLANT
WEST ALEXANDRIA, OHIO

Introduction

The United States Environmental Protection Agency (U.S. EPA) presents this Resource Conservation and Recovery Act (RCRA) Final Decision and Response to Comments for the Morton Plant, West Alexandria, Ohio, Rohm and Haas Company. Included in this document is the previously issued Statement of Basis (Attachment I). The Statement of Basis outlined remedial alternatives possible at the facility as well as U.S. EPA's proposed remedy and was made available to the public for review and comment on December 20, 2000. The public was notified of the public comment period in the local Twin Valley News newspaper and the local radio station. The Final Decision presented in this document supports the proposed remedy; the decision is based upon the documents in the Index to the Administrative Record (Attachment II). There were no comments received during the 45-day public comment period, which ended February 23, 2001.

Assessment of the Site

The action documented in the Final Decision is necessary to protect human health and the environment.

Selected Remedy

U.S. EPA has selected the following remedial actions as the remedy to address contaminated media at the Rohm and Haas Facility:

To address soil contamination:

- Institutional controls will consist of legal/administrative measures such as a deed restriction and notice to ensure land use remains industrial/commercial at the Rohm and Haas Facility.
- The Soil Vapor Extraction (SVE) System, currently in place, will continue to operate and remove additional Volatile Organic Compounds (VOC's) until recovery is no longer feasible. Extracted vapors are released to the atmosphere under a permit exemption from the Ohio Environmental Protection Agency.

Monitored Natural Attenuation of Contaminants in Groundwater

Monitored Natural Attenuation (MNA) relies on natural or intrinsic processes

such as adsorption, dispersion, biodegradation, and dilution to dissipate constituents that are present in groundwater to achieve remedial goals. The primary means of evaluating the performance of MNA is through an ongoing monitoring program and the continued assessment of the data to verify that natural attenuation is continuing to abate the chemicals of concern.

Rohm and Haas will conduct a groundwater monitoring program to verify that the overall area and distribution of groundwater impacted does not significantly expand or shift location, and the concentrations of individual constituents are stable or declining and remain below health-based action levels. The monitoring program will begin on a semiannual basis for an initial period of 2 years. If no significant changes are observed, the program will shift to annual sampling thereafter.

Rohm and Haas may terminate the monitoring program when concentrations of all chemicals of concern are below background or health-based levels for three consecutive monitoring events in all wells sampled and remain below these levels after 2 years as confirmed by a fourth sampling event. Additional details of the MNA and SVE remedies chosen for this site are given in the Statement Of Basis, December, 2000.

- Institutional controls, including deed restrictions, will prohibit the installation of any new domestic water supply wells within the affected area of groundwater contamination.
- If institutional controls prohibiting future domestic water supply wells within the ground-water plume cannot be implemented, Rohm and Haas will offer only future residents within the plume a connection to the municipal water supply.
- The remedy meets the evaluation criteria and will be protective of human health and the environment

Public Participation

The public comment period was announced through a newspaper advertisement and cable access announcements. The public comment period ran from December 20, 2000 through February 23, 2001. The Statement of Basis and supporting Administrative Record were placed in the West Alexandria Public Library in West Alexandria, OH and the U.S. EPA, Region 5, Waste, Pesticides and Toxics Division office for public review prior to and during the start of the public comment period.

Public Comments and Concerns

There were no public comments received during the comment period. There was no request for any formal public meetings.

Administrative Record

The Administrative Record upon which the final remedy was selected is available at both the West Alexandria Public Library, and the U.S. EPA, Region 5, Waste, Pesticides and Toxics Division office. Attachment II identifies the documents contained within the Administrative Record, by subject, author and date.

Future Actions

Over a 90-day negotiation period, U.S. EPA and Rohm and Haas will attempt to negotiate an administrative consent order requiring Rohm and Haas to implement the remedy. If Rohm and Haas does not agree to implement the remedy, U.S. EPA may use its enforcement alternatives including ordering the facility to implement the remedy through a unilateral administrative order.

Declaration

Based upon the Administrative Record compiled for this corrective action, U.S. EPA has determined that the selected remedy is appropriate and is protective of human health and the environment.

for George J. Hanper

Joseph Boyle
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division
U.S. EPA, Region 5

June 22, 2001

Date

Attachments

ATTACHMENT I

**STATEMENT OF BASIS
FOR
SELECTION OF REMEDIAL ALTERNATIVE**

AT

**The Rohm and Haas Co.
Morton Plant
10 S. Electric Street and 93 E. Dayton St.
West Alexandria, Ohio 45381**

U.S. EPA I.D. OHD 045 566 098

December, 2000



STATEMENT OF BASIS

The Rohm and Haas Co.
Morton Plant
10 S. Electric Street and 93 E. Dayton St.
West Alexandria, Ohio 45381
OHD 045 566 098

INTRODUCTION

This Statement of Basis explains the proposed remedy for groundwater contamination at a facility owned and operated by Morton International, Inc. (Morton), which is now a wholly-owned subsidiary of The Rohm and Haas Co. (Rohm and Haas). The facility (the Facility or the Morton Plant) is located at 10 S. Electric Street and 93 E. Dayton Street (U.S. Hwy 35) in West Alexandria, Ohio. The U.S. EPA will select a final remedy for the Facility only after the public comment period has ended and information submitted by the public has been reviewed and fully considered.

The purpose of this document is:

- to identify the proposed corrective action remedy for public comment,
- to solicit public review of and comment on all remedial alternatives including those not previously considered, and
- to provide information on how you can be involved in the remedy selection.

The U.S. EPA is issuing this Statement of Basis as part of its public participation responsibilities under the Resource Conservation and Recovery Act (RCRA). RCRA is the law that provides for hazardous waste facility cleanups. This Statement of Basis summarizes information found in greater detail in the RCRA Facility Investigation (RFI) and Streamlined Corrective Measures Study (CMS) reports, and other documents in the Facility's Administrative Record. The RFI characterized the nature and extent of contamination, and the CMS discussed the rationale, approach and justification for the proposed remedy at the Facility. Morton and subsequently Rohm and Haas prepared these documents in accordance with an Administrative Order on Consent between U.S. EPA and Morton. U.S. EPA encourages you to review these documents to gain a more comprehensive understanding of the Facility and the activities that have been conducted.

U.S. EPA may modify the proposed remedy or select another remedy based on public comments or new information obtained. The public is encouraged to review and comment on the proposed remedy. If a public meeting is requested, a newspaper notice will publish the meeting location and date prior to the meeting.

SUMMARY OF PROPOSED REMEDY

The proposed remedy for the Facility addresses the historical release of chemical contaminants to groundwater and soil. The proposed groundwater remedy involves the continued operation of a soil vapor extraction system near the former source of contamination, groundwater monitoring of a well network, and a restriction on installation of new drinking water wells within the plume of contamination until safe levels are achieved. The remedy also requires maintaining the existing land use at the Facility for commercial/industrial purposes only.

Possible sources of the contamination include former underground storage tanks, facility piping and historical spills or leaks from facility processes involving solvents or other raw materials. The groundwater and soils have been contaminated with organic solvents such as 1,1,1-trichloroethane and tetrachloroethene.

FACILITY BACKGROUND

The 14-acre Facility is located within a semi-rural area at the eastern edge of the town of West Alexandria in Preble County, Ohio, approximately 15 miles west of Dayton. Figure 1-1 (see attached) indicates the location of the Facility on the United States Geological Survey (USGS) Quadrangle. Figure 1-2 (see attached) presents a general site map of the Facility.

Operating History

The Facility began chemical product manufacturing operations in 1950 under the name Dayton Chemicals. In 1967, Dayton Chemicals was purchased by the Whittaker Corporation. Morton bought the Plant in 1990, and in 1999 Rohm and Haas acquired Morton and/or Morton's assets. The Plant has historically produced rubber to metal adhesives, polyester resins, and molded urethane (plastic) products. The Plant discontinued manufacturing molded plastic products in 1996.

Figure 1-3 (see attached) depicts the approximate layout of buildings, tanks, and other features for the Facility. The North Property, at 93 E. Dayton St., consists of a paved parking lot, used for employee and visitor parking, and a large landscaped open area. The South Property, at 10 S. Electric St., is used for the current manufacturing operations and includes a former railroad right of way extending south of the main plant. Rohm and Haas recently expanded their South Property by purchasing adjacent property at 15 S. Electric Street, a former supermarket building.

Current Facility Features

The Facility is currently zoned as light-industrial. The manufacturing process consists of the blending and/or reacting of raw materials including elastomers, resins, solvents, pigments, inorganic powders and rubber-based products. Solvents utilized at the Facility include methyl isobutyl ketone, methyl ethyl ketone, xylenes, toluene and ethylene glycol. Previous solvents used include tetrachloroethene (PCE), methylene chloride, 1,1,1 and 1,1,2-trichloroethane (1,1,1 TCA and 1,1,2 TCA).

Hazardous Waste Management

Solvents are stored primarily in eight above-ground storage tanks along the western side of the South Property. Smaller volumes are received and stored inside buildings in 55 gallon drums. Powdered materials are received and stored in bulk sacks, fiber drums, and cardboard packaging.

The Morton Plant stores wastes generated from the manufacturing process for less than 90 days, then transports them off-site for disposal or recycling. Since 1984, the Facility has operated as a RCRA hazardous waste generator. Prior to 1984, the Facility had interim status as a RCRA hazardous waste treatment, storage and disposal facility for storage of hazardous wastes greater than 90 days.

In the past, solvents, fuel oils, and other raw materials were stored in underground storage tanks on both the North and South Properties. All of the underground storage tanks were removed around 1986. The Facility does not currently use any underground piping systems for raw materials or process waste transfer.

Above-ground storage tanks have been used for chemical storage both historically and currently. Tanks have been removed over the years, and the current cluster of tanks used for chemical storage is located within a concrete secondary containment.

In 1980, the Facility applied for interim status as a hazardous waste treatment, storage and disposal facility. In 1984, the regulated storage unit was clean closed. RCRA-regulated units manage hazardous waste in a manner that requires hazardous waste interim status or a permit to operate. As examples, storage of hazardous waste in drums or tanks for more than 90 days and the management of hazardous waste in landfills, surface impoundments, and injection wells requires a hazardous waste permit. The clean closed RCRA-regulated unit was located east of the North Property, on property currently leased by Paramount Plastics from Lilly. The Ohio Environmental Protection Agency (OEPA) approved the closure plan and accepted the certification of closure in October 1987. Further information about the closure can be obtained from:

Ohio EPA Northwest District Office
347 North Dunbridge Road
Bowling Green, Ohio 43402
Phone: 419-352-8461 Fax: 419-352-8468

Facility Future Use

Rohm and Haas anticipates future use of the South Property as light industrial, and future use of the North Property as a parking lot (currently in place), or development for commercial use. Future residential development is not expected.

NATURE AND EXTENT OF CONTAMINATION

The RCRA Facility Investigation (RFI) conducted during 1999 and historical sampling established the nature and extent of contamination of soils and groundwater

RCRA FACILITY INVESTIGATION RESULTS

Historical investigations of soil and groundwater quality, and domestic well sampling indicated the presence of volatile and semi-volatile organic compounds in groundwater beneath and downgradient of the Morton Plant. Chemicals were also identified at low levels in soils from various locations across the property. Constituents historically detected in groundwater include volatile organic compounds such as styrene, chloromethanes, chloroethanes, and chloroethenes. These constituents were identified in wells up to 1.5 miles south of the Plant.

Operations throughout the North and South Properties that may have contributed to the historical contamination include: spills, leaks, and other accidental releases from process operations; spills, leaks, and other accidental discharges from storage tanks and associated piping; discharge of waste and wastewater to the ground surface; discharge of wastes and wastewater to sewers with subsequent leakage to surrounding soils; and possible burial of wastes.

The RFI was designed to address critical data gaps and evaluate the possible environmental impact associated with Plant operations, based on previously identified contamination. The specific objectives of the RFI were to: characterize soil and groundwater impacts in specific areas, investigate potential source areas, characterize the neighboring creek (Twin Creek), evaluate local groundwater use, characterize site hydrogeology and chemical fate and transport, and complete a human health and ecological risk assessment.

During 1999, Geomatrix consultants performed a number of field activities at the Morton Plant consisting of:

- Drilling 15 soil borings and collecting soil samples,
- Installation of 7 new groundwater monitoring wells both on-site and off-site,
- Additional surface soil sampling at 11 locations,
- Electromagnetic and seismic geophysical surveys,
- Surface water and sediment sampling in Twin Creek and storm water drains,
- Groundwater sampling of new and existing monitoring wells and domestic and municipal water supply wells in July and November,
- Measurement of physical characteristics of Twin Creek, including flow rate, depth and sediment thickness,
- Measurement of groundwater levels,
- Excavation of 3 exploratory trenches to characterize possible buried metals identified during the geophysical survey, and
- Analysis of soil, groundwater, sediment and surface water samples for physical and chemical parameters.

Groundwater

Groundwater samples from monitoring wells, domestic wells and municipal supply wells contained ketones, aromatics, chloroethanes, chloroethenes, and halomethanes. Low concentrations of acetophenone and 2-methylnaphthalene were also detected.

Consistent with previous investigation results, concentrations of the detected constituents were below 100 micrograms per liter ($\mu\text{g/L}$), and most were below 20 $\mu\text{g/L}$. Metals concentrations in groundwater were also generally low, and consistent with or lower than levels observed in the upgradient West Alexandria water supply wells. No evidence of environmental impact has been detected at the municipal supply wells, so these wells are considered useful indicators of background conditions.

Soils

Soil samples collected during the RFI contained low concentrations of ketones, aromatics, chloroethenes, chloroethanes, chloromethanes, and carbon disulfide. Consistent with previous investigation findings, all soil concentrations of these constituents were at or below 70 micrograms per kilogram ($\mu\text{g/kg}$), most were below 10 $\mu\text{g/kg}$. Several volatile organic compounds (VOCs) historically observed in Facility soils, including carbon tetrachloride, chloroform, styrene, and vinyl chloride, were no longer detected.

Surface Water and Sediments

Surface water samples were collected from both the municipal storm sewer and Twin Creek. Although low concentrations of metals and organics were identified in these samples, their distribution indicates they are not associated with the Morton Plant. Sediments also contained low concentrations of metals and organics, but do not appear related to possible releases from the Facility.

Other

A geophysical survey and subsequent trenching activities conducted on the North Property detected a buried steel boiler. The boiler was removed from the subsurface and no evidence of chemical impacts was detected. The assessment did not detect any buried drums.

Conclusions

Studies over the past 10 years have routinely detected VOCs in both on-site and off-site groundwater. The RFI updated the historical data collection efforts, and also acquired data in new locations. A review of the data indicates that the concentrations of organic constituents are stable or declining at all locations, both on and off-site. Maximum concentrations of all detected organic compounds, including PCE, carbon tetrachloride, and 1,1,1 TCA have declined from historical highs. The number of compounds detected in groundwater has decreased significantly.

The overall area of groundwater affected by organics related to the Morton Plant has also declined. Sampling conducted in 1995 identified PCE in wells up to 1.5 miles south of the Facility. The 1999 data shows the boundary of groundwater contamination now lies less than 1 mile south of the Facility. This decline is most likely due to aerobic degradation and source reduction for the aromatic compounds and mono- and dichlorinated compounds (e.g. 1, 4-dichlorobenzene, dichloromethane, 1, 1-dichloroethene, cis-1,2-dichloroethane, benzene, ethylbenzene, xylenes, styrene, etc.) The other compounds such as tetrachloroethene, carbon tetrachloride and 1,1,1-trichloroethane may be declining primarily due to dilution and source reduction.

Groundwater Use

According to the RFI, groundwater is located in both a deep transmissive zone (a sand and gravel layer at approximately 100 - 120 feet depth) and a shallow transmissive zone. The shallow transmissive zone is believed to discharge to Twin Creek southeast of the Morton Plant. Both zones are utilized for water supply wells in the area.

Together they form the primary source of groundwater supply for local domestic and municipal water supply wells for the Village of West Alexandria. The nearest downgradient residents are located to the east and south of the Facility. Local drinking water is supplied by the Village of West Alexandria, which obtains its water from the deep aquifer underlying the area to the west of the Facility. Some individual homes have private wells for their drinking water source.

ECOLOGICAL RISK ASSESSMENT

Geomatrix completed a screening ecological risk assessment for the Facility to determine whether constituents found in soils, sediments, groundwater, and surface water posed a risk to plants, animals, and habitats in the vicinity of the plant.

The Morton Plant is mostly covered with buildings or asphalt. Little vegetation exists to support wildlife populations. However, the area surrounding the Plant is vegetated and can support a diversity of wildlife species. Five distinct habitat types occur in the vicinity of the Plant (including successional old field, successional northern hardwood forest hedgerows, riparian forest, successional northern hardwood woodlot, and Twin Creek and associated wetlands). No state or federally listed endangered or threatened species or species of concern have been documented to occur within 2 miles of the Facility.

Fate and Transport

A variety of physiochemical and site-specific factors influence the fate and transport of chemicals in the environment. VOCs, semivolatile organic compounds (primarily polyaromatic hydrocarbons) and inorganic constituents were detected at the Morton Plant.

VOCs released to soils can be volatilized to the air, transported to surface waters by runoff, and transported to groundwater by leaching. VOCs tend to volatilize readily from surface water to the atmosphere, and once released, they photodegrade rapidly. In surface waters and soil, some of these compounds are also readily biodegraded by microbes.

Polyaromatic hydrocarbons (PAHs) are semivolatile compounds that are regarded as persistent in the environment, but are also degradable by microorganisms. Degradation is influenced by factors such as temperature, pH, redox potential, microbial species present, chemical structure, concentration, and lipophilicity.

The fate and transport of metals are largely determined by their low water solubility and tendency to bind to clays, organic matter, and iron and manganese hydroxides in soil and sediment. Metals are generally persistent in soil and sediment and not in

groundwater and surface water. Metals can mobilize from the soil into the water column and are most mobile under acidic conditions. Increasing pH usually reduces their bioavailability.

Chemicals of Potential Ecological Concern

Chemicals of potential ecological concern were identified by comparing available data on chemical concentrations found in various media with conservative ecological screening values derived by U.S. EPA Region 5. Potential risks posed by each chemical of concern were then evaluated by calculating a hazard quotient (the ratio of media chemical concentration to a screening value) for each contaminant. Hazard quotients greater than 1 indicate a potential risk of adverse effects may exist and further evaluation may be necessary.

Surface water samples collected in Twin Creek were compared with ecological screening values and the resulting hazard quotients were all less than 1 for the constituents detected. Surface water samples collected from the storm sewer contained inorganic compounds (copper, lead and zinc) which exceeded the conservative screening levels. However, these compounds are commonly found in urban storm water runoff, and the highest concentrations of copper and lead and the second highest concentration of zinc were observed in the sample collected farthest upstream of the Plant.

Concentrations of ethylbenzene and copper in sediment exceeded ecological screening values for an upstream location. However, the concentration of ethylbenzene, copper, and those metals without ecological screening values (barium, beryllium, thallium, tin and vanadium) represent background conditions which do not pose a risk to the environment.

Various metals were detected in soils at the Morton Plant and their concentrations result in hazard quotients exceeding 1, indicating potential risk to ecological receptors. However, these metals concentrations probably represent background conditions and any ecological receptors would be exposed for a limited frequency and duration to soils at the Plant because of the minimal habitat on-site that is suitable to support a wildlife population.

Therefore, the screening ecological assessment did not identify potential risks from constituents detected in any environmental media.

HUMAN HEALTH RISK ASSESSMENT

Rohm and Haas also conducted a human health risk assessment to identify any potential adverse effects to humans. The assessment was based on the assumption that the plant will remain an active industrial facility for the foreseeable future. The assessment also considered adjacent land use, including residential and commercial properties. Therefore, chemicals of potential concern were identified for each media by comparing maximum detected concentrations to risk-based screening criteria and background levels.

Chemicals of Potential Concern

Soil

Chemicals of potential concern for soil were identified by comparing concentrations detected during the 1999 field investigation to risk-based screening levels for groundwater protection (U.S. EPA Region 5), and preliminary remediation goals (PRGs) for industrial land use (U.S. EPA Region 9). The first comparison identified chemicals that may pose a potential risk as a result of their migration from soil to groundwater. The second comparison identified chemicals that may pose a potential risk as a result of direct contact by humans with the affected soil.

No soil chemicals of concern were selected based on protection of groundwater quality. However, several chemicals did exceed the industrial direct contact preliminary remedial goals and were retained for further evaluation.

| <i>Chemical</i> | <i>Area</i> | <i>Max. Conc.</i> | <i>Screening Level</i> | <i>Basis</i> |
|----------------------|-------------|-------------------|------------------------|-----------------|
| Arsenic | south | 50.1 mg/kg | 2.7 mg/kg | Direct contact |
| Benzo(a)anthracene | south | 2 mg/kg | 2.9 mg/kg | Direct contact* |
| Benzo(a)pyrene | south | 3 mg/kg | 0.29 mg/kg | Direct contact |
| Benzo(b)fluoranthene | south | 4 mg/kg | 2.9 mg/kg | Direct contact |
| Arsenic | north | 8.9 mg/kg | 2.7 mg/kg | Direct contact |
| Benzo(a)pyrene | north | 0.4 mg/kg | 0.29 mg/kg | Direct contact |

*Note: Benzo(a)anthracene was retained as a chemical of concern based on a cumulative effects analysis for all chemicals with a goal of reducing the overall cancer risk ratio to less than 1.

Groundwater

Chemicals of potential concern for groundwater were selected based on comparison with Federal Maximum Contaminant Levels (MCLs) for drinking water, if available.

| <i>Chemical</i> | <i>Location</i> | <i>Max. Conc.</i> | <i>MCL</i> |
|----------------------|-----------------|-------------------|------------|
| PCE | Onsite | 35 µg/L | 5 µg/L |
| Carbon tetrachloride | Offsite | 8 µg/L | 5 µg/L |
| PCE | Offsite | 44 µg/L | 5 µg/L |

Surface Water

Chemicals of potential concern for surface water were also screened based on comparison with MCLs, and preliminary remediation goals for tap water. All chemical detections in surface water were below MCLs, and a non-cancer risk ratio was calculated using the tap water PRGs. The total risk ratio was less than 1, thus no chemicals of concern in surface water were identified.

Sediment

Human health risk-based screening criteria do not exist for sediment. However, preliminary remediation goals for soils were used to identify potential chemicals of concern. Arsenic was the only chemical initially identified as a chemical of potential concern for sediment. Concentrations of arsenic ranged from 3.1 to 4.4 mg/kg, which exceed the industrial soil PRG of 2.7 mg/kg. However, these levels are consistent with concentrations observed in off-site shallow soil samples from the RFI. Further, arsenic concentrations were uniform at all sediment sampling locations. There are no indications that arsenic concentrations in sediment are elevated above natural levels.

Exposure Assessment

An analysis of potential risk depends on the mechanisms by which people might come in contact with chemicals of potential concern at the Morton Plant. This includes a characterization of the physical environment and potential receptors, identification of exposure pathways (potential source, points of release), and quantification of specific exposure pathways (exposure concentrations and intake assumptions). The types of activities that might occur at a site and the mechanisms that result in migration of chemicals determine potential exposure to chemicals.

This assessment assumed that the Facility will continue to operate as an industrial facility on the South Property, and the North Property will remain a parking lot or be developed for commercial use. Residential development of the property was not considered. Groundwater in the area is used by both public and private entities as a source of drinking water.

The West Alexandria water supply system wells are located southwest of the Facility and repeated analyses of the water have not identified any VOCs. However, several nearby domestic wells have been affected by chemicals identified with the Morton Plant and adjacent industrial property (Lilly/Paramount Plastics). The most recent sampling of domestic wells did not identify chemicals at concentrations which exceed protective screening levels. Rohm and Haas has provided an alternate water supply to residents with historically affected wells.

Several exposure scenarios were considered in the risk assessment. Onsite receptors include industrial workers involved primarily with outdoor activities, industrial workers who spend most of their day indoors, and construction workers. Offsite receptors include residents with existing or future water supply wells, and individuals working or residing downwind of the Facility.

Exposure point concentrations for surface and subsurface soils were derived separately for the South and North Properties. Groundwater exposure point concentrations were developed for onsite and offsite wells. Air exposure point concentrations were estimated using fate and transport models based on concentrations of chemicals in soil and groundwater.

Risk Analysis

Noncancer

Potential noncarcinogenic and carcinogenic effects were evaluated for specific pathways and potential receptors. Toxicity criteria were selected from relevant U.S. EPA sources. Potential adverse noncarcinogenic health effects were evaluated using the hazard index approach. This approach compares estimated daily intakes of each chemical to the appropriate reference dose, and then sums the individual chemicals which may have additive effects to develop a hazard index.

The noncarcinogenic hazard indices calculated for both onsite industrial and onsite construction workers were well below the target hazard index of 1. Therefore, adverse health effects are not expected as a result of onsite exposure to chemicals in soils or groundwater.

Noncarcinogenic risks were also evaluated for both current and potential future residents. Based on risk estimates for exposure to contaminated soils, and inhalation of VOCs in indoor air, adverse noncarcinogenic health effects are not expected as a result of current offsite resident exposure to chemicals in environmental media. However, the risk estimates for hypothetical future residents (utilizing offsite groundwater within the contaminated plume), showed a hazard index of 5, which is above the target hazard index of 1. A high degree of uncertainty is associated with this conservative risk estimate, because it incorporates a 1000 fold uncertainty factor in the calculation for carbon tetrachloride. This potential future risk will be addressed through the implementation of a monitored natural attenuation program, and institutional controls which restrict the installation of new groundwater wells within the plume of contamination.

Cancer

Carcinogenic risks are defined in terms of the increased possibility of an individual developing cancer as the result of exposure to a given chemical at a given concentration. U.S. EPA's risk reduction goal is to reduce the threat from carcinogenic contaminants, such that the excess risk of cancer to an individual exposed over a lifetime falls within the range of 1×10^{-6} to 1×10^{-4} . However, U.S. EPA prefers to select remedies at the more protective end of the risk range, and generally uses 1×10^{-6} as a point of departure for evaluating risks. The estimated risks calculated in this assessment were compared with U.S. EPA's acceptable risk range, and subsequent remedial alternatives will then be considered.

The estimated theoretical excess lifetime cancer risk for industrial workers on the South Property is 1×10^{-5} , the estimated risk for industrial workers on the North Property is 5×10^{-6} . Both values are within the acceptable risk range. However, institutional controls will be implemented to maintain the property for industrial purposes only, and ensure that the exposure assumptions remain true. The estimated cancer risk for onsite construction workers on the South Property is 3×10^{-6} , which is within the acceptable range. The estimated risk for construction workers on the North Property is 9×10^{-7} , which is below the acceptable risk range.

The estimated theoretical excess lifetime cancer risk for current offsite residents is 5×10^{-7} , which is below the acceptable risk range. The total estimated risk for hypothetical future offsite residents is 1×10^{-4} , which falls at the upper end of the acceptable risk range. This future offsite resident scenario was evaluated using a "within the plume" approach, using maximum detected values for the constituents of concern. This risk estimate assumed a future resident installs a potable groundwater well within the most affected area of the off-site plume and uses water from this well for domestic purposes, including consumption. This scenario is very unlikely, given the efforts already taken to offer current residents an alternate water supply. In addition, the owners of both wells historically affected by the primary risk driver, carbon tetrachloride, have already switched to an alternate water supply. However, to ensure that this future scenario does not occur, the facility will conduct a groundwater monitoring program and implement institutional controls that restrict the installation of new groundwater wells within the plume until such time that safe levels (e.g. federal maximum contaminant levels) are reached.

Conclusions

The calculated risks are based on conservative assumptions regarding potential exposures and protective levels. The elevated hazard index for the future offsite residents was attributable to inhalation of carbon tetrachloride in indoor air as a result of volatilization from groundwater used domestically. In addition, the potential risks were calculated based on maximum detected concentrations of carbon tetrachloride and PCE in offsite monitoring wells and also include a 1000 fold uncertainty factor for carbon tetrachloride. All current residents with water supply wells affected by VOCs in the past have been offered the option of connecting to the municipal water supply, or being provided with a deeper, unaffected well. The likelihood that future residents will be exposed to VOCs in groundwater is very low. However, the potential for future risks to residents will be addressed by the final remedy as discussed in the following sections.

STREAMLINED CORRECTIVE MEASURES STUDY RESULTS

Based on the results of the RCRA Facility Investigation and risk assessments, U.S. EPA directed Rohm and Haas to evaluate and provide its rationale for selection of a final remedy for the Facility. The RFI indicated that levels of impact to soils and groundwater are low and declining. All risk based on current exposure scenarios were within acceptable bounds as established by the U.S. EPA. However, the report identified potential future risks for groundwater use and must be addressed.

The streamlined corrective measures study had the following objectives:

- discuss selection of a recommended final remedy, consisting of monitored natural attenuation with land use restrictions;
- describe the nature, implementation and termination of critical components of the proposed final remedy including institutional controls, interim measures and continued groundwater monitoring; and
- describe measures for communicating with the public regarding the proposal.

Remedial alternatives must meet several criteria according to U.S. EPA guidance, including the mitigation of unacceptable risks and control of contaminant migration. Historic data indicate that the migration of contaminated groundwater is under control. Natural mechanisms, source control, and source removal appear to be reducing the number, concentration, and extent of site contaminants. Current risks were shown to be acceptable and do not require further action. Therefore, the proposed alternative must address only future risks, ensuring that current conditions do not change in a manner that would create an unacceptable exposure scenario. Therefore, the final remedy must meet the following criteria:

- Concentrations of chemicals in groundwater and the overall extent of impacted groundwater decline until health-based levels are achieved;
- Onsite land use remains consistent with the commercial/industrial scenario considered in the risk assessments; and
- Offsite groundwater remains unused in areas where concentrations of chemicals exceed health-based levels.

Continued monitoring of the groundwater using a portion of the existing groundwater monitoring network can achieve the first criterion, assuming that natural processes continue to reduce groundwater constituents. Institutional controls would restrict the placement of any new water supply wells within the area which exceeds health-based action levels. Institutional controls would also restrict the future use of onsite property for commercial/industrial use only, thus achieving the second two criteria.

Groundwater Contamination

Maximum Contaminant Levels (MCLs) are maximum permissible contaminant levels that can be delivered to any user of a public water system. These levels are based on human health concerns. The following compounds have been measured above MCLs:

| <u>Contaminant</u> | <u>Max. Concentration</u> | <u>MCL</u> | <u>Location</u> |
|----------------------|---------------------------|------------|-----------------|
| Carbon tetrachloride | 8 µg/L | 5 µg/L | Offsite |
| PCE | 44 µg/L | 5 µg/L | Offsite |
| PCE | 35 µg/L | 5 µg/L | Onsite |

Groundwater Risk

Groundwater near the Facility is not currently used for drinking water or any other identified use. This means there are no people (receptors) presently impacted by or at risk from the contaminated groundwater. Even so, U.S. EPA proposes a groundwater remedy to protect groundwater for potential future use. U.S. EPA maintains that groundwater is a natural resource that should not be contaminated.

Soil Vapor Extraction (SVE) System

Morton and Rohm and Haas have been operating a soil vapor extraction system onsite which has successfully removed approximately 400 to 500 pounds of PCE and TCA since its start-up in October, 1997. The continued operation of this SVE system is part

of the proposed final groundwater remedy. The extracted vapor is discharged to the atmosphere under a permit exemption from the Ohio Environmental Protection Agency.

SCOPE OF REMEDY

The purpose of the proposed remedy is:

- to monitor the natural attenuation of contaminants in groundwater,
- to prevent the installation of new wells within a limited area,
- to protect groundwater for potential future use,
- to implement institutional controls to establish the future use of the Facility as commercial/industrial, and
- to continue operation of the soil vapor extraction system.

Institutional Controls

Institutional Controls will be implemented to ensure that future use of the property remains industrial/commercial. Rohm and Haas will place a deed restriction on the property to prohibit the use of the property for residential purposes and restrict groundwater use. The land use restriction will remain in place until such time as a supplemental risk assessment verifies that on-site exposure to soils would be within acceptable limits for a residential land use scenario, and levels of contaminants in groundwater are stable and below health-based limits.

Rohm and Haas will also initiate institutional controls to prohibit and discourage the placement of future wells within off-site areas containing impacted groundwater with concentrations above health-based limits. These controls may include voluntary deed restrictions by landowners or local ordinances on groundwater use. Rohm and Haas will provide relevant information regarding the potential hazards and risks to current and potential landowners. Rohm and Haas will pursue voluntary deed restrictions by all landowners within areas containing impacted groundwater. Rohm and Haas may also elicit the support of the Village of West Alexandria and Preble County to place development restrictions or ordinances on the use of groundwater. These controls will remain in place until the concentrations of contaminants in groundwater are stable and remain below health-based action levels (i.e., federal drinking water MCLs).

The prohibition on groundwater use only includes groundwater from the shallow transmissive zone, either from new or existing wells. No prohibition would be placed on the use of groundwater from the deeper transmissive zone (approximately 100 feet below land surface), since investigations have not identified any impact to this zone.

In the event that institutional controls restricting placement of future off-site wells in the affected shallow aquifer cannot be achieved, Rohm and Haas will continue to offer applicable residents in the affected area with a connection to the municipal water supply.

Soil Vapor Extraction

A soil vapor extraction system currently operates onsite. The SVE system has removed an estimated 400 to 500 pounds of 1,1,1 TCA and PCE from soils beneath the Facility. As long as this system effectively removes VOCs from the subsurface soils, its operation will continue. System performance will be evaluated by periodically sampling

extracted vapor, calculating mass VOC removal rates, and terminating operation when VOC removal rates drop below 0.1 pounds per day for 3 consecutive weeks.

Approximately 4 months after termination, the SVE system will be reactivated and monitored for a rebound of VOC levels. If concentrations rebound above 0.1 pounds per hour and remain at those levels for more than three days, the evaluation program will be restarted. If concentrations drop back below 0.1 pounds per day within the 3 day period, operation of the SVE system will be permanently terminated.

Monitored Natural Attenuation

In addition to the SVE system, monitored natural attenuation will be utilized to demonstrate a clear and meaningful trend of decreasing contaminant mass and concentration over time. Data collected over the last decade already indicates that the overall plume area is significantly less than that observed in 1995 and 1997, with the downgradient edge moving from 1.5 miles to less than 1.0 miles south of the plant. Onsite concentrations of most organics have declined to levels lower than those at off-site monitoring locations, indicating that a source no longer exists. Concentrations of organic constituents are stable or declining at all locations, both onsite and offsite. Maximum concentrations observed in groundwater have also declined from historical highs, and the number of compounds detected in groundwater has decreased significantly. Therefore, natural mechanisms and source control activities appear to be meeting the objective of restoring impacted waters.

Summary and Evaluation of Possible Remedy

The following is a description and evaluation of the possible remedy considered in the Streamlined Corrective Measures Study and this Statement of Basis.

Evaluation of Technologies

The following criteria were used by the U.S. EPA in evaluating the remedy:

- Overall Protection - technology must provide adequate protection of human health and the environment,
- Restoration of impacted groundwater to achieve MCLs,
- Controlling the sources of releases,
- Prevention of plume migration,
- Long and short term reliability and effectiveness,
- Reduction of toxicity mobility, or volume of wastes,
- Implementability, and
- Cost

Soil Remediation

The risk assessment concluded that soils do not pose a threat to human health or the environment, under the existing industrial land use scenario. However, this assumption must remain valid by placing restrictions on future development of the Facility for residential purposes.

Groundwater Remediation

Based on current use of groundwater, no current human health risks are associated with contaminated groundwater. However, groundwater is a resource that must be protected and restored and the potential exists for possible future adverse effects on human health. Technologies for addressing the groundwater contamination are:

- No Action,
- Monitored Natural Attenuation (MNA) and Source Control

REMEDY DESCRIPTION AND EVALUATION

Soil: Institutional Controls

Institutional Controls would consist of legal/administrative measures such as a deed restriction and notice to ensure land use remains industrial/commercial at the Facility.

Decision: Soil Institutional Controls will ensure that the Facility is not redeveloped for residential use in the future, per the assumptions in the risk assessment. This technology could meet the overall protection criteria, as well as short and long term effectiveness. Institutional Controls are not cost prohibitive and can be implemented at this Facility.

Groundwater: No Action

No Action consists of shutting down the SVE system and conducting no further monitoring of the situation.

Decision: No Action will not verify that groundwater contaminants are decreasing in concentration and no longer migrating offsite. No Action would not meet the source control and reduction criteria, therefore No Action is not selected.

Soil Vapor Extraction System

The existing SVE system has removed 400 to 500 pounds of 1,1,1 TCA and PCE from the soils beneath the Facility. The system will continue to operate and remove additional VOCs until recovery is no longer feasible. Extracted vapors are released to the atmosphere under a permit exemption from the Ohio EPA.

Decision: The SVE system will continue to abate any remaining sources of releases and will reduce the volume and mobility of the contamination. This technology is not cost prohibitive and is already being implemented. This remedy would control any remaining sources of the groundwater contamination.

Monitored Natural Attenuation of Constituents in Groundwater

Monitored Natural Attenuation relies on natural or intrinsic processes such as adsorption, dispersion, biodegradation, and dilution to dissipate constituents that are present in groundwater to achieve remedial goals. The primary means of evaluating the performance of MNA is through an ongoing monitoring program and the continued assessment of the data to verify that natural attenuation is continuing to abate the chemicals of concern.

At the Facility, carbon tetrachloride and PCE are detected in groundwater above MCLs within the shallow aquifer unit. The horizontal and vertical distribution of constituents is well defined. All of the constituents in groundwater have the potential to undergo natural attenuation through a number of mechanisms. The dissolved organic constituents have the propensity to adsorb to soils, thus attenuating their migration. These constituents can also undergo chemical changes due to dissolution, dilution, and hydrolysis to further attenuate their potential migration. These constituents, especially the VOCs, have been shown to be biodegradable.

The limitations of natural attenuation as a remedial technology include the resistance of some of the constituents to these processes. VOCs are less retarded in migratory potential, but are more readily degradable. The timeframe associated with the more complex constituents can be longer due to the number of transformations required to degrade the constituents.

Since the decline in concentrations and number of constituents indicates that MNA is occurring at the Facility, and the process results in the permanent destruction of chemical constituents, MNA is anticipated to be both reliable and effective in the long term. Chemical species that may represent daughter products are present only at low concentrations and appear to be stable or decreasing.

Future groundwater monitoring will be conducted to provide data to quantitatively evaluate the degree to which natural attenuation is progressing at the Facility. The groundwater monitoring program will focus on collecting data that would be necessary to demonstrate a clear and meaningful trend of decreasing contaminant mass and concentration over time at appropriate monitoring points.

The groundwater monitoring network will include the following initial wells:

| | |
|-------|--|
| MW-2S | upgradient, northwest corner of North Property |
| MW-10 | downgradient at Meyers Lane |
| MW-11 | downgradient, east of North Property near Twin Creek |
| MW-12 | downgradient, near Black Road |
| MW-13 | near source area |
| MW-16 | upgradient, northwest corner of South Property |
| MW-24 | near source area |
| MW-25 | upgradient, west of South Property |
| MW-26 | downgradient, east of South Property |
| MW-27 | downgradient, east of South Property |
| MW-28 | downgradient, at Meyers Lane |
| 2 | downgradient and east of North Property (R. Summers) |
| 12 | southwest of South Property at Black Road |
| 13 | southwest of South Property at Black Road (L. Eubanks) |
| 14 | southwest of South Property at Black Road (P. Green) |
| 15A | southwest of South Property at Black Road (F. Glander) |
| 62A | municipal water supply (Village of West Alexandria) |
| 62B | municipal water supply (Village of West Alexandria) |
| 62C | municipal water supply (Village of West Alexandria) |

Additional monitoring wells may be sampled in the future if changes in the distribution of groundwater impact are observed. These wells include:

| | |
|--------|---|
| MW-3D | upgradient, midpoint of North Property |
| MW-7 | upgradient, west edge of South Property at midpoint |
| MW-8 | downgradient, at northeast corner of North Property |
| MW-14 | downgradient, east of potential source area on South Property |
| MW-15 | downgradient, at southeast edge of South Property |
| MW-22 | downgradient, near midpoint of North Property |
| MW-23 | downgradient, near midpoint of South Property |
| MW-tbd | downgradient of MW-28 |
| MW-tbd | downgradient of MW-12 |

Finally, wells that have been historically dry or have not contained detectable concentrations of organics will be plugged and abandoned.

The initial set of wells must be monitored until all analytes at a particular well are below either (a) the practical quantitation limit or (b) 70% of respective health-based screening

levels for 3 consecutive monitoring events. Wells will then be shifted from active monitoring to standby status.

Groundwater will be analyzed for the following list of compounds of concern:

| <i>Analyte</i> | <i>Human health risk-based screening level</i> | |
|----------------------|--|------|
| Carbon tetrachloride | 5 | ug/L |
| Chloroform | 80 | ug/L |
| Chloromethane | 1.5 | ug/L |
| 1,1-Dichloroethane | 810 | ug/L |
| PCE | 5 | ug/L |
| 1,1,1 TCA | 200 | ug/L |
| Vinyl Chloride | 2 | ug/L |

However, if groundwater monitoring shows a significant increase in concentrations of constituents or further migration of the plume, U.S. EPA will re-evaluate the monitoring program and additional corrective measures may be required.

Rohm and Haas will conduct semi-annual groundwater monitoring for an initial period of 2 years. If no significant changes in the concentration or distribution of constituents have been observed, the program will shift to annual sampling for an additional 3 years.

The monitoring program may then be terminated when both the following criteria are met: (a) concentrations of all monitoring analytes are below background or health-based levels for 3 consecutive monitoring events in all wells sampled and (b) concentrations remain below these levels after a 2-year waiting period, as confirmed by a fourth sampling event.

Decision: Monitored Natural Attenuation measures the natural reduction of chemical constituents. In conjunction with the soil vapor extraction system, and previously implemented source removal activities (removal of underground storage tanks), this remedy will achieve the objective of groundwater protection. This technology is not cost prohibitive and is implementable.

Groundwater Restriction for Future Well Installation

The potential exists for future residents to install a domestic water supply well within the contaminated groundwater plume. Rohm and Haas will pursue implementation of institutional controls to prohibit and discourage the placement of future wells in offsite impacted areas. These controls will remain in place until concentrations of chemicals of concern are below health-based action levels (e.g. federal MCLs) for at least 4 consecutive monitoring events. However, if institutional controls cannot be implemented, Rohm and Haas will continue to offer applicable residents seeking to install a domestic water supply well within the contaminated zone with a connection to the municipal water supply.

Decision: Institutional controls which restrict future installation of domestic drinking water wells will ensure that the impacted groundwater does not pose an adverse risk to

future residents. These controls are not cost prohibitive and can be implemented by the Facility, provided affected landowners concur with a voluntary deed restriction, or the Village of West Alexandria imposes a development restriction or ordinance. Otherwise, Rohm and Haas will provide applicable residents with an alternative water supply. Rohm and Haas may request permission to change these restrictions when groundwater monitoring data demonstrates that safe levels have been achieved throughout the plume.

SUMMARY

Rohm and Haas will conduct a groundwater monitoring program to verify that the overall area and distribution of impacted groundwater does not significantly expand or shift location, and the concentrations of individual constituents are stable or declining and remain below health-based action levels. The monitoring program will begin on a semiannual basis for an initial period of 2 years. If no significant changes are observed, the program will shift to annual sampling for an additional 3 years. Rohm and Haas may terminate the monitoring program when concentrations of all chemicals of concern are below background or health-based levels (e.g. federal MCLs) for 3 consecutive monitoring events in all wells sampled and remain below these levels for 2 years as confirmed by a fourth sampling event.

Until off-site groundwater meets health-based levels, as determined by the monitoring program, Rohm and Haas will encourage landowners or the municipality to place restrictions on the installation of new groundwater wells within the affected area of groundwater contamination. If these restrictions cannot be implemented, Rohm and Haas will continue to offer applicable residents a connection to the municipal water supply or an alternate water source.

Rohm and Haas must also ensure that the current land use assumptions remain valid for their property, and will implement institutional controls to restrict the property to commercial/industrial use. Institutional controls will prevent the property from being redeveloped for residential use, and must remain in place until a reassessment shows that safe levels exist for a residential scenario.

The restriction on new well installation eliminates the potential exposure of future residents to contaminated groundwater. A deed restriction on the property prevents its redevelopment for residential use. The SVE system will continue to extract VOCs from soils underlying the Facility until further recovery become impractical. The monitored natural attenuation program will verify that groundwater contamination is declining and not spreading further offsite.

The remedy meets the evaluation criteria and will be protective of human health and the environment. Based on current information, the proposed remedy provides a good balance between controlling unacceptable future risk due to groundwater contamination with future use of the Facility.

PUBLIC PARTICIPATION

U.S. EPA solicits input from the community on the proposed remedy. The public comment period starts on January 16, 2001 and ends on March 2, 2001. If requested, U.S. EPA will hold a public meeting in West Alexandria, Ohio, to discuss the proposed remedy and any additional actions the public may propose. The Administrative Record for the Morton Plant, which includes the Description of Current Conditions, RFI and Streamlined CMS reports, is available at the following locations:

West Alexandria Branch Library
Town Hall Building
16 North Main Street
West Alexandria, OH 45381
Phone: (937) 839-4915
Hours: Mon, Tues, Wed 2 pm - 8 pm; Fri 10 am - 4 pm; Sat 10 am - 2 pm

U.S. EPA, Region 5
Waste, Pesticides and Toxics Division Record Center
77 West Jackson Boulevard, 7th Floor
Chicago, Illinois 60604
Phone (312) 353-5821
Hours: Mon - Fri 8 am - 4 pm

After considering the comments received, U.S. EPA will summarize the comments and its responses to the comments, and specify and document the selected remedy in a Final Decision/Response to Comments document. This document will be incorporated into the Administrative Record. To send written comments or obtain further information, please contact:

George Hamper
U.S. Environmental Protection Agency
77 West Jackson Boulevard, DE-9J
Chicago, Illinois 60604
Phone: toll free (800) 621-8431 or direct (312) 886-0987
Email: hamper.george@epa.gov

ATTACHMENT II

REFERENCES

REFERENCES:

“Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites”, OSWER Directive 9200.4-17P, April 1999.

“Region 5 Framework for Monitored Natural Attenuation Decisions for Ground water”, Memorandum, William Muno, September 27, 2000.

ATTACHMENT III

ACKNOWLEDGMENT OF TERMINATION

ACKNOWLEDGMENT OF TERMINATION and
AGREEMENT TO RECORD PRESERVATION AND RESERVATION OF RIGHTS

1. The United States Environmental Protection Agency ("U.S. EPA") agrees and acknowledges that the terms of Order _____ issued by U.S. EPA on _____, 200_ (Order), including any additional tasks determined by U.S. EPA to have been required pursuant to the Order, but excluding Section X: Record Preservation, have been satisfactorily completed based upon the information presently available to U.S. EPA.
2. Respondent agrees and acknowledges that the terms of Section X: Record Preservation remain in effect until _____, 20__ (date 6 years after termination of the Order).
3. Respondent agrees and acknowledges that Respondent's completion of the terms of the Order does not limit or otherwise preclude U.S. EPA from taking additional enforcement action pursuant to Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h), or other available legal authorities, should U.S. EPA determine that such actions are warranted.
4. Respondent agrees and acknowledges that Respondent's completion of the terms of the Order does not relieve Respondent of its obligations to comply with RCRA or any other applicable local, State, or Federal laws and regulations.

IT IS SO AGREED AND ACKNOWLEDGED:

Date: _____ By: _____
(Name), (Title)
(RESPONDENT)

Date: _____ By: _____
(Name), (Title)
UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
(Petitioner)

ATTACHMENT IV

ADMINISTRATIVE ORDER ON CONSENT (9/25/98)

U.S. Environmental Protection Agency
RCRA §3008(h) CONSENT ORDER

for

Morton International, Inc
U.S. EPA I.D.# OHD 045 566 098

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ABBREVIATIONS AND ACRONYMS

| | |
|--------|--|
| AOC | Area of Concern |
| CAP | Corrective Action Plan |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| CMI | Corrective Measure Implementation |
| CMS | Corrective Measure Study |
| DQO | Data Quality Objective |
| EPA | United States Environmental Protection Agency |
| HWMU | Hazardous Waste Management Unit |
| IM | Interim Measures |
| MCL | Maximum Contaminant Level |
| mg/kg | milligram per kilogram |
| mg/l | milligram per liter |
| NPDES | National Pollution Discharge Elimination System |
| PA | Preliminary Assessment |
| ppm | parts per million |
| ppb | parts per billion |
| QAPP | Quality Assurance Project Plan |
| QA/QC | Quality Assurance/Quality Control |
| RA | Release Assessment |
| RCRA | Resource Conservation and Recovery Act |

RFA RCRA Facility Assessment

RFI - RCRA Facility Investigation

SOW Scope of Work

SWMU(s) Solid Waste Management Unit(s)

$\mu\text{g}/\text{kg}$ micrograms per kilogram

$\mu\text{g}/\text{l}$ micrograms per liter

U.S.C. United States Code

U.S. EPA United States Environmental Protection Agency

VSI Visual Site Inspection

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UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:

Morton International, Inc.
10 S. Electric Street
West Alexandria, OH 45301

EPA ID# OHD 045 566 098

RESPONDENT

ADMINISTRATIVE ORDER ON CONSENT

U.S. EPA Docket No.

5-RCRA-012-'98

Proceeding under Section
3008(h) of the Resource
Conservation and Recovery Act,
as amended, 42 U.S.C. §6928(h).

I. JURISDICTION

- A. This ADMINISTRATIVE ORDER ON CONSENT (Order) issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (U.S. EPA) by Section 3008(h) of the Solid Waste Disposal Act, commonly referred to as the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §6928(h). The authority vested in the Administrator has been delegated to the Chief of the Enforcement and Compliance Assurance Branch of the Waste, Pesticides and Toxics Division.

US ENVIRONMENTAL
PROTECTION AGENCY
REGION-V

98 SEP 25 9 11 23

RECEIVED
REGIONAL HEARING
CLERK

- B. This Order is issued to Morton International, Inc. (Respondent), the owner and operator of a facility at 10 S. Electric Street, West Alexandria, OH 45301 (Facility).
- C. Respondent consents to and agrees not to contest U.S. EPA's jurisdiction to issue this Order and to enforce its terms. Further, Respondent will not contest U.S. EPA's jurisdiction to:
1. Compel compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial;
 2. Require Respondent's full or interim compliance with the terms of this Order; and
 3. To impose sanctions for violations of this Order.

II. DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Order which are defined in RCRA or in regulations promulgated under RCRA shall have the definitions given to them in RCRA or in such regulations.

Acceptable, in the phrase "In a manner acceptable to U.S. EPA..." shall mean that submittals or completed work meet the terms and conditions of this Order, attachments, scopes of work, approved workplans and/or U.S. EPA's written comments and guidance documents.

Additional work shall mean any activity or requirement that is not expressly covered by this Order or its attachments but is determined by U.S. EPA to be necessary to fulfill the purposes of this Order as presented in Section III: Statement of Purpose.

Administrative Record shall mean the record compiled and maintained by U.S. EPA supporting this Order.

Area of Concern shall mean any area of the Facility under the control or ownership of the owner or operator where a release to the environment of hazardous waste(s) or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration of the release.

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

Comply or compliance may be used interchangeably and shall mean the performance of work required by this Order of a quality approvable by U.S. EPA and in the manner and time specified in this Order or any modification thereof, its attachments or any modification thereof, or written U.S. EPA directives. Respondent must meet both the quality and timeliness components of a particular requirement to be considered in compliance with the terms and conditions of this Order.

Contractor shall include any contractor, subcontractor, consultant or laboratory retained to conduct or monitor any portion of the work performed pursuant to this Order.

Corrective measures shall mean those measures or actions necessary to control, prevent, or mitigate the release or potential release of hazardous waste or hazardous constituents into the environment.

Corrective Measures Study or CMS shall mean the investigation and evaluation of potential remedies which will protect human health and/or the environment from the release or potential release of hazardous wastes, or hazardous constituents, into the environment

from the Facility. The CMS requirements are detailed in the CMS Scope of Work included as Attachment III.

Data Quality Objectives shall mean the qualitative or quantitative statements expressing acceptable levels of uncertainty. The Data Quality Objective process is designed to collect data that are scientifically valid, defensible, and of known precision and accuracy relative to the use for which the data are obtained.

Day shall mean a calendar day unless expressly stated to be a business day. Business day shall mean a day other than a Saturday, Sunday, or Federal Holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the end of the next business day.

EPA or U.S. EPA shall mean the United States Environmental Protection Agency, and any successor Departments or Agencies of the United States.

Facility shall mean all contiguous property under the control of the owner and/or operator.

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

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

Hazardous Waste Management Unit or HWMU shall mean a contiguous area of land on or in which hazardous waste is placed, or the largest area which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system, and a container storage area. A container alone does not constitute a hazardous waste management unit; the unit includes containers and the land or pad upon which they are placed.

Innovative Treatment Technologies shall mean those technologies for treatment of soil, sediment, sludge, and debris other than incineration or solidification - stabilization and those

technologies for treatment of groundwater contamination that are alternatives to pumping with conventional treatments like air stripping and ultraviolet light oxidation.

Interim measures or IM shall mean those actions, which can be initiated in advance of implementation of the final corrective action for a facility, to achieve the goal of stabilization. Interim Measures initiate cleanup at a facility and control or eliminate the release or potential release of hazardous wastes at or from the Facility. The IM requirements are detailed in the IM Scope of Work included as Attachment I.

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

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

Release shall mean any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of hazardous wastes or hazardous constituents into the environment.

Scope of Work or SOW shall mean the outline of work Respondent must use to develop all workplans and reports required by this Order as set forth in this Order and its Attachments: I, Interim Measures Scope of Work; II, RCRA Facility Investigation Scope of Work; and III, Corrective Measures Study Scope of Work. All SOW Attachments and modifications or amendments thereto, are incorporated into this Order and are an enforceable part of this Order.

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

Facility where solid wastes have been routinely and systematically released.

Stabilization shall mean controlling or abating immediate threats to human health and/or the environment from releases and/or preventing or minimizing the spread of contaminants while long-term corrective measures alternatives are being evaluated.

Submittal shall include any workplan, report, progress report, or any other written document Respondent is required by this Order to send to U.S. EPA.

Violations of this Order shall mean those actions or omissions, failures or refusals to act by Respondent that result in a failure to meet the terms and conditions of this Order or its attachments.

Work or Obligation shall mean any activity Respondent must perform to comply with the requirements of this Order and its attachments.

Workplan shall mean the detailed plans prepared by Respondent to satisfy the requirements of the corresponding Scope of Work. The

requirements for each workplan are presented in Section VIII:

Work to be Performed and/or the Attachments I-IV.

III. STATEMENT OF PURPOSE

In entering into this Order, the mutual objectives of U.S. EPA and Respondent are:

- A. To perform Interim Measures (IM) at the Facility to relieve threats to human health and/or the environment;
- B. To perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release of hazardous waste at or from the Facility;
- C. To perform a Corrective Measures Study (CMS) to identify and evaluate alternatives for the corrective measures necessary to prevent, mitigate, and/or remediate any releases of hazardous wastes at or from the Facility; and
- D. To perform any other activities necessary to evaluate actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste at or from the Facility.

IV. PARTIES BOUND

- A. This Order shall apply to and be binding upon U.S. EPA, Respondent and its officers, directors, employees, agents, successors and assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors, acting on behalf of Respondent.
- B. No change in ownership or corporate or partnership status relating to the Facility will in any way alter Respondent's responsibility under this Order. Any conveyance of title, easement, or other interest in the Facility, or a portion of the Facility, shall not affect Respondent's obligations under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of Respondent by the terms and conditions of the Order, regardless of Respondent's use of employees, agents, or contractors to perform any such tasks.
- C. Respondent shall provide a copy of this Order to all contractors and laboratories retained to conduct or monitor any portion of the work performed pursuant to this Order within fourteen (14) days of the issuance of this Order or the retention of such person(s), whichever occurs later, and

shall condition all such contracts on compliance with the terms of this Order.

- D. Respondent shall give written notice of this Order to any successor in interest prior to transfer of ownership or operation of the Facility or a portion thereof and shall notify U.S. EPA in writing within thirty (30) days prior to such transfer.
- E. Respondent agrees to undertake all actions required by the terms and conditions of this Order, including any portions of this Order incorporated by reference.
- F. Respondent waives any rights to request a hearing on this matter pursuant to §3008(b) of RCRA and 40 CFR Part 24, and consents to the issuance of this Order without a hearing pursuant to §3008(b) of RCRA as a Consent Order issued pursuant to §3008(h) of RCRA.

V. FINDINGS OF FACT

- A. Respondent is a company doing business in the State of Ohio and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. §6903(15) and 40 CFR 260.10.

- B. Respondent is a generator of hazardous waste and an owner and/or-operator of a hazardous waste management facility located at 10 South Electric Street/86 East Dayton Street, West Alexandria, Ohio 45301.
- C. Operations began at the Facility around 1950 under the name Dayton Chemicals. In 1967, Dayton Chemicals was purchased by the Whittaker Corporations (Whittaker), 10880 Wilshire Boulevard, Los Angeles, CA 90024. The Facility has operated as an industrial coatings, adhesives, and molded plastic products manufacturing plant as well as an industrial sealant manufacturing plant.
- D. Whittaker engaged in storage of hazardous waste at the Facility subject to interim status requirements of 40 CFR Part 265.
- E. Whittaker owned and/or operated the Facility as a hazardous waste management facility on or after November 19, 1980, the applicable date which renders facilities subject to interim status requirements or the requirement to have a permit under §§3004 and 3005 of RCRA.

- F. Pursuant to §3010 of RCRA, Whittaker notified U.S. EPA of its hazardous waste activity. In its notification dated August 20, 1980, Whittaker identified itself as a generator of hazardous waste and an owner/operator of a treatment, storage, and/or disposal facility for hazardous waste.
- G. In its notification of hazardous waste activity dated August 20, 1980, Whittaker identified itself as handling the following hazardous wastes at the Facility:
1. Hazardous wastes from non-specific sources identified at 40 C.F.R. §261.31 including F001 and F002 (spent halogenated solvents), F003 and F005 (spent non-halogenated solvents);
 2. Hazardous wastes from specific sources identified at 40 C.F.R. §261.32 including K078 and K082;
 3. Commercial chemical products, manufacturing chemical intermediates, off-specification commercial chemical products, or manufacturing chemical intermediates identified at 40 C.F.R. §261.33(f) including U002 (acetone), U013 (unclassified), U041 (oxirane), U056 (cyclohexane), U112 (acetic acid ethyl ester), U130

(hexachlorocyclopentadiene), U140 (isobutyl alcohol), U154 (methanol), U161 (methyl isobutyl ketone), U210 (tetrachloroethylene), U220 (toluene), U238 and U239 (xylene).

H. In its RCRA Part A application dated November 19, 1980, Whittaker identified itself as handling the following hazardous wastes at the Facility (managed in containers, S01, 4400 gallons capacity, for storage):

1. Hazardous wastes from non-specific sources identified at 40 C.F.R. §261.31 including F001 and F002 (spent halogenated solvents), F003 and F005 (spent non-halogenated solvents);
2. Hazardous wastes were stored in a Hazardous Waste Management Unit located on the northeastern portion of the property at Building 29.
3. Other buildings at the facility in 1980 were identified as follows: Buildings 1,2,3 and 5 - adhesive manufacturing; Building 21 - adhesives warehouse; Building 12 - sealant manufacturing; Building 26 - sealant warehouse; Buildings 16 and 17 - molded goods

manufacturing; Building 11 - warehouse; Building 8 - laboratory; Buildings 15 and 28 - solvent storage; Building 6 - office.

- I. On November 12, 1984, Whittaker submitted to the US EPA certification claiming generator status. Hazardous waste storage units at the facility did not undergo formal closure.
- J. On January 29, 1986, Whittaker Ram Chemicals Division of the Whittaker Corporation notified the US EPA of new hazardous waste activity at the 119 East Dayton Street portion of the property. A second EPA ID number (# OHD 981 191 398) was assigned to the facility, and identified Whittaker as a generator of hazardous waste using waste codes F003 (spent non-halogenated solvents) and F006 (wastewater treatment sludges from electroplating operations).
- K. The property was parceled into two pieces on September 29, 1989 when Lilly Industrial Coatings purchased the Whittaker Ram Chemicals Division and associated property at 119 East Dayton Street from Whittaker.

- L. Morton International, Inc. purchased the rest of the facility from Whittaker in March, 1990, including parcels north and south of East Dayton Street.
- M. Whittaker provided the US EPA with a revised Notification of Hazardous Waste Activity on February 13, 1990 indicating the change in ownership of the facility to Morton International, Inc. Three wastes from non-specific sources were listed: F002 (spent halogenated solvents), F003 and F005 (spent non-halogenated solvents).
- N. The Respondent's Facility includes two contiguous parcels of land separated by US Route 35 (East Dayton Street). The northwestern portion of the facility is considered 86 East Dayton Street whereas the southern portion of the facility is at 10 South Electric Street.
- O. The southern portion consists of the manufacturing facility, and is bordered on the north by East Dayton Street, on the south by farm land, on the west by former Conrail Railroad tracks, and on the east by South Electric Street. The northwestern parcel consists of a vacant lot and parking area, and is bordered on the north by farm land, on the

south by East Dayton Street, on the east by property currently leased by Paramount Plastic Products, Inc. (119 East Dayton Street), and on the west by Stotler Road.

P. The Facility covers 10 acres and consists of offices; manufacturing buildings, one above ground tank farm, final product and raw material warehouses, and a research and development laboratory. Operations have remained much the same since 1990.

Q. According to a Preliminary Assessment/Visual Site Inspection (PA/VSI) and Final Report dated October 4, 1993, the Facility contains five solid waste management units. They include:

1. Satellite Accumulation Areas
2. Hazardous Waste Storage Area less than 90 days
3. Hazardous Waste Bulk Tanks less than 90 days
4. Empty Drum Storage Area
5. Three Waste Dumpsters

- R. Solvent products are stored in eight aboveground storage tanks in a tank farm on the western border of the Morton property.
- S. Morton generates halogenated and nonhalogenated spent solvents (F001, F003, F005, D001-barium, D018-benzene, D019-carbon tetrachloride, D022-chloroform, D029-1,1-dichloroethylene, D040-trichloroethylene, D043-vinyl chloride), solvent-contaminated debris, including lead (D008) and selenium (D010), empty 55-gallon drums, and various nonhazardous housekeeping wastes. The primary commercial solvents used in manufacturing include: methyl isobutyl ketone (MIBK), methyl ethyl ketone (MEK), xylene, and toluene.
- T. Spent solvents are stored at satellite accumulation areas, and when full, are taken to the hazardous waste bulk tank. Once emptied, the drums are returned to the satellite accumulation areas.
- U. Drums containing materials that cannot be transferred to the hazardous waste bulk tanks are transferred to the hazardous waste storage area. These drums contain spent solvents that

contain large quantities of dissolved solids, dispersed pigments, elastomers, resins, residual material, and solvent-contaminated debris.

- V. The previous owner, Whittaker, installed at an unknown time, three underground storage tanks on the northwestern portion of their property. In 1986, Whittaker removed the USTs from the property. The USTs stored unknown amounts of hexane and heptane.

- W. Whittaker removed approximately eight underground storage tanks containing petroleum from their property in 1986. The tanks were located in the center of the southern portion of the property under what is currently a polyester resin products and raw material storage building.

- X. A portion of the Facility formally owned by Whittaker (Lilly property leased to Paramount) contains one solid waste management unit which is considered a RCRA unit. A former hazardous waste storage area is located adjacent to the west side of the manufacturing building. Lilly generated nonhalogenated spent solvents categorized as F003 waste.

- Y. The former hazardous waste storage area on the Lilly property was certified RCRA closed on February 21, 1992 by the Ohio Environmental Protection Agency.
- Z. Lilly manufactured a coating polymer, "Gel-Coat", used primarily in the painting and coating of fiberglass products. Wastes generated by the manufacturing process include nonhalogenated solvents (F003 waste). The primary commercial solvents used were acetone, heptane, styrene, and isopropanol. Spent solvents were stored in drums at the former hazardous waste storage area.
- AA. The Facility is located 0.25 miles west of Twin Creek. Twin Creek is the nearest surface water body and is used for local drainage, fishing, and storm sewer discharge. Storm water runoff from the facility enters storm sewer lines along East Dayton Street which discharge into the creek.
- BB. Glacial till is the dominant geologic parent material of soils in Preble County. Soils underlying the facility consist of unconsolidated deposits of clay, silt, sand and gravel. On-site soil borings encounter a clay and silt layer occurring from 6 to 15 feet below ground surface.

Bedrock is encountered at depths ranging from 14 to 32 feet below ground surface. Static groundwater occurs at depths between 8 and 24 feet below ground surface.

CC. Groundwater is the primary drinking water source for the City of West Alexandria and for private residents living outside of the city limits. The City of West Alexandria has two public supply wells located 0.5 mile southwest of the facility. These wells are screened at a depth of 130 feet in the underlying sand and gravel aquifer. The nearest residential well is located 1000 feet northeast of the facility. Other residents are located east and southeast of the facility. Residential wells are screened between 30 and 100 feet below ground surface. Approximately 10 local residents on private wells have been connected to municipal water supplies at the expense of Morton, following documented groundwater contamination. All affected town residents were offered free hook-ups to the city water system, however, some declined these offers.

DD. Reports indicate the groundwater flow direction in the area is generally south to southeast. However, site specific reports have indicated that beneath the site, groundwater

flows north-northeast, due east, or south-southeast. It has been suggested that a possible groundwater divide exists between the northern and southern portions of the Facility.

EE. Groundwater contamination by volatile organic compounds (VOCs) in the vicinity of the facility was documented by a West Alexandria resident in early 1990. The Ohio Department of Health conducted residential well sampling in 1990 which documented widespread VOC contamination to the south of the city of West Alexandria. A third round of groundwater sampling was conducted by the Ohio Health Department, Preble County Health Department and the Ohio EPA in January, 1991 which documented VOC contamination up to 1.5 miles south of East Dayton Street.

FF. Maximum contaminant levels (MCLs) as defined by 40 C. F. R. §141.61 are as follows:

| <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|----------------------|--------------|--------------|
| benzene | 5 | ppb |
| carbon tetrachloride | 5 | ppb |
| chlorobenzene | 100 | ppb |
| chloroform | 100 | ppb |

| | | |
|---|--------|-----|
| 1,1-dichloroethane | -- | |
| 1,1-dichloroethene (1,1-dichloroethylene) | 7 | ppb |
| cis 1,2-dichloroethene (cis 1,2, dichloroethylene) | 70 | ppb |
| ethylbenzene | 700 | ppb |
| styrene | 100 | ppb |
| tetrachloroethene (tetrachloroethylene) | 5 | ppb |
| toluene | 1,000 | ppb |
| 1,1,1-trichloroethane | 200 | ppb |
| 1,1,2-trichloroethane | 5 | ppb |
| trichloroethene (trichloroethylene) | 5 | ppb |
| xylenes (total) | 10,000 | ppb |

GG. Analytical results from the 1990 residential well sampling conducted by the Ohio Department of Health are as follows (Ohio EPA, 1990):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|------------------------|--------------|--------------|
| Summers (1A) | 3/13/90 | 1,1-dichloroethane | 17.9 | ppb |
| Summers (1A) | 3/13/90 | cis-1,2,dichloroethene | 15.4 | ppb |
| Summers (1A) | 2/12/90 | styrene | 1,650.0 | ppb * |
| Summers (1A) | 2/12/90 | tetrachloroethene | 168.0 | ppb * |

| | | | | |
|--------------|---------|-----------------------|-------|-------|
| Summers (1A) | 2/12/90 | trichloroethene | 51.9 | ppb * |
| Meyer (6) | 5/3/90 | 1,1-dichloroethylene | 35.8 | ppb * |
| Meyer (6) | 5/3/90 | tetrachloroethene | 69.4 | ppb * |
| Meyer (6) | 5/3/90 | 1,1,1 trichloroethane | 175.0 | ppb |
| Meyer (6) | 5/3/90 | carbon tetrachloride | 4.7 | ppb |
| Glander (7) | 12/5/90 | carbon tetrachloride | 5.5 | ppb * |
| Glander (7) | 12/7/90 | 1,1-dichloroethylene | 27.8 | ppb * |
| Reige (4) | 3/6/90 | benzene | 7.3 | ppb * |

(asterisks indicate levels above MCLs, only maximum results are shown)

HH. Groundwater and soil sampling were conducted at the Facility by Ohio EPA contractors from June 23 through June 28, 1991 (Compliance Solutions, April 1992).

1. Analytical results of groundwater samples collected from the Lilly property revealed the presence of the following volatile organic compounds (maximum values only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|--------------------|--------------|--------------|
| HA8D | 6/26/91 | benzene | 28.3 | ppb * |
| HA10B | 6/27/91 | 1,1-dichloroethane | 10.3 | ppb |

| | | | | |
|-------|---------|-----------------------|--------|-------|
| HA10B | 6/27/91 | ethylbenzene | 415.2 | ppb |
| HA10B | 6/27/91 | tetrachloroethene | 59.7 | ppb * |
| HA10B | 6/27/91 | toluene | 26.1 | ppb |
| HA11B | 6/27/91 | 1,1,1 trichloroethane | 59.7 | ppb |
| HA3A | 6/26/91 | styrene | 8638.6 | ppb * |
| HA10B | 6/27/91 | xylenes | 200 | ppb |

(asterisks indicate levels above MCLs)

2. Analytical results of groundwater samples collected from the northwestern portion of the facility (Morton property) revealed the presence of the following volatile organic compounds (maximum values only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|-----------------------|--------------|--------------|
| HB5A | 6/25/91 | benzene | 36.0 | ppb * |
| HB4A | 6/25/91 | 1,1-dichloroethane | 21.4 | ppb |
| HB5A | 6/25/91 | ethylbenzene | 15.0 | ppb |
| HB4A | 6/25/91 | toluene | 5.2 | ppb |
| HB4B | 6/25/91 | 1,1,1 trichloroethane | 94.3 | ppb |
| HB5A | 6/25/91 | xylenes | 136.0 | ppb |

(asterisks indicate levels above MCLs)

3. Analytical results of groundwater samples collected from the southern portion of the facility (Morton property) revealed the presence of the following VOCs (maximum results only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|-----------------------|--------------|--------------|
| HC12A | 6/25/91 | styrene | 5.3 | ppb |
| HC12A | 6/25/91 | tetrachloroethene | 5.7 | ppb * |
| HC12A | 6/25/91 | 1,1,1 trichloroethane | 41.7 | ppb |
| HC12A | 6/25/91 | 1,1,2 trichloroethane | 5.5 | ppb * |

(asterisks indicate levels above MCLs)

4. Analytical results from a soil sample collected from the southern portion of the facility revealed the presence of up to 8.97 ppb of 1,1,1-trichloroethane.

II. Additional groundwater well installation and sampling was performed July 8 through 18, 1991 by Morton consultant International Technology Corporation (IT, November, 1991).

1. Analytical results from the groundwater sampling indicate the presence of the following VOCs (maximum results only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|------------|--------------|--------------|
|-----------------|-------------|------------|--------------|--------------|

| | | | | |
|-------|---------|-----------------------|-------|-------|
| MW-3D | 7/18/91 | benzene | 16.7 | ppb * |
| MW-1D | 7/18/91 | carbon tetrachloride | 6.8 | ppb * |
| MW-2S | 7/18/91 | 1,1-dichloroethane | 14.0 | ppb |
| MW-1S | 7/18/91 | 1,1-dichloroethene | 52.2 | ppb * |
| MW-3D | 7/18/91 | ethylbenzene | 2.6 | ppb |
| MW-1S | 7/18/91 | tetrachloroethene | 86.0 | ppb * |
| MW-1S | 7/18/91 | 1,1,1-trichloroethane | 567.1 | ppb * |
| MW-1S | 7/18/91 | 1,1,2-trichloroethane | 4.8 | ppb |
| MW-3D | 7/18/91 | xylenes (total) | 1.3 | ppb |

(asterisks indicate levels above MCLs)

JJ. Groundwater sampling was performed by Environmental Science and Engineering, Inc. for Morton on March 23, 1994 (ESE, June, 1994).

1. Analytical results from the groundwater sampling indicate the presence of the following VOCs (maximum results only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|-----------------------|--------------|--------------|
| MW-2S | 3/23/94 | 1,1-dichloroethane | 20 | ppb |
| MW-1S | 3/23/94 | 1,1,1-trichloroethane | 170 | ppb |

KK. Groundwater and soil sampling of the Lilly property were conducted November 28 and 29, 1994 by Lilly's consultant SECOR International, Inc (SECOR, February, 1995).

1. Analytical results from the well sampling indicate the presence of the following VOCs (maximum results only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|-----------------------|--------------|--------------|
| OW-2 | 11/29/94 | benzene | 3.8 | ppb |
| OW-4 | 11/29/94 | 1,1-dichloroethane | 18.3 | ppb |
| OW-1 | 11/29/94 | 1,1,1-trichloroethane | 2.9 | ppb |
| OW-2 | 11/29/94 | toluene | 2.4 | ppb |
| OW-4 | 11/29/94 | styrene | 0.9 | ppb |

2. Analytical results from the soil sampling indicate that all VOCs were below detection limits.

LL. Geomatrix was contracted by Morton to do additional groundwater and soil sampling in 1995. Groundwater monitoring wells were installed and sampled during a site investigation from February 7 through 14, 1995 (Geomatrix, July, 1995).

1. Analytical results from the groundwater sampling indicate the presence of the following chemicals (VOCs) (maximum results only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|-----------------------|--------------|--------------|
| FSC-3 | 2/12/95 | 2-Butanone | 44 | ppb |
| FSC-2 | 2/12/95 | Carbon tetrachloride | 18 | ppb * |
| FSC-3 | 2/12/95 | 4-methyl-2-pentanone | 10 | ppb |
| MW-13 | 2/15/95 | Tetrachloroethene | 230 | ppb * |
| MW-14 | 2/15/95 | 1,1-dichloroethane | 6 | ppb |
| MW-14 | 2/14/95 | 1,1,1-trichloroethane | 22 | ppb |

(asterisks indicate levels above MCLs)

2. Analytical results from the soil sampling indicate the presence of the following chemicals (maximum results only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|----------------------|--------------|--------------|
| FSC-4 | 2/12/95 | Carbon tetrachloride | 15 | ppb * |
| FSC-4 | 2/12/95 | 1,1-dichloroethane | 9 | ppb |
| MW-16 | 2/13/95 | Ethylbenzene | 12 | ppb |
| FSC-5 | 2/12/95 | Tetrachloroethene | 810 | ppb * |
| MW-16 | 2/13/95 | Toluene | 70 | ppb |

styrene,
tetrachloroethene (tetrachloroethylene),
1,1,1-trichloroethane,
1,1,2-trichloroethane, and
trichloroethene (trichloroethylene).

OO. Hazardous wastes or hazardous constituents may further migrate from the Facility into the environment in the following pathways:

1. Groundwater
2. Surface Water runoff.

Groundwater present beneath the site most likely moves off-site in an easterly or southeasterly direction towards Twin Creek. Residential homes are located to the west, east, and southeast of the facility. Most residential homes outside of the City of West Alexandria limits are not supplied by city water hookups. These homes are supplied by private groundwater wells. Some of the residents have been connected to city water through efforts of Morton. Surface runoff from contaminated soils has the potential to contaminate the waters and sediments of Twin Creek.

| | | | | |
|-------|---------|-----------------------|-------|-----|
| MW-16 | 2/13/95 | TPHd | 41000 | ppb |
| MW-16 | 2/13/95 | TPHg | 20000 | ppb |
| FSC-4 | 2/12/95 | 1,1,1-trichloroethane | 110 | ppb |

MM. Groundwater sampling of residential wells was performed by Morton consultant Geomatrix in 1995.

1. Analytical results from the well sampling indicate the presence of the following VOCs (maximum levels only):

| <u>Location</u> | <u>Date</u> | <u>VOC</u> | <u>Conc.</u> | <u>Units</u> |
|-----------------|-------------|-----------------------|--------------|--------------|
| 21 | 2/8/95 | Tetrachloroethene | 62 | ppb * |
| 21 | 2/8/95 | Carbon Tetrachloride | 2 | ppb |
| MI-1C | 2/2/95 | 1,1,1-trichloroethane | 130 | ppb |

(asterisks indicate levels above MCLs)

NN. The above paragraphs document releases to the environment of the following eight VOCs above Maximum Contaminant Levels as defined by 52 Federal Register 25690 and 52 Federal Register 25715 or C.F.R. 171:

benzene,

carbon tetrachloride,

1,1-dichloroethene (1,1-dichloroethylene)

PP. The hazardous wastes or hazardous constituents identified in paragraph NN above may pose a threat to human health or the environment.

1. Benzene is a Class A human carcinogen (a known carcinogen) according to the US EPA's Integrated Risk Information System database (IRIS, 1997). Exposure to benzene over long periods of time results in an increased cancer risk in humans.
2. Carbon tetrachloride is classified as B2, a probable human carcinogen (IRIS, 1997) based upon laboratory studies that cause cancer in laboratory animals. Liver toxicity has also been documented.
3. 1,1-dichloroethene is classified as a Class C possible human carcinogen (IRIS, 1998). It is fetotoxic to rodents exposed via drinking water and is mutagenic.
4. Styrene has been shown to cause central nervous system effects in the laboratory, as well as irritation and other effects on the respiratory tract.

5. Tetrachloroethene exhibits hepatotoxicity to laboratory animals. Mild effects such as diminished odor perception have been observed in humans.
 6. 1,1,1-trichloroethane is not classified as a carcinogen (IRIS, 1997). However, it is considered to be toxic to the liver, nervous system, and circulatory system of humans and laboratory animals upon exposure to high doses over long periods of time.
 7. 1,1,2-trichloroethane is classified as a Class C possible human carcinogen (IRIS, 1998). Some chronic toxicity including adverse effects on the liver have been observed in mice.
- QQ. Releases from the Facility have migrated and may continue to migrate toward private residential drinking wells. VOCs have been documented in residential wells located approximately 100 feet from the facility. Storm water discharge from the facility may carry contaminants to Twin Creek.

VI. CONCLUSION OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above and after consideration of the Administrative Record, the Chief of the Enforcement and Compliance Assurance Branch; Waste, Pesticides and Toxics Division; Region 5; U.S. EPA has made the following conclusions of law and determinations:

- A. Respondent is a "person" within the meaning of Section §1004(15) of RCRA, 42 U.S.C. §6903(15);
- B. Respondent is the owner or operator of a Facility that has operated, is operating, should be, or should have been operating under interim status subject to §3005(e) of RCRA, 42 U.S.C. §6925(e);
- C. Certain wastes found at the Facility are hazardous wastes pursuant to §§1004(5) and 3001 of RCRA; 42 U.S.C. §§6903(5) and 6921; 40 CFR Part 261; and Subpart S, 264.501, 55 Federal Register 30874, July 27, 1990;
- D. There is or has been a release of hazardous waste(s) into the environment from the Facility; and

- E. The actions required by this Order are necessary to protect human health and/or the environment.

VII. PROJECT COORDINATOR

- A. Within fifteen (15) days of the effective date of this Order, U.S. EPA and Respondent shall each designate a Project Coordinator. Respondent shall notify U.S. EPA in writing of the Project Coordinator it has selected. Each Project Coordinator shall be responsible for overseeing the implementation of this Order and for designating a person to act in their absence. U.S. EPA Project Coordinator will be U.S. EPA's designated representative for the Facility. To the maximum extent practicable, all communications between Respondent and U.S. EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through the Project Coordinators.
- B. Respondent may change its Project Coordinator but agrees to provide at least fourteen (14) days written notice prior to changing a Project Coordinator. Respondent shall notify

U.S. EPA within five (5) days of any unanticipated change in its Project Coordinator.

- C. The absence of the U.S. EPA Project Coordinator from the Facility shall not be cause for the stoppage of work.

VIII. WORK TO BE PERFORMED

- A. Pursuant to §3008(h) of RCRA, Respondent agrees to and is hereby ordered to perform the acts specified in this section, in the manner and by the dates specified herein. All work undertaken pursuant to this Order shall be performed in a manner consistent with, at a minimum: the attached Scopes of Work; all U.S. EPA-approved workplans; RCRA and other applicable Federal laws and their implementing regulations; and applicable U.S. EPA guidance documents. Guidance may include, but is not limited to, documents listed in Attachment VI: References.

- B. Interim Measures

- 1. Respondent shall evaluate currently available data and assess the need for interim measures. Interim measures (IM) shall be used whenever possible to achieve the initial goal of stabilization.

2. In the event Respondent identifies an immediate or potential threat to human health and/or the environment; discovers new releases of hazardous wastes; or discovers new Solid Waste Management Units, Hazardous Waste Management Units, or Areas of Concern not previously identified; Respondent shall notify the U.S. EPA Project Coordinator orally within 48 hours of discovery, and notify U.S. EPA in writing within fourteen (14) days of such discovery summarizing the immediacy and magnitude of the potential threat(s) to human health and/or the environment.
3. If U.S. EPA identifies an immediate or potential threat to human health and/or the environment; discovers new releases of hazardous wastes; or discovers new Solid Waste Management Units, Hazardous Waste Management Units, or Areas of Concern not previously identified; U.S. EPA will notify Respondent in writing.
4. Within thirty (30) days of receiving the U.S. EPA's written notification or request, Respondent shall submit to the U.S. EPA an IM Workplan in accordance with the IM Scope of Work contained in Attachment I.

5. If U.S. EPA determines that immediate action is required, U.S. EPA's Project Coordinator may orally require Respondent to act prior to:

- a. Respondent's receipt of U.S. EPA's written notification;
- b. U.S. EPA's receipt of the IM Workplan; or
- c. U.S. EPA's approval of the IM Workplan.

C. RCRA Facility Investigation

1. Respondent shall submit to U.S. EPA a Workplan for a RCRA Facility Investigation (RFI) within one hundred twenty (120) days of the effective date of this Order. The RFI Workplan shall be developed in a manner consistent with the RFI Scope of Work contained in Attachment II.
2. The RFI Workplan shall detail the methodology Respondent shall use to:
 - a. Gather data needed to make decisions on stabilization during the early phase of the RFI;

- b. Identify and characterize all sources of contamination;
 - c. Define the degree and extent of contamination;
 - d. Characterize the potential pathways of contaminant migration;
 - e. Identify actual or potential human and/or ecological receptors; and
 - f. Support the development of alternatives from which a corrective measure will be selected by U.S. EPA.
3. Respondent shall include a specific schedule for implementation of all activities in the RFI Workplan.
 4. Respondent shall submit a RFI Report to U.S. EPA for approval in accordance with the U.S. EPA-approved RFI Workplan schedule.

D. Corrective Measures Study

1. Respondent shall submit to U.S. EPA a Corrective Measures Study (CMS) Report within ninety (90) days of U.S. EPA approval of the RFI Report. The CMS Report

shall be developed in a manner consistent with the CMS Scope of Work contained in Attachment III.

2. The CMS shall detail the methodology for developing and evaluating potential corrective measures to remedy any contamination exceeding Media Cleanup Standards¹ at or from the Facility. The CMS shall identify the potential corrective measures, including any innovative technologies, that may be used for the containment, treatment and/or disposal of contamination.
3. U.S. EPA will provide the public with an opportunity to review and comment on the final draft of the Corrective Measures Study Report and a description of U.S. EPA's proposed corrective measure(s), including U.S. EPA's justification for proposing such corrective measure(s) (Statement of Basis) and an opportunity for a public meeting regarding U.S. EPA's proposed cleanup standards and remedy for the Facility.

¹Media Cleanup Standards are described in Attachment II: RFI Scope of Work, and Attachment III: CMS Scope of Work.

4. Following the public comment period, U.S. EPA will issue its decision on corrective measure(s) for the protection of human health and/or the environment. U.S. EPA will also issue a Response to Comments received during the public comment period.

E. Additional Work

1. U.S. EPA may determine or Respondent may propose that certain tasks, including investigatory work, engineering evaluation, or procedure/methodology modifications, are necessary in addition to or in lieu of the tasks included in any U.S. EPA-approved workplan, when such additional work is necessary to meet the purposes set forth in Section III: Statement of Purpose.
2. U.S. EPA will notify Respondent in writing and specify the basis for its determination that additional work is necessary.
3. Within thirty (30) days after receipt of such determination, Respondent shall have the opportunity to

meet or confer with U.S. EPA to discuss the additional work.

4. If required by U.S. EPA, Respondent shall submit for U.S. EPA approval a workplan for the additional work. U.S. EPA shall specify the contents of such workplan. Such workplan shall be submitted within thirty (30) days of receipt of U.S. EPA's determination that additional work is necessary, or according to an alternative schedule established by U.S. EPA.
5. Upon approval of a workplan by U.S. EPA, Respondent shall implement it in accordance with the schedule and provisions contained therein.

IX. AGENCY APPROVALS/PROPOSED CONTRACTOR

A. Agency Approvals

1. U.S. EPA will provide Respondent with its written approval, approval with conditions and/or modifications, disapproval, or disapproval with comments for any workplan, report (except progress reports), specification, or schedule submitted pursuant to or required by this Order. U.S. EPA will provide a

statement of reasons for any approval with conditions and/or modifications, disapproval, or disapproval with comments.

2. Within forty-five (45) days of receipt of U.S. EPA's disapproval, or disapproval with comments, Respondent shall revise and submit an approvable workplan, report, specification, or schedule in accordance with U.S. EPA's written comments.
3. Any such disapproval or disapproval with comments of a revised and resubmitted workplan, report, specification, or schedule shall be deemed a violation of this Order and subject Respondent to the stipulated penalties provision found at Section XV.A.2 unless waived by U.S. EPA.
4. Upon receipt of U.S. EPA's written approval or approval with conditions and/or modifications, Respondent shall commence work and implement any approved workplan in accordance with the schedule and provisions contained therein.

5. Any U.S. EPA-approved report, workplan, specification, or schedule shall be deemed incorporated into this Order. Prior to this written approval, no workplan, report, specification, or schedule shall be construed as approved and final. Oral advice, suggestions, or comments given by U.S. EPA representatives will not constitute an official approval, nor shall any oral approval or oral assurance of approval be considered as binding.

B. Proposed Contractor

1. All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer, hydrologist, geologist, or environmental scientist with expertise in hazardous waste or contaminated soil and groundwater site cleanup. Respondent's contractor shall have the technical expertise sufficient to adequately perform all aspects of the work for which it is responsible.
2. Respondent shall notify U.S. EPA in writing of the name, title, and qualifications of the principal engineer, hydrologist, geologist, or environmental

scientist to be used in carrying out the terms of this Order within fourteen (14) days of the effective date of this Order.

3. Respondent shall identify whether any contractor is on the List of Parties Excluded for Federal Procurement or Non-Procurement Programs. U.S. EPA reserves the right to disapprove Respondent's contractor at any time during the period that the Order is effective.
4. If U.S. EPA disapproves a contractor, then Respondent must, within thirty (30) days of receipt from U.S. EPA of written notice of disapproval, notify U.S. EPA, in writing, of the name, title and qualifications of any replacement.

X. QUALITY ASSURANCE

- A. Respondent shall follow U.S. EPA guidance for sampling and analysis. Workplans shall contain quality assurance/quality control (QA/QC) and chain of custody procedures for all sampling, monitoring, and analytical activities. Any deviations from the QA/QC and chain of custody procedures in approved workplans must be approved by U.S. EPA prior to

implementation; must be documented, including reasons for the deviations; and must be reported in the applicable report.

- B. The name(s), addresses, and telephone numbers of the analytical laboratories Respondent proposes to use must be specified in the applicable workplan(s).
- C. All workplans required under this Order shall include data quality objectives for each data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use(s).
- D. Respondent shall monitor to ensure that high quality data is obtained by its consultant or contract laboratories. Respondent shall ensure that laboratories it uses perform analyses according to the latest approved edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846 Third Edition inclusive of Final updates I, II, IIa, IIb, III, and any subsequent updates), or other methods deemed satisfactory to U.S. EPA. If methods other than U.S. EPA methods are to be used, Respondent shall

specify all such protocols in the applicable workplan (e.g., RFI).

- E. U.S. EPA may reject any data that does not meet the requirements of the approved workplan or U.S. EPA analytical methods and may require re-sampling and additional analyses.
- F. Respondent shall ensure that laboratories it uses for analyses participate in a QA/QC program equivalent to that which is followed by U.S. EPA.
- G. U.S. EPA may conduct a performance and QA/QC audit of the laboratories chosen by Respondent before, during, or after sample analyses. Upon request by U.S. EPA, Respondent shall have its laboratory perform analyses of samples provided by U.S. EPA to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or QA/QC, re-sampling and additional analyses may be required.

XI. SAMPLING AND DATA/DOCUMENT AVAILABILITY

- A. Respondent shall submit to U.S. EPA upon request the results of all sampling and/or tests or other data generated by divisions, agents, or contractors pursuant to this Order.

- B. Notwithstanding any other provisions of this Order, the United States retains all of its information gathering and inspection authorities and rights, including the right to bring enforcement actions related thereto, under RCRA, CERCLA, and any other applicable statutes or regulations.
- C. Respondent shall notify U.S. EPA in writing at least fourteen (14) days prior to beginning each separate phase of field work approved under any workplan required by this Order.
- D. If Respondent believes it must commence emergency field activities without delay, Respondent may seek emergency telephone authorization from the U.S. EPA Project Coordinator or, if the U.S. EPA Project Coordinator is unavailable, their Section Chief, to commence such activities immediately.
- E. At the request of U.S. EPA, Respondent shall provide or allow U.S. EPA or its authorized representative to take split or duplicate samples of all samples collected by Respondent pursuant to this Order. Similarly, at the request of Respondent, U.S. EPA shall allow Respondent or

its authorized representative(s) to take split or duplicate samples of all samples collected by U.S. EPA under this Order.

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

XII. ACCESS

- A. U.S. EPA, its contractors, employees, and/or any duly designated U.S. EPA representatives are authorized to enter and freely move about the Facility pursuant to this Order for the purposes of, inter alia:
1. Interviewing Facility personnel and contractors;
 2. Inspecting records, operating logs, and contracts related to the Facility;
 3. Reviewing the progress of Respondent in carrying out the terms of this Order;
 4. Conducting such tests, sampling, or monitoring as U.S. EPA deems necessary;
 5. Using a camera, sound recording, or other documentary type equipment; and
 6. Verifying the reports and data submitted to U.S. EPA by Respondent.
- B. Respondent shall provide U.S. EPA and its representatives access at all reasonable times to the Facility and subject

to paragraph C below, to any other property to which access is required for implementation of this Order. Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of Respondent or its contractors.

- C. To the extent that work being performed pursuant to this Order must be done beyond the Facility property boundary, Respondent shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owner(s) of such property within thirty (30) days of the date that the need for access becomes known to Respondent. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from Respondent to the present owner(s) of such property requesting access agreement(s) to permit Respondent and its authorized representatives access to such property, and the payment of reasonable compensation in consideration of granting access. Any such access agreement shall provide for access by U.S. EPA and its representatives. Respondent shall insure that

U.S. EPA's Project Coordinator has a copy of any access agreement(s).

- D. In the event that agreements for access are not obtained within thirty (30) days of approval of any workplan for which access is required, or of the date that the need for access became known to Respondent, Respondent shall notify U.S. EPA in writing within fourteen (14) days thereafter of both the efforts undertaken to obtain access and the failure to obtain access agreements.
- E. U.S. EPA may, at its discretion, assist Respondent in obtaining access. In the event U.S. EPA obtains access, Respondent shall undertake U.S. EPA-approved work on such property.
- F. The Respondent agrees to indemnify the United States as provided in Section XXI: Indemnification of the United States Government, for any and all claims arising from activities on such property.
- G. Nothing in this section limits or otherwise affects U.S. EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.

- H. Nothing in this section shall be construed to limit or otherwise affect Respondent's liability and obligation to perform corrective action including corrective action beyond the Facility boundary, notwithstanding the lack of access.

XIII. RECORD PRESERVATION

- A. Respondent shall retain, during the pendency of this Order and for a minimum of 6 years after its termination, all data, records, and documents now in its possession or control or which come into its possession or control which relate in any way to this Order or to hazardous waste management and/or disposal at the Facility. Respondent shall notify U.S. EPA in writing ninety (90) days prior to the destruction of any such records, and shall provide U.S. EPA with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be addressed to:

Project Coordinator for Morton International, Inc.
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division (DE-9J)
U.S. EPA, Region 5
77 West Jackson Blvd.

Chicago, IL 60604

- B. Respondent shall within thirty (30) days of retaining or employing any agent, or contractor for the purpose of carrying out the terms of this Order, Respondent will enter into an agreement with any such agents or contractors whereby such agents or contractors will be required to provide Respondent a copy of all documents produced pursuant to this Order.

- C. All documents pertaining to this Order shall be stored by the Respondent in a centralized location at the Facility to afford ease of access by U.S. EPA or its representatives.

XIV. REPORTING AND DOCUMENT CERTIFICATION

- A. Beginning with the first full month following the effective date of this Order, and throughout the period that this Order is effective, Respondent shall provide U.S. EPA with monthly progress reports. Progress reports are due by the tenth day of each month (reports previous month's progress). The progress reports shall conform to requirements in the relevant scope of work contained in the Attachments. U.S.

EPA may adjust the frequency of progress reports to be consistent with site-specific activities.

- B. Three (3) copies of all documents submitted pursuant to this Order shall be in writing and shall be hand-delivered, sent by certified mail, return receipt requested, or by overnight express mail to the U.S. EPA project coordinator designated pursuant to Section VII of this Order. Other addresses and additional copies (e.g., state EPA) can also be designated by the U.S. EPA Project Coordinator. All documents submitted pursuant to this Order shall be printed on recycled paper and shall be copied double-sided whenever practicable.
- C. Any report or other document submitted by Respondent pursuant to this Order which makes any representation concerning Respondent's compliance or noncompliance with any requirement of this Order shall be certified by a responsible corporate officer of Respondent or a duly authorized representative. A responsible corporate officer means: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business

function, or any other person who performs similar policy or decision-making functions for the corporation.

- D. The certification required by paragraph C above, shall be in the following form:

"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: _____

Name: _____

Title: _____

Date: _____

XV. DELAY IN PERFORMANCE/STIPULATED PENALTIES

A. Unless there has been a written modification by U.S. EPA of a compliance date, an approved workplan condition, or excusable delay as defined in Section XVII: Force Majeure and Excusable Delay, if Respondent fails to comply with any term or condition set forth in this Order in the time or manner specified herein, Respondent shall pay stipulated penalties as set forth below upon written demand from U.S. EPA:

1. For failure to commence, perform, and/or complete field work in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$2,000 per day for the first seven days of such violation, \$5,000 per day for the eighth through twenty-first day of such violation, and \$8,000 per day for each day of such violation thereafter;
2. For failure to complete and submit any workplans or reports (other than progress reports) in a manner acceptable to U.S. EPA or at the time required pursuant to this Order, or for failure to notify U.S. EPA of

immediate or potential threats to human health and/or the environment, new releases of hazardous waste and/or new solid waste management units not previously identified, as required by this Order: \$2,000 per day for the first seven days of such violation, \$5,000 per day for the eighth through twenty-first day of such violation, and \$8,000 per day for each day of such violation thereafter;

3. For failure to complete and submit, other written submittals not included in paragraph A.2. of this section in a manner acceptable to U.S. EPA or at the time required pursuant to this Order: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such violation, and \$3,000 per day for each day of such violation thereafter;
4. For failure to comply with any other provisions of this Order in a manner acceptable to U.S. EPA: \$1,000 per day for the first seven days of such violation, \$2,000 per day for the eighth through twenty-first day of such

violation, and \$3,000 per day for each day of such violation thereafter.

- B. Penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the day of correction of the violation. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Order. Penalties shall continue to accrue regardless of whether U.S. EPA has notified the Respondent of a violation.
- C. All penalties owed to the United States under this section shall be due and payable within thirty (30) days of the Respondent's receipt from U.S. EPA of a written demand for payment of the penalties. Such a written demand will describe the violation and will indicate the amount of penalties due.
- D. Interest shall begin to accrue on any unpaid stipulated penalty balance beginning on the thirty-first (31) day after Respondent's receipt of U.S. EPA's demand letter. Interest shall accrue at the Current Value of Funds Rate established

by the Secretary of the Treasury. Pursuant to 31 U.S.C. § 3717, an additional penalty of 6% per annum on any unpaid principal shall be assessed for any stipulated penalty payment which is overdue for 90 or more days.

- E. All penalties shall be made payable by certified or cashier's check to the United States of America and shall be remitted to:

U.S. Department of Treasury
Attention: U.S. EPA, Region 5,
Office of the Comptroller
P.O. Box 70753
Pittsburgh, PA 15251

- F. All such checks shall reference the name of the Facility, the Respondent's name and address, and the U.S. EPA docket number of this action. Copies of all such checks and letters forwarding the checks shall be sent simultaneously to the U.S. EPA Project Coordinator.
- G. Respondent may dispute U.S. EPA's assessment of stipulated penalties by invoking the dispute resolution procedures under Section XVI: Dispute Resolution. The stipulated

penalties in dispute shall continue to accrue, but need not be paid, during the dispute resolution period. Respondent shall pay stipulated penalties and interest, if any, in accordance with the dispute resolution decision and/or agreement. Respondent shall submit such payment to U.S. EPA within seven (7) days of receipt of such resolution in accordance with paragraph E of this section.

- H. Neither the invocation of dispute resolution nor the payment of penalties shall alter in any way Respondent's obligation to comply with the terms and conditions of this Order.
- I. The stipulated penalties set forth in this section do not preclude U.S. EPA from pursuing any other remedies or sanctions which may be available to U.S. EPA by reason of Respondent's failure to comply with any of the terms and conditions of this Order.
- J. No payments under this section shall be tax deductible for Federal tax purposes.

XVI. DISPUTE RESOLUTION

- A. The parties shall use their best efforts to resolve informally and in good faith, all disputes or differences of opinion. The parties agree that the procedures contained in this section are the sole procedures for resolving disputes arising under this Order. If Respondent fails to follow any of the requirements contained in this section then it shall have waived its right to further consideration of the disputed issue.
- B. If Respondent disagrees, in whole or in part, with any written decision (Initial Written Decision) by U.S. EPA pursuant to this Order, Respondent's Project Coordinator shall notify the U.S. EPA's Project Coordinator of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.
- C. If the Project Coordinators cannot resolve the dispute informally, Respondent may pursue the matter formally by placing its objections in writing. Respondent's written objections must be directed to the U.S. EPA's Project Coordinator and copied to U.S. EPA's Regional Counsel. This

written notice must be mailed to such person(s) within fourteen (14) days of Respondent's receipt of the Initial Written Decision. Respondent's written objection must set forth the specific points of the dispute, the position Respondent claims should be adopted as consistent with the requirements of this Order, the basis for Respondent's position, and any matters which it considers necessary for U.S. EPA's determination.

- D. U.S. EPA and Respondent shall have fourteen (14) days from U.S. EPA's receipt of Respondent's written objections to attempt to resolve the dispute through formal negotiations. This time period may be extended by U.S. EPA for good cause. During such time period, (Negotiation Period) Respondent may request a conference with Chief of the Enforcement Compliance Assurance Branch to discuss the dispute and Respondent's objections. U.S. EPA agrees to confer in person or by telephone to resolve any such disagreement with the Respondent as long as Respondent's request for a conference will not extend the Negotiation Period.
- E. If the parties are unable to reach an agreement within the Negotiation Period, Respondent has the right to submit any

additional written arguments and evidence, not previously submitted, to the Director of the Waste, Pesticides and Toxics Division. Based on the record, U.S. EPA shall provide to Respondent its written decision on the dispute (U.S. EPA Dispute Decision) which shall include a response to Respondent's arguments and evidence. Such decision shall be incorporated into and become an enforceable element of this Order, but will not be considered final Agency action for purposes of judicial review.

- F. Except as provided in Section XV: Delay in Performance/Stipulated Penalties, the existence of a dispute as defined in this section and U.S. EPA's consideration of matters placed into dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Order during the pendency of the dispute resolution process.
- G. Any agreement to resolve the dispute reached by the parties pursuant to this section shall be in writing and shall be signed by both parties. The written agreement shall specify which provisions of the U.S. EPA Dispute Decision are superseded and/or modified. If the written agreement is not

signed by Respondent within seven (7) days after the resolution of the dispute it shall be null and void and the U.S. EPA Dispute Decision shall be incorporated into and become an enforceable element of this Order, but will not be considered final Agency action for purposes of judicial review.

XVII. FORCE MAJEURE AND EXCUSABLE DELAY

- A. Force majeure, for purposes of this Order, is defined as any event arising from causes not foreseen and beyond the control of Respondent or any person or entity controlled by Respondent, including but not limited to Respondent's contractors, that delays or prevents the timely performance of any obligation under this Order despite Respondent's best efforts to fulfill such obligation. The requirement that Respondent exercise "best efforts to fulfill such obligation" shall include, but not be limited to, best efforts to anticipate any potential force majeure event and address it before, during, and after its occurrence, such that any delay or prevention of performance is minimized to the greatest extent possible.

B. Force majeure does not include increased costs of work to be performed under this Order, financial inability to complete the work, plant shutdown, work stoppages or other labor disputes.

C. If any event occurs or has occurred that may delay the performance of an obligation under this Order, whether or not caused by a force majeure event, Respondent shall contact by telephone and communicate orally with U.S. EPA's Project Coordinator, or in their absence, their supervisor, within 48 hours of when Respondent first knew or should have known that the event might cause a delay. If Respondent wishes to claim a force majeure event, then within five (5) days thereafter, Respondent shall provide to U.S. EPA in writing:

1. The anticipated duration of the delay;
2. All actions taken or to be taken to prevent or minimize the delay;
3. All other obligations affected by the event, and what measures, if any, taken or to be taken, to minimize the effect of the event on those obligations;

4. A schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay;
 5. Respondent's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and
 6. A statement as to whether, in the opinion of Respondent, such event may cause or contribute to endangerment to public health or the environment.
- D. Respondent shall include with any notice all available documentation supporting its claim, if any, that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of force majeure for that event. Respondent shall be deemed to have notice of any circumstances of which its contractors had or should have had notice.
- E. If U.S. EPA determines that the delay or anticipated delay is attributable to a force majeure event, the time for performance of such obligation under this Order that is

affected by the force majeure event will be extended by U.S. EPA for such time as U.S. EPA determines is necessary to perform such obligation. U.S. EPA will notify Respondent in writing the length of the extension, if any.

- F. An extension of the time for performance of such obligation affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation, unless Respondent can demonstrate that more than one obligation was affected by the force majeure event.
- G. If U.S. EPA disagrees with Respondent's assertion of a force majeure event, U.S. EPA will notify Respondent in writing and Respondent may elect to invoke the dispute resolution provision, and shall follow the time frames set forth in Section XVI: Dispute Resolution. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or the anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent

complied with the requirements of this section. If Respondent satisfies this burden, the time for performance of such obligation will be extended by U.S. EPA for such time as is necessary to complete such obligation.

XVIII. RESERVATION OF RIGHTS

- A. U.S. EPA reserves all of its statutory and regulatory powers, authorities, rights, and remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under §3008(h)(2) of RCRA, 42 U.S.C. §6928(h)(2). This Order shall not be construed as a covenant not to sue, release, waiver, or limitation of any rights, remedies, powers, and/or authorities, civil or criminal, which U.S. EPA has under RCRA, CERCLA, or any other statutory, regulatory, or common law authority of the United States.
- B. U.S. EPA reserves the right to disapprove of work performed by Respondent pursuant to this Order and to order that Respondent perform additional tasks.

C. U.S. EPA reserves the right to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and remedial work as it deems necessary to protect human health and/or the environment. U.S. EPA may exercise its authority under CERCLA to undertake response actions at any time. In any event, U.S. EPA reserves its right to seek reimbursement from Respondent for costs incurred by the United States. Notwithstanding compliance with the terms of this Order, Respondent is not released from liability, if any, for the costs of any response actions taken or authorized by U.S. EPA.

D. If U.S. EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or hazardous constituent(s), or a threat to human health and/or the environment, or that Respondent is not capable of undertaking any of the work ordered, U.S. EPA may order Respondent to stop further implementation of this Order for such period of time as U.S. EPA determines may be needed to abate any such release or

threat and/or to undertake any action which U.S. EPA determines is necessary to abate such release or threat.

- E. This Order is not intended to be nor shall it be construed to be a permit. Further, the parties acknowledge and agree that U.S. EPA's approval of a scope of work or any final workplan does not constitute a warranty or representation that the scope of work or workplan will achieve the required cleanup or performance standards. Compliance by Respondent with the terms of this Order shall not relieve Respondent of its obligations to comply with RCRA or any other applicable local, State, or Federal laws and regulations.
- F. Notwithstanding any other provision of this Order, no action or decision by U.S. EPA pursuant to this Order, including without limitation, decisions of the Regional Administrator, the Director of the Waste, Pesticides and Toxics Division or any authorized representative of U.S. EPA, shall constitute final agency action giving rise to any right of judicial review prior to U.S. EPA's initiation of a judicial action to enforce this Order, including an action for penalties or an action to compel Respondent's compliance with the terms and conditions of this Order.

- G. In any action brought by U.S. EPA for a violation of this Order, Respondent shall bear the burden of proving that U.S. EPA's actions were arbitrary and capricious and not in accordance with law.
- H. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive or other appropriate relief relating to the Facility, Respondent shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been raised in the present matter.

XIX. OTHER CLAIMS

- A. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, demand, or defense in law or equity, against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any

hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken or migrating from the Facility.

- B. The Respondent waives any claims or demands for compensation or payment under §§106(b), 111, and 112 of CERCLA against the United States or the Hazardous Substance Superfund established by 26 U.S.C. §9507 for, or arising out of, any activity performed or expense incurred pursuant to this Order. Additionally, this Order does not constitute any decision on preauthorization of funds under §111(a)(2) of CERCLA.

XX. OTHER APPLICABLE LAWS

- A. All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations.
- B. Respondent shall obtain or cause its representatives to obtain all permits and approvals necessary under such laws and regulations.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

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

XXII. FINANCIAL RESPONSIBILITY

- A. Respondent shall provide financial assurance for the implementation of Corrective Measure(s) within ninety (90) days of U.S. EPA's selection of the final Corrective Measure(s). Respondent shall establish the financial assurance from among one or more of the following:
1. A trust fund;

2. A surety bond;
 3. A letter of credit;
 4. Insurance; or
 5. A financial test and corporate guarantee.
- B. The wording and terms of the financial assurance instrument(s) shall be subject to approval by the U.S. EPA.

XXIII. MODIFICATION

- A. This Order may only be modified by mutual agreement of U.S. EPA and Respondent. Any agreed modifications shall be in writing, be signed by both parties, shall have as their effective date, the date on which they are signed by U.S. EPA, and shall be incorporated into this Order.
- B. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon written approval by U.S. EPA, incorporated into this Order.
- C. Unless there is an approved modification as provided in paragraph D of this section, any noncompliance with such U.S. EPA-approved reports, plans, specifications, schedules,

and attachments shall be considered a violation of this Order and shall subject Respondent to the statutory penalty provisions of Section XV: Delay in Performance/Stipulated Penalties.

- D. Any request by Respondent for a compliance date modification and/or revision of an approved workplan requirement must be made in writing and be received by U.S. EPA at least ten (10) days prior to applicable deadline. Such requests must provide justification for any proposed compliance date modification or workplan revision. U.S. EPA has no obligation to approve such requests, but if it does so, such approval and the modification or revision must be in writing from U.S. EPA's Project Coordinator.
- E. Any approved compliance date modification shall be incorporated by reference into the Order. Such a modification would not alter other due dates, unless so stated by U.S. EPA in its written approval, modification, or revision.
- F. No informal advice, guidance, suggestions or comments by U.S. EPA regarding reports, plans, specifications, schedules

or any other writing submitted by the Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

XXIV. SEVERABILITY

If any provision or authority of this Order or the application of this Order to any party or circumstances is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall remain in force and shall not be affected thereby.

XXV. SURVIVABILITY/PERMIT INTEGRATION

- A. Except as otherwise expressly provided in this section, this Order shall survive the issuance or denial of a RCRA permit for the Facility, and this Order shall continue in full force and effect after either the issuance or denial of such permit. Accordingly, Respondent shall continue to be liable for the performance of obligations under this Order notwithstanding the issuance or denial of such permit.

B. If the Respondent is issued a RCRA permit for this Facility that expressly incorporates all or a part of the requirements of this Order, or expressly states that its requirements are intended to replace some or all of the requirements of this Order, Respondent may request a modification of this Order and shall, with written U.S. EPA approval, be relieved of liability under this Order for those specific obligations.

XXVI. SUBMITTAL SUMMARY

Table 1, as follows, is a summary of the major deadlines required by this Order. To the extent that this section is inconsistent with any other section of this Order, such other section rather than this summary shall prevail.

Table 1
Submittal Summary

| SECTION | ACTION | DUE DATE |
|----------------|--|---|
| IV.D | Notify U.S. EPA of transfer of ownership | 30 days prior to such scheduled transfer |
| VII.A | Designate a Project Coordinator and notify U.S. EPA in writing | Within 15 days of the effective date of the Order |

Table 1
Submittal Summary

| SECTION | ACTION | DUE DATE |
|----------------|--|---|
| VIII.B.4 | Submit IM Workplan | Within 30 days of receipt of U.S. EPA's request/ determination or upon written request |
| VIII.C.1 | Submit RFI Workplan | Within 120 days of the effective date of this Order |
| VIII.C.4 | Submit RFI Report | As scheduled in approved RFI Workplan |
| VIII.D.1 | Submit CMS Report | Within 90 days of receipt of U.S. EPA approval of RFI Report |
| VIII.F.4 | Submit workplan for additional work | If necessary, within 30 days of receipt of U.S. EPA determination |
| IX.A.2 | Revise and Submit document disapproved or disapproved with comments | Within 45 days of receipt of U.S. EPA's document disapproval or disapproval with comments |
| IX.B.2 | Notify U.S. EPA in writing of proposed contractor(s) | Within 14 days of the effective date of the Order |
| XI.C | Notify U.S. EPA prior to beginning each separate phase of field work | 14 days prior to beginning field activities |
| XII.C | Obtain access agreements | If necessary, within 30 days of approval of workplan where access is required |

Table 1
Submittal Summary

| SECTION | ACTION | DUE DATE |
|---------|--|--------------------------------|
| XIII.A | Notify U.S. EPA prior to destruction of documents or records that relate to this Order | 90 days prior to destruction |
| XIV.A | Submit monthly progress reports | On the tenth day of each month |

XXVII. TERMINATION AND SATISFACTION

- A. The provisions of this Order shall be deemed satisfied upon Respondent's and U.S. EPA's execution of an "Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights" (Acknowledgment). U.S. EPA will prepare the Acknowledgment for Respondent's signature. The Acknowledgment will specify that Respondent has demonstrated to the satisfaction of U.S. EPA that the terms of this Order, including any additional tasks determined by U.S. EPA to be required pursuant to this Order, have been satisfactorily completed. Respondent's execution of the

Acknowledgment will affirm Respondent's continuing obligation:

1. To preserve all records as required in Section XIII: Record Preservation; and
2. To recognize U.S. EPA's reservation of rights as required in Section XVIII: Reservation of Rights, after all other requirements of the Order are satisfied.

B. The Acknowledgment required by this section shall be as in Attachment VII: Acknowledgment of Termination.

XXVIII. EFFECTIVE DATE

The effective date of this Order shall be the date on which it is signed by U.S. EPA. Because the Order was entered with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. §6928(b).

IT IS SO AGREED:

Morton International, Inc.

BY: _____

(Respondent)

Date

IT BEING SO AGREED, IT IS HEREBY ORDERED THIS 25th DAY OF

September, 1998

BY: _____

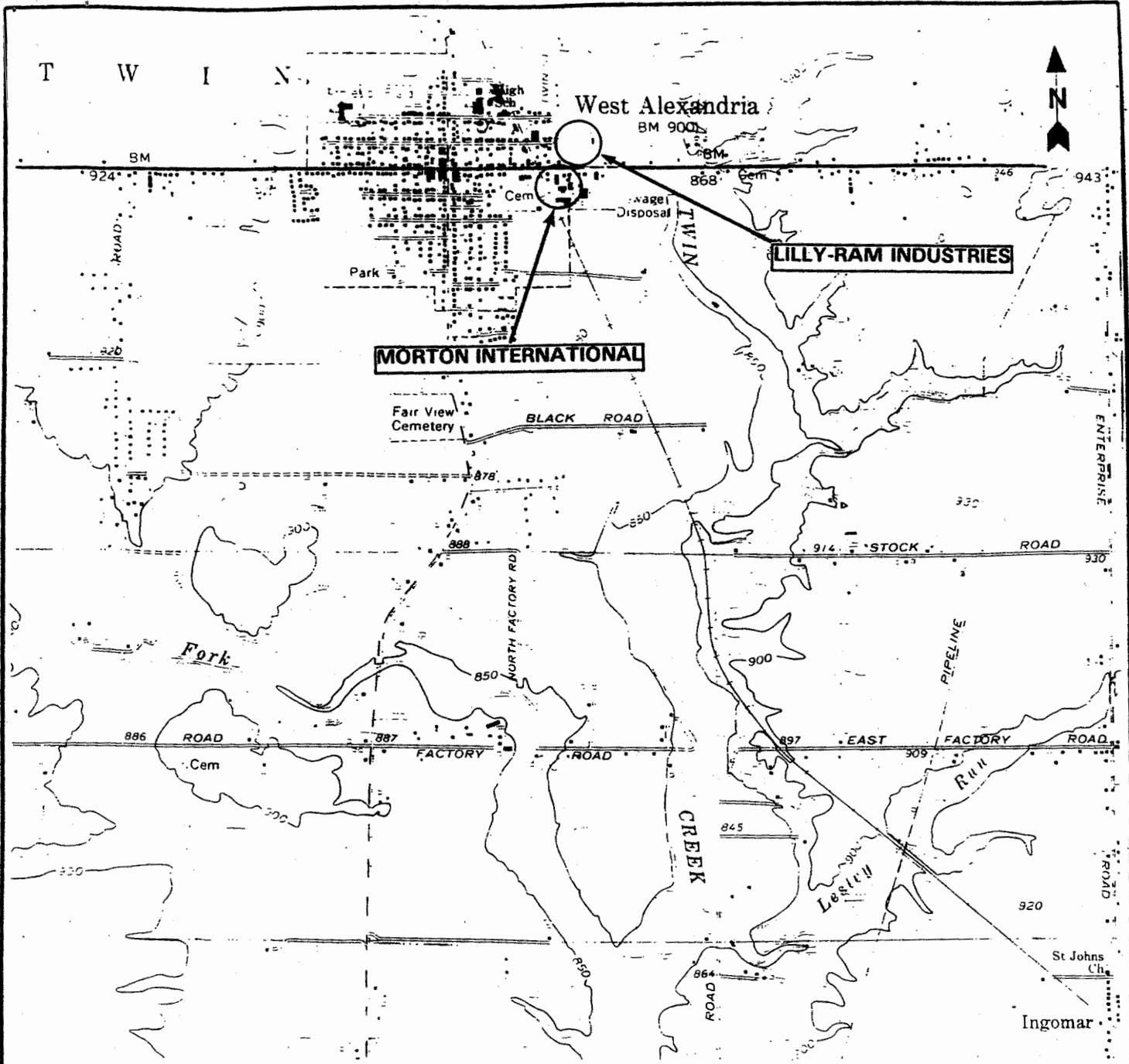
Joseph M. Boyle, Chief

Enforcement & Compliance Assurance Branch

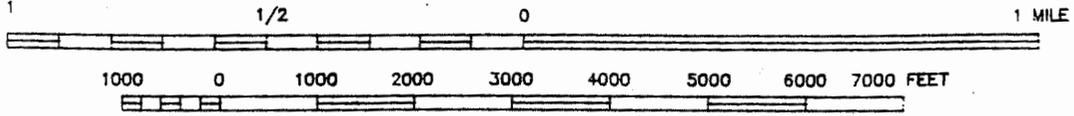
Waste, Pesticides and Toxics Division

U.S. EPA, Region 5

U.S. EPA I.D.# OHD 045 566 098



SCALE 1:24000



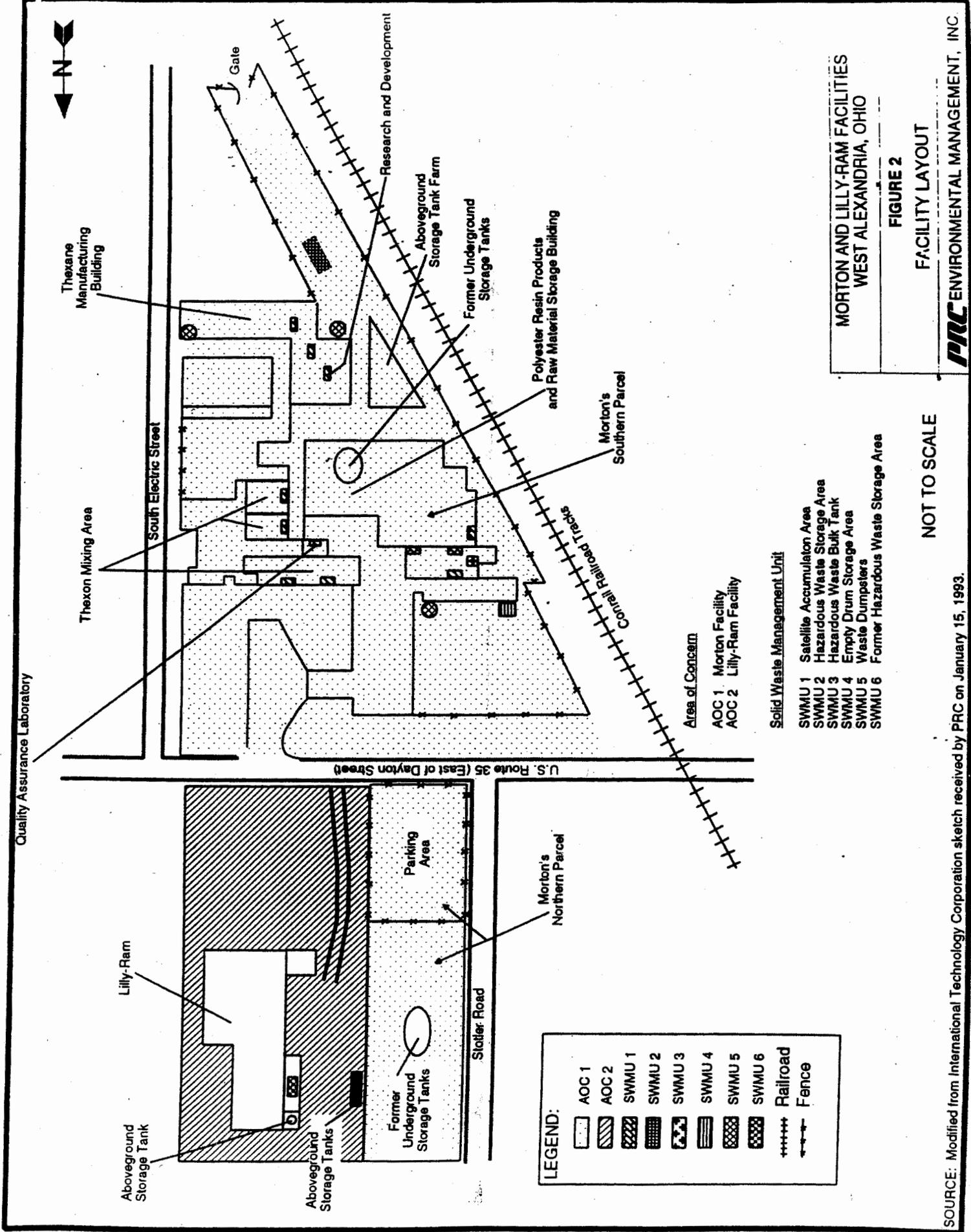
SCALE: 1" = 2,000'



QUADRANGLE LOCATION

SOURCE: Modified from USGS, Photorevised 1987.

| |
|---|
| MORTON AND LILLY-RAM WEST ALEXANDRIA, OHIO |
| FIGURE 1 FACILITY LOCATION |
| PRC ENVIRONMENTAL MANAGEMENT, INC. |



MORTON AND LILLY-RAM FACILITIES
WEST ALEXANDRIA, OHIO

FIGURE 2

FACILITY LAYOUT



NOT TO SCALE

SOURCE: Modified from International Technology Corporation sketch received by PRC on January 15, 1993.

IN THE MATTER OF:
Morton International, Inc.
10 South Electric Street
West Alexandria, Ohio 45301
OHD 045 566 098

5-RCRA-012-'98

DOCKET NO.

CERTIFICATE OF SERVICE

I hereby certify that I have caused a copy of the foregoing initial administrative order to be served upon the person designated below on the date below, by causing said copy to be deposited in the U.S. Mail, First Class and certified-return receipt requested, postage prepaid, at Chicago, Illinois in an envelope addressed to:

Mr. Albert E. Greene
Vice President, Heath, Safety and Environment
Morton International, Inc.
100 North Riverside Plaza
Chicago, IL 60606-1596

I have further caused the original of the initial administrative order and this Certificate of Service to be served in the Office of the Regional Hearing Clerk, U.S. EPA, Region 5, 77 West Jackson Boulevard, Chicago, Illinois, on the date below.

This is said person's last known address to the subscriber.

Dated this 25th Day of September 1998.

Anita Perry
Secretary, Enforcement and Compliance Assurance Branch
U.S. EPA, Region 5

US ENVIRONMENTAL
PROTECTION AGENCY
REGION 5

98 SEP 25 AM 11:24

RECEIVED
REGIONAL HEARING
CLERK