



September 2012

Draft Hazardous Waste Permit Renewal and Modification

Public Participation Procedures and Comment Period Ohio Administrative Code (OAC) Rule 3745-50-22 (B)(5)(a)&(b)

A public meeting will be held on Nov. 8, 2012 at 5:30 PM at Ashtabula Twp. Hall (CD Ray Community Room), 2718 N. Ridge Rd., E., Ashtabula, OH 44004 to receive public comments. Oral comments will be received during the public meeting. All persons, including the applicant, may submit written comments relating to this draft action. Written comments may be submitted before the end of the comment period to the address in the box on the right.

The comment period begins on Sept. 28, 2012 and ends on Nov. 23, 2012. A copy of the permit application and the draft permit is available for review by the public at the following locations:

Harbor Topky Memorial Library 1633 Walnut Blvd. Ashtabula, OH 44004 440-964-9645

Ohio EPA, Northeast District Office 2110 E Aurora Road Twinsburg, OH 44087 (330) 963-1200

Ohio EPA, Central Office Div. Materials & Waste Mgmt. Lazarus Government Center 50 West Town St., Suite 700 Columbus, Ohio 43215 (614) 644-2621

Facility Name: RMI Titanium Company Former Sodium Plant
U.S. EPA I.D.: OHD 000 810 242
Location: 600 State Rd. Ashtabula, OH 44004
Facility Owner: RMI Titanium Company 1000 Warren Ave., PO Box 269 Niles, OH 44446
Facility Operator: RMI Titanium Company 1000 Warren Ave., PO Box 269 Niles, OH 44446
Activity: Corrective Action
Comment Period: 9/28/12 to 11/23/12
Submit Comments to: Ohio EPA Attention: Mr. John Nyers Div. of Materials & Waste Mgmt. Engineering, Remediation, and Authorizations P.O. Box 1049 Columbus, Ohio 43216-1049 (614) 644-2621 dmwmcomments@epa.state.oh.us

The draft permit is available for review by the public online at:

http://www.epa.ohio.gov/dmwm

Within sixty (60) days of the close of the public comment period, Ohio EPA will, without prior hearing, issue the permit (or deny the request) in accordance with Chapter 3734 of the Ohio Revised Code (ORC). If Ohio EPA approves the application, a renewal permit will be issued with terms and conditions as are

necessary to ensure compliance with hazardous waste rules.



**Description of Facility
OAC Rule 3745-50-22
(B)(1)**

The RMI Titanium Company Former Sodium Plant (RMI Titanium Company) facility has been closed and the manufacturing buildings have been razed. The site was parceled and portions of the property were sold. A pre-RCRA landfill (Area A), in use from 1950 until it closed in 1981, remains on the property.

**Description of
Requested Permit
Renewal and
Modification
OAC Rule 3745-50-22
(B)(2)**

This renewal permit authorizes the facility to continue to conduct Corrective Action.

The RMI Titanium Company facility conducted an investigation of facility conditions, through a RCRA Facility Investigation and two RCRA Corrective Measures Studies, to address contamination on their facility. Soil and ground water samples were collected throughout the facility, in selected areas, to determine current facility conditions. Remedies were evaluated, and most remedies have already been successfully implemented. One waste management unit, the pre-RCRA landfill (Area A) requires additional remedies.

Ohio EPA reviewed the environmental data collected during the facility investigations and evaluated the corrective measure alternatives. Ohio EPA concludes that the corrective

measures summarized in the attached Statement of Basis will protect human health and the environment as required by OAC Rule 3745-54-101.

Therefore, Ohio EPA is also initiating a modification to the facility's permit to administer the implementation of site-wide corrective measures. The draft modification recommends that RMI Titanium Company enter into an Environmental Covenant with Ohio EPA to restrict future use of the facility and ground water. In addition, RMI Titanium Company would be required to continue implementation of other controls designed to protect authorized personnel coming onto the site, prevent unauthorized entry, ensure the landfill cap is properly maintained, implement the ground water monitoring plan and ensure funds are available for as long as Area A requires operation and maintenance, and ground water monitoring, to be protective of human health and the environment.

**Regulatory Basis to
Support the Decision
to Renew and Modify
the Permit Application
OAC Rule 3745-50-22
(B)(3)**

The director has determined that RMI Titanium Company has submitted an application for renewal one hundred eighty (180) days prior to the expiration date of its present permit which was issued by the Ohio EPA on July 19, 2002. The director has considered the application, inspection reports, a report regarding the facility's compliance with the present permit, and the rules adopted under ORC Section

3734. The director has found that the Part B permit application meets the director's performance standards and that the facility has a history of compliance with this chapter, rules adopted under it, the existing permit, and orders entered into, which demonstrates reliability, expertise, and competency to subsequently operate the facility under this chapter, the rules, and the permit.

In addition, the director may initiate a permit modification by issuing a draft modified permit in accordance with OAC Rule 3745-50-51(J). The director is using authority in this rule to incorporate RCRA Corrective Action requirements into the permit.

**Contact Person
OAC Rule 3745-50-22
(B)(6)**

For additional information, please contact Sherry Slone, Northeast district office at (330) 963-1200.

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PUBLIC NOTICE

Ashtabula County

HAZARDOUS WASTE DRAFT PERMIT RENEWAL

On September 26, 2012, Ohio EPA issued a draft renewal Hazardous Waste Facility Installation and Operation Permit (Permit) and director's initiated modification to RMI Titanium Company for its facility located at 600 State Road, Ashtabula, Ohio 44004, in Ashtabula County. The Ohio EPA ID number is OHD000810242. The RMI Titanium Company Former Sodium Plant has been closed. A pre-RCRA landfill (Area A) remains on the property. The purpose of this director's initiated modification is to select a remedy/corrective measure to address contaminated soil and ground water at the site. The renewal permit authorizes the facility to continue to conduct Corrective Action. To issue this draft renewal Permit, Ohio EPA determined that the Permit application is complete and meets appropriate standards and that the applicant has a history of compliance with relevant environmental laws and demonstrates sufficient reliability, expertise and competency to operate a hazardous waste facility. A public meeting will be held on Thursday, November 8, 2012 at 5:30 p.m. at Ashtabula Twp. Hall (CD Ray Community Room), 2718 N. Ridge Road East, Ashtabula, Ohio 44004. Oral comments will be received during the public meeting. All persons, including the applicant, may submit written comments relating to this draft action to Ohio EPA, Division of Materials and Waste Management, P.O. Box 1049, Columbus, Ohio 43216-1049, no later than November 23, 2012. A copy of the draft renewal Permit modification is available for review at the following locations: Harbor Topky Memorial Library, 1633 Walnut Blvd., Ashtabula, Ohio 44004, tel: (440) 964-9645. Ohio EPA Northeast District Office, 2110 E. Aurora Road, Twinsburg, Ohio 44087, tel: (330) 963-1200, or Ohio EPA Central Office, Division of Materials and Waste Management, 50 West Town Street, Suite 700, Columbus, Ohio 43215, tel: (614) 644-2621.

OHIO ENVIRONMENTAL PROTECTION AGENCY
OHIO HAZARDOUS WASTE FACILITY
INSTALLATION AND OPERATION PERMIT RENEWAL

Permittee: **RMI Titanium Company Former Sodium Plant**

Mailing
Address: **RMI Titanium Company**
1000 Warren Ave., PO Box 269
Niles, Ohio 44446

Owner: **RMI Titanium Company**
1000 Warren Ave., PO Box 269
Niles, Ohio 44446

Operator: **RMI Titanium Company**
1000 Warren Ave., PO Box 269
Niles, Ohio 44446

Location: **RMI Titanium Company Former Sodium Plant**
600 State Rd.
Ashtabula, Ohio 44004

US EPA ID:	OHD 000 810 242
Issue Date:	
Effective Date:	
Expiration Date:	

AUTHORIZED ACTIVITIES

In reference to the application of **RMI Titanium Company Former Sodium Plant** for an Ohio Hazardous Waste Facility Installation and Operation Renewal Permit under Ohio Revised Code (ORC) Chapter 3734 and the record in this matter, you are authorized to conduct at the above-named facility the following hazardous waste management activities:

Corrective Action

PERMIT APPROVAL

Scott J. Nally, Director
Ohio Environmental Protection Agency

This permit approval is based upon the record in this matter which is maintained at the offices of the Ohio Environmental Protection Agency. The Director has considered the application, accompanying information, inspection reports of the facility, a report regarding the facility's compliance or noncompliance with the terms and conditions of its permit and rules adopted by the Director under this chapter, and such other information as is relevant to the operation of the facility. The Director has determined that the facility under the existing permit has a history of compliance with ORC Chapter 3734, rules adopted under it, the existing permit, or orders entered to enforce such requirements that demonstrate sufficient reliability, expertise, and competency to operate the facility henceforth under this chapter, rules adopted under it, and the renewal permit.

Entered into the Journal of the Director this ____ day of _____, 2012.

By _____ of the Ohio Environmental Protection Agency.

MODULE A - GENERAL PERMIT CONDITIONS

A. GENERAL PERMIT CONDITIONS

A.1 Effect of Permit

ORC Sections 3734.02 (E) and (F) and 3734.05

OAC Rule 3745-50-58(G)

- (a) The Permittee is authorized to continue with corrective action activities in accordance with the terms and conditions of this Ohio hazardous waste permit (hereinafter "permit"), ORC Chapter 3734, all applicable Ohio hazardous waste rules, all applicable regulations promulgated under the Resource Conservation and Recovery Act (RCRA), as amended, and the permit application. The permit application, as submitted to Ohio EPA on January 19, 2012 and last updated on March 12, 2012, is hereby incorporated into this permit. In the instance of inconsistent language or discrepancies between the above, the language of the more stringent provision shall govern.
- (b) Any management of hazardous waste not authorized by this permit is prohibited, unless otherwise expressly authorized or specifically exempted by law. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, or invasion of other private rights. Compliance with the terms and conditions of this permit does not obviate Permittee's obligation to comply with other applicable provisions of law governing protection of public health or the environment including but not limited to the Community Right to Know law under ORC Chapter 3750.

A.2 Permit Actions

OAC Rule 3745-50-58(F)

This permit may be modified or revoked as specified by Ohio law. The filing of a request by the Permittee for a permit modification, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay any permit term or condition.

A.3 Permit Effective/Expiration Date
OAC Rule 3745-50-54

The effective date of this permit is the date the permit is entered into the Director's Journal. The permit expiration date is ten years after the date of journalization of this permit.

A.4 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

A.5 Duty to Comply
OAC Rule 3745-50-58(A)

The Permittee must comply with all applicable provisions of ORC Chapter 3734, all applicable Ohio hazardous waste rules, and all terms and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by the laws of the State of Ohio. Any permit noncompliance, other than noncompliance authorized by the laws of the State of Ohio, constitutes a violation of ORC Chapter 3734 and is grounds for enforcement action, revocation, modification, denial of a permit renewal application or other appropriate action.

A.6 Duty to Reapply and Permit Expiration
OAC Rules 3745-50-40(D), 3745-50-58(B), 3745-50-56 and ORC Section 3734.05(H)

- (a) If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must submit a completed permit application for a hazardous waste facility installation and operation permit renewal and any necessary accompanying general plans, detailed plans, specifications, and such information as the Director may require, to the Director no later than one hundred eighty (180) days prior to the expiration date of this permit, unless a later submittal date has been authorized by the Director upon a showing of good cause.
- (b) The Permittee may continue to operate in accordance with the terms and conditions of the expired permit until a renewal permit is issued or denied if:

- (i) the Permittee has submitted a timely and complete permit application for a renewal permit under OAC Rule 3745-50-40; and
 - (ii) through no fault of the Permittee, a new permit has not been issued pursuant to OAC Rule 3745-50-40 on or before the expiration date of this permit.
- (c) The Corrective Action obligations contained in this permit will continue regardless of whether the facility continues to operate or ceases operation and closes. The Permittee is obligated to complete facility-wide Corrective Action under the conditions of this permit regardless of the operational status of the facility. The Permittee must submit an application for permit renewal at least 180 days before the expiration date of this permit pursuant to OAC Rule 3745-50-40(D) unless a) the permit has been modified to terminate the Corrective Action schedule of compliance and the Permittee has been released from the requirements for financial assurance for Corrective Action; or b) a later submittal date has been authorized by the Director.

A.7 Need to Halt or Reduce Activity Not a Defense
OAC Rule 3745-50-58(C)

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce a permitted activity in order to maintain compliance with the conditions of this permit.

A.8 Duty to Mitigate
OAC Rule 3745-50-58(D)

The Permittee must take all reasonable steps to minimize releases to the environment and must carry out such measures as are reasonable to prevent significant adverse impact on human health or the environment resulting from noncompliance with this permit.

A.9 Proper Operation and Maintenance
OAC Rule 3745-50-58(E)

The Permittee must at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective management practices, adequate funding, adequate operator staffing and training, and where appropriate, adequate laboratory and process controls, including appropriate quality

assurance/quality control procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

A.10 Duty to Provide Information
OAC Rule 3745-50-58(H)

The Permittee must furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying or revoking, or to determine compliance with, this permit. The Permittee must also furnish to the Director, upon request, copies of records required to be kept by this permit.

A.11 Inspection and Entry
OAC Rules 3745-50-58(I) and 3745-50-30, and ORC Section 3734.07

- (a) The Permittee must allow the Director, or an authorized representative, upon stating the purpose and necessity of the inspection and upon proper identification, to:
- (i) enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the terms and conditions of this permit;
 - (ii) have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
 - (iii) inspect and photograph at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the terms and conditions of this permit; and
 - (iv) sample, document, or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 3734 and the rules adopted thereunder, any substances or parameter at any location.
- (b) Any record, report or other information obtained under the hazardous waste rules or Chapter 3734 of the Revised Code shall not be available to the public upon the Permittee's satisfactory showing to Ohio EPA that all or part of the information would divulge methods or processes entitled to protection

as trade secrets pursuant to Ohio Trade Secret Law and OAC Rule 3745-50-30.

A.12 Monitoring and Records
OAC Rule 3745-50-58(J)

- (a) Any sample and measurement taken for the purpose of monitoring must be representative of the monitored activity. Further, a sample must be a representative sample; as such term is defined and used in the Ohio hazardous waste rules. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of OAC Rule 3745-51-20, Laboratory Methods. Laboratory methods must be those specified in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition (November 1986), as amended by Updates I (dated July 1992), II (dated September 1994), IIA (dated August 1993), IIB (dated January 1995), III (dated December 1996) and IIIA (dated April 1998), and additional supplements or editions thereof; Standard Methods for the Examination of Water and Wastewater: Twentieth Edition, 1999; or an equivalent method as specified in the approved waste analysis plan, or as this term is defined and used in the Ohio hazardous waste rules.
- (b) Records of monitoring information must specify the:
 - (i) date(s), exact place(s), and time(s) of sampling or measurements;
 - (ii) individual(s) who performed the sampling or measurements;
 - (iii) date(s) analyses were performed;
 - (iv) individual(s) who performed the analyses;
 - (v) analytical technique(s) or method(s) used; and
 - (vi) results of such analyses.

A.13 Signatory Requirement and Certification of Records
OAC Rules 3745-50-58(K) and 3745-50-42

All applications, reports or information must be properly signed and certified in accordance with OAC Rule 3745-50-58(K).

A.14 Retention of Records and Information Repository

OAC Rules 3745-50-40(G), 3745-50-58(J), 3745-50-58(M) and 3745-50-58(N)

- (a) The Permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by OAC Rule 3745-54-73(B)(9), and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application.
- (b) The record retention period may be extended by request of the Director at any time and is automatically extended during the course of any unresolved enforcement action regarding the facility.
- (c) The Permittee must maintain, in accordance with the Ohio hazardous waste rules, records of all data used to complete the permit application and any amendments, supplements or modifications of such application. The Permittee must retain a complete copy of the current application for the effective life of the permit as indicated in Permit Condition A.3.
- (d) The Permittee must maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and for disposal facilities for the post-closure care period as well.
- (e) reserved.
- (f) Corrective Action records must be maintained at least three (3) years after all Corrective Action activities have been completed.

A.15 Planned Changes

OAC Rules 3745-50-51 and 3745-50-58(L)(1)

The Permittee must give notice to the Director as soon as possible of any planned physical alterations or additions to the facility. All such changes must be made in accordance with OAC Rule 3745-50-51.

A.16 Waste Shipments

OAC Rule 3745-53-11, ORC Section 3734.15(C)

The Permittee must only use properly registered transporters of hazardous waste to remove hazardous waste from the facility, in accordance with all applicable laws and rules.

A.17 Anticipated Noncompliance

OAC Rule 3745-50-58(L)(2)

The Permittee must give advance notice to the Director of any planned changes in the permitted facility or operations which may result in noncompliance with the terms and conditions of this permit. Such notification does not waive the Permittee's duty to comply with this permit pursuant to Permit Condition A.5.

A.18 Transfer of Permits

OAC Rules 3745-50-52, 3745-50-58(L)(3) and 3745-54-12

- (a) The permit may be transferred to a new owner or operator only if such transfer is conducted in accordance with ORC Chapter 3734 and the rules adopted thereunder. This permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified under OAC Rule 3745-50-51. Before transferring ownership or operation of the facility, the Permittee must notify the new owner or operator in writing of the requirements of ORC Chapter 3734 and the rules adopted thereunder (including all applicable Corrective Action requirements).
- (b) The Permittee's failure to notify the new owner or operator of the requirements of the applicable Ohio law or hazardous waste rules does not relieve the new owner or operator of its obligation to comply with all applicable requirements.

A.19 Compliance Reports

OAC Rules 3745-50-58(L)(5) and 3745-50-50

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule (developed in accordance with OAC Rule 3745-50-50) of this permit must be submitted to the Director no later than fourteen (14) days following each scheduled date.

A.20 Immediate Reporting of Noncompliance
OAC Rule 3745-50-58(L)(6)

- (a) The Permittee must report orally to Ohio EPA's Division of Emergency and Remedial Response within twenty-four (24) hours from the time the Permittee becomes aware of any noncompliance with this permit, ORC Chapter 3734 or the rules adopted thereunder, which may endanger human health or the environment, including:
 - (i) information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
 - (ii) any information of a release or discharge of hazardous waste or a fire or explosion from the hazardous waste facility, which could threaten the environment or human health outside the facility.
- (b) The report must consist of the following information (if such information is available at the time of the oral report):
 - (i) name, address, and telephone number of the owner or operator;
 - (ii) name, address, and telephone number of the facility;
 - (iii) date, time, and type of incident;
 - (iv) name and quantity of material(s) involved;
 - (v) the extent of injuries, if any;
 - (vi) an assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - (vii) estimated quantity and disposition of recovered material that resulted from the incident.

A.21 Follow-Up Written Report of Noncompliance
OAC Rule 3745-50-58(L)(6)(c)

- (a) A written report must also be provided to Ohio EPA's Division of Environmental Response and Revitalization and the Division of Materials and Waste Management, Northeast District Office within five (5) days of the time

the Permittee becomes aware of the circumstances reported in Permit Condition A.20.

- (b) The written report must address the items in Permit Condition A.20 and must contain a description of such noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and, if not, the anticipated time it is expected to continue; and steps taken or planned to minimize the impact on human health and the environment and to reduce, eliminate, and prevent recurrence of the noncompliance.
- (c) The Permittee need not comply with the five (5) day written report requirement if the Director, upon good cause shown by the Permittee, waives that requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

A.22 Other Noncompliance

OAC Rules 3745-50-58(L)(10) and 3745-50-58(L)(4)

The Permittee must report to the Director all other instances of noncompliance not provided for in Permit Conditions A.19 and A.20. These reports must be submitted within thirty (30) days of the time at which the Permittee is aware of such noncompliance. Such reports must contain all information set forth within Permit Condition A.20.

A.23 Reserved

A.24 Other Information

OAC Rule 3745-50-58(L)(11)

If at any time the Permittee becomes aware that it failed to submit any relevant facts, or submitted incorrect information to the Director, the Permittee must promptly submit such facts, information or corrected information to the Director.

A.25 Confidential Information

OAC Rule 3745-50-30

In accordance with ORC Chapter 3734 and the rules adopted thereunder, the Permittee may request confidentiality for any information required to be submitted by the terms and conditions of this permit, or any information obtained by the

Director, or an authorized representative, pursuant to the authority provided under Permit Condition A.11.

A.26 Reserved

A.27 Reserved

A.28 Information to be Maintained at the Facility
OAC Rule 3745-54-74

- (a) Unless otherwise specified by the hazardous waste rules, the Permittee must maintain at the facility, until corrective action activities are completed the following documents (including amendments, revisions and modifications):
- (i) reserved;
 - (ii) reserved;
 - (iii) reserved;
 - (iv) reserved;
 - (v) reserved;
 - (vi) reserved;
 - (vii) inspection schedules, developed in accordance with OAC Rules 3745-54-15, and the terms and conditions of this permit;
 - (viii) reserved;
 - (ix) reserved; and

- (x) all other documents required by Module A, Permit Condition A.12, Module E, and any other Permit Conditions.
- (b) The Permittee must maintain copies of all inspection logs at the facility for a period not less than three (3) years from the date of inspection.

A.29 Reserved

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MODULE B - GENERAL FACILITY CONDITIONS

B. GENERAL FACILITY CONDITIONS

B.1 Design and Operation of Facility OAC Rule 3745-54-31

- (a) The Permittee must design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water or surface waters which could threaten human health or the environment.
- (b) The Permittee must not accept hazardous waste from any off-site sources.

B.2 Reserved

B.3 Reserved

B.4 Security OAC Rule 3745-54-14

The Permittee must comply with the security provisions of OAC Rule 3745-54-14(B)(2), and (C) and Section F of the permit application.

B.5 General Inspection Requirements OAC Rules 3745-54-15 and 3745-54-73

The Permittee must inspect the facility in accordance with the inspection schedule in Section F of the permit application. The Permittee must remedy any deterioration or malfunction discovered by an inspection, as required by OAC Rule 3745-54-15(C). Records of inspection must be kept for a minimum of three years from the date of inspection.

B.6 Reserved

B.7 Reserved

B.8 Reserved

B.9 Reserved

B.10 Reserved

B.11 Reserved

B.12 Reserved

B.13 Reserved

B.14 Reserved

B.15 Reserved

B.16 Reserved

B.17 Reserved

B.18 Reserved

B.19 Reserved

B.20 Reserved

B.21 Availability, Retention and Disposition of Records
OAC Rule 3745-54-74

All records shall be furnished by the Permittee upon request to, and made available at all reasonable times for inspection by, Ohio EPA, in accordance with OAC Rule 3745-54-74.

B.22 Reserved

B.23 Reserved

B.24 Manifest System

OAC Rules 3745-54-70, 3745-54-71, 3745-54-72 and 3745-54-76

(a) In managing waste at the facility the Permittee must comply with OAC Chapter 3745-52 and OAC Rules 3745-54-71, 3745-54-72 and 3745-54-76 with regard to the manifest system.

(b) Reserved

(c) Reserved

B.25 Reserved

B.26 Reserved

B.27 Reserved

B.28 Reserved

B.29 Reserved

B.30 Reserved

B.31 Reserved

B.32 Reserved

B.33 Reserved

B.34 Reserved

B.35 Reserved

B.36 Reserved

B.37 Reserved

B.38 Reserved

B.39 Reserved

B.40 General Requirements for Land Disposal Restrictions
OAC Chapter 3745-270

The Permittee must comply with all applicable regulations regarding land disposal prohibitions and restrictions as required by OAC Chapter 3745-270.

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MODULE C – RESERVED

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MODULE D – RESERVED

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MODULE E - CORRECTIVE ACTION REQUIREMENTS

Corrective Action Summary

In early 1987, the RMI Titanium Company Sodium Plant (RMI Sodium), located on State Road in Ashtabula Township, Ashtabula County, Ohio, was granted a Resource Conservation and Recovery Act (RCRA) permit by the USEPA, authorizing them to treat and store hazardous wastes at the facility. This permit was subsequently transferred to the State of Ohio's authority.

The facility ceased primary manufacturing operations in 1992. The facility continued thermal destruction of sodium under its RCRA permit until 1998, when that unit was closed. All manufacturing and processing equipment have been decommissioned, and most structures were demolished (with the exception of the office buildings and a few smaller ancillary buildings) by 2000. The property was subdivided into four parcels and three of them were sold. The three transferred parcels are not subject to this permit. The remaining parcel, still owned by RMI, is the location of the former landfill known as Area A.

RMI Sodium's RCRA permit imposed RCRA Corrective Action obligations on the facility, including a requirement to investigate areas where wastes were managed, for potential releases of hazardous constituents. The permit also required developing and implementing a remedy for the facility, and anywhere contamination may have migrated. RMI Titanium Sodium developed and implemented a RCRA Facility Investigation (RFI), which assessed, investigated and addressed Waste Management Units to determine where contamination existed at the site and at what concentrations.

Initially, eleven Waste Management Units (WMUs) were identified. Two of the WMUs were still active at the time, but have since been certified as closed. The unit known as the Abandoned Pond East of the Closed Landfill was later determined to not be a WMU, but a manufacturing process unit which never contained waste materials or hazardous constituents. The WMU known as the Sulfuric Acid Neutralization System was a tank system permitted under the National Pollutant Discharge Elimination System (NPDES). There were no known releases from these tanks, and they were decommissioned and removed when the facility closed in 1992. The remaining seven units were investigated under the RFI and supplemental investigations. The investigations found contaminated soil and ground water, so that further evaluation and remedial action were required.

Although a Corrective Measures Study (CMS) to evaluate remedial alternatives was undertaken and approved in May 1995, in the late 1990s RMI Sodium was involved as a Potentially Responsible Party in the Fields Brook Superfund action. As part of the

settlement of that Superfund action, an engineered landfill was built on the RMI Sodium site. This provided new remedial options, and RMI Sodium submitted, and had approved, a revised CMS. Three WMUs were remediated by excavation and disposal in the new unit.

Two of the remaining units were evaluated by risk assessment, and found to meet unrestricted future use standards. One WMU was certified closed under Ohio's Surface Water regulations.

The remaining unit, a pre-RCRA landfill known as Area A, is the only Waste Management Unit remaining on this permitted facility. The landfill received industrial wastes generated by RMI sodium from 1950 until it closed in 1981. At that time it was capped with two feet of clay, and grasses were planted to form a cover.

Area A requires further action to ensure future protection of human health and the environment. Ohio EPA proposes continued implementation of an existing Operation and Maintenance Plan and an existing Ground Water Sampling and Analysis Plan to maintain the integrity and effectiveness of the landfill cover, and ensure the contaminant plume remains stable. Security measures currently in place at the facility will be maintained. Financial assurance for the on-going monitoring and maintenance will be established.

Finally, use of portions of the facility will be restricted through an enforceable, written agreement with Ohio EPA known as an Environmental Covenant. This restriction will run with the land and will be binding upon a future property owner should the property be sold.

The Environmental Covenant will include a legal description of the subject property, and describe acceptable and unacceptable land and ground water uses in the surveyed area. Ohio EPA will monitor the property owner's adherence to the Environmental Covenant.

Further details of the facility's history and setting may be found in the Statement of Basis.

E.1 Corrective Action at the Facility
OAC Rules 3745-50-10 & 3745-54-101

In accordance with OAC Rule 3745-50-10 "waste management unit" means any discernible unit at which solid waste, hazardous waste, infectious waste (as those terms are defined in ORC Chapter 3734), construction and demolition debris (as defined in ORC Chapter 3714) industrial waste, or other waste (as those terms are defined in ORC Chapter 6111), has been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste. Such units include any area at a facility at which wastes have been routinely and systematically released. For the purpose of Corrective Action, facility is defined as all contiguous property under the control of the owner or operator seeking a permit under Subtitle

C of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measure Implementation (CMI) are defined in U.S. EPA's Corrective Action Plan (CAP) (OSWER Directive 9902.3-2A, May 1994).

The Permittee must institute Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any waste management units (WMUs) at the Facility, regardless of the time at which waste was placed in such units.

E.2 Corrective Action Beyond the Facility Boundary
OAC Rule 3745-54-101

The Permittee must implement Corrective Action beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be addressed under the RFI, CMS, and CMI phases, as determined to be necessary on a case-by-case basis.

E.3 Identification of WMUs
OAC Rules 3745-50-44(D) and 3745-54-101

The landfill known as Area A is the only WMU regulated under this permit. Materials were first disposed in the Area A landfill in the 1950s, and included cell bath waste, anode butts, solid waste, salt dissolver sludge, and miscellaneous construction/demolition debris. Area A accepted waste until November 30, 1980. The landfill was closed according to a Closure Plan submitted to Ohio EPA's Office of Land Pollution Control on August 20, 1981. As part of the landfill closure, a re-compacted clay cover of 1.5 to 2 feet was installed over the graded fill, and seeded with grass. A new layer of topsoil was placed and seeded in 1991. Ground water monitoring wells around Area A were sampled on July 23, 2008, October 30, 2008, January 6, 2009, and October 18, 2010. A summary of the results can be found in the Statement of Basis.

The location of the WMU, and an aerial photograph depicting topography and well locations, can be found in the Statement of Basis.

E.4 Reserved

E.5 RCRA Facility Investigation (RFI)
OAC Rule 3745-54-101

The Permittee must conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous wastes and hazardous constituents from all applicable WMUs identified in Permit Condition E.10. The major tasks and required submittal dates are shown below. The scope of work for each of the tasks is found in U.S. EPA's CAP.

(a) RFI Workplan

The Permittee must submit a written RFI Workplan to Ohio EPA, in case of a newly discovered waste management unit or newly discovered releases, on a time frame established in written notification by Ohio EPA.

- (i) Within 45 days of receipt of any Ohio EPA comments on the RFI Workplan, the Permittee must submit either an amended or new RFI Workplan that incorporates Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Workplan. The RFI Workplan, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Workplan must be authorized by Ohio EPA.

(b) RFI Implementation

The Permittee must implement the RFI Workplan according to the terms and schedule in the approved RFI Workplan.

(c) RFI Final Report

Within 60 days after the completion of the RFI, the Permittee must submit an RFI Final Report to Ohio EPA. The RFI Final Report must describe the procedures, methods, and results of the RFI. The Final Report must contain adequate information to support further decisions concerning Corrective Action at the Facility.

- (i) Within 45 days of receipt of any Ohio EPA comments on the RFI Final Report, the Permittee must submit either an amended or new RFI Final Report that incorporates Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Final Report. The RFI Final Report, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Final Report must be authorized by Ohio EPA.

E.6 Interim Measure (IM)

Based on the RFI Final Report or other information documenting a release of hazardous waste or constituents to the environment, Ohio EPA may require (or the Permittee may propose) the development and implementation of an IM (this may include an IM Workplan) at any time during the life of the permit to mitigate or eliminate a threat to human health or the environment. The Permittee must implement the IM upon a time frame established in written notification by Ohio EPA.

E.7 Determination of No Further Action

(a) Permit Modification

Based on the results of the completed RFI and other relevant information, the Permittee may submit an application to Ohio EPA for a permit modification under OAC Rule 3745-50-51 to terminate the Corrective Action tasks of the Schedule of Compliance. Other tasks identified in the Schedule of Compliance shall remain in effect. This permit modification application must conclusively demonstrate that there are no releases of hazardous waste or constituents from WMUs at the Facility that pose an unacceptable risk to human health and the environment.

If, based upon review of the Permittee's request for a permit modification, the results of the completed RFI, and other information, Ohio EPA determines that releases or suspected releases which were investigated either are nonexistent or do not pose an unacceptable risk to human health and the environment, Ohio EPA will approve the requested modification. Decisions regarding the completion of RCRA Corrective Action and no further action may be made for the entire Facility, for a portion of the Facility, or for a specific unit or release.

(b) Periodic Monitoring

A determination of no further action shall not preclude Ohio EPA from requiring continued or periodic monitoring of air, soil, ground water, or surface water, if necessary to protect human health and the environment, when site-specific circumstances indicate that a potential or an actual release of hazardous waste or constituents exists.

(c) Further Investigations

A determination of no further action shall not preclude Ohio EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or potential release from a WMU at the Facility may pose an unacceptable risk to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with Permit Condition E.7(a). Additionally, in the event Ohio EPA determines that there is insufficient information on which to base a determination, the Permittee, upon notification, is required to develop a Work Plan and upon Ohio EPA approval of that Work Plan, perform additional investigations as needed.

E.8 Corrective Measures Study (CMS)

If Ohio EPA determines, based on the results of the RFI and any other relevant information, that corrective measures are necessary, Ohio EPA will notify the Permittee in writing that the Permittee must conduct a CMS either as described below or as described in Ohio EPA's notification to the Permittee. The purpose of the CMS will be to develop and evaluate the corrective action alternative(s) and to outline one or more alternative corrective measure(s) that will satisfy the performance objectives specified in Permit Condition E.9.

(a) CMS Workplan

The Permittee must submit a written CMS Workplan to Ohio EPA within 60 days from the notification by Ohio EPA of the requirement to conduct a CMS.

- (i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Workplan that incorporates Ohio EPA's comments.

- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Workplan. The CMS Workplan, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CMS Workplan must be authorized by Ohio EPA.

(b) CMS Workplan Implementation

The Permittee must implement the CMS Workplan according to the terms and schedule in the approved CMS Workplan.

(c) CMS Final Report

Within 60 days after the completion of the CMS, the Permittee must submit a CMS Final Report to Ohio EPA. The CMS Final Report must summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative.

- (i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Final Report that incorporates Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Final Report. The CMS Final Report, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CMS Final Report must be authorized by Ohio EPA.

E.9 Corrective Measures Implementation (CMI)

Based on the results of the CMS, the Permittee must implement one or more of the Corrective Measures authorized by Ohio EPA. Ohio EPA will authorize one or more of the Corrective Measures in the CMS, and will notify the Permittee in writing of the decision. The Corrective Measure selected for implementation must: (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous waste(s) (including hazardous constituent[s]); and (4) comply with all applicable standards for management of wastes.

If two or more of the Corrective Measures studied meet the threshold criteria set out above, Ohio EPA will authorize the Corrective Measures Implementation by

considering remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the Corrective Measure will reduce the toxicity, mobility or volume of contamination; (3) the Corrective Measure's short-term effectiveness; (4) the Corrective Measure's implementability; and (5) the relative cost associated with the alternative. With respect to WMU Area A, Ohio EPA considered, as applicable, remedy selection factors noted above. As such, the Permittee must implement the following corrective measures for this WMU:

- (a) Within 30 days of issuance of this permit renewal/modification, the Permittee shall initiate entering into an Environmental Covenant with Ohio EPA under Ohio law (Ohio Revised Code Sections 5301.80 through 5301.92) to restrict property use. This restriction will run with the land and will be binding upon all future property owners should the property be sold. The Environmental Covenant will include a legal description of the subject property, and identify the contaminated area.

The Environmental Covenant will restrict the property from residential activities but allow it to be used for industrial activities. The term "residential activities" shall include, but not be limited to, the following:

- (1) Single and multi-family dwelling and rental units;
- (2) Day care centers and preschools;
- (3) Hotels and motels;
- (4) Educational (except as part of industrial activities within the Property) and religious facilities;
- (5) Outdoor parks and playgrounds;
- (6) Correctional facilities;
- (7) Hospitals and other extended care medical facilities;
- (8) Transient or other residential facilities; and
- (9) Production of food-chain products by agricultural means for animal or human consumption.

The term "industrial activities" shall include, but is not limited to, facilities which supply goods or services to the public, and facilities engaged in manufacturing, processing operations and office and warehouse use, including but not limited to production, storage and sales of durable goods and parking/driveway use.

The Environmental Covenant will prohibit excavation on the site without prior approval from Ohio EPA. In addition, the Environmental Covenant will restrict the extraction of ground water for any purpose other than monitoring,

migration control, treatment or remediation in accordance with the permit conditions.

- (b) The Permittee shall prepare and submit an Inspection and Maintenance (IMP) Plan for the landfill cover system (cap) and security fence within 60 days following the effective date of this permit renewal/modification. The plan must include, but is not limited to, an inspection schedule, an inspection checklist detailing items to be evaluated, criteria for initiating repair work, a schedule for mowing and vegetation control, and methods for repairing the cover system if damaged.
 - (i) Within 45 days of receipt of any Ohio EPA comments on the IMP, the Permittee must submit either an amended or new plan that incorporates Ohio EPA's comments.
 - (ii) Ohio EPA will approve or modify and approve, in writing, the amended IMP or new IMP. The IMP, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved IMP plan must be authorized by Ohio EPA.
 - (iii) The Permittee shall implement the approved IMP.
- (c) The Permittee shall prepare and submit an Amended Ground Water Monitoring Plan (GWMP) within 60 days following the effective date of this permit renewal /modification. The GWMP shall be sufficient to provide adequate surveillance of the ground water underlying Area A, to a level of detail that field and laboratory personnel, initially unfamiliar with the site, may use to successfully implement the monitoring.
 - (i) Within 45 days of receipt of any Ohio EPA comments on the GWMP, the Permittee must submit either an amended or new plan that incorporates Ohio EPA's comments.
 - (ii) Ohio EPA will approve or modify and approve, in writing, the amended GWMP or new GWMP. The GWMP, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved GWMP plan must be authorized by Ohio EPA.
 - (iii) The Permittee shall implement the approved GWMP.

(d) The Permittee shall prepare and submit a site-specific Health and Safety Plan (HASP) for the protection of personnel implementing the remedies within 60 days following the effective date of this permit renewal /modification. The HASP shall be in accordance with all applicable and relevant laws and regulations. Ohio EPA will review, but not approve the HASP.

(e) Reporting and Record Keeping: The Permittee shall submit documentation of the activities called for in the IMP and GWMP to Ohio EPA on or before the date one year following the effective date of this permit renewal/modification, and annually thereafter. The documentation must include, but is not limited to, inspection reports, reports detailing any maintenance activities (e.g. mowing) or repairs, ground water monitoring field notes and data, and ground water analytical results sufficient and complete enough to perform a Tier 1 data validation. These documents, as well as the IMP, GWMP, and HASP, shall be retained by RMI Titanium Corporation in their offices in such a manner that they can be easily produced upon request from Ohio EPA.

(f) Financial Assurance
OAC Rule 3745-54-101

Within **45** days after receiving approval of the IMP or GWMP, whichever comes last, the Permittee must provide financial assurance in the amount necessary to implement the corrective measure(s) as required by OAC Rule 3745-54-101 (B) and (C), for the duration of this permit.

(g) Permit Modification
OAC Rule 3745-54-101

For any potential new WMUs identified through permit condition E.10, and which require additional corrective measures, Ohio EPA will initiate a permit modification, as provided by OAC Rule 3745-50-51 to require implementation of the corrective measure(s) authorized.

The Permittee must not implement the corrective measure until the permit is modified pursuant to OAC Rule 3745-50-51.

E.10 Newly Identified WMUs or Releases
OAC Rule 3745-54-101

(a) General Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, the following information regarding any new WMU identified at the Facility by Ohio EPA or the Permittee:

- (i) The location of the unit on the site topographic map;
- (ii) Designation of the type of unit;
- (iii) General dimensions and structural description (supply any available drawings);
- (iv) When the unit was operated; and
- (v) Specification of all waste(s) that have been managed at the unit.

(b) Release Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, all available information pertaining to any release of hazardous waste(s) or hazardous constituent(s) from any new or existing WMU.

E.11 Corrective Action for Newly Identified WMUs and Releases
OAC Rule 3745-54-101

If Ohio EPA determines that a RFI is required for newly identified WMUs, the Permittee must submit a written RFI Workplan to Ohio EPA upon a time frame established in written notification by Ohio EPA in accordance with Permit Condition E.5. This determination will be made based on the information submitted in accordance with Permit Condition E.10.

Further investigations or corrective measures will be established by Ohio EPA.

Permittee must make such submittal in accordance with time frames established by Ohio EPA.

E.12 Completion of Corrective Action
OAC Rule 3745-54-101

After completing Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any WMUs at the Facility, the Permittee shall submit a Corrective Measures Completion of Work (CMCW) Report. The CMCW Report shall document that Corrective Action construction is complete, cleanup objectives and standards have been met, and any releases of hazardous waste or constituents no longer pose an unacceptable risk to human health and the environment. The CMCW Report may be submitted for any part of the Facility for which corrective measures are complete, or for the entire Facility. The CMCW Report must be submitted as a request for permit modification pursuant to OAC Rule 3745-50-51.

E.13 Documents Requiring Professional Engineer Stamp
ORC Section 4733.01

Preparation of the following Corrective Action documents constitutes the "practice of engineering" as defined by ORC Section 4733.01:

Final Interim Measures Report

Corrective Measures Final Design

Corrective Measures Construction Completion Report

Corrective Measures Attainment of Groundwater Performance Standards Report

Corrective Measures Completion of Work Report

As such, the Permittee must ensure that these documents, as submitted to Ohio EPA, are stamped by a Professional Engineer licensed to practice in the State of Ohio.

END OF CONDITIONS

**STATEMENT OF BASIS
PROPOSAL OF CORRECTIVE ACTION REMEDIES
AT
RMI TITANIUM SODIUM PLANT
ASHTABULA, OHIO
OHD 000 810 242 / 02-04-0584**

**Comments should be sent to:
Ohio Environmental Protection Agency
Attention: Mr. John Nyers
Div. of Materials & Waste Mgmt.
Engineering, Remediation, and Authorizations
P.O. Box 1049
Columbus, OH 43216-1049**

dmwmcomments@epa.state.oh.us

1.0 INTRODUCTION

1.1 Executive Summary

In early 1987, the RMI Titanium Company Sodium Plant (RMI Sodium), located on State Road in Ashtabula Township, Ashtabula County, Ohio, was granted a Resource Conservation and Recovery Act (RCRA) permit by the USEPA, authorizing them to treat and store hazardous wastes at the facility. This permit was subsequently transferred to the State of Ohio's authority.

A RCRA permit imposes RCRA Corrective Action obligations on the facility, including a requirement to investigate areas where wastes were historically, and currently managed, for potential releases of hazardous constituents. The permit also requires developing and implementing a remedy for the facility, and anywhere contamination may have migrated. RMI Titanium Sodium developed and implemented a RCRA Facility Investigation (RFI), which assesses, investigates and addresses Waste Management Units to determine where contamination exists at the site and at what concentrations.

Initially, eleven Waste Management Units (WMUs) were identified (See § 3.2.2). Two of the WMUs were still active at the time, but have since been certified as closed. The unit known as the Abandoned Pond East of the Closed Landfill was later determined to not be a WMU, but a manufacturing process unit which never contained waste materials or hazardous constituents. The WMU known as the Sulfuric Acid Neutralization System was a tank system permitted under the National Pollutant Discharge Elimination System (NPDES). There were no known releases from these tanks, and they were decommissioned and removed when the facility closed. The remaining seven units were investigated under the RFI and supplemental investigations. The investigations found contaminated soil and ground water, so that further evaluation and remedial action were required.

Although a Corrective Measures Study (CMS) to evaluate remedial alternatives was undertaken and approved in May 1995, in the late 1990s RMI Sodium was involved as a Potentially Responsible Party in the Fields Brook Superfund action. As part of the settlement of that Superfund action, an engineered landfill was built on the RMI Sodium site. This provided new remedial options, and RMI Sodium submitted, and had approved, a revised CMS. Three WMUs were remediated by excavation and disposal in the new unit.

Two of the remaining units were evaluated by risk assessment, and found to meet unrestricted future use standards. One WMU was certified closed under Ohio's Surface Water regulations.

The remaining unit, a pre-RCRA landfill known as Area A, is the focus of this Statement of Basis. The landfill received industrial wastes generated by RMI sodium from 1950 until it

closed in 1981. At that time it was capped with two feet of clay, and grasses were planted to form a cover.

This Statement of Basis, using information from the RFI and CMS, summarizes information on the range of remedial alternatives evaluated for Area A, identifies Ohio EPA's preferred remedial alternative, and explains the reasons for selection of the preferred remedial alternative. This Statement of Basis forms the basis for an Agency initiated permit modification (*i.e.*, the final remedy decision.)

Ohio EPA's preferred remedial alternative will yield a permanent solution for risks associated with the contaminated media at the site. The expectations for the preferred alternative include:

- Protection of human health and the environment from exposure to hazardous constituents in soil and ground water at Area A.
- Short and long-term protection of public health and the environment through continued operation and maintenance of the existing remedial action (the cap) and ground water monitoring systems.
- Short and long-term protection of public health and the environment by restricting future use of Area A through an institutional control (Environmental Covenant).
- Cost-effectiveness and limitation of expenses to what is necessary to achieve the preferred alternative expectations.

The major components of the preferred remedial alternative include inspecting and maintaining the existing cover on Area A, ground water monitoring, and restricting future use of Area A and its ground water through institutional and engineering controls.

The performance standards for the preferred remedial alternative are:

Maintain the cap and related controls (fence, drainage) in a manner to prevent contact and dispersal, and limit infiltration of rain and surface water

Monitor ground water to ensure the contaminant plume remains stable

Ohio EPA finds that these measures will protect public health and the environment by reducing risk to acceptable levels once the remedial action objectives have been achieved.

1.2 How the Corrective Action Process Works

In general, the initial step in the corrective action process for facilities regulated under the Resource Conservation and Recovery Act (RCRA) is facility characterization or investigation to define the nature and extent of contamination from WMUs at the facility. This is the RCRA Facility Investigation. The information collected during the RFI is used to evaluate and recommend a remedy or remedies, if needed, during the CMS.

Upon completion of the RFI and CMS, the facility can either provide Ohio EPA with its proposed remedies or Ohio EPA may propose remedies. Ohio EPA may decide to approve the proposed remedy, tentatively approve a proposed remedy, tentatively select a different remedy, or require additional analysis of remedial alternatives.

Ohio EPA next presents its preliminary decision on remedy selection for public comments by issuing a Statement of Basis. That is the purpose of this document.

Following public review, Ohio EPA will respond to all comments received. Public comments on a draft permit modification are being solicited at the same time. Ohio EPA will take into account comments received during the Public Comment period in making any final decision. Ohio EPA will then issue a final decision selecting the remedy, in the form of an Agency initiated permit modification. The facility is then required to implement the remedies.

In this instance, RMI Sodium implemented some of the remedies ahead of this administrative process, both voluntarily and under U.S. EPA oversight. So this Statement of Basis is a description of remedies completed, a description of proposed remedies yet to be implemented, and a solicitation for comments on the acceptability of these remedies to interested parties.

1.3 Proposed Remedies

In brief, eleven Waste Management Units (WMUs) were identified during the site characterization process. Ten of these units have been satisfactorily addressed. The remaining unit, a pre-RCRA landfill known as Area A, requires further action to ensure future protection of human health and the environment. Ohio EPA is proposing continued implementation of an existing Operation and Maintenance Plan and an existing Ground Water Sampling and Analysis Plan to maintain the integrity and effectiveness of the landfill cover, and ensure the contaminant plume remains stable. Security measures currently in place at the facility will be maintained. Financial assurance for the on-going monitoring and maintenance will be established.

Finally, use of portions of the facility will be restricted through an enforceable, written agreement with Ohio EPA known as an Environmental Covenant. This restriction will run with the land and will be binding upon a future property owner should the property be sold. The Environmental Covenant will include a legal description of the subject property, and

describe acceptable and unacceptable land and ground water uses in the surveyed area. Ohio EPA will monitor the property owner's adherence to the Environmental Covenant.

A more detailed discussion of the proposed remedies is included in the Remedies Summary section of this document.

2.0 PUBLIC INVOLVEMENT

The Ohio EPA can modify the proposed remedies based on new information or public comments. The public can be involved in the remedy approval process by reviewing this Statement of Basis and the documents contained in the administrative record file. A public meeting will be held on Nov. 8, 2012 at 5:30 PM at Ashtabula Twp. Hall (CD Ray Community Room), 2718 N. Ridge Rd., E., Ashtabula, OH 44004 to receive public comments. Oral comments will be received during the public meeting. Any person may submit written comments relevant to the Statement of Basis during the comment period.

The actual approval for the final remedy will only be made after the comments received during the public comment period have been reviewed and analyzed. Ohio EPA will consider all public comments on this Statement of Basis in preparing the final Permit Modification. All written and oral comments received during the public comment period will be summarized and addressed in the Response to Comments of the final Permit Modification.

The documents which have been submitted to Ohio EPA on this matter by RMI Sodium are available for review by the public at Ohio EPA's Northeast District Office, Division of Materials and Waste Management, 2100 E. Aurora Road, Twinsburg, Ohio 44087. Please call Ohio EPA's Northeast District Office at (330) 963-1200 to make an appointment to review these records.

Your comments may either be submitted in writing by mail or e-mail to:

Ohio Environmental Protection Agency
Div. of Materials & Waste Mgmt.
Attention: Mr. John Nyers
Engineering, Remediation, and Authorizations
P.O. Box 1049
Columbus, OH 43216-1049

dmwmcomments@epa.state.oh.us

The comment period for this Statement of Basis will run from Sept. 28, 2012 until Nov. 23, 2012. Written comments regarding information contained in this Statement of Basis must be submitted before the end of the public comment period. The comment period may be extended by Ohio EPA if a specific request for a comment period extension is received within

the original comment period. All persons including RMI Sodium may submit written comments relating to this matter.

3.0 FACILITY BACKGROUND

3.1 Facility History

“The Sodium Plant was originally developed under a licensing agreement between National Distillers Products Corporation and E.I. DuPont de Nemours, the licensor, from 1948 through 1950. In 1949, the National Distillers Chemical Company (NDCC) was incorporated as a wholly-owned subsidiary of the National Distillers Products Corporation (NDPC) for the purpose of chemical (sodium and chlorine) production and manufacturing. NDPC operated the Sodium Plant until 1951 when NDPC merged with the U.S. Industrial Chemicals Company and became an operating division of that company. In the same year, NDCC was dissolved and became part of U.S. Industrial Chemicals. In 1964, National Distillers and U.S. Steel entered into a partnership agreement for the operation of the Sodium Plant ... under the corporate name of Reactive Metals Incorporated. In 1971, Reactive Metals Inc. was re-designated the RMI Company.

“Prior to the initial acquisition of land parcels in the late 1940s, it is believed that no chemical manufacturing or processing was conducted at the site. The sources of this information were RMI Sodium’s CERCLA 104 Response for the Fields Brook site, interviews with past and present employees, and historical aerial photographs. The land upon which the Sodium Plant was developed was purchased from the Cleveland Electric Illuminating Company and other areas owned by miscellaneous owners were idle or used for non-industrial purposes.

“RMI has operated this facility for the manufacture of metallic sodium and chlorine while operating under both the National Distillers Products Corporation and U.S. Industrial Chemicals Company. In addition to sodium and chlorine, sodium peroxide was intermittently produced from 1950 to 1979. No other products have ever been manufactured at the RMI Sodium Plant. A site location map (7.5 Minute Series Topographical) (Figure 1) identifies the approximate location of the Sodium Plant. The facility is located adjacent to the intersection of State Road and East Sixth Street in Ashtabula Township, Ohio.”¹ An aerial photo showing the current property boundary is Figure 2.

The facility ceased primary manufacturing operations in 1992. The facility continued thermal destruction of sodium under its RCRA permit until 1998, when that unit was closed. All manufacturing and processing equipment have been decommissioned, and most structures were demolished (with the exception of the office buildings and a few smaller ancillary buildings) by 2000. The property was subdivided into four parcels and three of them were sold (This parceling is described in more detail below). The remaining parcel, still owned by RMI, is the location of the former landfill known as Area A.

¹ Eckenfelder Incorporated, *RCRA Facility Assessment Report, RMI Sodium Plant, Ashtabula, Ohio*. June 1990.

3.2 Current Facility Activities

There are no industrial, commercial or residential activities at this facility, and it is unoccupied. There are two landfills present in the vicinity of the facility, and personnel are occasionally on site or passing through for inspection, maintenance and monitoring.

3.2.1 Facility Description

The RMI Sodium Area A Landfill is located on State Road, in Ashtabula Township, Ohio. The latitude and longitude coordinates are 41 degrees 53' 52.9" North and 80 degrees 46' 18.0" West. The Ashtabula River is located approximately one mile west of the facility and Lake Erie is located approximately one-half mile north of the Facility. Fields Brook is approximately one-third mile south. The site is located in an industrially developed area of Ashtabula County.

The former site was parceled and some of the property was sold to accommodate two other landfills that are not under the control of RMI Sodium. The current owner/operator of both landfills is De Maximis Inc. One landfill received CERCLA wastes from the Fields Brook remediation project, as well as some RMI Sodium remedial wastes. This landfill is variously known as 'The Fields Brook Landfill' and the 'New Engineered Landfill'. The landfill was built to TSCA standards, and was transferred from RMI Sodium to De Maximis on August 1, 2000. This landfill is being maintained and monitored under the authority of the USEPA.

The other landfill also was built to TSCA standards, and received dredge spoils from a remediation of the Ashtabula River. This landfill is being maintained and monitored by the Ashtabula River Cooperation Group II under the authority of the USEPA. The landfill was closed in 2007.

Maintenance and monitoring activities at these sites may occasionally involve authorized personnel entering and crossing current RMI Sodium property.

Both landfills are closed and in post-closure care. Ground water is being monitored, and financial assurance has been provided. These units have fulfilled any Corrective Action obligations that carried over from when the parcels were under RMI Sodium's permit.

The third parcel was sold to State Road Industrial, Inc. This parcel had WMUs at one time. Two of the units were permitted, and formally were certified closed. Portions of WMUs E, F, or G may also have been on this property, but they have been remediated and no further Corrective Action obligations remain.

3.2.2 Waste Management Unit Descriptions, History, and Current Status

Initially, eleven waste management units (WMUs) were listed².

Two of the WMUs, the South Chute Waste Pile and the Burning Room, were permitted units subject to RCRA closure. The Closure Plans were approved through the permit. Both units have completed clean closure, certified, and the certification has been accepted by Ohio EPA without Post-Closure requirements (1995 and 2000, respectively).

The unit known as the Abandoned Pond East of the Closed Landfill was later determined to not be a WMU, but a manufacturing process unit which never contained waste materials or hazardous constituents. No further action was required.

The WMU known as the Sulfuric Acid Neutralization System was a tank system permitted under the National Pollutant Discharge Elimination System (NPDES). There were no known unpermitted or accidental releases from these tanks, and they were decommissioned and removed when the facility closed. No further action was required.

The remaining seven WMUs were/are (See also Table 1):

Area A – A pre-RCRA landfill capped with two feet of clay, in use from 1950 until it closed in 1981. Potential hazardous constituents are barium, cadmium and lead. Further action is required. Figure 3 is an aerial photo showing contours and well locations.

Area B – A fill area northeast of Area A, in use from 1950 to 1981. Wastes were consolidated into Area A in 1981. Potential hazardous constituents were barium, cadmium and lead. The area was over-excavated in 2000 to unrestricted use standards, and the contaminated media were disposed in the Fields Brook Landfill. No further action was required.

Area C – A fill area northwest of Area A, in use from the 1960s to 1981. Wastes were consolidated into Area A in 1981. Potential hazardous constituents were barium, cadmium and lead. The area was over-excavated in 2000 to unrestricted use standards, and the contaminated media were disposed in the Fields Brook Landfill. No further action was required.

Area D – Former fill areas in the vicinity of Area E, in use from the 1950s to the 1960s. Potential hazardous constituents were barium, cadmium and lead. The WMU was characterized and assessed for risk. The unit met risk criteria for unrestricted future use. The USEPA determined that no further action was required.

² Eckenfelder Incorporated, *Work Plan for RCRA Facility Investigation RMI Sodium Plant, Ashtabula, Ohio, Revision No. 2.* June 1987.

Area E – Five wastewater treatment ponds, variously in use from the 1950s through 2000. Potential hazardous constituents were chromium, lead, selenium and silver. The ponds were clean closed under a Permit to Install from Ohio EPA's Division of Surface Water dated July 19, 2001. Closure consisted of excavation and off-site disposal. Work was completed in October 2001. No further action was required.

Area F – Former fill areas west of Area E, in use from 1966 to 1967. Potential hazardous constituents were barium, cadmium and lead. The WMU was characterized and assessed for risk. The unit met risk criteria for unrestricted future use. The USEPA determined that no further action was required.

Area G – A fill area north of Area E, in use from 1956 to 1976. Wastes were consolidated into Area A in 1981. Potential hazardous constituents were barium, cadmium and lead. The area was over-excavated in 2000 to unrestricted use standards, and the materials were disposed in the Fields Brook Landfill. No further action was required.

WMUs B through G were located on property that was sold by RMI Sodium, are no longer under RMI Sodium's control, and are no longer within the boundaries of the permitted facility. Area A remains subject to RMI Sodium's RCRA permit.

3.2.3 Solid and Hazardous Waste Description

“(Wastes) ...that have been deposited at the Sodium Plant property (*in Area A*) include cell bath waste, anode butts, and miscellaneous solid waste including electrolytic cell construction materials and salt dissolver sludge... Hazardous materials which were placed in the landfill (Area A) included cell bath waste (EP toxic for barium, and possibly cadmium and lead) and anode butts which contained hazardous constituents (lead and cadmium) but were not EP Toxic...”³

3.3 RCRA Permit Status

RMI was granted a RCRA Part B permit for storage and treatment by the USEPA in 1987. Later, the permit authority was transferred to Ohio EPA. The property boundary for the original permitted facility is illustrated in Figure Four. (This is the footprint of the facility assessed and investigated during the RFI.) RMI Sodium currently holds Ohio Permit Number 02-04-0584, issued July 19, 2002. The permit is for Corrective Action and maintenance of current conditions. The facility is not treating or storing hazardous waste, and the only disposal is in Area A. The permit expired July 19, 2012, and is up for renewal.

³ Eckenfelder Incorporated, *RCRA Facility Assessment Report, RMI Sodium Plant, Ashtabula, Ohio*. June 1990.

3.4 Physical Setting

The facility is located in the Lake Plains Physiographic Section adjacent to the present-day Lake Erie shoreline. There are no drinking water wells within a one mile radius of the facility. Production water (private system) and potable water (public system) for the general area are supplied. The source for both is Lake Erie.

3.4.1 Regional Geology

The regional geology is characterized by glaciolacustrine deposits formed during the deposition of glacially derived sediments upon glacial lake bottoms during the ice front margin retreat. These unconsolidated deposits generally consist of silts, clays, and interbedded lenses of very fine sand. The bedrock underlying the overburden near Ashtabula is predominantly undifferentiated shale and sandstone of the Ohio Formation of Devonian and Mississippian Age.

In the region of the facility, the unconsolidated silts and clays are considered one water bearing unit. Ground water is typically present within the first few feet of the ground surface; typically producing less than five gallons per minute (gpm). Within the uppermost shale bedrock in this region, wells typically produce less than 3 gpm.

3.4.2 Facility Hydrogeology

Ground water appears within two zones beneath the facility:

- 1) An unconfined water table zone within the fill and upper, weathered glacial till with moderate hydraulic conductivity and within the deeper unweathered glacial till with a presumed lower hydraulic conductivity.
- 2) A confined water-bearing zone within the low hydraulic conductivity shale.

The water bearing unit immediately beneath Area A is underlain by approximately 40 feet of till with an estimated hydraulic conductivity of 8.1×10^{-8} cm/sec. The water bearing unit itself consists of approximately 15 feet of weathered till with an estimated hydraulic conductivity of 2×10^{-5} cm/sec. Ground water flow direction in the vicinity of Area A is radial, with an overall tendency toward the west. There is a more southerly/southwesterly flow at the western end of the landfill.

4.0 SUMMARY OF THE FACILITY INVESTIGATIONS AND REMEDIAL ACTIONS

4.1 Initial Site characterization⁴

A RCRA Facility Investigation (RFI) Work Plan was approved by USEPA in March 1988, and subsequently was implemented by RMI Sodium. The purpose of the RFI was to investigate Waste Management Units suspected of being contaminated, and to define the character and extent of the contamination. Soils, ground water, and sediments from surface drainage were investigated during the RFI process. The initial RFI Report was submitted in May of 1989, and a revised report was submitted in June 1990. The RFI concluded that shallow ground water had been affected by RMI Sodium and identified barium and cadmium as constituents of interest. It further concluded that deep ground water had not been affected by RMI Sodium's activities. Soils were also investigated during the RFI and were found to exhibit concentrations of arsenic, cadmium and lead at levels statistically above background in surficial and shallow soils. Off-site migration of constituents of concern via surface water was investigated and found to not be a concern.⁵

A Supplemental Investigation Report was submitted in April 1991 to address gaps in the data identified during the initial RFI. The additional work included defining the bedrock piezometric surface and direction of the ground water flow; defining the hydrogeology and shallow ground water, surface water, and sediment quality in the vicinity of RMI Sodium's eastern boundary, determining the potential for off-site contaminant release adjacent to the eastern boundary of the facility; and defining sediment quality in an on-site ditch where erosion of soil or fill material had been documented. The results of the supplementary work generally confirmed the findings of the 1990 RFI. (For a listing of constituents for the WMUs, see § 3.2.2, above.)

In June 1990, a partial submittal of the Corrective Measures Study (CMS) was received by USEPA. The purpose of the CMS was to develop and evaluate the Corrective Action alternative(s) and to outline one or more alternative remedies that would satisfy performance objectives specified by USEPA.

The CMS Work Plan was submitted to USEPA in May 1991, revised in August 1991, and finalized in March 1993. The CMS Report was submitted to USEPA in August 1991, revised in March 1993, September 1994, and May 1995. Based upon the review of the revised Final Corrective Measures Study Report, dated May 1995, USEPA determined that the revised CMS Report conformed with the elements in the approved CMS Work Plan. This approval is documented in a letter dated September 29, 1995, from USEPA Region 5.

Prior to implementation of the selected remedies, RMI Sodium was named as a Potentially Responsible Party in the Fields Brook CERCLA (Superfund) site, also in Ashtabula, Ohio.

⁴ Documents referenced in this section are available for review at Ohio EPA's Northeast District Office

⁵ Eckenfelder Incorporated, Final Corrective Measures Study, RMI Sodium Plant, Ashtabula, Ohio. September 1994.

This event led to new remedial options for the facility, described in the next section. On January 11, 1999, RMI Sodium submitted a Supplement to the Revised Final Corrective Measures Study to the USEPA.

4.2 Completed Remedial Actions

Subsequent to RMI Sodium's submittal of the May 1995 CMS Report, the Fields Brook Superfund Potentially Responsible Parties entered into an agreement with USEPA Region 5 for the remediation of contamination in Fields Brook. Part of the settlement provided for construction of an engineered landfill on RMI Sodium property. The construction of the 'New Engineered Landfill' on the facility's property provided a new, potentially feasible, remedial alternative for disposal of contaminated media from on-site WMUs. The January 1999 Supplemental CMS was prepared to evaluate the new alternative as compared to the previously recommended alternatives set forth in the May 1995 CMS Report.

The construction of the New Engineered Landfill, or Fields Brook Landfill, was completed under USEPA regulatory oversight. Corrective Measures for Areas B, C, and G were initiated by way of voluntary action coordinated through USEPA. The remediation included over-excavation of Areas B, C, and G to unrestricted future use standards; temporary stockpiling of Area B and Area C materials; and on-site disposal at the New Engineered Landfill.

Area E: On April 6, 2000, Ohio EPA's Division of Surface Water received a Permit to Install / Plan Approval Application (PTI) for the closure of the five wastewater settling ponds at RMI Sodium's facility. The PTI was granted on July 19, 2001. The remedy was draining, sediment removal, excavation of the surface layer of the clay side walls and bottom to unrestricted future use standards, removal for disposal at an approved landfill, and (later) backfilling and seeding for vegetative cover. Construction began on September 24, 2001, and was substantially complete by November 9, 2001.

Area A: Materials were first disposed in the Area A landfill in the 1950s, and included cell bath waste, anode butts, solid waste, electrolytic cell construction and demolition debris, salt dissolver sludge, and miscellaneous construction/demolition debris. Area A accepted waste until November 30, 1980. The landfill was closed according to a Closure Plan submitted to Ohio EPA's Office of Land Pollution Control on August 20, 1981. As part of the landfill closure, a re-compacted clay cover of 1.5 to 2 feet was installed over the graded fill, and seeded with grass. A new layer of topsoil was placed and seeded in 1991, since the salinity of the waste made establishing vegetation difficult.

The 2002 permit required RMI Sodium to perform actions to enhance the capping remedy:

1. Submit a plan for inspection, maintenance and repair. RMI Sodium complied on October 16, 2002. Over the years, several cap repair and re-seeding projects have been implemented.

2. Implement the plan. RMI has complied. Over the years, several cap repair and re-seeding projects have been implemented, and the vegetation is mowed regularly.
3. Submit a Ground Water Monitoring Plan. RMI submitted a plan, which Ohio EPA approved on September 11, 2007. RMI Sodium has implemented the plan.
4. Place deed restrictions on the landfill. This issue remains to be resolved, mostly due to the changing legal environment in Ohio's property restriction statutes. As early as September 16, 2002, the facility proposed a *Declaration and Notice of Restriction* to the deed. However, there is no record of it actually being filed with the Ashtabula Auditor's office (see *Data for Parcel 030140000500*). In 2005, Ohio EPA informed RMI Sodium that the preferred mechanism would be an Environmental Covenant. RMI Sodium subsequently submitted a draft Environmental Covenant, which is currently under review by Ohio EPA.
5. Establish financial assurance. RMI Sodium did not establish Financial Assurance, stating in a letter dated May 25, 2011, "Since no need for Corrective Measures has been identified, financial assurance for corrective measures is not being provided at this time". The 2002 permit is vague on this issue. Nevertheless, Ohio EPA found RMI Sodium to be in compliance with Ohio's financial assurance requirements in letters dated June 14, 2011 and July 30, 2012. Until the final remedy decision has been made by the director, RMI Sodium cannot prepare an estimate for the cost of financial assurance.

4.3 Maintenance and Monitoring

Ground water monitoring wells around Area A were sampled on July 23, 2008, October 30, 2008, January 6, 2009, and October 18, 2010. A summary of the results can be found in Table 2. Significant exceedances of Maximum Contaminant Levels were found. In some cases, metals were not detected, but the reporting limits exceeded the corresponding Maximum Contaminant Levels. This is due to the high levels of dissolved solids in the ground water (note the specific conductivities) interfering with the analysis. Although migration of contaminants is *currently* under control, and the landfill has been closed for over thirty years, and the plume is *currently* stable, continued monitoring is indicated. Constituents of concern are at high levels, and future mobilization of the contaminant plume, for example by remedial activities at the adjacent site, cannot be ruled out.

4.3.1 Human Exposures and Environmental Indicator 725

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The USEPA evaluated

RMI Sodium for EI 725 'Current Human Exposures Under Control' and made a 'YES' (positive) determination on March 9, 2001. A positive "Current Human Exposures Under Control" EI determination indicates that there are no "unacceptable" human exposures to "contamination" (*i.e.*, contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under *current* land- and ground water-use conditions (for all "contamination" subject to RCRA Corrective Action at or from the identified facility (*i.e.*, site-wide)).

The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and ground water-use conditions only, and do not consider potential future land- or ground water-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that final remedies address these issues (*i.e.*, potential future human exposure scenarios, future land and ground water uses, and ecological receptors).

4.3.2 Contaminant Migration and Environmental Indicator 750

Another EI developed by USEPA indicates the quality of the environment in relation to the migration of contaminated ground water. The USEPA evaluated RMI Sodium for EI 750 'Migration of Contaminated Ground Water Under Control' and made a 'YES' (positive) determination on February 7, 2000.

Ohio EPA performed its own review of available data and information for the RMI Sodium facility in order to determine if migration of contaminated ground water was under control. This was done because more data and information had become available over the decade. The determination was of particular interest since data indicate that ground water is contaminated above acceptable limits beneath Area A.

Ohio EPA concluded that a 'Yes' determination was appropriate on June 14, 2010. Quoting the determination document rationale:

1. The Area A Waste Management Unit has had a clay cap since 1981.
2. The water bearing unit is underlain by approximately 40 feet of till with an estimated hydraulic conductivity of 8.1×10^{-8} cm/sec. The water bearing unit consists of approximately 15 feet of weathered till with an estimated hydraulic conductivity of 2×10^{-5} cm/sec.
3. Immediately south of the unit lies the Detrex site that has a well documented DNAPL plume. This DNAPL plume has affected water quality on the south side of the Area A Waste Management Unit. Detrex has installed a subsurface cut off wall and ground water collection trenches in the northwest portion of their property. Detrex's system includes a cut off wall extension onto the RMI site that is designed to divert shallow ground water toward the collection trenches on the Detrex property. In the past, some NAPL has been observed on the RMI property, at the southwest corner of the Area A landfill. However, the

presence of interceptors, and the prevailing ground water flow direction (westward tending) indicates that the Detrex contamination is not migrating further to the north.

Due to the above factors, inorganic contamination associated with the waste management unit is not expected to pose a significant threat to the environment. There is no off-site migration of contamination. This information supports the conclusion that ground water contamination has stabilized.

4.3.3 Migration to Surface Waters

The closest surface water body is an unnamed intermittent low-flow stream that is located west and southwest of the waste management unit. The stream in turn flows into Fields Brook. These water bodies have been extensively studied as part of the Detrex facility and the Fields Brook Superfund site. No impacts to surface water quality have been identified in these studies as originating from the RMI site. Further, on-site surface water was investigated during the RFI, and no impacts were found.

5.0 ECOLOGICAL EVALUATION

The facility is located in a major urban/industrial area. Threatened or endangered species are not present at the facility, and there aren't any complete pathways. There is no off-site migration of contamination. The adjacent undeveloped woodland is not expected to provide habitat for threatened or endangered species. Perennially wet areas on the site are dominated by species of the genus *Phragmites*. No further ecological evaluation is being required.

6.0 SUMMARY OF PROPOSED REMEDIES

Area A is currently not posing unacceptable risk to human health or the environment. Nevertheless, landfills require on-going maintenance and monitoring to ensure that the protective measures (*i.e.* the engineered cap) remain effective. Therefore, **Ohio EPA is proposing the following remedies for Area A.**

These are the preferred remedy components that, together, will compose the final preferred remedy:

- 1) An Inspection, Operation and Maintenance (O&M) Plan for on-going upkeep of the landfill, including the security fence. The current O&M plan may be used, but it needs to be reviewed for currency, such as contact names. The permit will also require implementation.
- 2) A Ground Water Monitoring Plan is needed to ensure that the contaminated ground water plume remains stable. The current plan may be used, but it needs to be reviewed for currency, such as contact names. The permit will also require implementation.

- 3) Reporting and record keeping requirements to document the implementation of Remedies One and Two.
- 4) A site-specific Health and Safety Plan (HASP) for the protection of personnel implementing Remedies One and Two. Currently, RMI Sodium is required to provide extensive personnel training, maintain an active-facility-style RCRA Contingency Plan, and provide detailed information to Emergency Response authorities. Ohio EPA is proposing to allow RMI Sodium to prepare a comprehensive plan that simplifies these requirements into a practical plan that is site-specific, and recognizes that the primary hazards are slips, trips and falls, insect bites and stings, and other prosaic hazards. The permit will require implementation.
- 5) Ensure Financial Assurance for the implementation of Remedies One and Two for as long as Area A requires operation and maintenance, and ground water monitoring, to be protective of human health and the environment.
- 6) Enter into an Environmental Covenant to restrict land and ground water use.

6.1 Environmental Covenant

Ohio EPA proposes that use of the facility will be restricted through enactment of an Environmental Covenant, an enforceable mechanism under Ohio law (Ohio Revised Code Sections 5301.80 through 5301.92) that can be used to restrict property use. This restriction will run with the land and will be binding upon all future property owners should the property be sold. The Environmental Covenant will include a legal description of the subject property, identifying the contaminated area.

The Environmental Covenant will restrict the property from residential activities but allow it to be used for industrial activities. The term “residential activities” shall include, but not be limited to, the following:

- (i) Single and multi-family dwelling and rental units;
- (ii) Day care centers and preschools;
- (iii) Hotels and motels;
- (iv) Educational (except as part of industrial activities within the Property) and religious facilities;
- (v) Outdoor parks and playgrounds;
- (vi) Correctional facilities;
- (vii) Hospitals and other extended care medical facilities;
- (viii) Transient or other residential facilities; and
- (IX) Production of food-chain products by agricultural means for animal or human consumption.

The term “industrial activities” shall include, but is not limited to, facilities which supply goods or services to the public, and facilities engaged in manufacturing, processing operations and office and warehouse use, including but not limited to production, storage and sales of durable goods and parking/driveway use.

The Environmental Covenant will prohibit excavation on the site without prior approval from Ohio EPA.

In addition, the Environmental Covenant will restrict the extraction of ground water for any purpose other than monitoring, migration control, treatment or remediation in accordance with the permit conditions.

Ohio EPA will monitor the property owner’s adherence to the Environmental Covenant to ensure continued protection of human health and the environment

6.2 Evaluation Of The Proposed Remedies

The Ohio EPA believes that the proposed remedies would be protective of human health and the environment. The remedies would control the sources of releases over the long term so as to reduce or eliminate, to the maximum extent practicable, future releases. Some of the remedies already have been implemented, and the remaining components should be implementable in a short period of time, without posing risks to human health or the environment. The remedies comply with applicable standards (ARARs)⁶ for management of waste. Also, the proposed remedies are cost-effective. This section explains how the proposed remedies meet the performance objectives.

1) Inspection, Operation and Maintenance (O&M) Plan: Ensures protection of remedies requiring occasional human intervention, that is, the engineered cap and security fence.

2) Ground Water Monitoring Plan: On-going monitoring will provide the appropriate information to monitor the effectiveness of the infiltration control (the landfill cap) and to ensure that off-unit migration of contaminated ground water is not occurring.

3) Reporting and record keeping requirements to document the implementation of Remedies One and Two.

4) Health and Safety Plan: The plan will enhance the safety of personnel implementing Remedies One and Two.

5) Financial Assurance: To ensure funds are available for the implementation of Remedies One and Two for as long as Area A requires operation and maintenance, and ground water monitoring, to be protective of human health and the environment.

⁶ *Applicable or relevant and appropriate requirements*

6) Environmental Covenant: The Environmental Covenant will be implemented to restrict land and ground water uses to those appropriate and consistent with protecting the engineered cap, and protecting human health and the environment.

7.0 Conclusion

The RMI Sodium facility conducted an investigation of facility conditions, through a RCRA Facility Investigation and two RCRA Corrective Measures Studies, to address contamination on their facility located on State Road, Ashtabula Township, Ohio. Soil and ground water samples were collected throughout the facility, in selected areas, to determine current facility conditions. Remedies were evaluated, and most remedies have already been successfully implemented. One Waste Management Unit requires additional remedies, and the acceptable remedies have been proposed in this Statement of Basis.

Under Ohio EPA's preferred remedies, RMI Sodium would enter into an Environmental Covenant restricting use of the property. In addition, RMI Sodium would be required to continue implementation of other controls designed to protect authorized personnel coming onto the site, prevent unauthorized entry, prevent the disturbance of the cap, ensure the cap is properly maintained, ensure that the ground water contaminant plume remains stable, and ensure there are funds for on-going implementation.

The actual approval for the final remedies will only be made after the comments received during the public comment period have been reviewed and analyzed.

TABLES

TABLE ONE
 PROFILE OF PREVIOUS AND EXISTING SOLID WASTE MANAGEMENT UNITS^a

Map Code	Name	Approx. Dimensions	Status	Period of Use	Potential Hazardous Constituents	Other Information
A	Closed landfill	400 ft x 700 ft	Closed	1950 to 1980	barium, cadmium, lead	Closed in 1981; 2 ft clay cap
B	Fill area north-east of closed landfill	50 ft x 100 ft	Inactive	1950 to 1981	barium, cadmium, lead	Wastes reportedly removed to landfill during closure in 1981
C	Fill area north-west of closed landfill	150 ft x 200 ft	Inactive	1960s to 1981	barium, cadmium, lead	Wastes reportedly removed to landfill during closure in 1981
D	Former fill areas in vicinity of wastewater treatment ponds	#1 @ 150 ft x 300 ft #2 @ 80 ft x 120 ft #3 @ 60 ft x 175 ft	Inactive	1950s to 1960s	barium, cadmium, lead	Fill area encompassed by area now occupied by Pond Nos. 2, 3, 4, 5; excavated wastes placed in fill areas north of ponds during pond construction; filled low areas
E	Wastewater Treatment Ponds ^b					Perimeter french drain installed in 1980
	Pond No. 1	100 ft x 400 ft (1.7 mil gal)	Active	1950 to present	chromium, lead, selenium silver	
	Pond No. 2	40 ft x 500 ft (1.4 mil gal)	Active	1956 to present	chromium, lead, selenium silver	
	Pond No. 3	170 ft x 170 ft (1.5 mil gal)	Active	1967 to present	chromium, lead, selenium, silver	
	Pond No. 4	170 ft x 200 ft (1.3 mil gal)	Active	1971 to present	chromium, lead, selenium, silver	
	Pond No. 5	150 ft x 150 ft (1.5 mil gal)	Active	1971 to present	chromium, lead, selenium, silver	
F	Fill areas west of wastewater treatment ponds	200 ft x 500 ft (overall)	Inactive	1966 to 1967	barium, cadmium, lead	Filled low areas
G	Fill area north of wastewater treatment ponds	200 ft x 300 ft	Inactive	1956 to 1976	barium, cadmium, lead	Received excavated materials from present site of wastewater treatment ponds during pond construction; filled low areas

^aThe two active hazardous waste management units for which RMI holds a RCRA operating permit, the South Chute Waste Pile and the Burning Room, are not included in this listing. The sulfuric acid neutralization system, part of RMI's NPDES treatment system (OEPA Permit No 31E00012*AD), has also been excluded from this listing.

Table 2

Summary of Groundwater Analytical Data

Former RMI Sodium Plant Landfill
Ashtabula, Ohio

Parameter	Units	Measured Concentration/Value												MCL				
		July 23, 2008				October 30, 2008				January 6, 2009					October 18, 2010			
		RMI-101 ^c	RMI-102 ^b	RMI-103	FB-04	RMI-101 ^c	RMI-102	RMI-103 ^b	FB-04	RMI-101A ^c	RMI-102	RMI-103	FB-04		RMI-101A ^{b,c}	RMI-102	RMI-103	FB-04
pH	-	6.05	7.02	6.00	6.86	6.80	7.23	5.86	7.14	6.90	7.00	6.20	NA	NA	NA	NA	NA	-
Specific Conductivity ^A	µmhos	64,000	14,000	85,000	10,000	>100,000	18,800	>100,000	18,000	7,000	7,000	17,000	22,000	NA	NA	15,000	15,000	-
Temperature	°C	23.47	16.35	16.23	15.93	12.78	11.40	12.23	13.91	9.20	9.20	14.20	13.80	13.80	13.80	15.10	15.10	-
Turbidity	NTU	11.30	605.00	8.40	16.50	NA	NA	NA	NA	8.70	8.70	6.00	32.00	27.00	0.00	0.00	0.00	-
Total Barium	mg/L	2.24	0.0836	0.624	0.0728	2.15	0.0463	0.398	0.0524	0.140	0.140	0.108	0.041	0.374	0.047	0.047	2.0 mg/L	
Soluble Barium	mg/L	2.19	0.0802	0.555	0.0706	1.98	0.0464	0.407	0.0453	0.143	0.143	0.103	0.039	0.370	0.045	0.045	2.0 mg/L	
Total Cadmium	mg/L	0.00305	0.00704	0.364	0.00216	0.00133	0.082	0.00133	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.005 mg/L	
Soluble Cadmium	mg/L	0.00228	0.0027	0.337	0.00199	0.00199	0.157	0.00199	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.005 mg/L	
Total Lead	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0129	0.0129	<0.01	<0.01	<0.01	<0.01	<0.01	0.015 mg/L	
Soluble Lead	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0121	0.0121	<0.01	<0.01	<0.01	<0.01	<0.01	0.015 mg/L	

Notes:

^A - Specific conductivity values for the July 23, 2008 and January 6, 2009 sampling events were measured by the laboratory, whereas

^B - Specific conductivity values for the October 30, 2008 sampling event were measured in the field.

^C - Duplicate sample collected (total only). The highest measured value is included in this summary.

^D - Well RMI-101 was abandoned and replaced with upgradient well RMI-101A.

NA - Not available. Meter malfunctioned in the field.

A yellow shaded cell indicates an MCL exceedance.

A blue shaded cell indicates that the parameter was not detected, but the reporting limit was above the MCL.

FIGURES

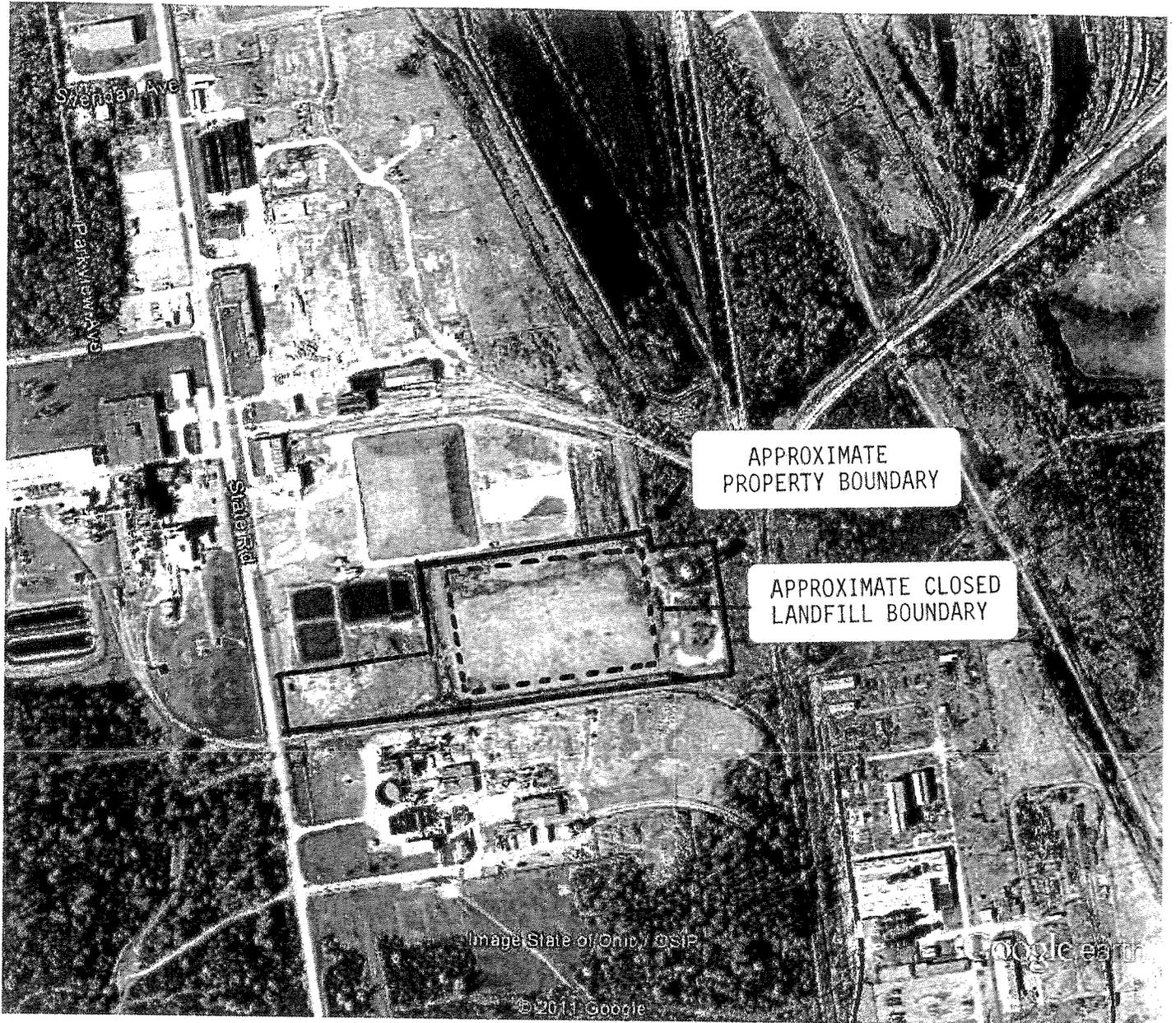


FIGURE TWO



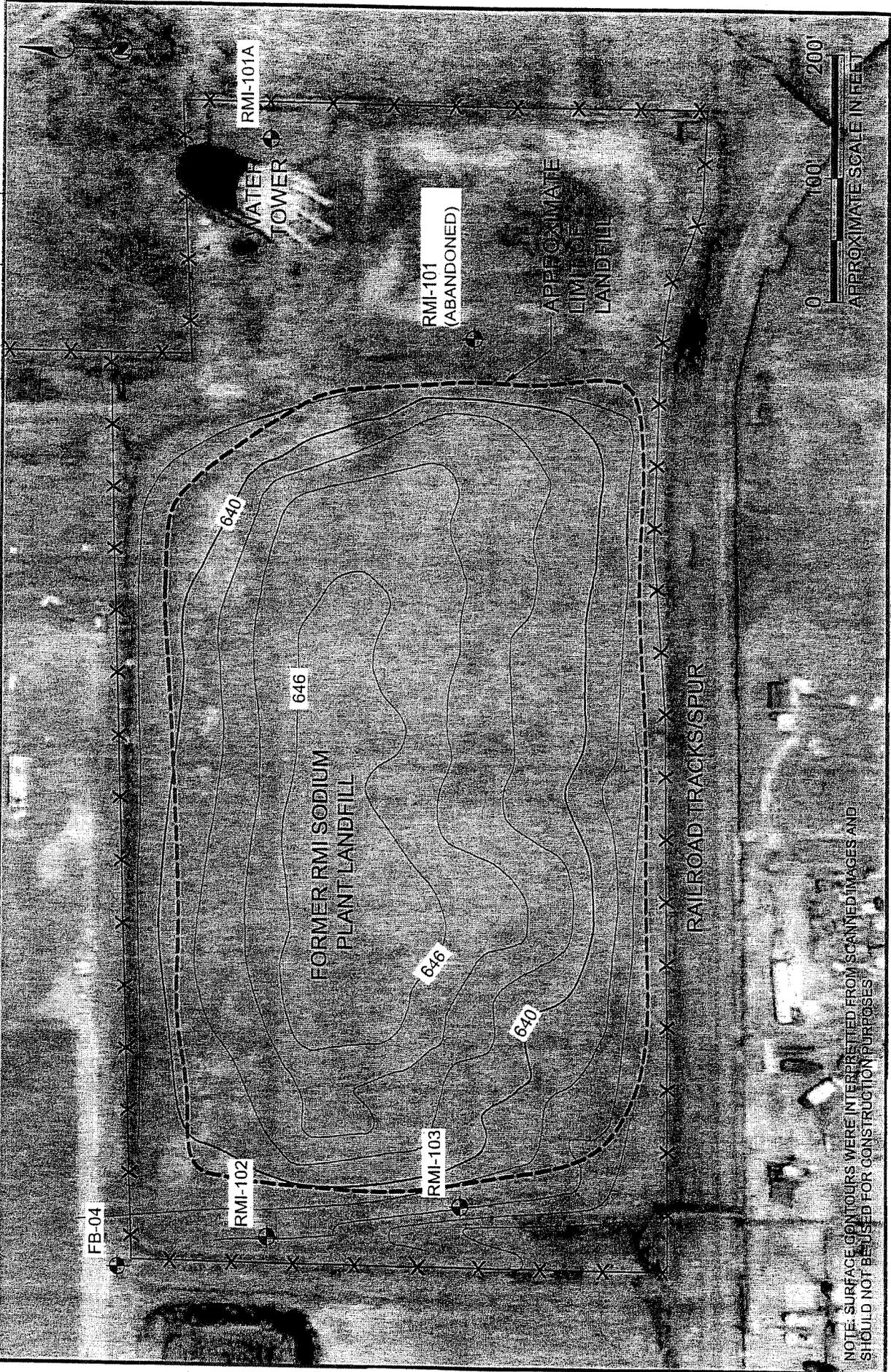


FIGURE THREE

FORMER RMI SODIUM PLANT LANDFILL
GENERAL SITE FEATURES

