COVER PAGE

13-55324

1110650003
Arnold Magnetic Technologies
Category: 19C Superfund Technical
Document Date: 11/20/2013

Volume 2 of 10

CONTENTS:

Focused Site Investigation Report

THIS PAGE FOR IMAGING PURPOSES

APPENDIX A – IEPA NOV AND AG INJUNCTION ORDERS

FILE COPY

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IEPA NOTICE OF VIOLATION

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

847/294-4000
847/294-4083 Fax

FEB 2 8 2008

Arnold Magnetic Technologies
300 N. West Street
Marengo, IL 60152

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7004 1350 0003 1611 1531

Attention: Al Kalaczinski

Re: **Violation Notice, L-2008-01057**
LPC #1110650003 – McHenry County
Marengo/Arnold Magnetic Technologies
Compliance File

Dear Mr. Kalaczinski:

This constitutes a Violation Notice pursuant to Section 31(a)(1) of the [Illinois] Environmental Protection Act, 415 ILCS 5/31(a)(1), and is based on a record review completed on February 26, 2008 by representatives of the Illinois Environmental Protection Agency (Illinois EPA).

The Illinois EPA hereby provides notice of violations of environmental statutes, regulations, or permits as set forth in Attachment A to this letter. Attachment A includes an explanation of the activities that the Illinois EPA believes may resolve the specified violations, including an estimate of a reasonable time period to complete the necessary activities. However, due to the nature and seriousness of the violations cited, please be advised that resolution of the violations may require the involvement of a prosecutorial authority for purposes that may include, among others, the imposition of statutory penalties.

A written response which may include a request for a meeting with representatives of the Illinois EPA, must be submitted via certified mail to the Illinois EPA within 45 days of receipt of this letter. The response must address each violation specified in Attachment A and include for each an explanation of the activities that will be implemented and the time schedule for the completion of that activity. The written response will constitute a proposed Compliance Commitment Agreement (CCA) pursuant to Section 31 of the Act. The Illinois EPA will review the proposed CCA and will accept or reject it within 30 days of receipt.

If a timely written response to this Violation Notice is not provided, it shall be considered to be a waiver of the opportunity to respond and to meet provided by Section 31(a) of the Act, and the Illinois EPA may proceed with a referral to the prosecutorial authority.

Written communications should be directed to:

Illinois EPA – Bureau of Land
Attn: Charles Grigalauski
9511 West Harrison Street, 3rd Floor
Des Plaines, Illinois 60016

All communications must include reference to this **Violation Notice Number, L-2008-01057.**

The text of the Act referenced herein is available at www.ipcb.state.il.us. If you have questions regarding this matter, please contact Thomas Rivera at 847/294-4079.

Sincerely,

Charles T. Grigalauski, Regional Manager
Field Operations Section
Bureau of Land

Enclosure

cc: Bureau of Land File
Des Plaines Region File

ATTACHMENT A

1. Pursuant to Section 12(a) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(a)), no person shall cause, threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources, or so as to violate regulations or standards adopted by the Pollution Control under this Act.

   A violation of Section 12(a) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(a)) is alleged for the following reason: **The discharge of contaminants was caused and allowed in a way that caused water pollution. Chlorinated solvent contamination above the Class I groundwater objectives is present in on site groundwater. The groundwater contamination has been present for approximately 20 years. Shallow groundwater flow under the site is to the north-northwest, towards the nearby Kishwaukee River. Residential/nonresidential private water wells are located to the north-northwest, directly down gradient of the site. The private wells are within ½ mile of the site and its unknown at this time if the private wells have been impacted by the chlorinated solvent groundwater contamination.**

   1,1,1-Trichloroethane (1,1,1-TCA) was detected as high as 4,900 ppb, in 1999, in on site groundwater monitoring well MW-3. More recently in 2007, 1,1,1-TCA was detected as high as 501 ppb in on site groundwater monitoring well MW-A7. Tetrachloroethene (PCE) was detected as high as 18.8 ppb, in 2007, in onsite groundwater monitoring well MW-3. PCE contamination in MW-3 has steadily increased over the past approximately 6 years. Other on site groundwater monitoring wells have chlorinated solvent detections as well, but MW-3 and MW-A7 have shown the highest concentrations of 1,1,1-TCA and PCE.

2. Pursuant to Section 12(d) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(d)), no person shall deposit any contaminants upon the land in such place and manner so as to create a water pollution hazard.

   A violation of Section 12(d) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(d)) is alleged for the following reason: **Contaminants were deposited upon the land in such a place and manner that created a water pollution hazard. Chlorinated solvent contamination above the Class I groundwater objectives is present in on site groundwater. The groundwater contamination has been present for approximately 20 years. Shallow groundwater flow under the site is to the north-northwest, towards the nearby Kishwaukee River. Residential/nonresidential private water wells are located to the north-northwest, directly down gradient of the site. The private wells are within ½ mile of the site and its unknown at this time if the private wells have been impacted by the chlorinated solvent groundwater contamination.**

   1,1,1-TCA was detected as high as 4,900 ppb, in 1999, in on site groundwater monitoring well MW-3. More recently in 2007, 1,1,1-TCA was detected as high as 501 ppb in on site groundwater monitoring well MW-A7. PCE was detected as high as 18.8 ppb, in 2007, in on site groundwater monitoring well MW-3. PCE contamination in MW-3 has steadily increased over the past approximately 6 years. Other on site groundwater monitoring wells have chlorinated solvent detections as well, but MW-3 and MW-A7 have shown the highest concentrations of 1,1,1-TCA and PCE.

SUGGESTED RESOLUTIONS

1. Immediately determine the source(s) of 1,1,1-TCA, PCE and other related contaminants that are present in groundwater under the subject site by conducting an Investigation.

2. Immediately determine the extent of 1,1,1-TCA, PCE and other related contaminants in soil and groundwater, both on site and off site, by conducting an Investigation.

3. Collect representative groundwater samples from all down gradient residential/nonresidential private water wells (approximately 16) located within approximately ½ mile of the site, see the attached map. The private water well samples shall be collected from an unfiltered and unsoftened spigot, after an appropriate water system purge is conducted. The samples shall be analyzed for Volatile Organic Compounds at an Illinois EPA approved laboratory. Illinois EPA would like to oversee the sampling event.

4. Remediate, if necessary, to meet all applicable remediation objectives for soil and groundwater.

* Immediately manage the groundwater to mitigate impairment caused by the release of volatile organic compounds.

* All copies of receipts/manifests, and analytical reports must be submitted to the Illinois EPA that document the proper disposal of any waste (i.e. impacted soil, contaminated groundwater). The receipts/manifests must be submitted within 10 days after the off-site shipment.

* Within 45 days from the receipt of this letter, enroll in the Site Remediation Program.

* A Site Investigation Work Plan shall be submitted within 30 days of the Illinois EPA approval of the Site Remediation application.

* The Site Investigation shall be implemented within 30 days of the Illinois EPA approval of the Site Investigation Work Plan.

* The Site Investigation Report shall be submitted within 180 days of approval of the Site Investigation Work Plan.

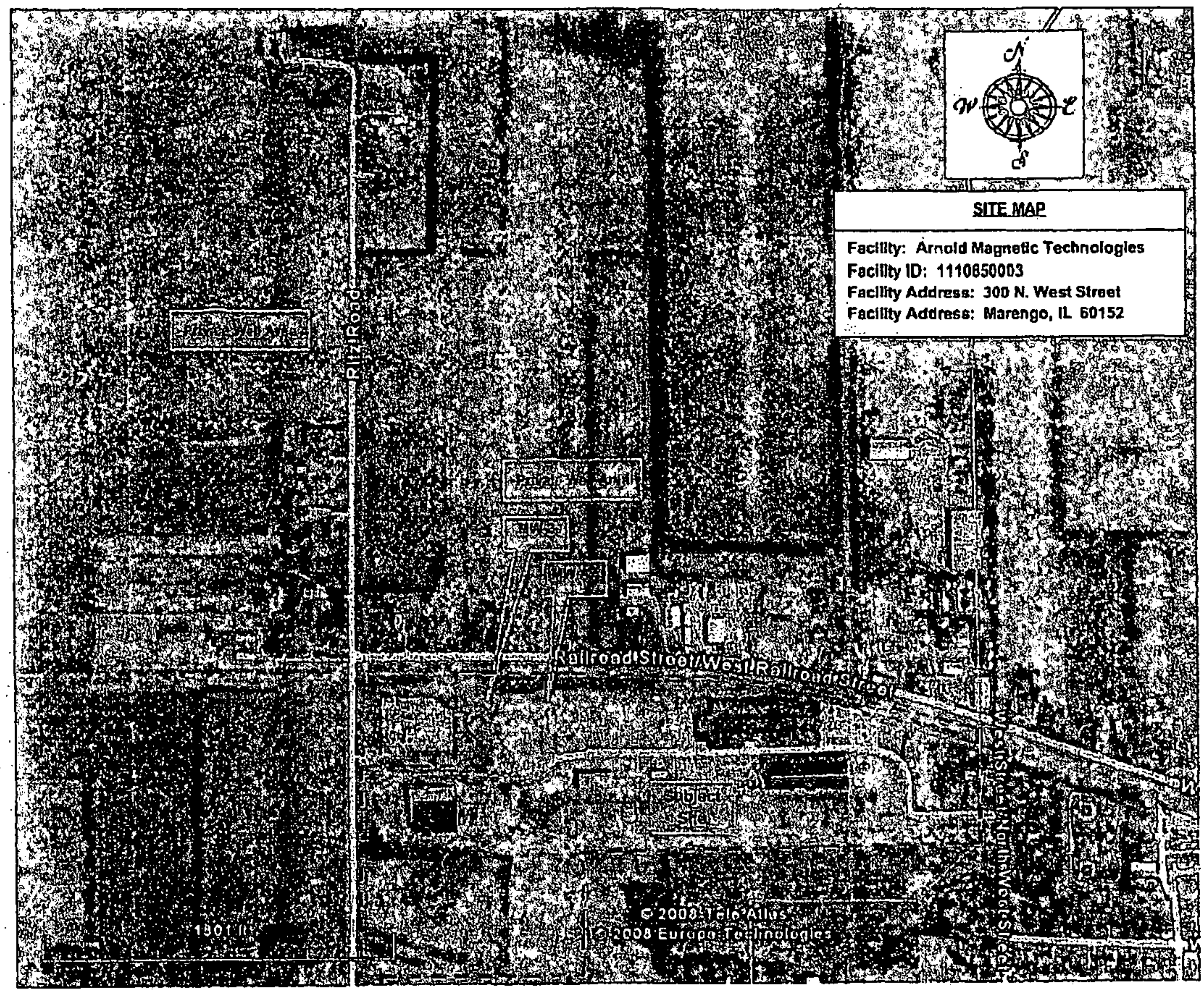
* The Remediation Objectives Report shall be submitted within 30 days of approval of the Site Investigation Report.

* The Remedial Action Plan shall be submitted within 30 days of Illinois EPA approval of the Remedial Objectives Report.

* The remedial action shall be implemented within 30 days of Illinois EPA approval of the Remediation Action Plan.

* The Remedial Action Completion Report shall be submitted within 365 days of Illinois EPA approval of the Remedial Action Plan.

The written response to this Violation Notice must include information in rebuttal, explanation, or justification of each alleged violation and must be submitted to the Illinois EPA by certified mail, within 45 days of receipt of this Violation Notice. The written response must also include a proposed Compliance Commitment Agreement that commits to specific remedial actions, includes specified times for achieving each commitment, and may include a statement that compliance has been achieved.


SITE MAP
Facility: Arnold Magnetic Technologies
Facility ID: 1110850003
Facility Address: 300 N. West Street
Facility Address: Marengo, IL 60152
Ritz Road
Railroad Street/West Railroad Street
© 2008 Tele Atlas
© 2008 Europa Technologies

300 WEST LLC

2340 RIVER ROAD, SUITE 310
DES PLAINES, ILLINOIS 60018
FAX (847) 257-8888

June 17, 2008

VIA FEDERAL EXPRESS
IEPA – Bureau of Land
9511 West Harrison Street, 3rd Floor
Des Plaines, Illinois 60016
Attention: Thomas Rivera

Re: Violation Notice Number, L-2008-01123

Dear Mr. Rivera:

This letter shall serve as a written response to Violation Notice Number L-2008-01057 on behalf of 300 West LLC, owner of the property at 300 N. West Street, Marengo.

1. The source of 1,1,1-TCA and PCE detected in the groundwater monitoring wells along the northwestern portion of the subject property was reportedly related to historical operations conducted in that area. A historical subject building ("Building #6") was located at the northwestern corner of the subject property and was reportedly demolished approximately 10-20 years ago. Historical industrial operations conducted within Building #6 reportedly utilized chlorinated solvents in production processes. The historical utilization of chlorinated solvents in this area is believed to be the source of elevated levels of 1,1,1-TCA and PCE in the groundwater.

2. 300 West LLC has engaged Environmental Group Services Limited ("EGSL"), and EGSL currently is working with Mr. Thomas Rivera of the IEPA regarding off-site groundwater sampling. Addresses were obtained from all of the northern, western, and northwestern properties that are possibly utilizing groundwater wells for potable purposes. Mr. Rivera sent letters to all of the neighboring addresses requesting access to the properties in order to sample the groundwater wells for each of the sites. At this time, Mr. Rivera and EGSL are awaiting for responses from the neighboring properties. Upon receipt of any and all responses, neighboring wells will be sampled, and all groundwater samples will be submitted to an accredited laboratory of analysis of VOCs. It is anticipated that the on-site sampling will be complete in approximately one month.

3. The subject property has been enrolled into the IEPA's Site Remediation Program (SRP). Tim Zook has been assigned as the project manager for the site. Upon submittal of the Remedial Action Completion Report (RACR), a Comprehensive NFR for residential properties will be requested for the entire subject property. The RACR is anticipated to be complete by December 2008.

Do not hesitate to call me (312.420.6046) with any questions.

Very truly yours,

John M. Daley

Enclosures

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

217/782-6762
TDD 217/782-9143

July 16, 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7007 2560 0003 2097 0406

300 WEST LLC
Attn: John M. Daley
2340 River Road, Suite 310
Des Plaines, Illinois 60018

Re: **Compliance Proposal dated June 17, 2008**
Violation Notice L-2008-01123 and L-2008-01057
BOL # 1110650003 – McHenry County
Marengo/Arnold Magnetic Technologies
Compliance File

Dear Mr. Daley:

On June 17, 2008 the Illinois Environmental Protection Agency ("Illinois EPA") received your transmittal concerning Arnold Magnetic Technologies in response to the Febraury 28, 2008 and April 15, 2008 Violation Notice. This transmittal proposed certain steps and initiatives, whose purpose was to bring Arnold Magnetic Technologies into compliance with State law and regulations remedying the violations alleged in the Violation Notice, **L-2008-01123 and L-2008-01057**. Unfortunately, the Illinois EPA cannot consider this transmittal as a Compliance Commitment Agreement ("CCA") under the Illinois Environmental Protection Act, Section 31(a)(2) [415 ILCS 5/31(a)(2) (1996)], because the transmittal was received after the 45-day deadline.

Nonetheless, the Illinois EPA evaluated your proposal and we are pleased to inform you that the timely implementation of the proposal will allow the resolution of this matter short of formal enforcement at this time. However, this matter remains open to formal enforcement if necessary. The failure to achieve compliance as proposed will result in the reconsideration of this matter including referral to the Office of the Attorney General, the State's Attorney of McHenry County, or the United States Environmental Protection Agency for formal enforcement and the imposition of penalties.

Further, if any of the alleged violations remain the subject of disagreement between the Illinois EPA and Arnold Magnetic Technologies, this matter may be considered for referral to the Office of the Attorney General, the State's Attorney of McHenry County, or the United States Environmental Protection Agency for formal enforcement action and the imposition of penalties.

Written communications should be directed to:

Illinois EPA – Bureau of Land
Attn: Charles Grigalauski
9511 West Harrison, 3rd Floor
Des Plaines, Illinois 60016

All communications must include reference to your **Violation Notice L-2008-01123 and L-2008-01057**. If you have questions regarding this matter, please contact **Thomas Rivera** at **847/294-4079**.

Sincerely,

Paul M. Purseglove, Manager
Field Operations Section
Bureau of Land

bcc: Bureau File
DesPlaines Region

ATTORNEY GENERAL

AGREED PRELININARY INJUNCTION ORDER

IN THE CIRCUIT COURT OF THE TWENTY-SECOND JUDICIAL CIRCUIT
McHENRY COUNTY, ILLINOIS
CHANCERY DIVISION

PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* LISA MADIGAN, Attorney General of the State Illinois,	)	
Plaintiff,	)	
v.	)	No. 13 CH 1046
300 WEST LLC, an Illinois corporation, and THE ARNOLD ENGINEERING CO., an Illinois corporation a/k/a Arnold Magnetic Technologies Corporation,	)	
Defendants.	)	

AGREED PRELIMINARY INJUNCTION ORDER

This cause coming before this Court on Plaintiff's Motion for Preliminary Injunction; due notice having been given; the Court having jurisdiction over the parties and the subject matter herein; and the Court otherwise being duly advised in the premises;

NOW THEREFORE, Plaintiff having alleged that a substantial danger to the environment or to the health and welfare of persons exists pursuant to the Illinois Environmental Protection Act, 415 ILCS 5/1 *et seq.* (2012) ("Act"), and the parties having agreed to the entry of this Agreed Preliminary Injunction Order, the Court enters the following preliminary injunction pursuant to Section 43(a) of the Act, 415 ILCS 5/43(a) (2012), which shall remain in effect until further order of this Court. IT IS HEREBY ORDERED THAT:

I. BACKGROUND

1. Plaintiff incorporates by reference herein the allegations in its Verified Complaint for Injunction and Civil Penalties filed on June 14, 2013 (the "Verified Complaint"), which allegations are neither admitted nor denied by the Defendants.

2. On June 14, 2013, this Court entered the Agreed Immediate Injunction Order. This Agreed Preliminary Injunction Order supersedes the Agreed Immediate Injunction Order entered on June 14, 2013.

II. GENERAL PROVISIONS

3. This Order is not a final resolution of the merits of Plaintiff's Verified Complaint, but rather addresses current concerns regarding the groundwater contamination alleged in the Verified Complaint. This Order does not, nor is it intended to, determine the liability of the Defendants for the subject matter of the Verified Complaint, except as to their compliance with the requirements of the Agreed Preliminary Injunction Order itself.

4. By entering into this Agreed Preliminary Injunction Order and complying with its terms, the Defendants do not affirmatively admit, and at this time deny, the allegations of violation within the Verified Complaint and referenced above, and this Agreed Preliminary Injunction Order and compliance therewith shall not be interpreted as including such admission

5. This Order shall apply to and bind the Plaintiff and the Defendants.

III. CONTINUED ACTION

6. Bottled Water Delivery. The Defendants are currently providing bottled water to certain private water well owners and shall continue to provide an alternative source of drinking water to the owners of the private water wells located at 4907 Ritz Road, 4913 Ritz Road, 4805 Ritz Road, 5010 Ritz Road, 5011 Ritz Road, 21902 Railroad St. and 22104 Railroad St. in

Marengo, McHenry County, Illinois (collectively, the "Private Well Properties") by replenishing the water consumed by the residents in each Private Well Property so as to provide at least 2 gallons per person per day at each Private Well Property, on a weekly basis or such other schedule as agreed to in writing by the resident.

a. The Defendants shall continue distributing potable drinking water to the owners of the Private Well Properties until the Defendants receive written authorization from the Illinois Attorney General's Office and the Illinois EPA that they may cease such drinking water distribution or until such further Order of the Court.

b. The Defendants may submit a written request to the Illinois EPA to modify this Paragraph III.6. To the extent the Illinois EPA approves such written request, the parties may modify this Paragraph III.6. without further Order of the Court.

7. Well Water Sampling. The Defendants shall conduct water sampling at the private water wells as follows:

a. Subject to Paragraph III.7.g. herein, the Defendants shall cause water sampling to be conducted from the drinking water wells at the following properties in Marengo, McHenry County, Illinois (the "Water Sampling Properties"):

4501 Ritz Road	4106 Ritz Road
4210 Ritz Road	4805 Ritz Road
4907 Ritz Road	4913 Ritz Road
5011 Ritz Road	5017 Ritz Road
5010 Ritz Road	22110 Railroad St.
22104 Railroad St.	22012 Railroad St.
21902 Railroad St.	21816 Railroad St.
21820 Railroad St.	21606 Railroad St.
21602 Railroad St.	

b. The Defendants shall test each water sample for 1,1-Dichloroethylene, 1,1,1-Trichloroethane, cis-1,2-Dichloroethylene, 1,2-Dichloroethane, trans-1,2-

Dichloroethylene, Trichloroethylene, Tetrachloroethylene and Vinyl Chloride (collectively referred to herein as the "Chlorinated VOCs").

c. Commencing with the quarter beginning October 1, 2013, the Defendants shall conduct the water sampling on a date within the first 30 days of each quarter beginning January 1, April 1, July 1, and October 1 of each year.

d. Samples must be analyzed by a laboratory certified by the Illinois EPA for analysis.

e. The Defendants shall submit the results of such water sampling to the Illinois EPA within thirty (30) days of the date that each water sampling event occurs.

f. The Defendants shall continue to conduct water sampling at the Water Sampling Properties until the Defendants receive written authorization from the Illinois EPA that they may cease conducting such sampling or until such further Order of the Court.

g. The Defendants shall promptly notify the Illinois EPA if they are unable to obtain access to any of the Water Sampling Properties to conduct the water sampling. To the extent an owner of a Water Sampling Property refuses to provide access for water sampling on such property, within five (5) days after the scheduled sampling date, the Defendants shall provide the Illinois EPA with a notarized affidavit attesting as such.

IV. PRELIMINARY REMEDIAL ACTION BY DEFENDANTS

8. For purposes of Section IV of this Agreed Preliminary Injunction Order, the term "Northern Portion of the Site" shall mean the northern one-half of the property located at 300 North West Street, Marengo, McHenry County, Illinois, as set forth on Exhibit A attached hereto.

9. On August 12, 2013, the Defendants submitted a "Site Investigation Work Plan" to the Plaintiff (as identified in Section V.14. below entitled "Notices") regarding the Northern Portion of the Site for review and approval in accordance with the requirements detailed in Attachments A and B, attached hereto and incorporated herein.

10. Within fourteen (14) business days of the Plaintiff's written approval of the Site Investigation Work Plan, the Defendants shall commence the implementation of the Site Investigation Work Plan.

11. Within ninety (90) calendar days of the Plaintiff's approval of the Site Investigation Work Plan, the Defendants shall submit to the Plaintiff a Focused Site Investigation Report regarding the Northern Portion of the Site for review and approval in accordance with the requirements detailed in Attachments A and B, attached hereto and incorporated herein. In the Focused Site Investigation Report, the Defendants may propose to the Plaintiffs for review and approval, a new definition of the term "Northern Portion of the Site" for purposes of future reporting and remediation requirements.

12. The Site Investigation Report shall be signed and sealed by an Illinois Licensed Professional Engineer or Geologist.

13. The Defendants shall submit the Site Investigation Report within the timeframes indicated in this Agreed Preliminary Injunction Order. If the Plaintiff approves with conditions or disapproves of the Site Investigation Work Plan or the Site Investigation Report, the Defendants shall, within fourteen (14) business days after receiving Plaintiff's written notice of such approval with conditions or disapproval, unless otherwise specifically provided herein or unless the Plaintiff grants, in writing, a longer time period, submit a proposal to the persons identified in Section V (Notices), that addresses all conditions or deficiencies identified by the

Plaintiff in its approval with conditions or disapproval.

V. NOTICES

14. All submittals and correspondence relating to the requirements of this Order shall be directed to the following persons:

FOR PLAINTIFF

Kathryn Pamenter
Jamie Davidson
Assistant Attorneys General
Illinois Attorney General's Office
Environmental Bureau North
69 W. Washington St., 18th Floor
Chicago, Illinois 60602
(312) 814-0608
(312) 814-6986
KPamenter@atg.state.il.us
JDavidson@atg.state.il.us
(Electronic Copy)

Michelle Ryan
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794
(217) 782-9817
Michelle.Ryan@illinois.gov
(Electronic Copy)

Tim Zook
Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794
(217) 524-3300
Tim.Zook@illinois.gov
(2 Hard Copies; 1 Electronic Copy)

FOR DEFENDANTS:

300 West LLC
Attn: John Daley
2340 River Road, Suite 310
Des Plaines, Illinois 60018
312.420.6046

300 West LLC
Klein, Thorpe & Jenkins, Ltd.
c/o Dennis G. Walsh, Esq.
20 North Wacker Drive, Suite 1660
Chicago, Illinois 60606
(312) 984-6400

The Arnold Engineering Co.
c/o Craig A. Sturtz, Esq.
Squire Sanders (US) LLP
2000 Huntington Center
41 South High Street
Columbus, Ohio 43215
614.365.2761

VI. DUTY TO COOPERATE

15. The Parties shall cooperate with each other in implementation of this Order.

VII. COMPLIANCE WITH OTHER LAWS AND REGULATIONS

16. This Order in no way affects the responsibilities of the Defendants to comply with any other federal, state or local laws or regulations, including but not limited to the Act.

VIII. STIPULATED PENALTIES

17. If the Defendants fail to complete any activity or fail to comply with any of the reporting requirements by the dates specified in this Order, the Defendants shall pay to Plaintiff stipulated penalties in the amount of $250.00 per day, per violation, until such time that compliance is achieved. To the extent an owner of a Water Sampling Property refuses to grant access to the Defendants to conduct water sampling, this Section VII shall not apply solely to the extent the Defendants comply with Paragraph III.7.g.

18. In the event Plaintiff determines that a violation that could be subject to stipulated penalties has occurred, Plaintiff will provide written notification of such violation to the Defendants and their representatives identified in Paragraph 14 of this Order. Failure by Plaintiff to provide such written notification shall not be construed as a waiver of Plaintiff's right to seek stipulated penalties under this Order.

19. All stipulated penalties owed shall be payable within forty-five (45) calendar days of the receipt of written demand from Plaintiff, unless such penalties, or any portion thereof, are disputed by the Defendants, which dispute shall be resolved pursuant to Paragraph 23 of this Order. All penalties shall be paid by certified check or money order payable to the "Illinois EPA" for deposit in the Environmental Protection Trust Fund and delivered to:

Illinois Environmental Protection Agency
Fiscal Services Division
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

The case name and case number shall appear on the face of the certified check or money order. A copy of the certified check or money order and any transmittal letter shall be sent to:

Kathryn A. Pamenter
Environmental Bureau
Illinois Attorney General's Office
69 W. Washington St, 18th Flr.
Chicago, Illinois 60602

IX. COST RECOVERY

20. The Defendants shall reimburse the Illinois EPA for all reasonable and necessary future costs incurred and documented by the Illinois EPA in its oversight of the investigation of the Northern Portion of the Site, and its review and evaluation of documents and reports submitted to it pursuant to the Agreed Preliminary Injunction Order consistent with the

reimbursement of project costs incurred by the Illinois EPA under the Site Remediation Program, including, but not limited to, all costs associated with Community Relations activities ("Future Response Costs"). Future Response Costs shall mean all unpaid, reasonable and necessary costs incurred by the Illinois EPA on and after July 1, 2013. Future Response Costs shall include direct program costs, allocated program costs and indirect costs.

a. Direct program costs shall include, but are not limited to, all related payroll costs for all applicable organizational units, outside contractor/consultants fees, travel costs, and costs associated with photographs, maps, and laboratory services.

b. Allocated program costs represent program costs that are related to the overall program operations, including but not limited to, fiscal services, bill preparation and clerical duties, Division of Legal Counsel program meetings and regulatory preparation and implementation, and staff program meetings and management oversight for the Bureau of Land, Bureau of Water, Office of Emergency Response, Toxicity Assessment Unit, and Office of Community Relations.

c. Indirect costs are those costs incurred by the Illinois EPA in day-to-day operations, including but not limited to, the operation and maintenance of buildings, utilities and administrative costs.

21. The Illinois EPA will submit to the Defendant on a quarterly basis invoices for Future Response Costs incurred during the billing period.

a. Within forty-five (45) days of the receipt of each invoice, the Defendant shall pay, unless contested pursuant to Section X (Dispute Resolution) of this Agreed Preliminary Injunction Order, the Future Response Costs detailed therein by means of a check or

checks made payable to the Illinois Environmental Protection Agency for deposit into the Hazardous Waste Fund.

b. The case name, case number, LPC # 1110650003, LP52-62W, and the Defendants' FEIN numbers shall appear on the face of the check. The Defendants shall send each check and a copy of the Illinois EPA invoice to:

Division of Administration
Fiscal Services Section
Illinois EPA
1021 North Grand Avenue East
P. O. Box 19276
Springfield, Illinois 62794-9276

c. If the Defendants do not receive an invoice in the time frame indicated in paragraph 21, this does not waive the Illinois EPA's right to submit an invoice or receive cost reimbursement for Future Response Costs.

d. A copy of the check(s) and the transmittal letter shall be sent to:

Kathryn A. Pamenter
Assistant Attorney General
Environmental Bureau
Illinois Attorney General's Office
69 W. Washington Street, Suite 1800
Chicago, Illinois 60602

22. The dispute resolution procedures set forth in Section X of this Agreed Preliminary Injunction Order shall be the exclusive mechanism for resolving disputes regarding the Defendants' obligation to reimburse the Illinois EPA for its Future Response Costs; except that for purposes of this Section IX only, the informal negotiation period shall be extended to twenty-one (21) days after written initiation of dispute resolution proceedings.

X. DISPUTE RESOLUTION

23. The parties shall use their best efforts to resolve any and all disputes or

differences of opinion arising with regard to this Order, informally and in good faith, within seven (7) days of a party providing notice to the other parties of such a dispute. If, however, a dispute arises concerning this Order that the parties are unable to resolve informally, either party may, by written motion, within three (3) days of conclusion of the informal resolution efforts, request that an evidentiary hearing be held before the Circuit Court for the Twenty-Second Judicial Circuit, McHenry County, Illinois, to resolve the dispute between the parties. Upon Plaintiff's establishment of a prima facie violation of the Order, the Defendants shall bear the burden of proving that it did not violate this Order. Stipulated penalties shall not attach if the Defendants prevail in a dispute resolution.

XI. FORCE MAJEURE

24. The Defendants may declare *force majeure* in appropriate circumstances as follows:

a. A *force majeure* event is an event arising solely beyond the control of the Defendants, which prevents the timely performance of any of the requirements of this Order. For the purposes of this Order, *force majeure* shall include, but is not limited to, events such as, floods, fires, tornadoes, other natural disasters, labor disputes beyond the reasonable control of the Defendants, or prohibitions imposed by any court having jurisdiction over the Defendants.

b. When, in the opinion of the Defendants, a *force majeure* event occurs which causes or may cause a delay in the performance of any of the requirements of this Order, the Defendants shall orally notify the Plaintiff within forty-eight (48) hours of the occurrence. Written notice shall be given to the Plaintiff as soon as practicable, but no later than ten (10) business days after the claimed occurrence.

c. Failure by the Defendants to comply with the notice requirements of the preceding paragraph shall render this *force majeure* provision voidable by Plaintiff as to the specific event for which the Defendants have failed to comply with the notice requirement. If voided, this section shall be of no effect as to the particular event involved.

d. An increase in costs associated with implementing any requirement of this Order shall not, by itself, excuse the Defendants under the provisions of this Order from a failure to comply with such a requirement.

XII. RIGHT OF ENTRY

25. In addition to any other authority, the Illinois EPA, its employees and representatives, and the Attorney General, her agents and representatives, shall have the right of entry into and upon the portions of the Site owned by or under control of the Defendants and which are the subject of this Order, at all reasonable times for the purpose of carrying out inspections of the Site. Plaintiff agrees to comply with any safety regulations in effect at the Site at the time of inspection. In conducting such inspections, the Illinois EPA, its employees and representatives, and the Attorney General, her employees and representatives, may take photographs, samples, and collect information, as they deem necessary. Plaintiff shall provide upon the Defendants' written request copies of any photographs, files, records, data or information collected during said inspection.

XIII. EXTENSIONS AND MODIFICATIONS

26. The parties may, by mutual consent, extend any compliance dates or modify the terms of this Order without leave of court. Any such agreed modification shall be in writing, signed by authorized representatives of each party and incorporated into this Order by reference.

Any request for modification shall be made by the Defendants in writing and shall be independent of any other submittal made pursuant to this Order. Moreover, notice of a request for any proposed modification shall be provided to the Plaintiff's representatives listed in Paragraph 14 of this Order.

XIV. RESERVATION OF RIGHTS

27. Nothing contained herein shall be deemed at this time, and compliance with this order by the Defendants shall not be deemed, an admission of any wrongful conduct or violation of any applicable statute, law or regulations thereunder by the Defendants, nor a finding of fact or adjudication by this Court of any of the facts or claims contained in the Verified Complaint. Plaintiff reserves the right to seek additional technical relief and civil penalties in this matter.

28. This Order is without prejudice to and shall not act as a waiver of any right of contribution the Defendants may now or in the future have against any other person or entity.

XV. RETENTION OF JURISDICTION

29. This Court shall retain jurisdiction of this matter and shall consider any motion by Plaintiff or the Defendants for the purposes of interpreting and enforcing the terms and conditions of this Order.

XVI. SIGNATURE

30. This Order may be signed in counterparts, all of which shall be considered one agreement.

XVII. STATUS CONFERENCE WITH THE COURT

31. This Agreed Preliminary Injunction Order resolves Plaintiff's Motion for preliminary injunction. This matter is set for a status conference on December 4, 2013, at 9:15 a.m. without further notice.

[Remainder of Page Blank; Continued on Page 14]

WHEREFORE the parties, by their representatives, enter into this Agreed Preliminary Injunction Order and submit it to the Court that it may be approved and entered.

AGREED:

PEOPLE OF THE STATE OF ILLINOIS
ex rel. LISA MADIGAN, Attorney General
of the State of Illinois,

MATTHEW J. DUNN, Chief
Environmental/Asbestos Litigation Division

By: _____
Elizabeth Wallace, Chief
Environmental Bureau
Assistant Attorney General

Date: _____

FOR DEFENDANT 300 WEST LLC

BY: _____

Name Dennis G. Walsh
Title ATTORNEY

DATE: August 19, 2013

FOR DEFENDANT THE ARNOLD ENGINEERING CO.

BY: _____
Name
Title

DATE: _____

ENTERED:

_____
JUDGE

Date: _____

WHEREFORE the parties, by their representatives, enter into this Agreed Preliminary Injunction Order and submit it to the Court that it may be approved and entered.

AGREED:

PEOPLE OF THE STATE OF ILLINOIS
ex rel. LISA MADIGAN, Attorney General
of the State of Illinois,

MATTHEW J. DUNN, Chief
Environmental/Asbestos Litigation Division

By: _____
Elizabeth Wallace, Chief
Environmental Bureau
Assistant Attorney General

Date: _____

FOR DEFENDANT 300 WEST LLC

BY: _____

Name
Title

DATE: _____

FOR DEFENDANT THE ARNOLD ENGINEERING CO.

BY: Craig A. Stuntz
Name Craig A. Stuntz
Title Attorney for Defendant The Arnold Engineering Co.

DATE: August 19, 2013

ENTERED:

_____
JUDGE

Date: _____

WHEREFORE the parties, by their representatives, enter into this Agreed Preliminary Injunction Order and submit it to the Court that it may be approved and entered.

AGREED:

PEOPLE OF THE STATE OF ILLINOIS
ex rel. LISA MADIGAN, Attorney General
of the State of Illinois,

MATTHEW J. DUNN, Chief
Environmental/Asbestos Litigation Division

By: _____
Elizabeth Wallace, Chief
Environmental Bureau
Assistant Attorney General

Date: 8/19/13

FOR DEFENDANT 300 WEST LLC

BY: _____

Name
Title

DATE: _____

FOR DEFENDANT THE ARNOLD ENGINEERING CO.

BY: _____
Name
Title

DATE: _____

ENTERED: _____
JUDGE

Date: _____

ATTORNEY GENERAL

VERFIFIED COMPLINAT FOR

INJUNCTION AND CIVIL PENALTIES

IN THE CIRCUIT COURT OF THE TWENTY-SECOND JUDICIAL CIRCUIT
McHENRY COUNTY, ILLINOIS
CHANCERY DIVISION

PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* LISA MADIGAN, Attorney General of the State Illinois, Plaintiff,	)	
v.	)	No. 13CH1046
300 WEST LLC, an Illinois corporation, and THE ARNOLD ENGINEERING CO., an Illinois corporation a/k/a Arnold Magnetic Technologies Corporation, Defendants.	)	

VERIFIED COMPLAINT FOR INJUNCTION AND CIVIL PENALTIES

Plaintiff, PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* LISA MADIGAN, Attorney General of the State of Illinois, on her own motion and at the request of the Illinois Environmental Protection Agency ("Illinois EPA"), complains of the Defendants, 300 WEST LLC, an Illinois corporation ("300 West"), and THE ARNOLD ENGINEERING CO., an Illinois corporation also known as Arnold Magnetic Technologies Corporation, a Delaware corporation not authorized to do business in Illinois ("Arnold" and together with 300 West, the "Defendants"), as follows:

COUNT I

SUBSTANTIAL DANGER TO THE ENVIRONMENT, PUBLIC HEALTH AND WELFARE

1. This Count is brought on behalf of the PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* LISA MADIGAN, the Attorney General of the State of Illinois, on her own motion and at the request of the Illinois EPA, against the Defendants, 300 West and Arnold, pursuant to the

terms and provisions of Section 43(a) of the Illinois Environmental Protection Act (the "Act"), 415 ILCS 5/43(a) (2012), and is an action to restrain a substantial danger to public health and welfare and to the environment.

2. The Illinois EPA is an administrative agency of the State of Illinois created pursuant to Section 4 of the Act, 415 ILCS 5/4 (2012), and charged, *inter alia*, with the duty of enforcing the Act.

3. At all times relevant to this Complaint, Defendant 300 West LLC was and is an Illinois corporation in good standing.

4. At all times relevant to this Complaint, Defendant The Arnold Engineering Co. was and is an Illinois corporation in good standing and also known as Arnold Magnetic Technologies Corporation, a Delaware corporation not authorized to do business in Illinois.

5. For approximately 100 years, Arnold owned, and operated a manufacturing facility at, the property located at 300 North West Street, Marengo, McHenry County, Illinois (the "Site"). Upon information and belief, Arnold historically utilized chlorinated solvents in its production processes in a building located at the northwestern corner of the Site, commonly known as "Building #6." On such dates better known to the Defendants, operations at Building #6 ceased, and the building was demolished. Wastewater treatment ponds have been, and are currently, located at the north side of the Site, adjacent to the former Building #6 area.

6. In or about June 2003, and on such dates better known to the Defendants, Arnold sold the Site to 300 West, who has since owned, and continues to own, the Site. Since selling the Site to 300 West, Arnold has leased the Site from 300 West and conducted manufacturing operations at the Site.

7. Shallow groundwater flow under the Site is to the north-northwest.

8. Seventeen private and non-community water wells are located within an area to the north-northwest, approximately one mile downgradient of the Site. The Kishwaukee River is located approximately 1.5 miles north-northwest of the Site.

9. On February 28, 2008, the Illinois EPA issued a Violation Notice numbered L-2008-01057 to Arnold due to chlorinated solvent groundwater contamination existing on-Site (the "February 28, 2008 Violation Notice"). A true and correct copy of the February 28, 2008 Violation Notice is attached hereto as Exhibit 1.

10. On April 15, 2008, the Illinois EPA issued a Violation Notice numbered L-2008-01123 to 300 West due to chlorinated solvent groundwater contamination existing on-Site (the "April 15, 2008 Violation Notice"). A true and correct copy of the April 15, 2008 Violation Notice is attached hereto as Exhibit 2.

11. In or about May 2008, and on such date better known to the Defendants, the Site entered the Illinois EPA's "Site Remediation Program."

12. Since entering the Site Remediation Program, and on such dates better known to the Defendants, the Defendants have conducted limited on-Site and off-Site groundwater sampling from monitoring wells which were installed as follows: (a) Monitoring Wells 1-16 installed on-Site in May 2010; (b) Monitoring Well 17 installed on-Site in October 2010; (c) Monitoring Wells 18-21 installed off-Site in October 2010; (d) Monitoring Well 22 installed on-Site in February 2011; and (e) Monitoring Well 23 installed off-Site in February 2011.

13. Pursuant to the authority granted in Section 8(a) of the Illinois Groundwater Protection Act, 415 ILCS 55/8(a) (2012), the Illinois Pollution Control Board ("Board") has promulgated rules and regulations to establish comprehensive water quality standards which are

specifically for the protection of groundwater and which are codified as 35 Ill. Adm. Code 620: Groundwater Quality Standards ("Board Groundwater Quality Regulations").

14. Class I groundwater is defined in Section 620.210(a) of the Board Groundwater Quality Regulations, 35 Ill. Adm. Code 620.210(a), as follows:

a) Groundwater located 10 feet or more below the land surface and within:

1) The minimum setback zone of a well which serves as a potable water supply and to the bottom of such well;

15. The groundwater underlying the Site is within the minimum setback zone of a number of private and non-community potable water wells, and is "Class I Groundwater" as that term is defined in Section 620.210(a) of the Board Groundwater Quality Regulations, 35 Ill. Adm. Code 620.210(a).

16. Section 620.410(b) of the Board Groundwater Quality Regulations, 35 Ill. Adm. Code 620.410(b), provides as follows:

b) Organic Chemical Constituents

Except due to natural causes or as provided in Section 620.450 or subsection (d), concentrations of the following organic chemical constituents shall not be exceeded in Class I groundwater:

Constituent	**Standard** (1 mg/L = 1ppm = 0.001 ppb)
1,1-Dichloroethylene ("1,1-DCE")	7ppb
cis-1,2-Dichloroethylene ("cis-1,2-DCE")	70ppb
1,2-Dichloroethane ("DCA")	5ppb
trans-1,2-Dichloroethylene ("trans-1,2-DCE")	100ppb
Trichloroethylene ("TCE")	5ppb
Tetrachloroethylene ("PCE")	5ppb
Vinyl Chloride	2ppb

(1,1-DCE, cis-1,2-DCE, DCA, trans-1,2-DCE, TCE, PCE and Vinyl Chloride are chlorinated volatile organic compounds and are collectively referred to herein as the "Chlorinated VOCs.")

17. 1,1-DCE, cis-1,2-DCE, DCA, trans-1,2-DCE, TCE and PCE degrade chemically over time into Vinyl Chloride, which can dissolve in water and migrate through groundwater.

18. Vinyl Chloride is recognized by the United States Department of Health and Human Services, the United States Environmental Protection Agency ("U.S. EPA") and the International Agency for Research on Cancer as a known human carcinogen. Short term exposure to high levels of Vinyl Chloride can cause damage to the nervous system. Long term exposure can cause cancer and may damage the liver.

19. TCE has recently been recognized as a known human carcinogen by the U.S. EPA and is reasonably anticipated to be a human carcinogen by the Agency for Toxic Substances and Disease Registries. Short term exposure to high levels of TCE can cause liver effects, and exposure during pregnancy may cause heart defects in the offspring. Long term exposure to lower levels of TCE can cause cancer, nervous and immune system effects and developmental effects.

20. PCE is reasonably anticipated to be a human carcinogen by the Agency for Toxic Substances and Disease Registries, probably carcinogenic by the International Agency for Research on Cancer, and likely to be a human carcinogen by the U.S. EPA. Short term exposure to high levels of PCE can cause damage to the nervous system. Long term exposure to lower levels of PCE may cause cancer, nervous and respiratory system effects and developmental effects.

21. Short term exposure to high levels of 1,1-DCE can cause damage to the liver and kidneys. Long term exposure to lower levels of 1,1-DCE can cause damage to the liver and kidneys, cardiovascular and nervous system effects and developmental effects.

22. After May 2010, and on such dates better known to the Defendants, Environmental Group Services Limited ("EGSL"), an environmental consultant retained by or on behalf of one or both of the Defendants, collected samples of groundwater from monitoring wells located on-Site. Analytical testing of the samples revealed the highest concentrations of 1,1-DCE, PCE and TCE to be as follows:

Constituent	Sample Location	Constituent Concentration	Class I Groundwater Standards in ppb (1 mg/L = 1ppm = 0.001 ppb)
1,1-DCE	Monitoring Well-1	17 ppb	7 ppb
	Monitoring Well-2	44 ppb	
	Monitoring Well-4	36 ppb	
	Monitoring Well-5	13 ppb	
	Monitoring Well-6	12 ppb	
	Monitoring Well-7	31 ppb	
	Monitoring Well-13	12 ppb	
	Monitoring Well-17	10 ppb	
PCE	Monitoring Well-4	14 ppb	5 ppb
	Monitoring Well-7	12 ppb	
	Monitoring Well-8	10 ppb	
TCE	Monitoring Well-7	7.8 ppb	5 ppb

23. After May 2010, and on such dates better known to the Defendants, EGSL collected samples of groundwater from monitoring wells located approximately fifty feet away from the northwest portion of the Site. Analytical testing of the samples revealed the highest concentrations of 1,1-DCE, PCE and Vinyl Chloride to be as follows:

Constituent	Sample Location	Constituent Concentration	Class I Groundwater Standards in ppb (1 mg/L = 1ppm = 0.001 ppb)
1,1-DCE	Monitoring Well-19	16 ppb	7 ppb
PCE	Monitoring Well-19	9.2 ppb	5 ppb
Vinyl Chloride	Monitoring Well-18	2.5 ppb	2 ppb

24. On May 14, 2013, EGSL, with oversight by the Illinois EPA, collected water samples from thirteen private wells located north-northwest and within one mile of the Site.

Analytical testing of the samples revealed the presence of the Chlorinated VOCs in six of the private wells as follows:

Sample Location	Constituent Concentration (in ppb): (1 mg/L = 1ppm = 0.001 ppb)							
	1,1-DCE	cis-1,2-DCE	DCA	Trans-1,2-DCE	TCE	PCE	Vinyl Chloride	
4907 Ritz Road	39.6*	19	1.34	5.84	2.37	-	1.52	
4913 Ritz Road	22*	13.6	-	5.26	6.47**	1.28	-	
4805 Ritz Road	3.05	1.48	-	-	-	-	-	
5010 Ritz Road	2.62	-	-	-	-	-	0.54	
21902 Railroad St.	0.47	-	-	-	-	-	-	
21816 Railroad St.	2.01	2.23	-	-	4.47	-	-	

*Denotes a class 1 groundwater exceedance above the 7ppb standard
**Denotes a class 1 groundwater exceedance above the 5ppb standard

25. Section 43(a) of the Act, 415 ILCS 5/43(a) (2012), provides in pertinent part as follows:

> (a) In circumstances of substantial danger to the environment or to the public health of persons or to the welfare of persons where such danger is to the livelihood of such persons, the State's Attorney or Attorney General, upon request of the Agency or on his own motion, may institute a civil action for an immediate injunction to halt any discharge or other activity causing or contributing to the danger or to require such other action as may be necessary. The court may issue an ex parte order and shall schedule a hearing on the matter not later than 3 working days from the date of injunction.

26. The Chlorinated VOCs released at the Site have migrated through the groundwater and impacted residential potable water wells. The Chlorinated VOCs have exceeded the Board's Class I Groundwater Quality Regulations in at least two drinking water wells, thereby threatening the health and safety of the public.

27. Defendants 300 West and Arnold, by their actions or omissions as alleged herein, have created circumstances of substantial danger to the environment and the public health and

the Defendants, 300 WEST LLC and THE ARNOLD ENGINEERING CO. a/k/a Arnold Magnetic Technologies Corporation:

1. Finding that the Defendants created and are maintaining a substantial danger to the environment and public health and welfare;

2. Enjoining the Defendants from creating any further substantial endangerment pursuant to Section 43(a) of the Act, 415 ILCS 5/43(a) (2012);

3. Ordering the Defendants to (a) immediately provide an alternative source of drinking water to the owners of the private water wells located at 4907 Ritz Road, 4913 Ritz Road, 4805 Ritz Road, 5010 Ritz Road, 21902 Railroad St. and 21816 Railroad St. in Marengo, McHenry County, Illinois, and (b) conduct water sampling at the private water wells located at 4501 Ritz Road, 4106 Ritz Road, 4210 Ritz Road, 4805 Ritz Road, 4907 Ritz Road, 4913 Ritz Road, 5011 Ritz Road, 5017 Ritz Road, 5010 Ritz Road, 22110 Railroad St., 22104 Railroad St., 22012 Railroad St., 21902 Railroad St., 21816 Railroad St., 21820 Railroad St., 21606 Railroad St. and 21602 Railroad St. in accordance with a schedule approved by Plaintiff to monitor the Chlorinated VOCs downgradient of the Site.

4. Ordering the Defendants to immediately delineate the nature and extent of groundwater contamination of the Chlorinated VOCs, and to remediate such groundwater contamination, both on-Site and off-Site;

5. Assessing against the Defendants, pursuant to Section 42(a) of the Act, 415 ILCS 5/42(a) (2012), a civil penalty of Fifty Thousand Dollars ($50,000.00) for each and every violation of the Act, and an additional Ten Thousand Dollars ($10,000.00) for each day of violation;

6. Ordering the Defendants, pursuant to 415 ILCS 5/42(f) (2012), to pay all costs, including oversight, sampling and clean-up costs, and attorney, expert witness and consultant fees expended by the Plaintiff in its pursuit of this action; and

7. Granting such other relief as this Court deems appropriate and just.

COUNT II

WATER POLLUTION

1. This count is brought on behalf of the People of the State of Illinois, *ex rel.* Lisa Madigan, Attorney General of the State of Illinois, on her own motion, pursuant to Sections 42(d) and (e) of the Act, 415 ILCS 5/42(d) and (e) (2012).

2-29. Plaintiff realleges and incorporates herein by reference paragraphs 2 through 26 and 28 through 31 of Count I as paragraphs 2 through 29 of this Count II.

30. Section 12(a) of the Act, 415 ILCS 5/12(a) (2012), provides, as follows:

No person shall:

a. Cause or threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources, or so as to violate regulations or standards adopted by the Pollution Control Board under this Act.

31. Section 3.165 of the Act, 415 ILCS 5/3.165 (2012), provides the following definition:

"CONTAMINANT" is any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source.

32. The Chlorinated VOCs both on- and off-Site are "contaminants," as that term is defined in Section 3.165 of the Act, 415 ILCS 5/3.165 (2012).

33. Section 3.550 of the Act, 415 ILCS 5/3.550 (2012), provides the following definition:

> "WATERS" means all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this State.

34. The groundwater underlying the Site and located off-Site constitutes "water[s]" of the State of Illinois, as that term is defined in Section 3.550 of the Act, 415 ILCS 5/3.550 (2012).

35. Section 3.545 of the Act, 415 ILCS 5/3.545 (2012), provides the following definition:

> "WATER POLLUTION" is such alteration of the physical, thermal, chemical, biological or radioactive properties of any waters of the State, or such discharge of any contaminant into any waters of the State, as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate uses, or to livestock, wild animals, birds, fish, or other aquatic life.

36. On such dates better known to the Defendants, the Defendants caused, threatened or allowed the discharge and migration of the Chlorinated VOCs into groundwater at the Site. The Chlorinated VOCs were allowed to migrate into groundwater underlying the Site and into off-Site groundwater, including into private water wells located in close proximity to the north-northwest boundary of the Site, impacting drinking water.

37. The Chlorinated VOCs migrating to groundwater at and near the Site created, or threatened to create, a nuisance and rendered the groundwater harmful to human health and the environment, which constitutes water pollution as that term is defined by Section 3.545 of the Act, 415 ILCS 5/3.545 (2012).

38. The Defendants, by their actions as alleged herein, caused, threatened or allowed water pollution, and thereby violated and continue to violate Section 12(a) of the Act, 415 ILCS 5/12(a) (2012).

39. Plaintiff is without an adequate remedy at law. Plaintiff will be irreparably injured and violations of the pertinent environmental statutes and regulations will continue unless and until this Court grants equitable relief in the form of preliminary and, after trial, permanent injunctive relief.

WHEREFORE, Plaintiff, PEOPLE OF THE STATE OF ILLINOIS, respectfully requests that this Court enter an Order granting a preliminary injunction and, after trial, a permanent injunction in favor of Plaintiff, and against the Defendants, 300 WEST LLC and THE ARNOLD ENGINEERING CO. a/k/a Arnold Magnetic Technologies Corporation:

1. Finding that the Defendants violated Section 12(a) of the Act, 415 ILCS 5/12(a) (2012);

2. Enjoining the Defendants from any further violation of Section 12(a) of the Act, 415 ILCS 5/12(a) (2012);

3. Ordering the Defendants to immediately delineate the nature and extent of the groundwater contamination of the Chlorinated VOCs, and to remediate such groundwater contamination, both on-Site and off-Site;

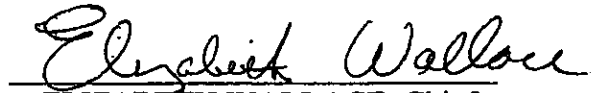
4. Assessing a civil penalty of Fifty Thousand Dollars ($50,000.00) against the Defendants for each violation of the Act and pertinent regulations, and an additional civil penalty of Ten Thousand Dollars ($10,000.00) for each day of violation;

5. Ordering the Defendants, pursuant to 415 ILCS 5/42(f) (2012), to pay all costs, including oversight, sampling and clean-up costs, and attorney, expert witness and consultant fees expended by the Plaintiff in its pursuit of this action; and

6. Granting such other relief as this Court deems appropriate and just.

PEOPLE OF THE STATE OF ILLINOIS,
ex rel. LISA MADIGAN, Attorney
General of the State of Illinois,

MATTHEW J. DUNN, Chief
Environmental Enforcement/
Asbestos Litigation Division

By: 
ELIZABETH WALLACE, Chief
Environmental Bureau
Assistant Attorney General

Of Counsel:
KATHRYN A. PAMENTER
JAMIE DAVIDSON
Assistant Attorneys General
Environmental Bureau
69 W. Washington Street, 18th Floor
Chicago, Illinois 60601
(312) 814-0608
(312) 814-6986

IN THE CIRCUIT COURT OF THE TWENTY-SECOND JUDICIAL CIRCUIT
McHENRY COUNTY, ILLINOIS
CHANCERY DIVISION

PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* LISA MADIGAN, Attorney General of the State Illinois,	)	
Plaintiff,	)	
v.	)	No.
300 WEST LLC, an Illinois corporation, and THE ARNOLD ENGINEERING CO., an Illinois corporation a/k/a Arnold Magnetic Technologies Corporation,	)	
Defendants.	)	

VERIFICATION

I, Thomas Rivera, being duly sworn, on oath state as follows:

1. I am currently employed by the Illinois Environmental Protection Agency ("Illinois EPA") in Des Plaines, Illinois as an Environmental Protection Specialist 3.

2. I have been employed by the Illinois EPA for the past 13 years with the last 11 years in my current position.

3. The duties and responsibilities of my current position include: conducting regulatory/complaint inspections and soil/groundwater sampling, overseeing consultants perform sampling and environmental investigation work, and assisting with conducting soil and groundwater investigations.

4. I have read the foregoing Verified Complaint for Injunction and Civil Penalties (the "Complaint"), and am aware of the contents thereof.

5. The factual matters set forth in Paragraphs 5-12, 17 and 22-25 of Count I of the Complaint are true in substance and in fact, to the best of my knowledge, information and belief.

Thomas Rivera
Illinois Environmental Protection Agency

SUBSCRIBED and SWORN to before me
this 13 day of June, 2013

Notary Public

"OFFICIAL SEAL"
Matt Weiland
Notary Public, State of Illinois
My Commission Expires 5/13/2014

EXHIBIT 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

847/294-4000
847/294-4083 Fax

FEB 2 8 2008

Arnold Magnetic Technologies
300 N. West Street
Marengo, IL 60152

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7004 1350 0003 1611 1531

RECEIVED
MAR 0 5 2008
IEPA/BOL

Attention: Al Kalaczinski

Re: Violation Notice, L-2008-01057
LPC #1110650003 – McHenry County
Marengo/Arnold Magnetic Technologies
Compliance File

Dear Mr. Kalaczinski:

This constitutes a Violation Notice pursuant to Section 31(a)(1) of the [Illinois] Environmental Protection Act, 415 ILCS 5/31(a)(1), and is based on a record review completed on February 26, 2008 by representatives of the Illinois Environmental Protection Agency (Illinois EPA).

The Illinois EPA hereby provides notice of violations of environmental statutes, regulations, or permits as set forth in Attachment A to this letter. Attachment A includes an explanation of the activities that the Illinois EPA believes may resolve the specified violations, including an estimate of a reasonable time period to complete the necessary activities. However, due to the nature and seriousness of the violations cited, please be advised that resolution of the violations may require the involvement of a prosecutorial authority for purposes that may include, among others, the imposition of statutory penalties.

A written response which may include a request for a meeting with representatives of the Illinois EPA, must be submitted via certified mail to the Illinois EPA within 45 days of receipt of this letter. The response must address each violation specified in Attachment A and include for each an explanation of the activities that will be implemented and the time schedule for the completion of that activity. The written response will constitute a proposed Compliance Commitment Agreement (CCA) pursuant to Section 31 of the Act. The Illinois EPA will review the proposed CCA and will accept or reject it within 30 days of receipt.

RELEASABLE
MAY 14 2008
REVIEWER MD

ROCKFORD – 4302 North Main Street, Rockford, IL 61103 – (815) 987-7760 • DES PLAINES – 9511 W. Harrison St., Des Plaines, IL 60016 – (847) 294-4000
ELGIN – 595 South State, Elgin, IL 60123 – (847) 608-3131 • PEORIA – 5415 N. University St., Peoria, IL 61614 – (309) 693-5463
BUREAU OF LAND - PEORIA – 7620 N. University St., Peoria, IL 61614 – (309) 693-5462 • CHAMPAIGN – 2125 South First Street, Champaign, IL 61820 – (217) 278-5800
SPRINGFIELD – 4500 S. Sixth Street Rd., Springfield, IL 62706 – (217) 786-6892 • COLLINSVILLE – 2009 Mall Street, Collinsville, IL 62234 – (618) 346-5120
MARION – 2309 W. Main St., Suite 116, Marion, IL 62959 – (618) 993-7200

If a timely written response to this Violation Notice is not provided, it shall be considered to be a waiver of the opportunity to respond and to meet provided by Section 31(a) of the Act, and the Illinois EPA may proceed with a referral to the prosecutorial authority.

Written communications should be directed to:

Illinois EPA – Bureau of Land
Attn: Charles Grigalauski
9511 West Harrison Street, 3rd Floor
Des Plaines, Illinois 60016

All communications must include reference to this **Violation Notice Number, L-2008-01057.**

The text of the Act referenced herein is available at www.ipcb.state.il.us. If you have questions regarding this matter, please contact Thomas Rivera at 847/294-4079.

Sincerely,

Charles T. Grigalauski, Regional Manager
Field Operations Section
Bureau of Land

Enclosure

cc: Bureau of Land File
Des Plaines Region File

ATTACHMENT A

1. Pursuant to Section 12(a) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(a)), no person shall cause, threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources, or so as to violate regulations or standards adopted by the Pollution Control under this Act.

   A violation of Section 12(a) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(a)) is alleged for the following reason: **The discharge of contaminants was caused and allowed in a way that caused water pollution. Chlorinated solvent contamination above the Class 1 groundwater objectives is present in on site groundwater. The groundwater contamination has been present for approximately 20 years. Shallow groundwater flow under the site is to the north-northwest, towards the nearby Kishwaukee River. Residential/nonresidential private water wells are located to the north-northwest, directly down gradient of the site. The private wells are within ½ mile of the site and its unknown at this time if the private wells have been impacted by the chlorinated solvent groundwater contamination.**

   1,1,1-Trichloroethane (1,1,1-TCA) was detected as high as 4,900 ppb, in 1999, in on site groundwater monitoring well MW-3. More recently in 2007, 1,1,1-TCA was detected as high as 501 ppb in on site groundwater monitoring well MW-A7. Tetrachloroethene (PCE) was detected as high as 18.8 ppb, in 2007, in onsite groundwater monitoring well MW-3. PCE contamination in MW-3 has steadily increased over the past approximately 6 years. Other on site groundwater monitoring wells have chlorinated solvent detections as well, but MW-3 and MW-A7 have shown the highest concentrations of 1,1,1-TCA and PCE.

2. Pursuant to Section 12(d) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(d)), no person shall deposit any contaminants upon the land in such place and manner so as to create a water pollution hazard.

   A violation of Section 12(d) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(d)) is alleged for the following reason: **Contaminants were deposited upon the land in such a place and manner that created a water pollution hazard. Chlorinated solvent contamination above the Class 1 groundwater objectives is present in on site groundwater. The groundwater contamination has been present for approximately 20 years. Shallow groundwater flow under the site is to the north-northwest, towards the nearby Kishwaukee River. Residential/nonresidential private water wells are located to the north-northwest, directly down gradient of the site. The private wells are within ½ mile of the site and its unknown at this time if the private wells have been impacted by the chlorinated solvent groundwater contamination.**

   1,1,1-TCA was detected as high as 4,900 ppb, in 1999, in on site groundwater monitoring well MW-3. More recently in 2007, 1,1,1-TCA was detected as high as 501 ppb in on site groundwater monitoring well MW-A7. PCE was detected as high as 18.8 ppb, in 2007, in on site groundwater monitoring well MW-3. PCE contamination in MW-3 has steadily increased over the past approximately 6 years. Other on site groundwater monitoring wells have chlorinated solvent detections as well, but MW-3 and MW-A7 have shown the highest concentrations of 1,1,1-TCA and PCE.

SUGGESTED RESOLUTIONS

1. Immediately determine the source(s) of 1,1,1-TCA, PCE and other related contaminants that are present in groundwater under the subject site by conducting an Investigation.

2. Immediately determine the extent of 1,1,1-TCA, PCE and other related contaminants in soil and groundwater, both on site and off site, by conducting an Investigation.

3. Collect representative groundwater samples from all down gradient residential/nonresidential private water wells (approximately 16) located within approximately ½ mile of the site, see the attached map. The private water well samples shall be collected from an unfiltered and unsoftened spigot, after an appropriate water system purge is conducted. The samples shall be analyzed for Volatile Organic Compounds at an Illinois EPA approved laboratory. Illinois EPA would like to oversee the sampling event.

4. Remediate, if necessary, to meet all applicable remediation objectives for soil and groundwater.

* Immediately manage the groundwater to mitigate impairment caused by the release of volatile organic compounds.

* All copies of receipts/manifests, and analytical reports must be submitted to the Illinois EPA that document the proper disposal of any waste (i.e. impacted soil, contaminated groundwater). The receipts/manifests must be submitted within 10 days after the off-site shipment.

* Within 45 days from the receipt of this letter, enroll in the Site Remediation Program.

* A Site Investigation Work Plan shall be submitted within 30 days of the Illinois EPA approval of the Site Remediation application.

* The Site Investigation shall be implemented within 30 days of the Illinois EPA approval of the Site Investigation Work Plan.

* The Site Investigation Report shall be submitted within 180 days of approval of the Site Investigation Work Plan.

* The Remediation Objectives Report shall be submitted within 30 days of approval of the Site Investigation Report.

* The Remedial Action Plan shall be submitted within 30 days of Illinois EPA approval of the Remedial Objectives Report.

* The remedial action shall be implemented within 30 days of Illinois EPA approval of the Remediation Action Plan.

* **The Remedial Action Completion Report shall be submitted within 365 days of Illinois EPA approval of the Remedial Action Plan.**

The written response to this Violation Notice must include information in rebuttal, explanation, or justification of each alleged violation and must be submitted to the Illinois EPA by certified mail, within 45 days of receipt of this Violation Notice. The written response must also include a proposed Compliance Commitment Agreement that commits to specific remedial actions, includes specified times for achieving each commitment, and may include a statement that compliance has been achieved.

EXHIBIT 2

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 – (217) 782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601 – (312) 814-6026

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

847/294-4000
847/294-4083 Fax

APR 1 5 2008

300 West LLC
2340 River Road
Suite 310
Des Plaines, IL 60018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7004 1350 0003 1611 1586

Attention: John Daley and Sam Mandarino

Re: **Violation Notice, L-2008-01123**
LPC #1110650003 – McHenry County
Marengo/Arnold Magnetic Technologies
Compliance File

RELEASABLE

MAY 1 4 2008

REVIEWER MD

Dear Mr. Daley and Mr. Mandarino:

This constitutes a Violation Notice pursuant to Section 31(a)(1) of the [Illinois] Environmental Protection Act, 415 ILCS 5/31(a)(1), and is based on a record review completed on February 26, 2008 by representatives of the Illinois Environmental Protection Agency (Illinois EPA).

The Illinois EPA hereby provides notice of violations of environmental statutes, regulations, or permits as set forth in Attachment A to this letter. Attachment A includes an explanation of the activities that the Illinois EPA believes may resolve the specified violations, including an estimate of a reasonable time period to complete the necessary activities. However, due to the nature and seriousness of the violations cited, please be advised that resolution of the violations may require the involvement of a prosecutorial authority for purposes that may include, among others, the imposition of statutory penalties.

A written response which may include a request for a meeting with representatives of the Illinois EPA, must be submitted via certified mail to the Illinois EPA within 45 days of receipt of this letter. The response must address each violation specified in Attachment A and include for each an explanation of the activities that will be implemented and the time schedule for the completion of that activity. The written response will constitute a proposed Compliance Commitment Agreement (CCA) pursuant to Section 31 of the Act. The Illinois EPA will review the proposed CCA and will accept or reject it within 30 days of receipt.

If a timely written response to this Violation Notice is not provided, it shall be considered to be a waiver of the opportunity to respond and to meet provided by Section 31(a) of the Act, and the Illinois EPA may proceed with a referral to the prosecutorial authority.

Written communications should be directed to:

Illinois EPA – Bureau of Land
Attn: Charles Grigalauski
9511 West Harrison Street, 3rd Floor
Des Plaines, Illinois 60016

All communications must include reference to this **Violation Notice Number, L-2008-01123.**

The text of the Act referenced herein is available at www.ipcb.state.il.us. If you have questions regarding this matter, please contact Thomas Rivera at 847/294-4079.

Sincerely,

Charles C. Grigalauski, Regional Manager
Field Operations Section
Bureau of Land

Enclosure

cc: Bureau of Land File
Des Plaines Region File

ATTACHMENT A

1. Pursuant to Section 12(a) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(a)), no person shall cause, threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources; or so as to violate regulations or standards adopted by the Pollution Control under this Act.

   A violation of Section 12(a) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(a)) is alleged for the following reason: **The discharge of contaminants was caused and allowed in a way that caused water pollution. Chlorinated solvent contamination above the Class 1 groundwater objectives is present in on site groundwater. The groundwater contamination has been present for approximately 20 years. Shallow groundwater flow under the site is to the north-northwest, towards the nearby Kishwaukee River. Residential/nonresidential private water wells are located to the north-northwest, directly down gradient of the site. The private wells are within ½ mile of the site and its unknown at this time if the private wells have been impacted by the chlorinated solvent groundwater contamination.**

   1,1,1-Trichloroethane (1,1,1-TCA) was detected as high as 4,900 ppb, in 1999, in on site groundwater monitoring well MW-3. More recently in 2007, 1,1,1-TCA was detected as high as 501 ppb in on site groundwater monitoring well MW-A7. Tetrachloroethene (PCE) was detected as high as 18.8 ppb, in 2007, in onsite groundwater monitoring well MW-3. PCE contamination in MW-3 has steadily increased over the past approximately 6 years. Other on site groundwater monitoring wells have chlorinated solvent detections as well, but MW-3 and MW-A7 have shown the highest concentrations of 1,1,1-TCA and PCE.

2. Pursuant to Section 12(d) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(d)), no person shall deposit any contaminants upon the land in such place and manner so as to create a water pollution hazard.

   A violation of Section 12(d) of the {Illinois} Environmental Protection Act (415 ILCS 5/12(d)) is alleged for the following reason: **Contaminants were deposited upon the land in such a place and manner that created a water pollution hazard. Chlorinated solvent contamination above the Class 1 groundwater objectives is present in on site groundwater. The groundwater contamination has been present for approximately 20 years. Shallow groundwater flow under the site is to the north-northwest, towards the nearby Kishwaukee River. Residential/nonresidential private water wells are located to the north-northwest, directly down gradient of the site. The private wells are within ½ mile of the site and its unknown at this time if the private wells have been impacted by the chlorinated solvent groundwater contamination.**

   1,1,1-TCA was detected as high as 4,900 ppb, in 1999, in on site groundwater monitoring well MW-3. More recently in 2007, 1,1,1-TCA was detected as high as 501 ppb in on site groundwater monitoring well MW-A7. PCE was detected as high as 18.8 ppb, in 2007, in on site groundwater monitoring well MW-3. PCE contamination in MW-3 has steadily increased over the past approximately 6 years. Other on site groundwater monitoring wells have chlorinated solvent detections as well, but MW-3 and MW-A7 have shown the highest concentrations of 1,1,1-TCA and PCE.

SUGGESTED RESOLUTIONS

1. Immediately determine the source(s) of 1,1,1-TCA, PCE and other related contaminants that are present in groundwater under the subject site by conducting an Investigation.

2. Immediately determine the extent of 1,1,1-TCA, PCE and other related contaminants in soil and groundwater, both on site and off site, by conducting an Investigation.

3. Collect representative groundwater samples from all down gradient residential/nonresidential private water wells (approximately 16) located within approximately ½ mile of the site, see the attached map. The private water well samples shall be collected from an unfiltered and unsoftened spigot, after an appropriate water system purge is conducted. The samples shall be analyzed for Volatile Organic Compounds at an Illinois EPA approved laboratory. Illinois EPA would like to oversee the sampling event.

4. Remediate, if necessary, to meet all applicable remediation objectives for soil and groundwater.

* Immediately manage the groundwater to mitigate impairment caused by the release of volatile organic compounds.

* All copies of receipts/manifests, and analytical reports must be submitted to the Illinois EPA that document the proper disposal of any waste (i.e. impacted soil, contaminated groundwater). The receipts/manifests must be submitted within 10 days after the off-site shipment.

* Within 45 days from the receipt of this letter, enroll in the Site Remediation Program.

* A Site Investigation Work Plan shall be submitted within 30 days of the Illinois EPA approval of the Site Remediation application.

* The Site Investigation shall be implemented within 30 days of the Illinois EPA approval of the Site Investigation Work Plan.

* The Site Investigation Report shall be submitted within 180 days of approval of the Site Investigation Work Plan.

* The Remediation Objectives Report shall be submitted within 30 days of approval of the Site Investigation Report.

* The Remedial Action Plan shall be submitted within 30 days of Illinois EPA approval of the Remedial Objectives Report.

* The remedial action shall be implemented within 30 days of Illinois EPA approval of the Remediation Action Plan.

* The Remedial Action Completion Report shall be submitted within 365 days of Illinois EPA approval of the Remedial Action Plan.

The written response to this Violation Notice must include information in rebuttal, explanation, or justification of each alleged violation and must be submitted to the Illinois EPA by certified mail, within 45 days of receipt of this Violation Notice. The written response must also include a proposed Compliance Commitment Agreement that commits to specific remedial actions, includes specified times for achieving each commitment, and may include a statement that compliance has been achieved.

APPENDIX B – OSFM DATABASE SEARCH RESULTS

Division of Petroleum & Chemical Safety

Print Detail Page Export to Excel Facility/Tank Ownership Last Search Page

Facility Details

Facility Number:	2043823
Facility Name:	300 West LLC (Arnold Technologies)
Address:	300 N. West Avenue Marengo, IL 60152
County:	McHenry
Status:	Exempt
Facility Type:	None
Motor Fuel Type:	
Owner Type:	Private
Green Tag Decal:	
Green Tag Issue Date:	
Green Tag Expiration Date:	
Motor Fuel Dispensing Permit Inspection Date:	
Motor Fuel Dispensing Permit Expiration Date:	

Owner Details

Owner Name:	300 West LLC
Owner Address:	2340 River Road, Suite 310 Des Plaines, IL 60018
Owner Status:	Current Owner
Purchase Date:	
Type of Financial Responsibility:	
Financial Responsibility Received Date:	

Owner Summary

Owner Number	Owner Name	Owner Status	Purchase Date
U0034374	300 West LLC	Current Owner	

Permits (Unexpired)

No Active Permits Found

Deficiencies (Current)

No Deficiencies Found

IEMA Numbers Associated with the Facility

IEMA Number
07-1279

LUST Fund Eligibility and Deductibility Determinations

No Applications Found

Tank Information

Tank Number	Capacity	Product	Status	Fee Due
1	6000	Unknown	Exempt from registration	
2	1000	Cutting Oil	Exempt from registration	
3	8000	Solvent	Exempt from registration	
4	8000	Solvent	Exempt from registration	
5	1000	Cutting Oil	Exempt from registration	

R 0000417

R 0000417

Division of Petroleum & Chemical Safety

Print Detail Page Export to Excel Facility/Tank Ownership Last Search Page

Facility Details

Facility Number:	2013028
Facility Name:	Arnold Engineering Co
Address:	300 W St Marengo, IL 60152
County:	McHenry
Status:	Closed
Facility Type:	None
Motor Fuel Type:	
Owner Type:	None
Green Tag Decal:	
Green Tag Issue Date:	
Green Tag Expiration Date:	
Motor Fuel Dispensing Permit Inspection Date:	
Motor Fuel Dispensing Permit Expiration Date:	

Owner Details

Owner Name:	Arnold Engineering Co
Owner Address:	300 W St Marengo, IL 60152
Owner Status:	Current Owner
Purchase Date:	
Type of Financial Responsibility:	
Financial Responsibility Received Date:	

Owner Summary

Owner Number	Owner Name	Owner Status	Purchase Date
U0000789	Arnold Engineering Co	Current Owner	

Permits (Unexpired)

No Active Permits Found

Deficiencies (Current)

No Deficiencies Found

IEMA Numbers Associated with the Facility

No IEMA Numbers Found

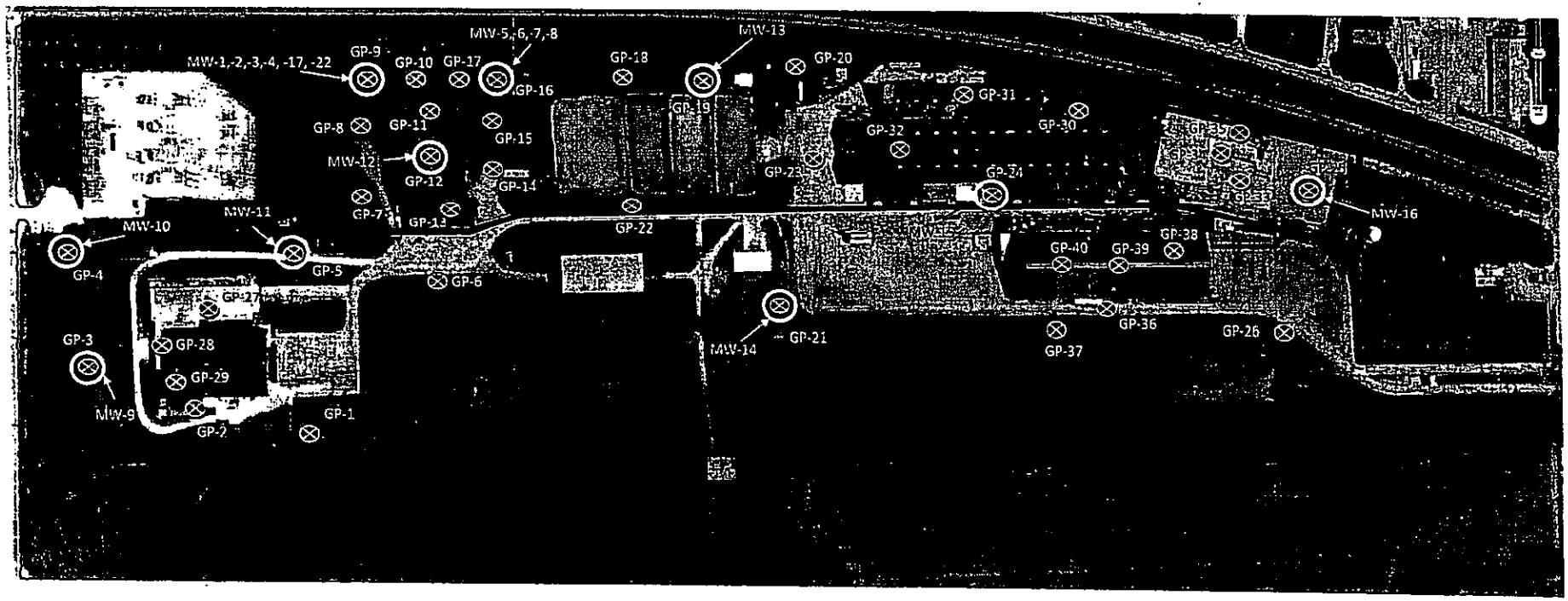
LUST Fund Eligibility and Deductibility Determinations

No Applications Found

Tank Information

Tank Number	Capacity	Product	Status	Fee Due
1	1500		Abandoned in place	
2	1500		Abandoned in place	
3	1500		Abandoned in place	
4	1500		Abandoned in place	
5	1500		Abandoned in place	
6	1500		Abandoned in place	
7	6000	Hazardous Substance	Removed	
8	6000	Hazardous Substance	Removed	

Tank Number	Capacity	Product	Status	Fee Due
9	6000	Hazardous Substance	Removed	
10	6000	Hazardous Substance	Removed	
11	1500	Kerosene	Removed	
12	1500	Gasoline	Exempt from registration	



NORTH PARCEL

R 000420

EXHIBIT

A

Attachment A

Site Investigation -- General

A site investigation shall be performed to identify all or specified recognized environmental conditions existing at the remediation site, the related contaminants of concern, and associated factors that will aid in the identification of risks to human health, safety and the environment, the determination of remediation objectives, and the design and implementation of a Remedial Action Plan.

a) If the Defendants have elected under the application for review and evaluation services to obtain a No Further Remediation Letter covering all recognized environmental conditions and related contaminants of concern for the remediation site, then the procedures provided under 35 Ill. Adm. Code 740.420 and 740.425 shall be followed.

b) If the Defendants have elected under the application for review and evaluation services to obtain a No Further Remediation Letter covering a limited number of recognized environmental conditions and related contaminants of concern as specified by the RA, then the procedures provided under 35 Ill. Adm. Code Sections 740.430 and 740.435 shall be followed.

c) The Defendants may revise an election at any time by initiating a modification of the Review and Evaluation Services Agreement under 35 Ill. Adm. Code 740.220 and performing the appropriate site investigation, if necessary.

d) Site investigations shall satisfy the following data quality objectives for field and laboratory operations to ensure that all data is scientifically valid and of known precision and accuracy:

1) All field sampling activities relative to sample collection, documentation, preparation, labeling, storage, shipment and security, quality assurance and quality control, acceptance criteria, corrective action, and decontamination procedures shall be conducted in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Vol. One, Ch. One (Quality Control) and Vol. Two (Field Manual), incorporated by reference at 35 Ill. Adm. Code 740.125. If approved by the Agency, such activities also may be conducted in accordance with ASTM standards, methods identified in "A Compendium of Superfund Field Operations Methods" (EPA/540/0-87-001, OSWER Directive 9355.0-14, December 1987), "Subsurface Characterization and Monitoring Techniques: A Desk Reference Guide, Volume I: Solids and Ground Water, Appendices A and B" (EPA/625/R-93/003a, May 1993),

"Subsurface Characterization and Monitoring Techniques: A Desk Reference Guide, Volume II: The Vadose Zone, Field Screening and Analytical Methods, Appendices C and D" (EPA/625/R-93/003b, May 1993), incorporated by reference at 35 Ill. Adm. Code 740.125, or other procedures.

2) All field measurement activities relative to equipment and instrument operation, calibration and maintenance, corrective action, and data handling shall be conducted in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Vol. One, Ch. One (Quality Control), incorporated by reference at 35 Ill. Adm. Code 740.125, or with an equipment or instrument manufacturer's or vendor's published standard operating procedures.

3) All laboratory quantitative analysis of samples to determine concentrations of regulated substances or pesticides shall be conducted fully in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), incorporated by reference at 35 Ill. Adm. Code 740.125, relative to all facilities, equipment and instrumentation, operating procedures, sample management, test methods, equipment calibration and maintenance, quality assurance and quality control, corrective action, data reduction and validation, reporting, and records management. The practical quantitation limit (PQL) of the test methods selected must be less than or equal to the most protective Tier 1 soil remediation objectives in 35 Ill. Adm. Code 742 Appendix B, applicable groundwater remediation objectives under 35 Ill. Adm. Code 742 Appendix B, or, if already determined, the remediation objective concentrations for the site. If a contaminant of concern is not identified in 35 Ill. Adm. Code Part 742 or the remediation objectives for the site have not been determined, the PQL shall equal the lowest concentration that reliably can be achieved within specified limits of precision and accuracy during routine laboratory operating conditions but shall not be greater than ten times the method detection limit.

4) All field or laboratory measurements of samples to determine physical or geophysical characteristics shall be conducted in accordance with ASTM standards or other procedures as approved by the Agency.

5) All laboratory quantitative analyses of samples to determine concentrations of any regulated substances or pesticides that require more exacting detection limits or cannot be analyzed by standard methods identified in "Test Methods for Evaluating Solid

Waste, Physical/Chemical Methods" (SW-846), incorporated by reference at 35 Ill. Adm. Code 740.125, shall be conducted in accordance with analytical protocols developed in consultation with and approved by the Agency.

6) Effective January 1, 2003, all quantitative analyses of samples collected on or after that date and utilizing any of the approved test methods identified in 35 Ill. Adm. Code 186.180 shall be completed by an accredited laboratory in accordance with the requirements of 35 Ill. Adm. Code 186. Quantitative analyses not utilizing an accredited laboratory in accordance with Part 186 shall be deemed invalid.

Focused Site Investigation

The focused site investigation shall be performed where the Defendants have specified limitations on the recognized environmental conditions or contaminants of concern to be covered by the No Further Remediation Letter. At a minimum the focused site investigation shall include:

a) A remediation site evaluation to identify the following features as relevant to the focus of the investigation:

1) Current and post-remediation use(s) of the remediation site and surrounding areas that are immediately adjacent to the remediation site;
2) Physical setting including features relevant to geologic, hydrogeologic, hydrologic, and topographic conditions; structures or other improvements on the remediation site; public thoroughfares adjoining the remediation site, as well any roads, streets, and parking facilities on the remediation site; utilities located on or adjacent to the remediation site; source of potable water supply; and sewage disposal system;
3) The presence of containers and storage tanks containing the selected contaminants of concern, including contents, and assessment of leakage or potential for leakage; and
4) Any other environmental, geologic, geographic, hydrologic or physical conditions of concern at the remediation site and surrounding areas immediately adjacent to the remediation site;

b) Review of reasonably obtainable records relevant to the recognized environmental conditions and the related contaminants of concern for the remediation site and areas immediately adjacent to the remediation site, records of environmental enforcement actions and their subsequent responses, any previous response actions conducted by either local, State, federal or private parties, and a list of documents and studies prepared for the remediation site;

c) Characterization of sources and potential sources of recognized environmental conditions and the related contaminants of concern, identifying:

1) The sources or potential sources of the contaminants of concern;
2) The sampling, analyses, and field screening measurements indicating the concentrations of the contaminants of concern; and
3) The statutory or regulatory classification of the contaminants of concern and contaminated materials (e.g., hazardous waste, hazardous substance, special waste);

d) Characterization of the extent of the contaminants of concern, identifying:

1) The actual contaminated medium or media of concern;
2) The three-dimensional configuration of the contaminants of concern with concentrations delineated; and
3) The nature, direction, and rate of movement of the contaminants of concern and degradation products;

e) Characterization of current and post-remediation exposure routes, identifying:

1) All natural and man-made pathways that are on the remediation site, in rights-of-way attached to the remediation site, or in any areas surrounding the remediation site that may be adversely affected as a result of a release from the recognized environmental conditions and whether there is evidence of migration of contaminants of concern, in either solution or vapors, along such pathways that may potentially threaten human or environmental receptors or that may cause explosions in basements, crawl spaces, utility conduits, storm or sanitary sewers, vaults or other spaces;
2) The locations of any human and environmental receptors and receptor exposure routes; and
3) Current and post-remediation uses of affected or potentially affected land, groundwater, surface water, and sensitive habitats; and

f) Characterization of significant physical features of the site and vicinity that may affect contaminant transport and risk to human health, safety and the environment.

Attachment B

1. General

All plans and reports required by the Agreed Preliminary Injunction Order shall be submitted to the Plaintiff with attachments and accompanying documentation as necessary. Plans and reports shall be mailed or delivered to the address designated by the Order. Plans and reports that are hand-delivered to the Plaintiff shall be delivered during the Plaintiff's normal business hours.

All plans and reports submitted to the Plaintiff shall include:

a) The full legal name, address and telephone number of the Defendant or any authorized agent acting on behalf of the Defendant, and any contact persons to whom inquiries and correspondence must be addressed;

b) The original signature of the Defendant or of any authorized agent acting on behalf of the Defendant;

c) The name of the Licensed Professional Engineer (LPE) or Geologist responsible for site activities and preparation of the plan or report, the date of preparation, registration number, license expiration date, and professional seal; and

d) The LPE or Geologist responsible for the site investigations, remedial activities, and preparation of the plans or reports shall affirm by original signature as follows:

"I attest that all site investigations or remedial activities, including review of laboratory data, that are the subject of this plan or report were performed under my direction and this document and all attachments were prepared under my direction or reviewed by me, and, to the best of my knowledge and belief, the work described in the plan or report has been designed or completed in accordance with the Act, and generally accepted engineering practices, and the information presented, including any qualified laboratory data, is accurate and complete."

2. Site Investigation Report -- Focused Site Investigation

a) Data and results from the focused site investigation shall be combined into one Site Investigation Report.

b) A Site Investigation Report for the focused site investigation shall include the results and methodologies of the investigation performed pursuant to 35 Ill. Adm. Code 740.430 and the following chapters:

1) Executive summary. This chapter shall identify the objectives of the site investigation and the technical approach utilized to meet such objectives. It shall state the recognized environmental conditions and related

contaminants of concern specified by the Defendants and the data limitations in the assessment;

2) Site description.

A) If a phase I environmental site assessment has been completed in accordance with 35 Ill. Adm. Code 740.420(a), then the results may be submitted in accordance with 35 Ill. Adm. Code 740.425;

B) This subchapter shall state the method used for the evaluation of the remediation site and areas immediately adjacent to the remediation site and document the observations obtained (e.g., grid patterns or other systematic approaches used for large properties). It shall describe the regional location, pertinent boundary features, general facility physiography, geology, hydrogeology, and current and post-remediation uses of the remediation site and areas immediately adjacent to the remediation site;

C) Site base map(s) meeting the requirements of 35 Ill. Adm. Code 740.210(a)(7) and including the following:

i) The sources or potential sources of the contaminants of concern, spill areas, and other suspected areas for the specified contaminants of concern;

ii) On-site and off-site injection and withdrawal wells; and

iii) All buildings, tanks, piles, utilities, paved areas, easements, rights-of-way and other features, including all known past and current product and waste underground tanks or piping;

D) A legal description or reference to a plat showing the boundaries of the remediation site, or, for a Federal Landholding Entity, a common address, notations in any available facility master land use plan, site specific GIS or GPS coordinates, plat maps, or any other means that identifies the site in question with particularity;

3) Enforcement or response actions. This chapter shall include the following information as relevant to the recognized environmental conditions:

A) A summary of environmental enforcement actions for the remediation site and areas immediately adjacent to the remediation site and their subsequent responses;

B) Any previous response actions conducted by either local, State, federal or private parties at those sites; and

C) A list of documents and studies prepared for those sites;

4) Site-specific sampling plan. This chapter shall indicate those applicable physical and chemical methods utilized for contaminant source investigations, soil and sediment investigations, hydrogeological

investigations, surface water investigations, and potential receptor investigations;

5) Documentation of field activities. This chapter shall include the results of the field activities to determine physical characteristics. At a minimum, this chapter shall include the following elements:

A) Narrative description of the field activities conducted during the investigation;

B) The quality assurance project plan utilized to document all monitoring procedures (e.g., sampling, field measurements and sample analysis) performed during the investigation, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented; and

C) Presentation of the data in an appropriate format (e.g., tabular and graphical displays) such that all information is organized and presented logically and that relationships between the different investigations for each medium are apparent;

6) Endangerment assessment. This chapter shall analyze the results of the field activities and characterize the extent of contamination (qualitative and quantitative) for contaminants of concern related to the recognized environmental conditions and compare the site information with the applicable provisions of 35 Ill. Adm. Code 742. This chapter shall:

A) Describe any recognized environmental conditions, evaluate exposure routes, including threatened releases, and evaluate exposure routes excluded under 35 Ill. Adm. Code 742;

B) Describe the nature, concentration and extent of contaminants of concern within all environmental media at the remediation site and assess the observed and potential contaminant fate and transport;

C) Describe the significant physical features of the remediation site and vicinity that may affect contaminant transport and risk to human health, safety and the environment; and

D) Compare the concentrations of the contaminants of concern with the corresponding Tier 1 remediation objectives under 35 Ill. Adm. Code 742;

7) Conclusion. This chapter shall assess the sufficiency of the data in the report and recommend future steps;

8) Appendices. Supporting documentation, references and data sources, including, but not limited to, field logs, well logs, and reports of laboratory analyses, shall be incorporated into the appendices with reports containing laboratory analyses of samples collected on or after January 1, 2003,

including the following:

A) Accreditation status of the laboratory performing the quantitative analyses;

B) Certification by an authorized agent of the laboratory that all analyses have been performed in accordance with the requirements of 35 Ill. Adm. Code 186 and the scope of accreditation; and

9) Licensed Professional Engineer or Geologist affirmation in accordance with 35 Ill. Adm. Code 740.410.

APPENDIX C – ENVIRON 2004, 2006, 2008 ENVIRONMENTAL REPORTS

PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

MED

ENVIRONMENTAL REVIEW OF NINE ARNOLD MAGNETICS FACILITIES

Prepared for

Kirkland & Ellis LLP
Washington, D.C.

On behalf of

Audax Group

Prepared by

ENVIRON International Corporation
Arlington, Virginia

December 2004

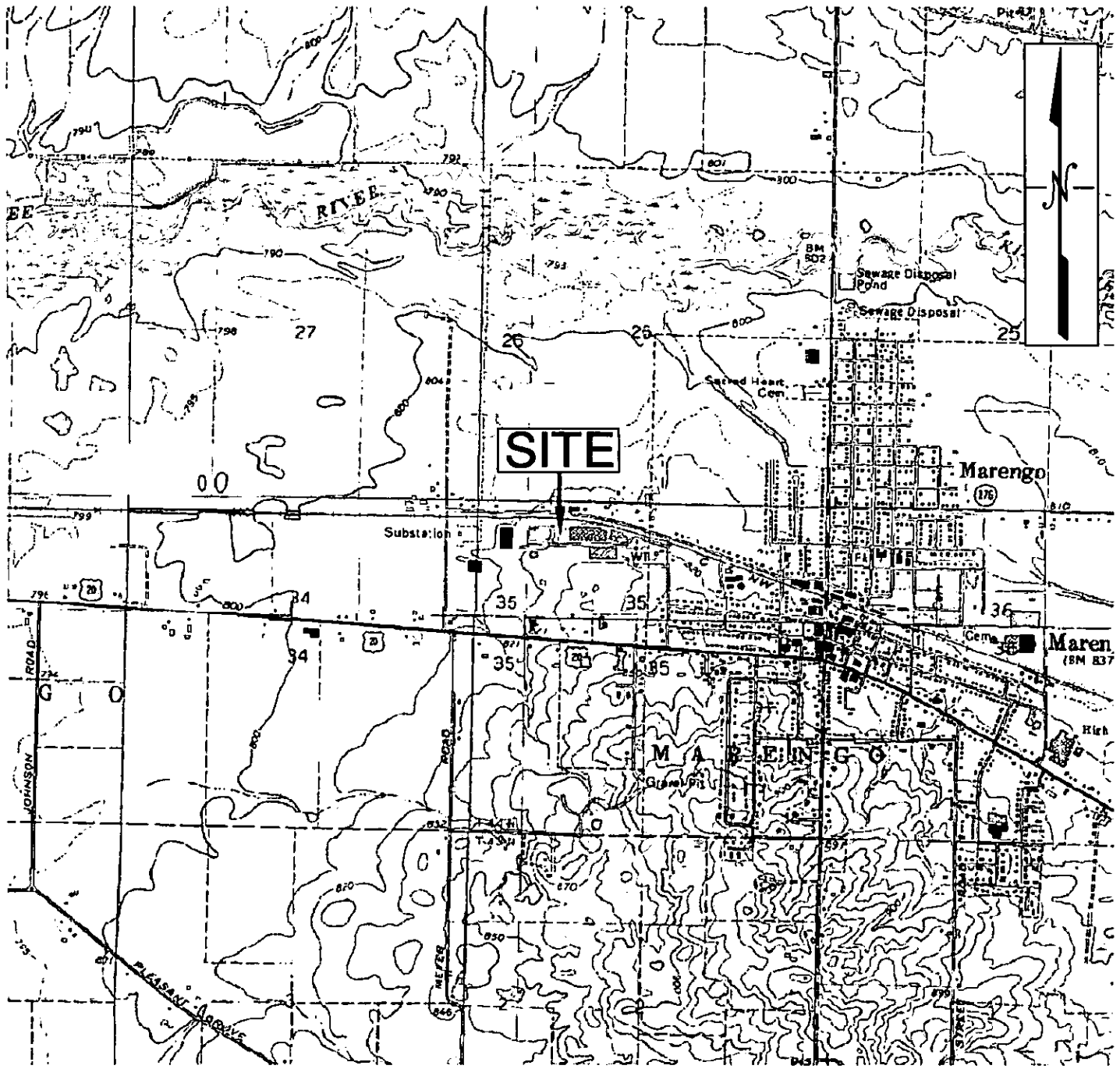
V. MARENGO, ILLINOIS

A. Site Setting

Arnold owns and operates a magnet and related components manufacturing facility located at 300 North West Street in Marengo, McHenry County, Illinois (the "site," or "facility") (Figure V-1). The site consists of an approximately 94-acre property located in a relatively rural setting. The site is developed with three primary operations buildings and a number of ancillary structures on the northern portion of the site (Figure V-2). Building 2/3/4/7 (comprised of several attached buildings), likely built during the mid-1900s, is an approximately 120,000-square foot building that currently houses the facility's Magnetic Technology Center Division, which includes QA/QC testing, environmental services including wastewater treatment and a wet chemistry laboratory, equipment maintenance and machining, miscellaneous storage, shipping, and other ancillary operations. Building 5, likely built during the mid-1900s, comprises approximately 60,000 square feet and houses the Alnico Products Division, which manufactures magnet components primarily by molting, melting, and finishing aluminum, nickel, and cobalt materials. Building 11/14, built in approximately 1970, comprises approximately 45,000-square feet and houses the Rolled Products Division, which conducts rolling mill and finishing operations to produce a thin gauge rolled steel product.

Ancillary structures include Building 12, a parts and miscellaneous storage warehouse; Building 16, a hazardous and nonhazardous waste storage warehouse; Building 10, used for storage and drum cleaning; Building 8, which houses a landscape and building maintenance shed and the facility's ground water supply well; a small pump house associated with the wastewater treatment system and collection ponds; a small building encompassing the wastewater treatment system; a small pump house associated with the facility's fire suppression system; and a small security station located at the facility entrance. Paved and gravel-covered driveways and parking areas are present surrounding the primary buildings and primarily in the northeastern portion of the site. A series of four wastewater collection ponds are present on the northern portion of the site, west of Building 2/3/4/7. The remainder of the northern portion of the site consists primarily of grass-covered land. An overflow pond is present on the southwestern portion of the site, southwest of Building 11/14. The remainder of the southern portion of the property consists of undeveloped, vegetated land. Table V-1 provides an overview of physical setting information for the site.

The facility is located in a relatively rural area of mixed residential, commercial, and agricultural land use. The site is bordered to the north by a railroad right-of-way owned (or formerly owned) by Chicago and Northwest Railroad, beyond which is Railroad Street, which is bordered to the north by several commercial and light industrial facilities, including a grain

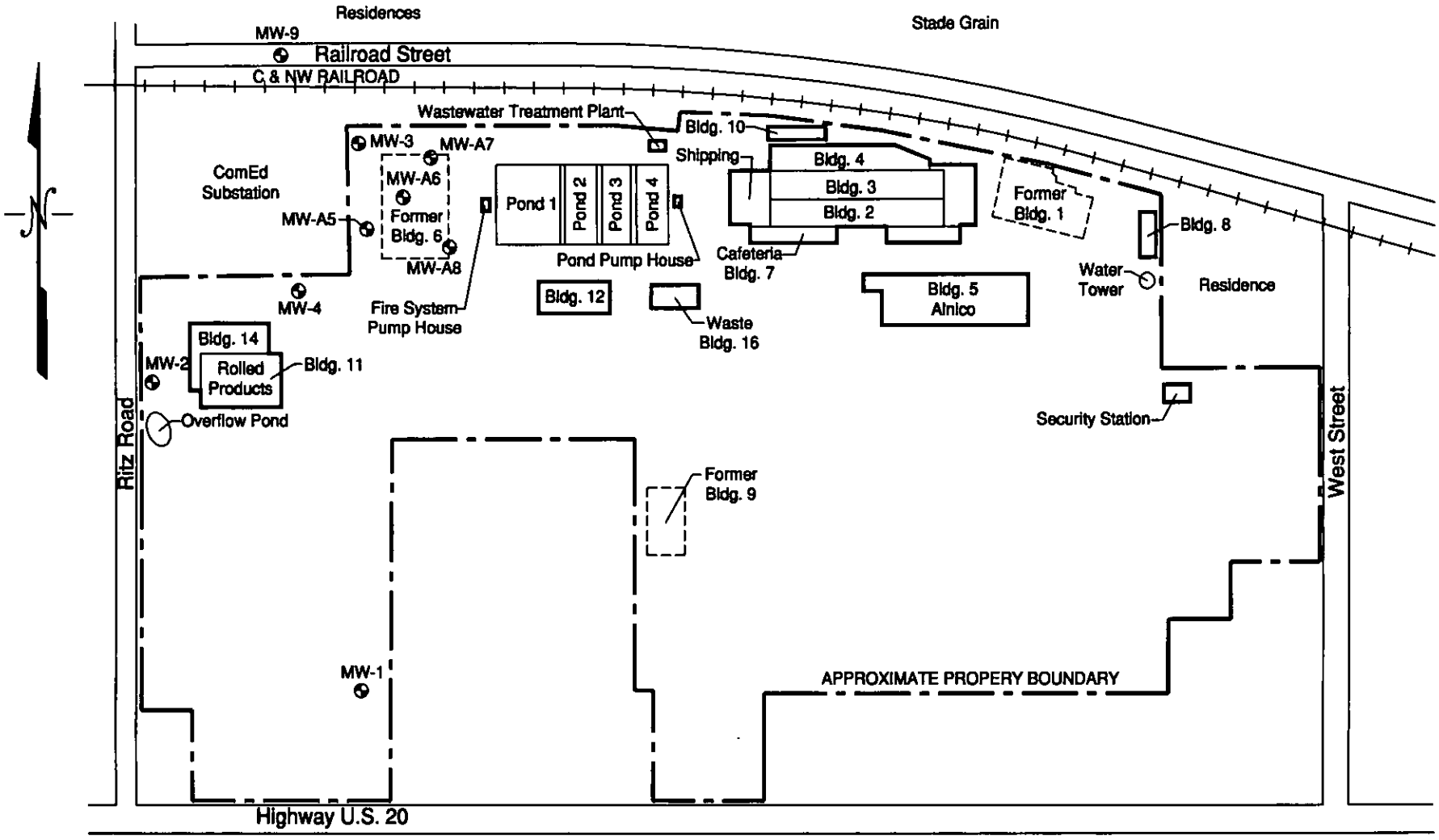


SOURCE: WWW.TOPOZONE.COM; MAPS A LA CARTE, INC.

c:\acad\ SLM MARENGO ILDWG

ENVIRON	SITE LOCATION MAP ARNOLD MAGNETICS FACILITY MARENGO, ILLINOIS	Figure V-1

c:\acad\ SITE LAYOUT MARENGO IL.DWG



EXPLANATION

Ground water monitoring well (approximate location)

0 400 800

Scale in Feet

ENVIRON

SITE LAYOUT
ARNOLD MAGNETICS FACILITY
MARENGO, ILLINOIS

Figure
V-2

R 0000433

R 0000433

Table V-1
Physical Setting Information for Arnold Magnetics in Marengo, Illinois

Conditions	Source	Description
	Topographic Conditions	
Elevation (above mean sea level)	1975 and 1970 USGS topographic map (Marengo North and Garden Prairie, Illinois, respectively); EDR Radius Map with GeoCheck	Approx. 820 feet
Topographic Gradient	1975 and 1970 USGS topographic map; EDR Radius Map with GeoCheck; visual observations	Relatively flat, with a gentle downward slope towards the north/northwest at the site and in the site vicinity toward the Kishwaukee River. Regional topography is generally flat, with a slight downward slope north toward the Kishwaukee River.
	Hydrologic Conditions	
Storm Water Discharge	Facility personnel; visual observations	All storm drains from facility ditches, paved-areas, and building roofs reportedly discharge to the wastewater treatment system prior to discharging to the collection ponds. Storm water landing on grass-covered areas may infiltrate to the ground, discharge as runoff to the overflow pond, or discharge as runoff off-site.
Nearest Surface Water Body	1975 USGS topographic map; visual observations	Kishwaukee River, is located approximately one mile north of the site. The Kishwaukee River flows west/northwestward to the Rock River, which ultimately flows into the Mississippi River.
Flood Plain	EDR data base report; facility personnel	Not located within 500-year or 100-year flood zones. Facility personnel reported no known occurrences of flooding.
Wetlands	EDR data base report	No on-site federally-designated wetlands. The on-site ponds may possibly be considered wetlands.
	Geologic and Hydrogeologic Conditions	
Presumed Direction of Shallow Ground Water Flow	Inference from topographic gradient; 1993 PRC report; facility personnel	North/northwest
Depth to Ground Water	1993 PRC report; ground water monitoring data	Approximately 15 feet bgs
On-site Wells	Facility personnel; 1993 PRC report; Facility permits and documentation	One production well on-site, drawing from a depth of approximately 750 to 850 feet bgs, supplies potable and process water to facility. There are seven existing shallow monitoring wells at the site. Ground water monitoring began with the installation of wells MW-1, MW-2, and MW-3 in 1990 as a condition of the facility's Water Pollution Control Permit. Additional monitoring wells may have been installed on-site, but have since been abandoned.
Nearest Ground Water Supply Wells	1993 PRC report; EDR data base report	According to the 1993 PRC report, there are seven domestic water supply wells downgradient of and bordering the site – the nearest located 100 yards north and downgradient of the site. The depth of these wells ranges from 45 to 218 feet bgs. The EDR report identified 66 water supply and monitoring wells within a one mile radius of the site, in all directions.
Geologic Conditions	EDR data base report; 1993 PRC report	Surficial and shallow soil types primarily consist of well drained silt loams underlain by glacial till to 200 feet bgs, which comprises the regional sand and gravel aquifer (15 to 200 ft bgs). Underlying the till are a series of rock formations of Ordovician and Cambrian age to a depth of 1,500 ft bgs. The facility's water supply well likely draws from a limestone and dolomite or a sandstone layer.

processing facility operated by Stade Grain, a farm services and supplies facility, G.E. Johnson Construction, and Stark Services, and residential properties to the north/northwest. The site is bound to the east by a residence and West Street, beyond which is residential and undeveloped land. The site is bound to the south by commercial facilities and Route 20. The site is bound to the west by a ComEd substation at the northwestern site boundary and Ritz Road to the west, beyond which is undeveloped and agricultural land.

Potable water at the site is provided by a facility-owned and operated ground water supply well, located at the northeastern site boundary in Building 8, and by recirculation from the facility's wastewater treatment plant. In addition, a water tower is present on the eastern portion of the site, adjacent to Building 8, for storage of the facility's water supply. The facility's sanitary wastewater is treated on-site in the facility's wastewater treatment system and associated collection ponds. Facility personnel were not aware of any current or former septic systems at the site. Electricity and natural gas are provided by ComEd and Nicor, respectively. No heating oil or other fuel sources for building heat are used at the facility.

B. Historical Use of the Property and Surrounding Area

Based on ENVIRON's review of limited historical information sources available (Table V-2) and discussions with facility personnel, the site was first developed for industrial use during the late 1800s or early 1900s for use as a rail yard and railroad engine maintenance facility. The Arnold family reportedly purchased the property during the early 1900s and built transformers at the site until the 1950s, when Arnold began manufacturing magnets and related components at the facility. The facility employed up to 500 people at its peak of magnetic component manufacturing operations during the 1960s through 1980s, but has since downsized to approximately 50 to 75 employees as operations have been moved off-site to other Arnold locations.

According to facility personnel, Building 1, which was demolished in 2002, was the first known structure developed at the site, likely in the late 1800s or early 1900s. Building 1 was reportedly present when the facility was operated as a rail yard and engine maintenance facility. A railroad spur was observed on the ground surface within the footprint of the former building at the time of the site visit. During Arnold's occupancy of the site, Building 1 was used for most of the magnetic component manufacturing operations conducted at the site at some point in its history, including current operations and Sintered Alnico magnet production (powdered aluminum, nickel and cobalt blending and pressing operations), Molypermalloy operations, maintenance and tool shops, and office operations. According to the 1993 PRC report, spent mineral spirits, trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA) were generated at Building 1 during its history. In addition, facility personnel reported that the Arnold family built electrical transformers on-site in Building 1 prior to beginning magnetic components manufacturing in the 1950s.

The exact construction dates of the additional site buildings are generally unknown; however, based on a review of historical topographic maps, it appears that Building 2/3/4/7, or a

TABLE V-2
Review of Historical Reference Sources for Arnold Magnetics in Marengo, Illinois

Time Period	Reference Source	Description
1900s – 1920s	No readily available historical sources.	
1930s	1932 topographic map (Harvard, Illinois [1:62,500 scale])	The site is depicted on the topographic map as developed with Building 2/3/4/7 (or a portion of the building). Based on the scale of the map, the depicted structure may also include Building 1. The Chicago and Northwestern Railroad right-of-way and Railroad Street are depicted to the north of the property, beyond which are residences bordering the street. A residence is depicted to the east of the property, as is West Street. No development is shown to the immediate south or west of the site, with the exception of Route 20 and Ritz Road, which border the site to the south and west, respectively.
1950s – 1960s	No readily available historical sources.	
1970s	1970 and 1975 topographic map (Marengo North, Illinois) 1970 topographic map (Garden Prairie, Illinois)	The eastern portion of the site is depicted on the Marengo North topographic map. Buildings 1, 2/3/4/7, 5, 8, and 12, the water tower, the wastewater treatment facility, and the collection ponds are depicted on both the 1970 and 1975 maps. Development to the north and east of the site appears generally the same as in the 1932 topographic map, with the exception of the addition of one larger structure to the north of the site. One structure, likely the former airplane hanger, is depicted on the southern portion of the site, south of Building 12, and an additional small structure is depicted on either the southern portion or to the south of the site. The western portion of the site is depicted on the Garden Prairie topographic map. Buildings 6 and 11/14 are depicted on the site. An electrical substation is depicted and identified to the west of the site, west of Building 6. Residences are depicted to the north and northwest of the site. No development is depicted west of Ritz Road.
1980s	1987 Remcor Revised Closure Plan, Drum Waste Storage Facility report.	Site sketch depicts all of the building depicted on the 1970s topographic maps, plus Building 10, north of Building 2/3/4/7, which was likely too small to be depicted separately on the previous topographic maps. No additional structures are depicted.
1990s	1998 aerial photograph	The site appears generally as it did during the site visit, with the exception of Building 1, which is also present in the 2001 aerial photograph. According to facility personnel, Building 1 was demolished in 2002. Building 16 has been developed since the time of the previous photograph.
2000s	2001 aerial photograph	The site appears generally the same as in the 1998 aerial photograph.

portion of it, had been developed by 1932, and Buildings 5, 8, and 12, the water tower, the wastewater treatment facility, the collection ponds, a former airplane hangar (Building 9), Building 6, and Building 11/14 had been developed by 1970. Building 6, an operations building which formerly housed a Strontium Ferrite Department (wet processing and pressing of mixed metal sludges and iron powder, and baking and grinding operations), and Building 9, an airplane hangar built and used by the Arnold family, were reportedly demolished in approximately 1991 or 1992. Building 16, used for hazardous and nonhazardous waste storage, was apparently constructed after 1987 and before the time of the 1993 PRC report.

Based on information provided by facility personnel and documents reviewed, including the 1993 PRC report, hazardous waste manifests, and former UST information obtained from the Office of the State Fire Marshal, the facility formerly used tetrachloroethylene (PCE), TCE, and TCA for degreasing and parts washing operations. TCA had reportedly been stored in two 6,000-gallon USTs (Underground Storage Tanks). The approximately 30-year old USTs were reportedly removed in 1990. One of the former USTs was located adjacent to the southern exterior wall of Building 11/14. The location of the second former TCA UST is not specifically known. These and additional USTs formerly present at the site are discussed in Section D.1 of this chapter. According to the report, spent TCA had been stored in satellite accumulation areas in Building 1, 2/3/4/7, 5, and 11/14, in Building 16, and in a former drum storage area, located east of the wastewater treatment system. According to the PRC report, the facility discontinued the use of TCA in 1991. The facility has since discontinued the use of both TCE and PCE; TCE use was discontinued prior to 2001, and PCE was discontinued in September 2001. Arnold now uses Leksol, a brominated (non-chlorinated) solvent, in the facility's degreasers, and mineral spirits, a petroleum distillate, in the facility's parts washers.

Based on ENVIRON's review, no indications of additional development or uses of the site were identified. The historical documents also indicate that the uses of the properties in the general vicinity of the site have not changed significantly since the 1930s, other than an increasing level of development to the present condition. Site history information obtained from facility personnel is in general agreement with historical information obtained from a review of readily available historical sources, with one exception. The 1993 PRC report indicates that the facility was developed in 1958 for magnetic component manufacturing by Allegheny Ludlum Steel, and that the site was previously undeveloped; however, historical sources prior to a 1968 topographic map are not identified in the reference list provided in the report. The 1993 PRC historical information is not consistent with historical sources reviewed by ENVIRON, including a 1932 topographic map, information provided by facility personnel, and site observations. Additional discussion of the historical uses of the site is presented in Section E of this Chapter.

C. Data Base Review for the Site and Surrounding Properties

ENVIRON reviewed the results of the state and federal environmental data base searches performed by EDR (Environmental Data Resources; see Appendix A), as well as the USEPA's Envirofacts and ECHO (Enforcement and Compliance History Online) data bases.
The site is listed on several environmental data bases, as discussed below:

- The site, identified as Arnold Engineering Company, is listed on the CERCLIS-NFRAP (Comprehensive Environmental Response, Compensation, and Liability Information System-No Further Remedial Action Planned) data base. According to the EDR report, the CERCLIS-NFRAP listing indicates that discovery was made in 1992, and a

preliminary assessment was conducted in 1993. It appears that the discovery and preliminary assessment were conducted as a routine inspection for former or current treatment, storage, or disposal (TSD) facilities[1]. ENVIRON has reviewed the 1993 Preliminary Assessment report, prepared by PRC, which did not identify areas of concern except for the known ground water contamination issue, discussed in Section E of this chapter. In 1995, the site was granted NFRAP status and archived. No further details regarding the site's listing in the CERCLIS-NFRAP data base are provided in the EDR report or from facility personnel.

- The site, identified as Arnold Engineering Company, is listed on the CORRACTS (Corrective Action Report) data base, which indicates that the site was assigned a medium corrective action priority in 1993. Further, the data base listing indicates that the facility was deemed not amenable to stabilization due to lack of technical data, and the status should be changed when data becomes available. No further details are provided in the EDR report. The listing may be related to the known on-site ground water contamination issue (discussed in Section E of this chapter), which is currently under the oversight of the IEPA (Illinois Environmental Protection Agency) Division of Water Pollution Control.

- The site, identified as Arnold Engineering Company, is listed on the UST data base. According to the EDR report, 12 USTs have been removed or closed-in-place at the site. The former USTs are discussed in D.1 of this chapter.

- The site, identified as Arnold Engineering Company, is listed on the Illinois Surface Impoundment (IMPDMENT) data base, which identifies impoundments based on a one time statewide survey conducted in the late 1970s. The site's listing on the IMPDMENT data base is associated with the facility's wastewater treatment system and collection ponds, operated for the treatment and recycling of the facility's process and sanitary wastewater, as discussed in Chapter XIII of this report.

- The site, identified as Arnold Engineering Company, is listed on the RCRIS (Resource Conservation and Recovery Information System) data base as a SQG (Small Quantity Generator) of hazardous waste. Violations were reported in 1985, and the facility subsequently achieved compliance within three months of the reported violations. A

[1] The site was designated a TSD facility after being issued a RCRA Part A permit in approximately 1980/1981 for hazardous waste treatment and storage within a neutralization tank, waste acid tank, and drum storage area. The units were approved for closure and the Part A permit was withdrawn by the IEPA in 1987.

discussion of the facility's hazardous waste management practices is presented in Chapter XIII of this report.

- The site, identified as Arnold Engineering Company, is identified on the FINDS (Facility Index System) data base as being listed on several regulatory compliance data bases, including AIRS (Aerometric Information Retrieval System), National Emissions Inventory, Permit Compliance System, RCRIS, and TRI (Toxic Release Inventory). Relevant issues relating to these listings are discussed in Chapter XIII.

In addition to the site, there are several other listings in the EDR report for off-site sources within applicable ASTM (American Society for Testing and Materials) search radii. Several of these listings (registered UST sites), by themselves, are not necessarily indicative of an environmental concern, and these listings are therefore not discussed herein. Two sites appear on the LUST (Leaking Underground Storage Tank) data base, which may indicate potential contamination concerns. Of these LUST facilities, only one is located adjacent to or upgradient of the property and is discussed in the section below. This facility was selected for further discussion based on the assumption that a hazardous material released to the subsurface generally does not migrate laterally within the unsaturated soil for a significant distance, but a hazardous material can migrate in the ground water in a generally downgradient direction; however, there are limitations to this interpretation.

- Floit Sand and Gravel Company, located between one-eight and one-quarter mile east/southeast (likely upgradient) of the site, is identified on the LUST data base. According to a representative of the IEPA, in March 1991 Floit sent IEPA a closure report for a 1,000-gallon diesel UST that was removed. The closure report indicated that one soil sample from the area surrounding the tank had been analyzed for contaminants, and none were found above the limit of detection. IEPA responded with a letter stating that more soil testing was required in order for IEPA to accept the closure report. Although Floit has not provided IEPA with the results of further soil analysis to date, there is no indication that there was a release from the diesel UST that could adversely affect the subject site.

The EDR data base search identified a number of unmapped sites. ENVIRON reviewed the list of unmapped sites and verified that none were adjacent to the subject site; however, it was beyond the scope of this review to accurately locate each of the unmapped sites identified by EDR.

D. Chemical Use and Storage

1. Underground Storage Tanks

According to facility personnel, there are no current USTs at the site, nor was evidence of such (e.g., vent pipes, fill ports, or dispensing equipment) observed by ENVIRON during the site visit or in the review of records pertaining to the site. The site is not listed on the state UST data base for any registered USTs currently in use at the facility.

According to the EDR report and the 1993 PRC report, there were formerly 12 USTs present at the facility. Details regarding the former USTs are presented in Table V-3.

Table V-3
Former USTs at the Marengo, Illinois Facility

Tank ID	Contents	Size (gallons)	Approximate Year Installed	Approximate Year Removed/Closed in Place	Comments
USTs 1-6	Mineral oil	1,500	1961	1988-1990	Filled with sand and closed in place
UST 7	Acetone	6,000	1954	1988-1990	Filled with sand and closed in place
UST 8	Methanol	6,000	1959	1988-1990	Removed from ground
UST 9	TCA	6,000	1959	1988-1990	Removed from ground
UST 10	TCA	6,000	1962	1988-1990	Removed from ground; 3 soil samples collected and analyzed for TCA
UST 11	Kerosene	1,500	1956	After 1993; before 2004	Removed from ground
UST 12	Gasoline	1,500	1950	1968	As of 1993, empty and in place, last used 1968

The locations of the former USTs are generally unknown. ENVIRON observed a site figure that depicts the 6,000-gallon acetone and methanol USTs (USTs 7 and 8) adjacent to the northwest corner of Building 2/3/4/7, west of Building 10. In addition, ENVIRON obtained a partial site figure from the Office of the State Fire Marshal's Division of Petroleum and Chemical Safety that depicts one of the 6,000-gallon TCA tanks (Tank 10) adjacent to the southern exterior wall of Building 11/14. No other USTs are depicted on any site figures reviewed by ENVIRON. According to the 1993 PRC report, three soil samples were collected from the excavation pit following the removal of UST 10 and analyzed for TCA. TCA concentrations detected were 0.02 ppm, 0.09 ppm, and 0.003 ppm, respectively. No soil samples were documented during the removal of UST 9. The 1993 PRC report does not indicate whether any soil sampling was conducted or documented during the removal or closure of USTs 1 through 8, 11, or 12, and no sampling information was available from the Office of the State Fire Marshal's Division of Petroleum and Chemical Safety, which maintains registered UST information for the state. The facility is not identified on the state

LUST data base.

Although not considered to be a UST, site figures observed by ENVIRON depict an underground double-walled paint transfer line, labeled as "inactive" between Building 10, formerly a paint and drum storage area, and Building 2/3/4/7. Facility personnel had no information regarding the operation or decommissioning of this underground piping system.

2. Aboveground Storage Tanks

The facility maintains a number of ASTs (Aboveground Storage Tanks) at the site, including four approximately 300-gallon double-walled steel diesel fuel tanks located outside Building 2/3/4/7, the pond pump house, the fire suppression pump house, and west of Building 16, respectively. A 300-gallon, double-walled gasoline tank is also located west of Building 16. A number of large liquid argon, liquid nitrogen, and hydrogen tanks ranging in capacity from 3,000 to 9,300 gallons are located outdoors at the site, adjacent to Building 2/3/4/7, 5, and 11/14. A propane tank is located outside Building 2/3/4/7, to the south, adjacent to a liquid argon tank. Three silos containing foundry sand are located outside the southeastern wall of Building 5. Two inactive approximately 8,000-gallons tanks, formerly used for storage of hydrochloric and waste acid, are located outside the northern side of Building 11/14, within a concrete secondary containment structure. The waste acid tank was formerly permitted under the RCRA (Resource Conservation and Recovery Act) Part A permit program for TSD facilities, and was approved for closure in 1987. Two 1,500-gallon ASTs used for the bulk storage of rolling mill oil are present within an oil storage and filter room at the southern side of Building 11/14. Secondary containment for these ASTs consists of a prefabricated metal floor pan.

Facility personnel were not aware of any leaks or spills relating to the ASTs, and ENVIRON did not observe evidence of staining or past releases at the time of the site visit. Rolling mill oil was observed in the secondary containment pan provided for the bulk rolling mill ASTs; however, the oil appeared to be contained within the provided floor pan.

A 1,800-gallon neutralization tank was formerly present to the north of Building 2/3/4/7 for the treatment of caustic process wastewater prior to discharge to the wastewater treatment system. The tank was reportedly decommissioned as part of the 1987 RCRA Part A permit closure and withdrawal, and had been removed by the time of ENVIRON's site visit. In addition, a 5,000-gallon phosphoric acid tank was formerly located inside the northeastern section of Building 11/14 within a concrete secondary containment structure. Facility personnel did not know the exact date the tank was removed, but based on ENVIRON's review of a 1994 site figure and observations during the site visit, the tank was removed after 1994 and before 2004. Facility personnel were not aware of the presence of other historical ASTs at the site, nor did ENVIRON observe any evidence of other current or former ASTs (e.g., piping, stands, pads) during the site visit.

3. Drums and Container Storage

Drum storage areas are present within each of the active facility operations buildings (Buildings 2/3/4/7, 5, and 11/14) and Building 8, Building 10, and Building 16. In addition, individual drums of chemicals (primarily oils) are kept at or near their points of use. Drummed materials used on-site include 55-gallon drums of lubricating oils, hydraulic fluid, motor oil, other petroleum products, phosphoric acid, muriatic acid, alcohol, Leksol solvent, mineral spirits, chlorine bleach, and other specialty chemicals related to site operations and maintenance. Plastic totes, ranging from approximately 100- to 300-gallons, containing acids, are also stored in Building 11/14. The facility's operations have changed such that the quantity of acid used has significantly decreased. Many of the totes observed at the time of the site visit were empty. Drums of waste materials, including waste solvents and waste oils, are stored within Building 16. Building 16 is a self-contained building, provided with a concrete-bermed floor. All of the drum storage areas observed by ENVIRON were indoors primarily on concrete-paved surfaces. Some of the drum storage areas are located near floor drains, which reportedly discharge to the facility's collection ponds.

Historically, drum storage, including paints, solvents, and petroleum products, was also present in Building 10. Historically and currently, empty drums have been rinsed and crushed within Building 10 prior to removal for off-site management. Rinse water from the drum cleaning operations discharges to the facility's collection ponds. Drum cleaning was also historically conducted on an outdoor pad to the west of Building 10.

Facility personnel were not aware of significant spills or releases of materials from drum and container storage areas. At the time of the site visit, ENVIRON did not observe evidence of spills or uncontrolled releases from these storage areas, other than minor staining in some interior areas.

E. On-site Soil and Ground Water Conditions

The following known and potential soil and ground water contamination issues were identified:

1. Existing Chlorinated Solvent Ground Water Contamination

The facility has a history of significant chlorinated solvent use, including degreasers utilizing TCA, PCE, and TCE, and two former 6,000-gallon USTs for the storage of TCA. In 1990, the facility began monitoring ground water at the property as a condition of the facility's Water Pollution Control Permit. Elevated levels of chlorinated solvents, including TCA, PCE, and TCE have been detected in the northwestern corner of the property, in the vicinity of former Building 6. Both TCA and PCE have been detected at concentrations exceeding their federal Maximum Contaminant Levels (MCLs, 200 parts per billion [ppb]

and 5 ppb, respectively). Based on ground water data reviewed, the highest concentration of TCA was 3,000 ppb, detected in MW-3, located at the northwestern property boundary, in 2001. The most recent data (November 2004) indicated concentrations ranging from 9 to 41 ppb for TCA. The highest concentration of PCE was 9 ppb, detected in MW-3 during the most recent sampling (November 2004).

Lower concentrations of TCA have been detected in other on-site monitoring wells located upgradient of MW-3 but downgradient of current and former facility operations, including MW-A4, MW-A6, MW-A7, and MW-A8. All of the monitoring wells at the site, including MW-3, are installed to a depth of approximately 25 feet bgs and screened from 15 to 25 feet bgs. The monitoring wells are installed within the region's most important aquifer, the sand and gravel aquifer, which is present at a depth of approximately 15 to 200 feet bgs in the site vicinity. A source area for the contamination has not been identified; however, the contamination has been detected downgradient of former Building 6, where a former TCA UST may have been located. MW-3 is also located downgradient of the wastewater collection ponds and Building 16, which is used for hazardous and nonhazardous waste storage, formerly including waste TCA.

Potential downgradient receptors include nearby residences, which use private ground water wells that draw water from the same aquifer in which the contamination has been detected (the sand and gravel aquifer). According to the 1993 PRC report, approximately seven domestic water supply wells are located downgradient of and bordering the site, the nearest of which is located 100 yards north and downgradient of the site. The depth of these domestic wells reportedly ranges from 45 to 218 feet bgs. Facility personnel did not believe that testing of the nearby residential wells has been conducted (the Company has not been required to do this). The facility has its own ground water supply well, which draws from a deeper aquifer at a depth of approximately 750 to 850 feet bgs to supply both potable and process water to the facility.

As a condition of the facility's permit renewal, issued in July 2003, IEPA requested that the facility conduct additional investigation of ground water conditions at the site to determine the source and extent of contamination and evaluate the possibility that contamination has migrated off-site. In response, the facility installed an off-site downgradient monitoring well (MW-9) at a location approximately 300 feet northwest of MW-3, and sampled the new and existing monitoring wells during the most recent sampling event (November 2004). None of the analyzed volatile organic compounds (TCA, PCE, and TCE) were detected above laboratory detection limits (5 ppb) in the off-site well, which was installed to a depth of 20 feet below ground surface (bgs). Based on the analytical data, it appears that shallow

ground water has not been impacted at this off-site location, which may suggest that chlorinated solvents detected in shallow ground water beneath the site are attenuating prior to migrating to potential off-site receptors; however, it should be noted that this off-site well represents only one downgradient data point, and the potential presence of chlorinated solvents in deeper ground water has not been investigated. It can be argued that, based on the sampling data collected to date, the vertical and lateral extent of the contaminant plume have not yet been delineated and a source area for the contamination has not been identified. Because the facility's Water Pollution Control Permit requires that the facility determine the source and extent of the contamination and pursue options to address elevated levels (i.e., levels exceeding MCLs) of PCE in the ground water, the IEPA may require further investigation and action at the site to delineate, determine the source of, and mitigate the chlorinated solvent contaminant plume.

[redacted]

2. Potential Undiscovered Contamination

The site has reportedly been used for industrial operations since the late 1800s or early 1900s. Former operations conducted at the site, including railroad engine maintenance, transformer manufacturing, metal working and ancillary operations including degreasing and drum cleaning, have likely involved the use of petroleum products, chlorinated solvents,

[2] ENVIRON was not provided with a breakdown of the reserve amount.

metals, and polychlorinated biphenyls (PCBs). Ground water sampling conducted at the site to date has been limited primarily to one portion of the property (west of the collection ponds) and to analysis for volatile organic compounds (VOCs) and metals. No ground water sampling appears to have been conducted immediately downgradient (north/northwest) of the manufacturing buildings, Building 2/3/4/7, Building 5, Building 11/14, or former Building 1. In addition, no soil sampling has been conducted in the immediate vicinity of these current and former manufacturing and operations areas. Given the long history of industrial operations and use and storage of numerous hazardous materials at the property, the presence of soil and ground water contamination at portions of the site not investigated cannot be ruled out.

3. Staining Noted on Pad Beneath PCB-containing Transformers.

Evidence of minor leaks or stains was noted on a concrete pad beneath transformers located outside Building 5, some of which contain PCBs in concentrations between 50 ppm and 500 ppm. The staining did not appear to extent onto unpaved ground.

PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

UPDATED ENVIRONMENTAL REVIEW OF SIX FACILITIES OF ARNOLD MAGNETICS

Prepared for

Latham & Watkins LLP
Chicago, Illinois

On Behalf of

Freeport Financial
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Prepared by

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March 2006

IV. MARENGO, ILLINOIS

A. Facility Overview

Arnold owns and operates a magnet and related components manufacturing facility located at 300 North West Street in Marengo, McHenry County, Illinois (the "site," or "facility"). The 94-acre site is developed with three primary operations buildings (totaling 225,000 square feet), a number of ancillary structures, and a series of four wastewater collection ponds. The site has a long history of industrial operations, including a rail yard and railroad engine maintenance (from the late 1800s or early 1900s) and transformer manufacturing (early 1900s to 1950s). The manufacturing of magnets and related components at the facility began in 1958.

Arnold employs approximately 75 individuals in the manufacture of magnetic product components. Major operations consist of the rolling, milling, cutting, and finishing of steel and other metals, and major chemicals used in the process include phosphoric acid, muriatic acid, a brominated degreasing solvent (Leksol), mineral spirits, propylene glycol, and diesel fuel. Chlorinated solvents were formerly used in degreasing and parts washing operations.

The facility and its operations have generally remained the same since ENVIRON's previous review in 2004.

B. Data Base Review for the Site and Surrounding Properties

ENVIRON reviewed the results of the state and federal environmental data base searches performed by EDR (see Appendix B), as well as the USEPA's Envirofacts and ECHO data bases. As discussed in ENVIRON's 2004 report, the site is listed on numerous federal and state environmental data bases including CERCLIS-NFRAP, CORRACTS, UST, IMPDMENT, RCRIS-SQG, AIRS, PCS, TRI, and FINDS. There do not appear to be any entries in the data base subsequent to ENVIRON's 2004 review, and there are no violations listed in the ECHO data base.

ENVIRON's 2004 report identified one potentially upgradient property within one-quarter mile of the site listed with active status on a data base indicative of potential environmental concern (Floit Sand and Gravel Company, listed on the LUST data base). According to the 2006 EDR report, this site still has open status, and there are no new listings for potentially upgradient properties within one-quarter mile of the site listed on a data base indicative of potential environmental concern.

C. On-site Soil and Ground Water Conditions

In its 2004 report, ENVIRON identified three known and potential soil and ground water contamination issues, which are summarized in italics below. A discussion on the current status of

the issues based on ENVIRON's February 2006 site visit follows the italicized summary. No new issues were identified as a result of ENVIRON's 2006 assessment.

[redacted]

[redacted]

[redacted]

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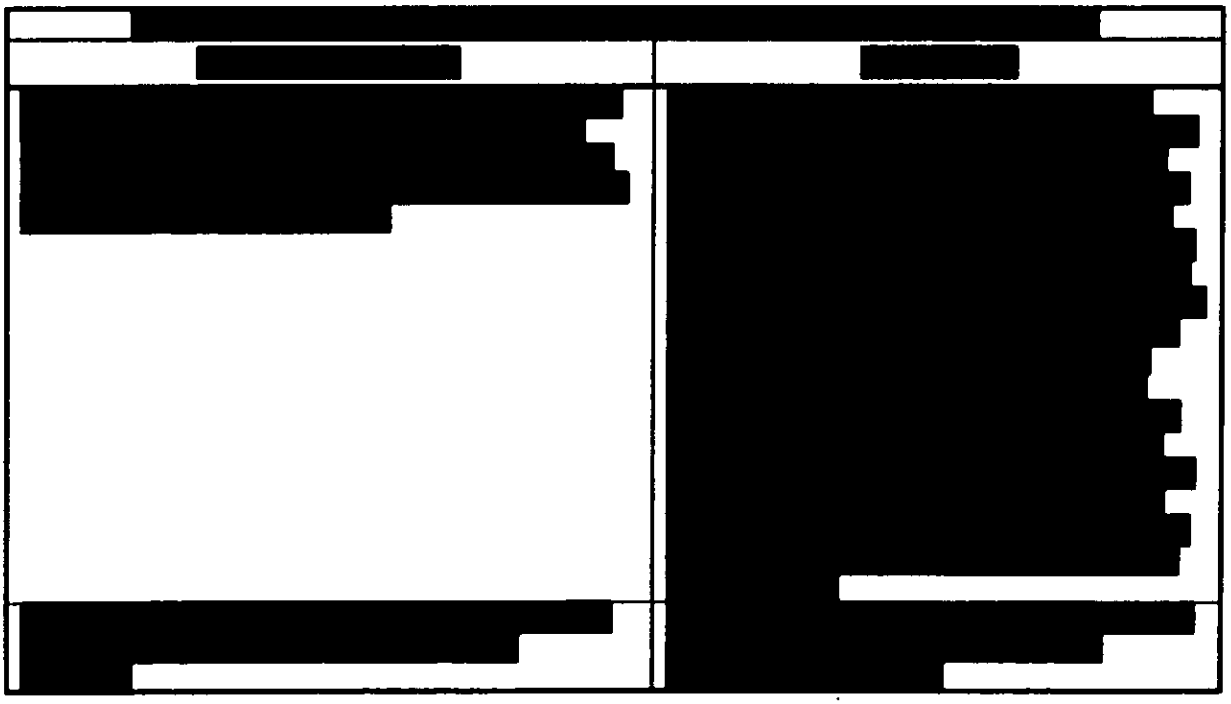

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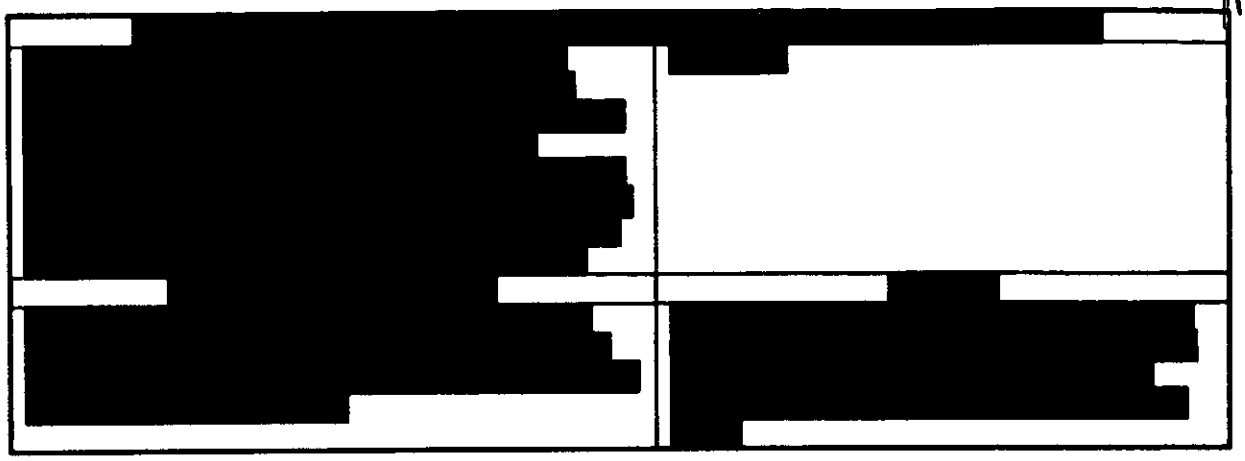

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PHASE I ENVIRONMENTAL SITE ASSESSMENT AND LIMITED ENVIRONMENTAL COMPLIANCE REVIEW OF ARNOLD MAGNETIC TECHNOLOGIES CORPORATION 300 N. WEST STREET MARENGO, ILLINOIS

Prepared for

Kirkland & Ellis LLP
Washington, D.C.

On behalf of

Arnold Magnetic Technologies Corporation
Rochester, New York

Prepared by

ENVIRON International Corporation

April 2008

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Environmental Professional Certification

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR §312.10. Further, we have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject properties. We have developed and performed this assessment in conformance with the standards and practices set forth in 40 CFR §312.

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III. PHASE I ENVIRONMENTAL SITE ASSESSMENT

A. Site Setting

Arnold operates a magnet and related components manufacturing facility located at 300 North West Street in Marengo, McHenry County, Illinois (the "site," or the "facility") (Figure III-1). Arnold leases the site from 300 West LLC. The site consists of an approximately 94-acre property located in a relatively rural setting. The site is developed with three primary operations buildings and a number of ancillary structures on the northern portion of the site (Figure III-2). Building 2/3/4/7 (comprised of several attached buildings), likely built during the mid-1900s, is an approximately 120,000-square foot building that houses offices, a maintenance area, and miscellaneous storage, shipping, and other ancillary operations.[1] Building 5, likely built during the mid-1900s, comprises approximately 60,000 square feet and houses the Alnico Products Division, which manufactures magnet components primarily by molting, melting, and finishing aluminum, nickel, and cobalt materials. Building 11/14, built in approximately 1970, comprises approximately 45,000-square feet and houses the Rolled Products Division, which conducts rolling mill and finishing operations to produce a thin-gauge rolled steel product.

Ancillary structures include Building 12, a parts and miscellaneous storage warehouse; Building 16, a hazardous and nonhazardous waste storage building; Building 10, used for storage and drum cleaning; Building 8, which houses a landscape and building maintenance shed and the facility's ground water supply well; a small pump house associated with the wastewater treatment system and collection ponds; a small building encompassing the wastewater treatment system; a small pump house associated with the facility's fire suppression system; and a small security station located at the facility entrance. Paved and gravel-covered driveways and parking areas are present surrounding the primary buildings and primarily in the northeastern portion of the site. A series of four wastewater collection ponds are present on the northern portion of the site, west of Building 2/3/4/7. The remainder of the northern portion of the site consists primarily of grass-covered land. An overflow pond is present on the southwestern portion of the site, southwest of Building 11/14. The remainder of the southern portion of the property consists of undeveloped, vegetated land. Table III-1 provides an overview of physical setting information for the site.

[1] Facility personnel reported that the site owner leases a portion of Building 2/3/4/7 to a separate entity that uses the space to store inventories obtained from companies that have gone out of business.

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TABLE III-1
Physical Setting and Utility Information for Arnold in Marengo, Illinois

Conditions	Source	Description
	Topography	
Elevation (above mean sea level)	1975 and 1970 USGS topographic map (Marengo North and Garden Prairie, Illinois, respectively); EDR Radius Map with GeoCheck	Approximately 820 feet.
Topographic Gradient	1975 and 1970 USGS topographic map; EDR Radius Map with GeoCheck; visual observations	Relatively flat, with a gentle downward slope towards the north/northwest at the site and in the site vicinity toward the Kishwaukee River. Regional topography is generally flat, with a slight downward slope north toward the Kishwaukee River.
	Hydrology	
Surface Water Runoff	Facility personnel; visual observations	All storm drains from facility ditches, paved areas, and building roofs reportedly discharge to the wastewater treatment system prior to discharging to the collection ponds. The one exception is a storm drain on the western side of Building 8 that discharges off-site along the northern boundary of the site. Storm water falling on grass-covered areas may infiltrate to the ground, discharge as runoff to the overflow pond, or discharge as runoff off-site.
Nearest Surface Water Body	1975 USGS topographic map; visual observations	The Kishwaukee River, which is located approximately one mile north of the site. The Kishwaukee River flows west/northwestward to the Rock River, which ultimately flows into the Mississippi River.
Flood Plain	FEMA*; facility personnel	Not located within 500-year or 100-year flood zones. Facility personnel reported no known occurrences of flooding.
Wetlands	NWI*	No on-site federally-designated wetlands.
	Geology and Hydrogeology	
Presumed Direction of Shallow Ground Water Flow	Inference from topographic gradient; 1993 PRC report; facility personnel	North/northwest
Depth to Ground Water	1993 PRC report; ground water monitoring data	Approximately 15 feet bgs.
On-site Wells	Facility personnel; 1993 PRC report; facility permits and documentation	One production well on-site, drawing from a depth of approximately 750 to 850 feet bgs, supplies potable and process water to facility. There are eight shallow monitoring wells at the site which are monitored pursuant to the facility's Water Pollution Control Permit. There is also one off-site ground water monitoring well located within the Railroad Street right-of-way off of the northwestern side of the site.
Nearest Ground Water Supply Wells	1993 PRC report; EDR database report	According to the 1993 PRC report, there are seven domestic water supply wells downgradient of the site – the nearest located 100 yards north of the site. The depth of these wells ranges from 45 to 218 feet bgs. The EDR report identified 66 water supply and monitoring wells within a one mile radius of the site, in all directions.

TABLE III-1
Physical Setting and Utility Information for Arnold in Marengo, Illinois

Conditions	Source	Description
Geologic Conditions	NCSS; 1993 PRC report	Surficial and shallow soil types primarily consist of well drained silt loams underlain by glacial till to 200 feet bgs, which comprises the regional sand and gravel aquifer (15 to 200 ft bgs). Underlying the till are a series of rock formations of Ordovician and Cambrian age to a depth of 1,500 ft bgs. The facility's water supply well likely draws from a limestone/dolomite or a sandstone layer.
Site Utility Information		
Electricity Supplier	Facility Personnel	ComEd
Natural Gas Supplier	Facility Personnel	Nicor
Use of Fuel Oil	Facility Personnel	There is no use of fuel oil on-site. Propane is stored on-site for a backup fuel source for fire pumps and office heating units.
Water Supplier	Facility Personnel	On-site water supply well located in Building 8. Water is also recirculated from the on-site wastewater treatment system for reuse in the production process. There is an on-site water tower for water storage. Records obtained from the MCDPD indicate that a well located on the western portion of the site (possibly adjacent to former Building 6) was abandoned in 1994.
Sanitary Sewer	Facility Personnel	No connection to the local sanitary sewer system. Domestic and process wastewater is treated on-site and then discharged to a percolation field located on the southwestern portion of the site.
Septic Systems	Facility Personnel	Facility personnel were not aware of current or former on-site septic systems. Documentation obtained from the MCDPD indicates that a temporary below-grade waste disposition unit for the "foundry building" (believed to be Building 5) was used for a brief period of time in 1964. No further information was available.

Notes:
FEMA = Federal Emergency Management Agency; NCSS = National Cooperative Soil Survey; NWI = National Wetlands Inventory
* - Source was provided in the EDR database report.

The facility is located in a relatively rural area of mixed residential, commercial, and agricultural land use. The nearest residential areas are located adjacent to the east side (residential homes) of the site. Based on discussions with facility personnel, ENVIRON's visual observations from the property boundary and public rights-of-way, and a limited review of publicly available information, a general determination of the current use of adjacent properties was developed, as described Table III-2.

TABLE III-2
Current Use of Properties Adjacent to Arnold in Marengo, Illinois

Direction	Property/Land Use	ENVIRON's Observations*
North	Railroad right-of-way owned (or formerly owned) by Chicago and Northwest Railroad, beyond which is Railroad Street. North of Railroad Street are several commercial and light industrial facilities, including a grain processing facility operated by Stade Grain, a farm services and supplies facility, G.E. Johnson Construction, and Stark Services, and residential properties to the north/northwest.	No apparent exterior manufacturing or storage operations were noted during ENVIRON's reconnaissance.
East	Residence and West Street, beyond which is residential and undeveloped land.	No apparent exterior manufacturing or storage operations were noted during ENVIRON's reconnaissance.
South	Commercial businesses and Route 20.	No apparent exterior manufacturing or storage operations were noted during ENVIRON's reconnaissance.
West	ComEd substation at the northwestern site boundary and Ritz Road to the west, beyond which is undeveloped and agricultural land	No apparent exterior manufacturing or storage operations were noted during ENVIRON's reconnaissance.

* Observations were made by ENVIRON during the site visit. ENVIRON walked or drove by the borders of these properties that are shared with the subject site. ENVIRON did not enter the neighboring properties and was therefore unable to observe the rear and sides of the properties.

B. Historical Uses of the Site and Adjacent Properties

Based on ENVIRON's review of limited historical information sources available (Table III-3) and discussions with facility personnel, the site was first developed for industrial use during the late 1800s or early 1900s and was purchased by the Arnold family in the early 1900s. The exact construction dates of the site buildings are generally unknown. According to facility personnel, Building 1 was the first known structure developed at the site, likely in the late 1800s or early 1900s and was used as a rail yard and engine maintenance facility and for the manufacture of transformers (possibly for railroad engines) prior to its use by Arnold Engineering Company for magnetic component manufacturing operations beginning in the 1950s. Buildings 5, 8, and 12, the water tower, the wastewater treatment facility, the collection ponds, a former airplane hangar (Building 9), Building 6, and Building 11 had been developed by 1970. Building 6, an operations building which formerly housed a Strontium Ferrite Department (wet processing and pressing of mixed metal sludges and iron powder, and baking and grinding operations), and Building 9, an airplane hangar built and used by the Arnold family, were reportedly demolished in approximately 1991 or 1992. Building 16, used for hazardous and nonhazardous waste storage, was apparently constructed after 1987.

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TABLE III-3
Review of Historical Reference Sources for Arnold in Marengo, Illinois

Time Period	Reference Source	Description of Site	Description of Surrounding Properties
Late 1800s – early 1900s	Facility personnel	The site was first developed for industrial use. Building 1 likely constructed around this timeframe.	NA
1930s	1932* and 1937 topographic map (Harvard, Illinois [1:62,500 scale])	One building that is in the general location of where Building 1 (and/or possibly a portion of Building 2/3/3/7) is depicted on the 1932 map. The Chicago and Northwestern Railroad right-of-way and Railroad Street are depicted to the north of the property, beyond which are residences bordering the street. A residence is depicted to the east of the property, as is West Street. No development is shown to the immediate south or west of the site, with the exception of Route 20 and Ritz Road, which border the site to the south and west, respectively. The 1937 map shows conditions similar to the 1932 map.	The general area surrounding the site appears relatively undeveloped, with the exception of the Town of Marengo, which is located east of the site.
1950s – 1960s	McHenry County Department of Planning and Development; 1993 PRC PA report	Building permit information indicates that a number of new constructions and additions to existing structures occurred at the site during this time period. The wastewater treatment system including the wastewater ponds began operation in 1965.	NA
1970s	1970 and 1975 topographic map (Marengo North, Illinois) 1970 topographic map* (Garden Prairie, Illinois) 1975 aerial photograph	The eastern portion of the site is depicted on the Marengo North topographic map. Buildings 1, 2/3/4/7, 5, 8, the water tower, the wastewater treatment facility, the collection ponds, and possibly Building 9 are depicted on both the 1970 and 1975 maps. Building 12 is depicted on the 1975 map. Development to the north and east of the site appears generally the same as in the 1932 and 1937 topographic maps The western portion of the site is depicted on the Garden Prairie topographic map. Buildings 6 and 11 are depicted on the site. An electrical substation is depicted and identified to the west of the site, west of Building 6. Residences are depicted to the north and northwest of the site. No development is depicted west of Ritz Road. On the 1975 photograph, all structures noted on the 1970 and 1975 maps are visible. A rectangular light colored area is visible to the south of Building 5 in the	Development around the site is primarily present along major roads and within the Town of Marengo, east of the site. The rest of the surrounding area is generally undeveloped, although relatively large buildings are present south of the site on the western fringe of Marengo.

TABLE III-3
Review of Historical Reference Sources for Arnold in Marengo, Illinois

Time Period	Reference Source	Description of Site	Description of Surrounding Properties
		general vicinity of where facility personnel reported the historical presence of an on-site air strip.	
1980s	1986 aerial photograph and 1987 Remcor Revised Closure Plan, Drum Waste Storage Facility report.*	The poor quality of the aerial photograph prevents the identification of site details, although the main facility buildings are visible. A site sketch from the 1987 report depicts all of the building depicted on the 1970s topographic maps, plus Building 10, north of Building 2/3/4/7, which was likely too small to be depicted separately on the previous topographic maps. No additional structures are depicted.	The surrounding area appears to be similar to conditions noted on the previous sources.
1990s	1998 aerial photograph	The site appears generally as it did during the site visit, with the exception that Building 1 is present (Building 6 is not present).	The surrounding area appears to be similar to conditions noted on the previous sources, although more residential development is evident to the south of the site.
2000s	2001 aerial photograph;* facility personnel 2001 and 2006 City Directories	On the 2001 photograph, the site appears generally the same as in the 1998 aerial photograph. Building 1 was demolished in 2002. City directory information indicates the site address was occupied by Arnold Engineering.	During the site visit, the surrounding area was generally rural with residences and small businesses located along roads surrounding the site location.

* = Reference source was reviewed and described in the 2004 environmental review.
Historical fire insurance maps and City Directory information for the site were not available from EDR. According to the City Directory Abstract provided by EDR, the subject site address was not listed in directories searched between 1971 and 1996.

Building permit information obtained from the MCDPD indicates that permits for building construction/additions were issued between 1951 and 2001. Many of the building permit records provided by the MCDPD are not readable or do not clearly indicate the dates of construction, the location of the new construction, or what specifically the permit was issued for. Some of the more notable constructions identified from a review of the building permit information include a 1951 construction of a residence, a 1957 construction of a 77,000-square foot building, a 1960 construction of a 43,000-square foot warehouse identified as Building 6, a 1960 construction of a 7,200-square foot addition for heat treating, a 1968 construction of a 34,000-square foot building, a 1968 construction of a 1,836-square foot coolant storage building, a 1980 construction of Building 14 (26,312 square feet), and a 2002 demolition of a residence.

Site history information obtained from facility personnel is in general agreement with historical information obtained from a review of readily available historical sources. It is noted that according to the 1993 PRC PA report, the facility was developed in 1958 for magnetic component manufacturing by Allegheny Ludlum Steel. It is ENVIRON's understanding that Arnold

Engineering Company was a wholly-owned subsidiary of the Allegheny Ludlum Steel Corporation. SPS Technologies purchased Arnold Engineering Company from Allegheny in 1986, and the Company acquired Arnold Engineering Company from SPS Technologies in 2004.

C. Current Use of Site

Manufacturing operations conducted at the site are associated with two main divisions: the Alnico Products Division, which is housed in Building 5; and the Rolled Products Division, which is housed in Building 11/14. Arnold employs approximately 140 individuals at the site and operates three shifts. The Alnico Products Division's primary Standard Industrial Classification (SIC) code is 3499 (Fabricated Metal Products, Not Elsewhere Classified), and the applicable SIC codes for the Rolled Products Division are 3316 (Cold Finishing of Steel Shapes), 3351 (Copper Rolling and Drawing), 3353 (Aluminum Sheet, Plate, and Foil), and 3356 (Nonferrous Rolling and Drawing, Note Elsewhere Classified). A summary of facility operations are provided below.

Alnico Products Division

- Receiving – The facility receives aluminum, cobalt, nickel, brass, and copper in various forms (e.g., scrap, parts). Cleaning of the received raw materials is not conducted as it is not necessary.
- Melting – The raw materials are mixed according to product recipes and are melted in one of three induction furnaces (two 150-pound furnaces and one 1,000-pound furnace).
- Mold Preparation – Sand molds are produced using foundry sand, binders, and dimethyl ethyl amine (DMEA). Sand is blown into the core-making equipment, and the binders and hardener are added which results in the hardening of the mold. Emissions from core making operations are controlled by a baghouse and sulfuric acid scrubber.
- Casting and Shakeout – The molten metals are poured into the sand molds. Swarf and slag are removed and sent off-site for reclamation. Reverb is collected for reuse. The filled molds sit for a day to cool and then placed in shakeout machines that separate the sand molds from the casted parts. The sand is not reclaimed, but is collected for off-site disposal as a nonhazardous waste. Sandblasting is conducted to smooth out the casted parts.
- Magnetizing – The parts are heated in ovens to activate their molecular structures. Using a solenoid, the molecular structures are reoriented to magnetize the parts.
- Finishing – Magnetized parts are undergo fine grinding and cutting (using a water-based cutting fluid) to finish the parts.
- Sintered Alnico – In addition to casting operations, Arnold has a smaller sintered process where alloys are crushed and mixed with powdered ingredients. The powdered mix is pressed to harden into a desired shape, and then is heat treated for finishing.

Rolled Products Division

- Receiving – The facility receives stainless steel, titanium, and nickel coils.
- Size Reduction/Slitting – The coils are processed through mills to reduce their thickness (down to foil) and are slit to specifications.
- Cleaning and Surface Preparation – The coils are cleaned in a dip tank utilizing a brominated solvent (Leksol). The surfaces of the coils are prepared using a phosphoric acid cleaning lines. Fumes are controlled by an acid scrubber system.
- Annealing/Heat Treating – Nine annealing furnaces are used to prepare the coils for magnetizing.
- Magnetizing – The coils are energized to create a magnetic property in the metal.

According to facility personnel, operations and chemical usage have not changed substantially since ENVIRON conducted its 2006 review, with the exception that the Magnetic Technology Center Division operations that were conducted in portions of Building 2/3/4/7 were moved to Arnold's Rochester, New York facility. The facility does not currently use chlorinated solvents; however, based on information provided by facility personnel and documents reviewed, the facility formerly used tetrachloroethene (PCE), TCE, TCA, and methylene chloride for degreasing and parts washing operations. According to the PRC report, the facility discontinued the use of TCA in 1991. Facility personnel reported that TCE use was discontinued prior to 2001, and PCE was discontinued in September 2001. Arnold now uses Leksol, a brominated (non-chlorinated) solvent, in the facility's degreasers, and mineral spirits, a petroleum distillate, in the facility's parts washers.

D. Database Review for the Site and Surrounding Properties

ENVIRON reviewed the results of the state and federal environmental database searches performed by EDR (see Appendix C). The site is listed on several environmental databases, as discussed in Table III-4.

Table III-4
Summary of Environmental Database Listings for Arnold in Marengo, Illinois

Listing Name or Address	Database	Comments	Reference for Further Discussion
		Databases Related to Potential Releases	
Arnold Engineering Co.	CORRACTS CERC-NFRAP	The CORRACTS listing indicates that the site was assigned a medium corrective action priority in 1993, the facility was deemed not amenable to stabilization due to lack of technical data, and the status should be changed when data becomes available. The CERCLIS-NFRAP listing indicates that discovery was made in 1992, and a preliminary assessment was conducted in 1993. It appears that the discovery and preliminary assessment were conducted as a routine inspection for former or current treatment, storage, or disposal (TSD) facilities[2]. In 1995, the site was granted NFRAP status and archived.	III.G.
300 West Street, Marengo, IL	SPILLS	No details associated with the SPILLS listing is provided in the EDR database report. Facility personnel believed that the listing may be associated with a May 17, 2004 fire in Building 14 that was reported to IEPA. The fire involved phosphoric acid tanks, and was contained within the building (i.e., no release of chemicals to the ground occurred).	NA
300 West LLC	LUST	The listing identifies incident number 111065003 with a date of September 24, 2007. The substance involved is identified as "other petro."	III.G
		Databases Related to Regulatory Compliance	
Arnold Engineering Co.	UST RCRA-SQG FINDS TRIS WI MANIFEST	Twelve USTs are indicated as having been removed or closed in-place. These are discussed further below. The site is listed on the RCRIS (Resource Conservation and Recovery Information System) database as a SQG (Small Quantity Generator) of hazardous waste. Violations were reported in 1985, and the facility subsequently achieved compliance within three months of the reported violations. The FINDS (Facility Index System) database as being listed on several regulatory compliance databases, including AIRS (Aerometric Information Retrieval System), National Emissions Inventory, Permit Compliance System, RCRIS, and TRI (Toxic Release Inventory). The WI MANIFEST listing shows the transfer of wastes generated at the facility to disposal locations in Wisconsin during 2006.	III.E.1 (USTs) Table IV-2
Arnold Magnetic Technologies	FINDS AIRS	Under the FINDS listing, the site is indicated as being included under the Illinois Agency Compliance and Enforcement System (ACES) database, which is associated	Table IV-2

[2] The site was designated a TSD facility after being issued a RCRA Part A permit in approximately 1980/1981 for hazardous waste treatment and storage within a neutralization tank, waste acid tank, and drum storage area. The units were approved for closure and the Part A permit was withdrawn by the IEPA in 1987.

Table III-4
Summary of Environmental Database Listings for Arnold in Marengo, Illinois

Listing Name or Address	Database	Comments	Reference for Further Discussion
		with permitting activities in the state. The AIRS listing provides emission information submitted to IEPA over several years.	
300 West LLC	UST	The listing includes four USTs that are indicated as being exempt from regulation.	III.E.1
Arnold Engineering Company	IMPDMENT	The database identifies impoundments based on a one time statewide survey conducted in the late 1970s. The site's listing is associated with the facility's wastewater treatment system and collection ponds, operated for the treatment and recycling of the facility's process and sanitary wastewater.	Table IV-2

In addition to the site, there are several other listings in the EDR report for off-site sources within applicable ASTM search radii. Several of these listings (registered UST, AIRS, SW/LF), by themselves, are not necessarily indicative of an environmental concern, and these listings are therefore not discussed herein. Two sites appear on the LUST (Leaking Underground Storage Tank) database, which may indicate potential contamination concerns. One of the LUST sites was selected for further discussion below based on the assumption that a hazardous material released to the subsurface generally does not migrate laterally within the unsaturated soil for a significant distance, but a hazardous material can migrate in the ground water in a generally downgradient direction. The other LUST site appears to be located approximately one-half mile hydraulically crossgradient from the subject site, is not considered to represent a potential concern, and is not discussed further. One site is listed on the state Site Remedial Program (SRP) database that is located north of the site across West Railroad Street. Due to the proximity of this site to the subject site, it is discussed further below.

- Floit Sand and Gravel Company, located between one-eight and one-quarter mile east/southeast (likely upgradient) of the site, is identified on the LUST database. Information obtained by ENVIRON during previous reviews indicates that according to a representative of IEPA, in March 1991 Floit sent IEPA a closure report for a 1,000-gallon diesel UST that was removed. The closure report indicated that one soil sample from the area surrounding the tank had been analyzed for contaminants, and none were found above the limit of detection. IEPA responded with a letter stating that more soil testing was required in order for IEPA to accept the closure report. Although Floit has not provided IEPA with the results of further soil analysis to date, there is no indication that there was a release from the diesel UST that could adversely affect the subject site.

- The Stade Property, located at 21600 West Railroad Street and less than one-eighth mile north of the site, is listed on the SRP database, which is a state database of sites being

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addressed voluntarily by responsible parties. No specific information regarding contamination at this site or the status of remediation activities is provided. This site appears to be located downgradient of the subject site, and is therefore not expected to represent a concern to the subject site.

The EDR database search identified a number of unmapped sites. ENVIRON reviewed the list of unmapped sites and verified that none were adjacent to the subject site; however, it was beyond the scope of this review to accurately locate each of the unmapped sites identified by EDR.

E. Materials Storage

1. Underground Storage Tanks

According to facility personnel, there are no current USTs at the site, nor was evidence of such (e.g., vent pipes, fill ports, or dispensing equipment) observed by ENVIRON during the site visit or in the review of records pertaining to the site. The site is listed on the state UST database for a total of 16 USTs. 12 of the tanks are indicated as having been abandoned in place or removed. The listings for the remaining four tanks (listed under the name 300 West LLC) do not indicate if the tanks were removed or are still present. Facility personnel were not aware of these four USTs, but indicated they may be associated with USTs removed from the site in 2007 by the current site owner (300 West LLC). Details regarding the former USTs are presented in Table III-5.

Table III-5
Former USTs at the Marengo, Illinois Facility

Tank ID	Contents	Size (gallons)	Approximate Year Installed	Approximate Year Removed/Closed in Place	Comments
USTs 1-6	Mineral oil	1,500	1961	1988-1990	Filled with sand and closed in place
UST 7	Acetone	6,000	1954	1988-1990	Filled with sand and closed in place
UST 8	Methanol	6,000	1959	1988-1990	Removed from ground
UST 9	TCA	6,000	1959	1988-1990	Removed from ground
UST 10	TCA	6,000	1962	1988-1990	Removed from ground; 3 soil samples collected and analyzed for TCA
UST 11	Kerosene	1,500	1956	After 1993; before 2004	Removed from ground
UST 12	Gasoline	1,500	1950	1968	As of 1993, empty and in place, last used 1968
UST 13	"Hazardous Substance"	8,000	Unknown	Unknown	Indicated in the EDR report as being exempt from regulation
UST 14	Lube Oil	1,000	Unknown	Unknown	Indicated in the EDR report

Table III-5 Former USTs at the Marengo, Illinois Facility					
Tank ID	**Contents**	**Size (gallons)**	**Approximate Year Installed**	**Approximate Year Removed/Closed in Place**	**Comments**
					as being exempt from regulation
UST 15	Fuel Oil	2,000	Unknown	Unknown	Indicated in the EDR report as being exempt from regulation
UST 16	Fuel Oil	2,000	Unknown	Unknown	Indicated in the EDR report as being exempt from regulation

The locations of the former USTs are generally unknown. During ENVIRON's 2004 review, a site figure was reviewed that depicted the 6,000-gallon acetone and methanol USTs (USTs 7 and 8) adjacent to the northwest corner of Building 2/3/4/7, west of Building 10. In addition, ENVIRON had obtained a partial site figure from the Office of the State Fire Marshal's Division of Petroleum and Chemical Safety that depicted one of the 6,000-gallon TCA tanks (Tank 10) adjacent to the southern exterior wall of Building 11/14. No other USTs were depicted on any site figures reviewed by ENVIRON.

According to the 1993 PRC report, three soil samples were collected from the excavation pit following the removal of UST 10 and analyzed for TCA. TCA concentrations detected were 0.02 parts per million (ppm), 0.09 ppm, and 0.003 ppm, respectively. No soil samples were documented during the removal of UST 9. The 1993 PRC report does not indicate whether any soil sampling was conducted or documented during the removal or closure of USTs 1 through 8, 11, or 12, and no sampling information was available from the Office of the State Fire Marshal's Division of Petroleum and Chemical Safety, which maintains registered UST information for the state. Facility personnel reported that during 2007, the current site owner removed at least two and possibly three USTs from the site including one located within the footprint of former Building 1 and one from the northern side of Building 2/3/4/7. Facility personnel were not aware of the contents of the tanks and had no documentation related to the removal of the tanks, but reported that soil excavation was conducted as part of the tank removal activities.

The site is listed on the LUST database (as indicated in Table III-4) for an incident occurring in September 2007. Facility personnel were not aware of this incident, but believed that it may be associated with the removal of USTs by the current site owner.

Although not considered to be a UST, site figures reviewed by ENVIRON during the 2004 review depicted an underground double-walled paint transfer line (labeled as "inactive") between Building 10, formerly a paint and drum storage area, and Building 2/3/4/7. Facility personnel had no information regarding the operation or decommissioning of this underground piping system. In addition, the facility utilizes a below grade pit located on the southern side of Building 2/3/4/7 that is used as a machining coolant reservoir. Facility personnel indicated that the pit holds

approximately 200 gallons of coolant, that approximately half of the pit was blocked off years ago, and that the pit is cleaned of swarf approximately once every two years. Facility personnel were not aware of any leaks from the pit.

2. Aboveground Storage Tanks

The facility maintains a number of ASTs (aboveground storage tanks) at the site, including four approximately 300-gallon double-walled steel diesel fuel tanks located outside Building 2/3/4/7, the pond pump house, the fire suppression pump house, and west of Building 16, respectively. A 300-gallon, double-walled gasoline tank is also located west of Building 16. A number of large liquid argon, liquid nitrogen, and hydrogen tanks ranging in capacity from 3,000 to 9,300 gallons are located outdoors at the site, adjacent to Building 2/3/4/7, 5, and 11/14. A propane tank is located outside Building 2/3/4/7, to the south, adjacent to a liquid argon tank. Three silos containing foundry sand are located outside the southeastern wall of Building 5. Two inactive approximately 8,000-gallons tanks, formerly used for storage of hydrochloric and waste acid, are located outside the northern side of Building 11/14, within a concrete secondary containment structure. The waste acid tank was formerly permitted under the RCRA (Resource Conservation and Recovery Act) Part A permit program for TSD facilities, and was approved for closure in 1987. Two 1,500-gallon ASTs used for the bulk storage of rolling mill oil are present within an oil storage and filter room at the southern side of Building 11/14. Secondary containment for these ASTs consists of a prefabricated metal floor pan, and during the site visit, oil was observed to be present within the floor pan. Facility personnel were not aware of any leaks or spills relating to the ASTs, and ENVIRON did not observe evidence of releases or significant staining at the time of the site visit.

A 1,800-gallon neutralization tank was formerly present to the north of Building 2/3/4/7 for the treatment of caustic process wastewater prior to discharge to the wastewater treatment system. The tank was reportedly decommissioned as part of the 1987 RCRA Part A permit closure and withdrawal, and had been removed by the time of ENVIRON's site visit. In addition, a 5,000-gallon phosphoric acid tank was formerly located inside the northeastern section of Building 11/14 within a concrete secondary containment structure. Facility personnel did not know the exact date the tank was removed, but based on ENVIRON's review of a 1994 site figure and observations during the site visit, the tank was removed after 1994 and before 2004. Facility personnel were not aware of the presence of other historical ASTs at the site, nor did ENVIRON observe any evidence of other current or former ASTs (e.g., piping, stands, pads) during the site visit.

3. Drums and Container Storage

Storage of chemicals in drums and containers occurs inside each of the active facility operations buildings (Buildings 2/3/4/7, 5, and 11/14) and Building 8, Building 10, and Building 16. In addition, individual drums of chemicals (primarily oils) are kept at or near their points of use.

Drummed materials used on-site include 55-gallon drums of lubricating oils, hydraulic fluid, motor oil, other petroleum products, phosphoric acid, muriatic acid, alcohol, Leksol solvent, mineral spirits, chlorine bleach, and other specialty chemicals related to site operations and maintenance. Plastic totes, ranging from approximately 100- to 300-gallons, containing acids, are also stored in Building 11/14. The facility's operations have changed such that the quantity of acid used has significantly decreased. Many of the totes observed at the time of the site visit were empty. Drums of waste materials, including waste solvents and waste oils, are stored within Building 16. Building 16 is a self-contained building, provided with a concrete-bermed floor. Facility personnel were not aware of any significant spills or releases of materials from drum and container storage areas. At the time of the site visit, ENVIRON did not observe evidence of spills or uncontrolled releases from these storage areas, other than minor staining in some interior areas.

Several drums were noted in exterior areas of the site including empty drums outside of Building 10, two drums containing purge water from monitoring wells situated west of the fire system pump house, and two drums of DMEA situated on the eastern side of Building 5. No spills or staining were noted around these drums.

Historically, paints, solvents, and petroleum products were stored in drums in Building 10. The eastern section of Building 10 is currently used for records storage. The western portion is used for drum rinsing activities. Drums are manually rinsed and the rinsate is discharged to a floor trench drain that discharges to the facility's wastewater treatment system. Cleaned drums are crushed inside Building 10 and are collected for off-site disposal. Solids collected from the drums (e.g., tool room grinding fines) are collected for off-site disposal. During ENVIRON's 2004 review, facility personnel reported that drum cleaning was also historically conducted on an outdoor pad to the west of Building 10.

F. Polychlorinated Biphenyls

Facility personnel were not aware of any equipment on-site containing polychlorinated biphenyls (PCBs). A number of pad-mounted, facility-owned transformers are located on-site. Facility personnel reported that in 2006, Arnold retrofilled any transformer that was known to contain oil containing PCBs in a concentration greater than 50 ppm, and that all transformers at the site (even transformers that are not in use) contain PCBs at concentrations less than 50 ppm with the exception of one unit located off of the northwestern wall of Building 5. According to facility personnel, transformers are tested on an annual basis and such testing includes PCB analyses. Facility personnel reported that the one remaining unit that contains PCBs in excess of 50 ppm is scheduled to be retrofilled during 2008. During the site visit, staining was not noted around exterior pad-mounted transformer units with the exception of staining noted on the concrete pad beneath one of the transformers located on the northeastern side of Building 5. This unit was labeled as a non-PCB transformer.

Facility personnel were not aware of the presence of PCBs in other electrical equipment or hydraulic equipment at the site. Because portions of the building were constructed prior to the 1976 federal ban on the manufacture of PCBs, it is possible that hydraulic oils, light ballasts, or other types of electrical equipment, such as capacitors, could contain PCBs.

G. Soil and Ground Water Conditions (Findings and Opinions)

ENVIRON conducted a Phase I ESA of the Arnold facility located at 300 N. West Street, Marengo, Illinois. The objective of the ESA was to identify RECs, which the ASTM Standard defines as follows:

> "The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions."

Based on the historical information reviewed, the site was first developed for industrial use during the late 1800s or early 1900s and was purchased by the Arnold family in the early 1900s. Building 1 was the first known structure developed at the site, likely in the late 1800s or early 1900s and was used as a rail yard and engine maintenance facility and for the manufacture of transformers prior to its use by Arnold Engineering Company for magnetic component manufacturing operations beginning in the 1950s. Historical activities conducted at the site involved the use of chlorinated solvents as well as on-site wastewater treatment ponds, which are still in use.

ENVIRON has identified two RECs associated with the site, as described below. Both of these RECs are considered to be only noteworthy from a business risk perspective.

Existing Chlorinated Solvent Ground Water Contamination and IEPA Violation Notice

In 1990, the facility began monitoring ground water at the property as a condition of the facility's Water Pollution Control (WPC) Permit, and Arnold continues to conduct monthly ground water monitoring at eight on-site monitoring wells as well as monthly sampling of the outfall from wastewater treatment Pond 4. The monitoring wells are all located on the western portion of the site, with most located around the location of former Building 6.

Over the period of monitoring, chlorinated solvents including 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), and trichloroethene (TCE) as well as nickel have been detected in certain wells above permit limitations/Maximum Contaminant Levels (MCLs). The most recent ground water results[3] indicate two wells with concentrations of chlorinated solvents above MCLs. In MW-3, PCE was detected at 13.0 ug/L, which is above its MCL of 5.0 ug/L. This concentration has remained relatively steady for the past several years. In MW-A7, 1,1,1-TCA was detected at 247 ug/L, which is above its MCL of 200 ug/L. Results for 1,1,1-TCA in MW-A7 had been below the MCL for several months during 2007, but again exceeded the MCL in November 2007. 1,1,1-TCA was detected at 11.4 ug/L and 2.2 ug/L in MW-3 and MW-A8, respectively. These concentrations are well below the MCL of 200 ug/L. Nickel has not been detected above its permit limit in any well since 2004 when it was detected in MW-3 at 0.110 mg/l, which is only slightly above the permit limitation of 0.1 mg/l. Wells MW-3, MW-A7, and MW-A8 are located in the northwestern portion of the site near former Building 6.

Potential downgradient receptors include nearby residences, which use private ground water wells that draw water from the same aquifer in which the contamination has been detected (the sand and gravel aquifer). The depth of these domestic wells ranges from 45 to 218 feet bgs. The closest downgradient residences are located across Railroad Street to the north-northwest of the Arnold site. To address potential contamination migration concerns, IEPA required Arnold (as a condition of its WPC permit issued in 2004) to install an off-site downgradient monitoring well (MW-A9), which was installed at a depth of 20 feet bgs in November 2004 within the right-of-way of Railroad Street, approximately 300 feet northwest of MW-3. MW-A9 was sampled several times between November 2004 and April 2006, and 1,1,1-TCA, PCE, and TCE were not detected during any sampling event. IEPA also required Arnold to obtain water samples from the three residences located across Railroad Street from the Arnold site. In November 2005, Arnold collected well water samples from two of the three residences and analyzed the samples for PCE, 1,1,1-TCA, and TCE. None of the contaminants were detected in the samples obtained from the residences.

The current WPC permit, which was issued in April 2006, does not require Arnold to monitor MW-A9, which has not been sampled since April 2006. Arnold is required to submit the ground water sampling results to IEPA on a semi-annual basis. The current WPC permit also does not include certain "Special Conditions" included in the previous version of

[3] The most recent sampling was conducted on February 18, 2008; however, during that sampling event, samples were not collected from two monitoring wells (MW-A6 and MW-A7) due to weather conditions. The most recent results for these two wells were obtained from samples collected on January 18, 2008.

the WPC permit that required Arnold to investigate/address the elevated levels of specific contaminants (i.e., 1,1,1-TCA, PCE, and nickel) in ground water at the site. Based on a review of available documentation, the source(s) of the ground water contamination at the site has not yet been identified, and the presence of chlorinated solvents in ground water above permit limitations/MCLs is identified as a REC.

In January 2008, IEPA conducted a site inspection of the Arnold facility to evaluate compliance with Arnold's WPC permit and its NPDES permit (storm water). Subsequent to the inspection, IEPA issued a Violation Notice to Arnold dated February 28, 2008 (received by Arnold on March 5, 2008) that concluded that the existing chlorinated solvent ground water contamination above Class 1 ground water objectives represents a violation of certain Illinois statutes. The Violation Notice alleges that the discharge of contaminants was "caused and allowed in a way that caused water pollution," and contaminants were "deposited on the land in such a place and manner that created a water pollution hazard." IEPA included in the Violation Notice a list of "Suggested Resolutions" including 1) immediately determine the source(s) of 1,1,1-TCA, PCE, and other related contaminants that are present in ground water under the site by conducting an investigation, 2) immediately determine the extent of 1,1,1-TCA, PCE, and other related contaminants in soil and ground water, both on-site and off-site by conducting an investigation, 3) collect ground water samples from all downgradient residential/nonresidential private water wells located within approximately one-half mile of the site, 4) remediate, if necessary, to meet all applicable remediation objectives for soil and ground water, and 5) enroll in the voluntary Site Remediation Program (SRP) within 45 days from the receipt of the Violation Notice. IEPA required Arnold to provide a written response within 45 days of receipt of the Violation Notice.

ENVIRON cannot rule out the possibility that any future site investigation activities conducted pursuant to the IEPA Violation Notice may identify additional contamination concerns. However, by entering the site in the SRP, a degree of flexibility can be achieved with respect to the scope and timing of the investigation and the remediation objectives.

The facility has also been identified as subject to the RCRA Corrective Action Program and was assigned a "medium priority" designation under the program in 1993. USEPA sent a letter to Arnold dated April 3, 2007 notifying Arnold that the facility had been identified as being part of the "2020 Corrective Action Universe," and that all facilities in this universe will be expected to have implemented a final remedy by 2020. USEPA further indicated that it plans to work with all such facilities to develop plans and schedules that achieve this goal before 2020. No further correspondence has been received by Arnold from USEPA

since then.

[redacted]

LUST Listing

The site is listed on the LUST database under the name 300 West LLC for an incident involving a petroleum product occurring in September 2007. Facility personnel reported that Arnold did not remove any USTs during 2007 and believed that the LUST listing may be associated with the removal of several USTs by the current site owner (300 West LLC) during 2007, which Arnold was not involved with. Facility personnel reported that the current site owner conducted site investigation activities around the time it acquired the subject site and subsequently removed/closed at least two and possibly three USTs from the site including one located within the footprint of former Building 1 and one from the northern side of Building 2/3/4/7. Facility personnel were not aware of the contents of the tanks, but reported that soil excavation was conducted as part of the tank removal activities. Arnold has not been provided with any documentation related to site investigation activities, UST closures, or remediation activities conducted by the current site owner. It appears the current site owner may have transferred this LUST incident to the SRP in December 2007, , and therefore ENVIRON characterizes this issue as a REC. However, it also appears the current owner of the site has accepted the responsibility for any remediation required in connection with this incident under the SRP.

ENVIRON identified the following *de minimis* condition:

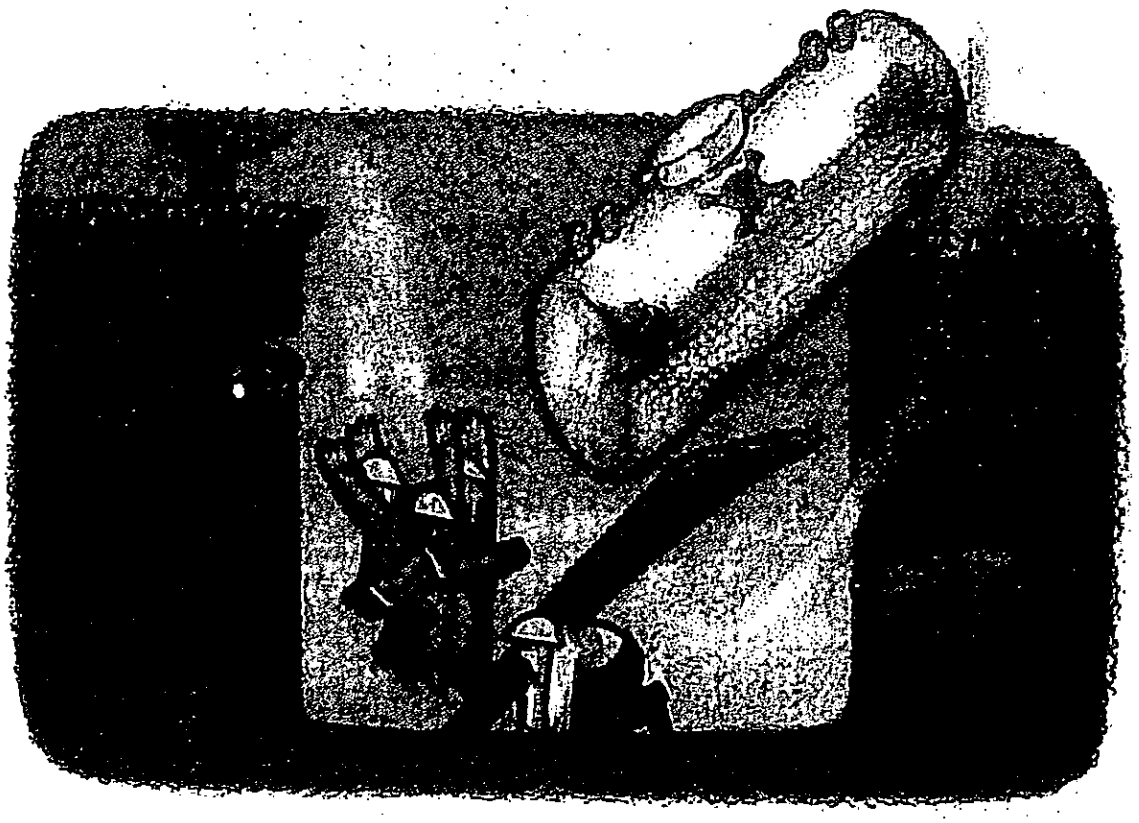
Staining on Pad Beneath Transformer

During the site inspection, ENVIRON noted dark staining on the concrete pad underlying one of three transformer units on the exterior northeastern wall of Building 5. The transformer around which the staining was present was labeled as a non-PCB transformer (i.e., contains oil with PCBs at a concentration of less than 50 ppm). The noted staining did not appear to extend onto unpaved ground. Facility personnel reported that when testing of site transformers for PCBs was initiated in 2004, this unit was determined to not contain PCBs in excess of 50 ppm. At the time of ENVIRON's 2004 and 2006 site visits, staining was not identified in this area suggesting the staining occurred after the 2006 inspection.

H. Conclusions and Analysis of Data Gaps

ENVIRON performed a Phase I Environmental Site Assessment of 300 N. West Street in Marengo, Illinois in conformance with the scope and limitations of ASTM Practice E 1527-05. Any exceptions to, or deletions from, this practice are described in Section I.C of this report. This assessment has revealed two recognized environmental condition in connection with the property: the presence of chlorinated solvent ground water contamination; and the listing of the site on the state LUST data base related to a release incident involving a petroleum product reported in September 2007 and apparently transferred to the SRP by the site owner in December 2007. ENVIRON did not identify any significant data gaps during this assessment.

APPENDIX D – EGSL 2006 GPR REPORT



Ground Penetrating Radar Survey

Subject Property
Arnold Technologies
300 North West Street
Marengo, Illinois 60152

Prepared For
Mr. John Daley
John Daley and Associates
2340 River Road – Suite 202
Des Plaines, Illinois 60018

September 13, 2006
EGSL Project Number: 601107

EGSL

ENVIRONMENTAL GROUP SERVICES, LTD.

Ground Penetrating Radar Survey

SUBJECT PROPERTY

Arnold Technologies
300 North West Street
Marengo, Illinois 60152

Prepared For

Mr. John Daley
John Daley and Associates
2340 River Road – Suite 202
Des Plaines, Illinois 60018

Prepared By

ENVIRONMENTAL GROUP SERVICES, LTD.
557 WEST POLK STREET, SUITE 201
CHICAGO, ILLINOIS 60607

Field Inspectors:
Bill Lennon
Antonela Vadan

Inspection Date:
August 25, 2006

EGSL Project Number: 601107

1 EXECUTIVE SUMMARY

Environmental Group Services, Limited (EGSL) of Chicago, Illinois was contracted by *John Daley and Associates* to perform a Ground Penetrating Radar (GPR) Survey of the property known as Arnold Technologies, located at 300 North West Street, Marengo, Illinois (herein referred to as the Subject Property or the Site).

The GPR Survey consisted of utilizing a USRADAR Seeker SPR Subsurface Imaging System equipped with a 500 MHz antenna. All areas of concern were scanned utilizing a 3-foot interval grid pattern in North-South and East-West directions. Maximum penetration depth of the GPR system at the Subject Property was approximately 8-feet below ground surface.

A GPR is typically utilized to detect subsurface objects. The GPR system sends a series of radar pulses into the subsurface and then calibrates and processes the information. Any reflected signals showing different characteristics from its surrounding media will represent an anomaly. The anomalies can then be displayed on-screen in order to determine its relative shape and depth. It should be noted that the subsurface anomalies represent the general shape, size and location of subsurface objects, and is in no way fully signifying a specific object and/or excavation.

The purpose of this GPR Survey was to confirm or deny the presence of multiple underground storage tank (UST) systems reported to be located at the Subject Property. Listed below are the areas of concern scanned and GPR Survey results:

Area of Concern	Reported USTs	GPR Results	Scan Number
1	One, 10,000-gallon fuel oil	Anomaly representative of the excavation of an area the could have contained a 10,000-gallon UST	SVY_8
2	One, 1,500-gallon core oil	Anomaly representative of the excavation of an area the could have contained a 1,500-gallon UST	SVY_9
3	One, 6,000-gallon acetone	Anomaly representative of an underground storage tank	SVY_12
4	Two, 1,000-gallon rolling oil	Anomaly representative of two underground storage tanks lying side-by-side	SVY_7
5	One, 20,000-gallon oil	No significant anomalies detected. It should be noted that this area was located within a fenced-in storage area with machinery and equipment present. EGSL was unable to achieve full maneuverability in order to fully depict any subsurface scans in this area.	N/A
6	One, 6,000-gallon menthol alcohol One, 6,000-gallon chlorophine	Anomaly representative of the excavation of an area the could have contained two, 6,000-gallon USTs lying end-to-end	SVY_13

Area of Concern	Reported USTs	GPR Results	Scan Number
7	One, 3,500-gallon coolant	No significant UST anomalies detected. It should be noted that this area contained a historical building that was demolished. GPR scans in the reported tank area resulted in numerous shallow anomalies of large debris that may be representative of the remains of the former building; as such, any scans for the UST system were inconclusive.	N/A
8	Two fuel oil tanks of unknown size	Anomaly representative of two underground storage tanks lying side-by-side	SVY_11
9	One, 10,000-gallon gasoline	Anomaly representative of the excavation of an area the could have contained a 10,000-gallon UST	SVY_6

See Appendix A for Area of Concern Locations.
See Appendix B for GPR Scans and Photographic Documentation.

2 CONCLUSIONS AND RECOMMENDATIONS

The Ground Penetrating Radar Survey conducted at nine areas of concern revealed the following:

- GPR Scans in Areas 3, 4 and 8 indicated the possible presence of UST systems in each area. As such, EGSL recommends that subsurface sampling be conducted along all four walls and the floor of each tank system in order to determine if any of the USTs have negatively impacted the subsurface soil.

- GPR Scans in Areas 1, 2, 6 and 9 indicated anomalies characteristic of possible excavations in each area. The locations and dimensions of each possible excavation were representative of the reported UST system for each area. EGSL recommends that subsurface sampling be conducted along all four walls and the floor of each excavation in order to determine if any of the reported former USTs have negatively impacted the subsurface soil.

- GPR Scans in Area 5 were inconclusive to the possible presence of a UST system due to surface debris. EGSL was able to perform limited scans in the area; however, none of the scans indicated any anomalies representative of a UST system. One subsurface soil sample was obtained from this area during a previous subsurface investigation conducted by EGSL; analytical results indicated no chemicals of concern above IEPA Tier 1 Remediation Objectives. EGSL believes that this UST system may still be present; as such, it is recommended that the tank be removed in accordance with all federal, state and, local regulation if encountered during any future demolition activities.

- GPR Scans in Area 7 were inconclusive to the possible presence of a UST system due to subsurface debris related to the historical demolition of the former building. EGSL

recommends that a test pit be excavated in the reported area of the UST system in order to confirm or deny its presence.

3 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

This report pertains to the property known as Arnold Technologies, located at 300 North West Street, Marengo, Illinois. Our professional services have been performed using the degree of care and skill ordinarily exercised under similar circumstances by environmental professionals practicing in this field. The representations made in this report are accurate and true to the best knowledge of the undersigned.

Sincerely,

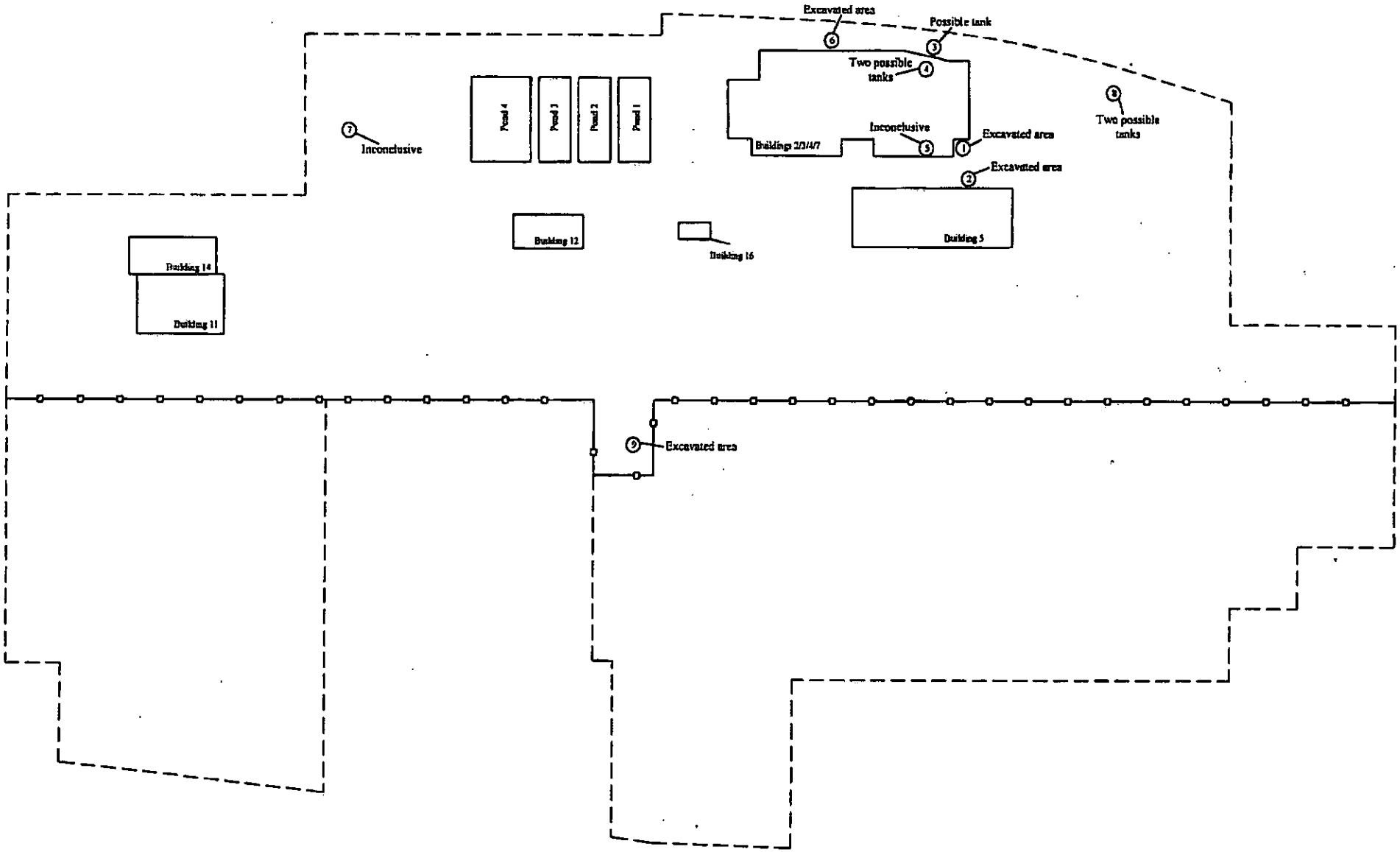
ENVIRONMENTAL GROUP SERVICES, LIMITED

Vahooman Mirkhaef
President

Bill Lennon
Project Manager

Appendix A

Site Location Map



EGSL Environmental Group Services LTD.
357 West Polk Street
Suite 201
Chicago, Illinois 60607

Project Name
Arnold Technologies
300 West Street
Marengo, Illinois

Project Number
601107

(1) Area of Concern

Subject Property Boundary

Fenceline

GRAPHIC SCALE
Not to Scale

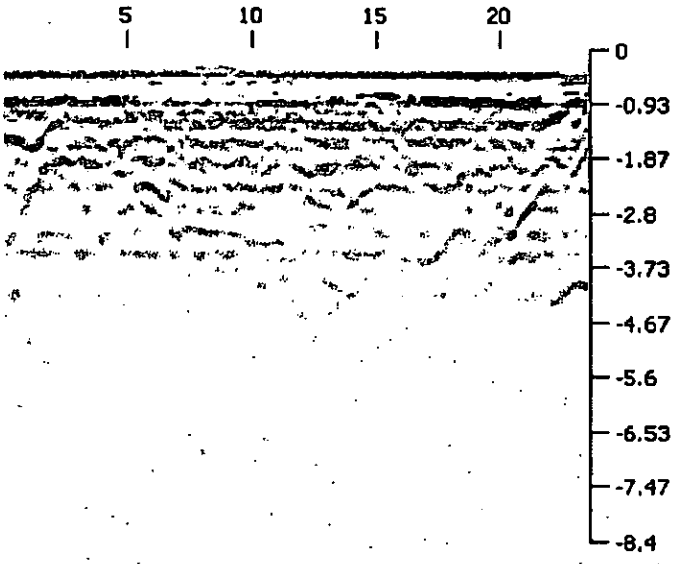
N

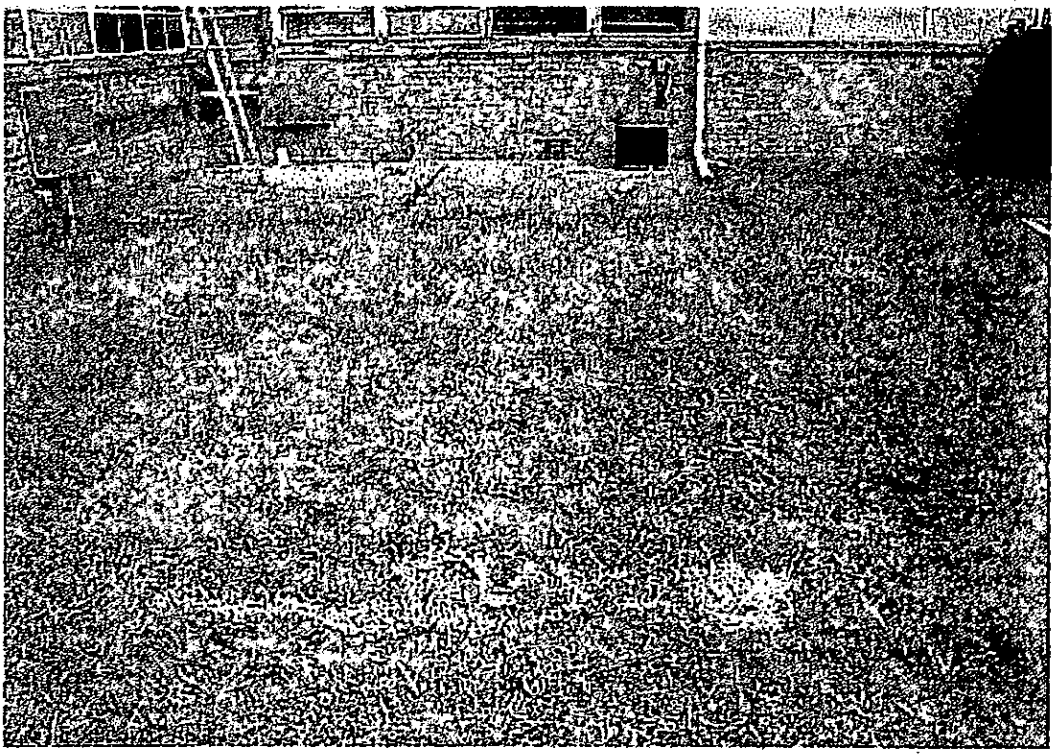
R 000481

Appendix B

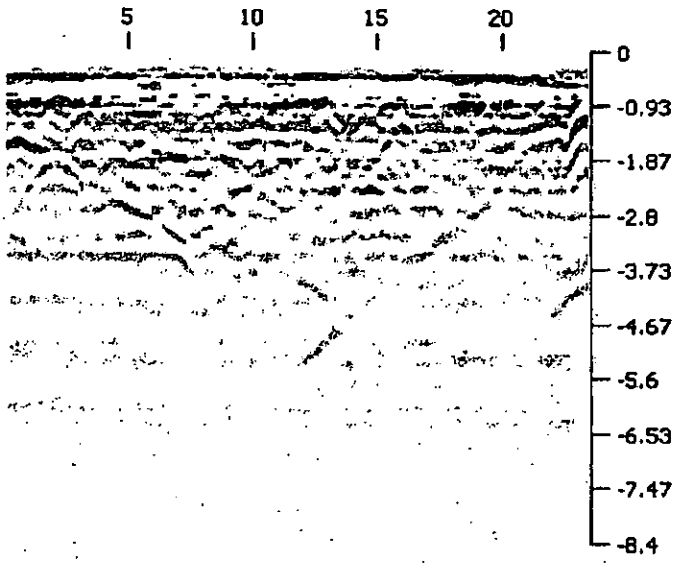
GPR Scan Results and Photographic Documentation

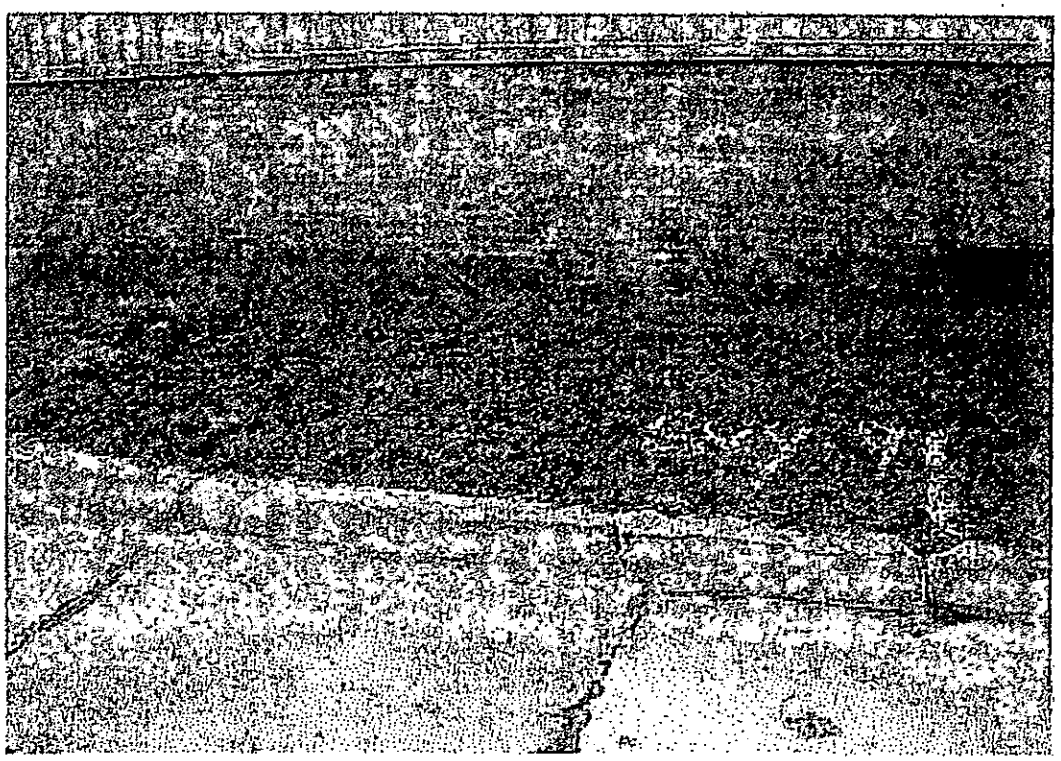
Area 1 – Survey 8



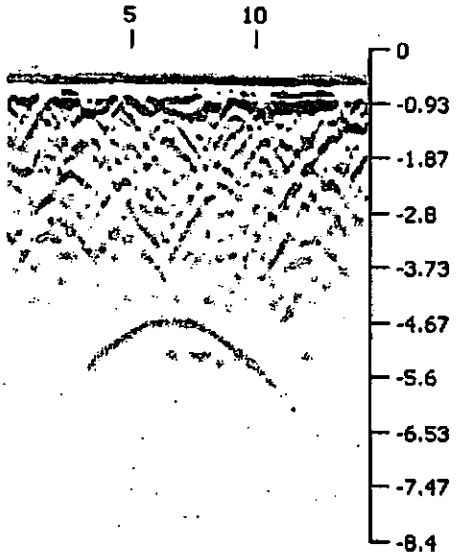


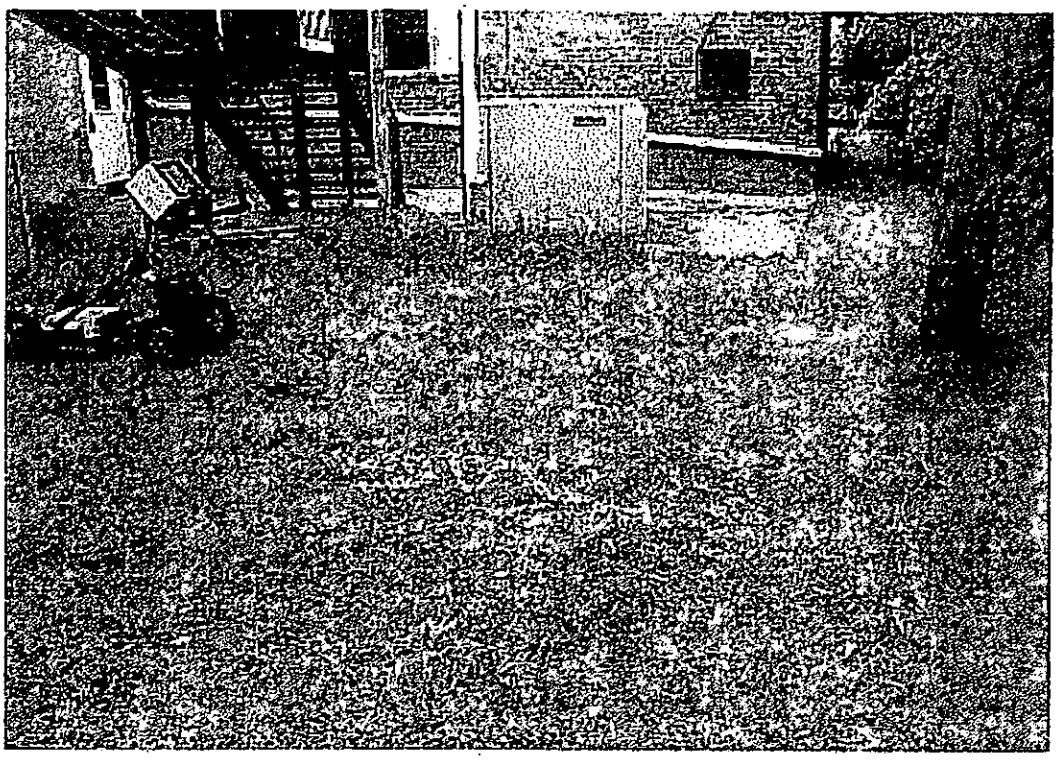
Area 2 – Survey 9



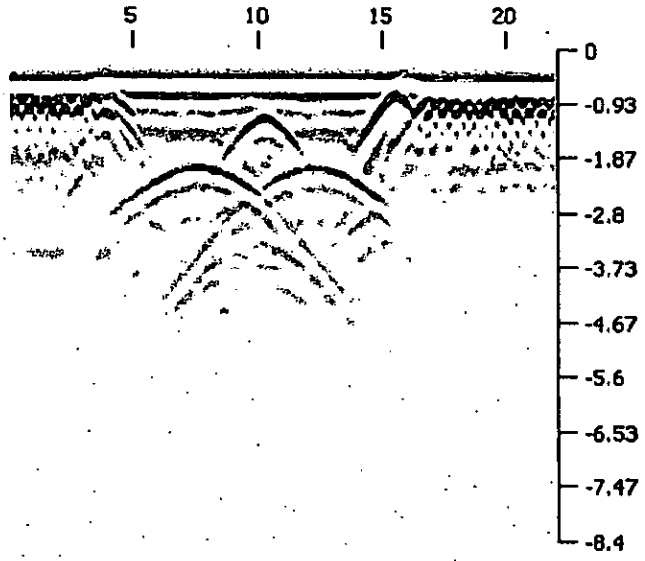


Area 3 – Survey 12

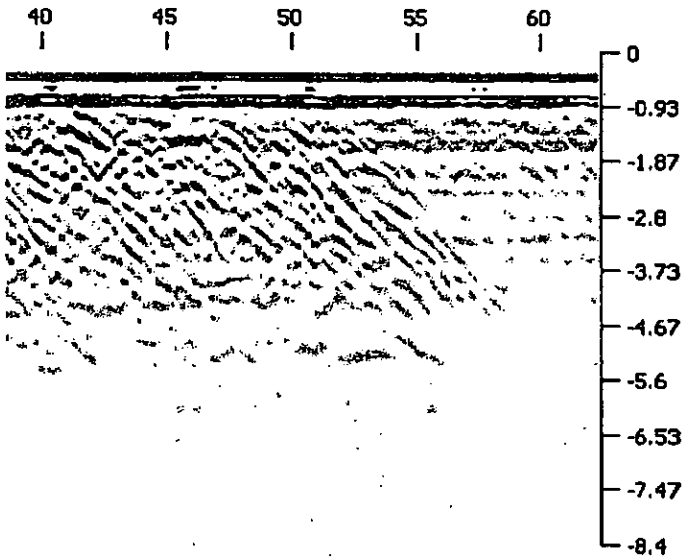


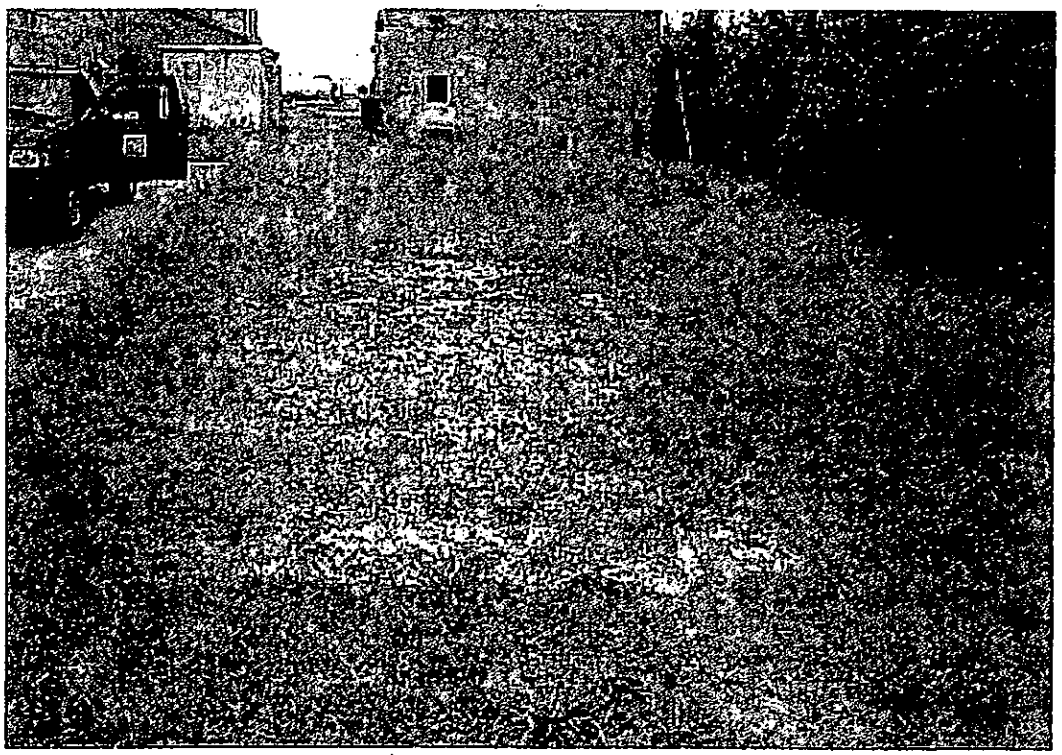


Area 4 – Survey 7

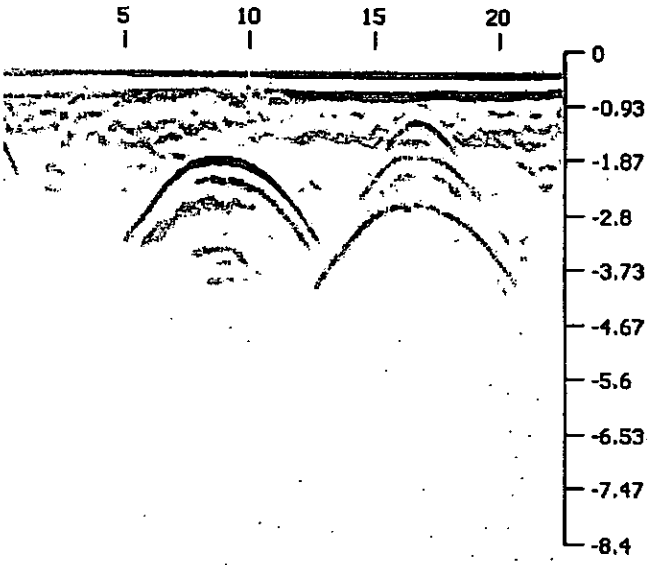


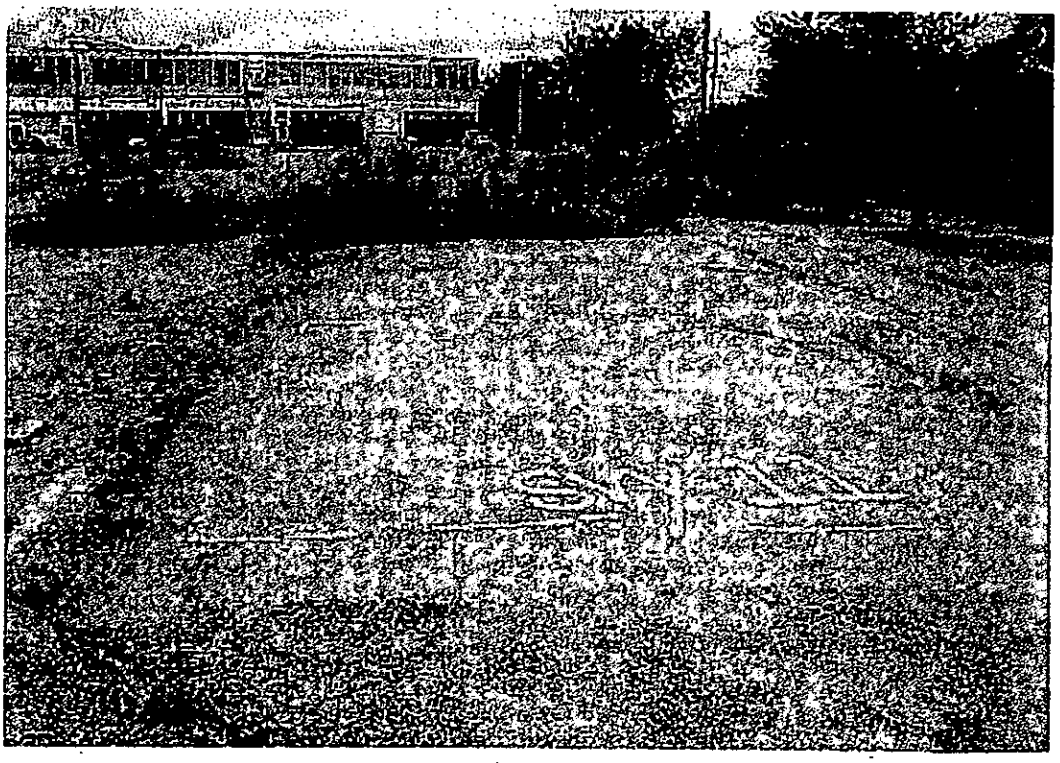
Area 6 – Survey 13



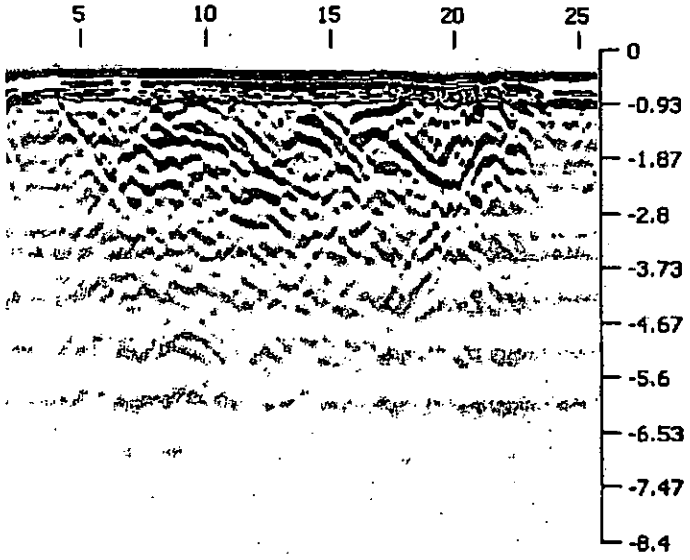


Area 8 – Survey 11

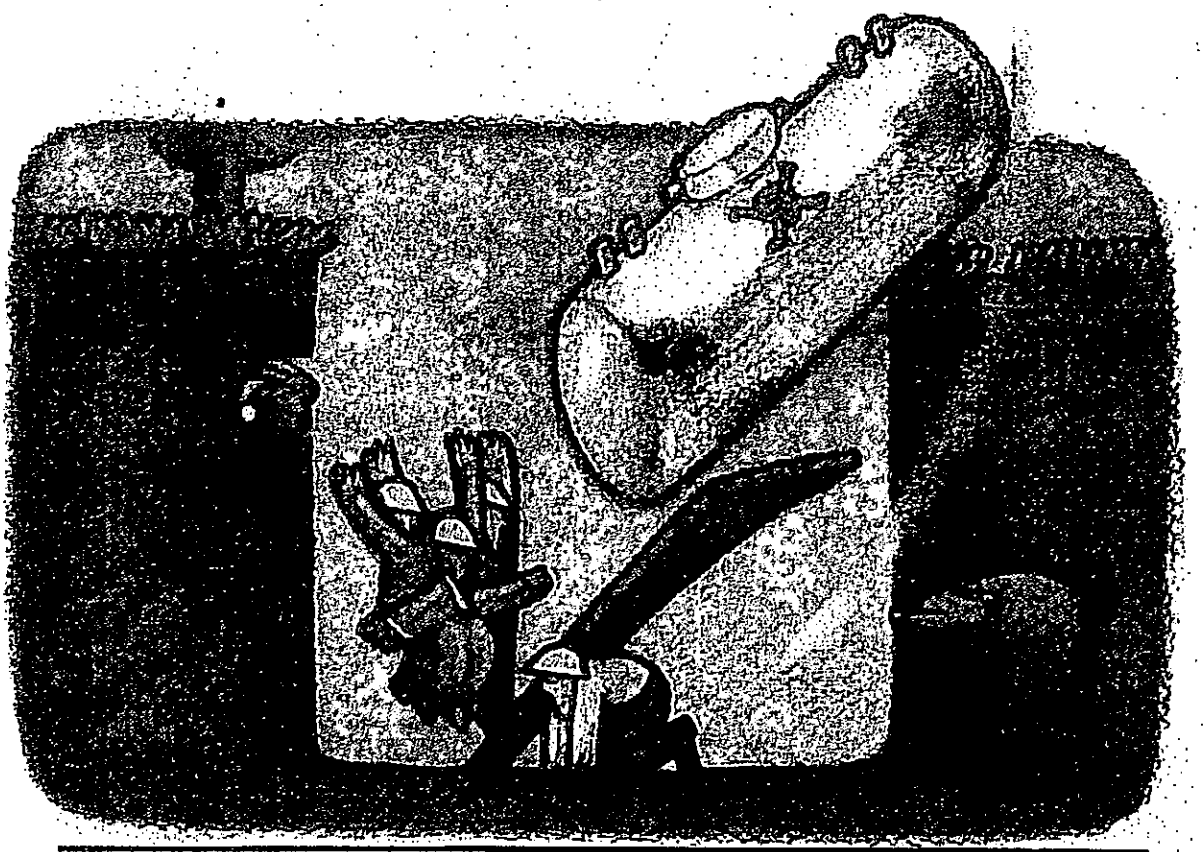




Area 9 – Survey 6



APPENDIX E – EGSL 2006 PHASE II ESA REPORT



Limited Phase II Subsurface Soil and Groundwater Investigation Report

Subject Property
300 North West Street
Marengo, Illinois

Prepared on Behalf Of:
Mr. John Daley
John Daley & Associates
2340 River Road – Suite 202
Des Plaines, Illinois 60018

March 3, 2006
EGSL Project Number: 601107

ENVIRONMENTAL GROUP SERVICES, LTD.

Limited Phase II Subsurface Soil and Groundwater Investigation Report

SUBJECT PROPERTY
300 North West Street
Marengo, Illinois

Prepared By
ENVIRONMENTAL GROUP SERVICES, LTD.
557 WEST POLK STREET, SUITE 201
CHICAGO, ILLINOIS 60607

On Behalf of
Mr. John Daley
John Daley & Associates
2340 River Road – Suite 202
Des Plaines, Illinois 60018

March 3, 2006

EGSL Project Number: 601107

TABLE OF CONTENTS

LIST OF APPENDICES

1 EXECUTIVE SUMMARY

On February 15, 2006, Environmental Group Services, Ltd. (EGSL) completed a Phase II Subsurface Soil and Groundwater Investigation at the property located at 300 N. West Street, Marengo, Illinois, hereinafter referred to as the "Subject Property". This investigation was performed in accordance with the regulations set forth in 35 IAC 740 (Site Remediation Program) and 35 IAC 742 (Tiered Approach to Corrective Action Objectives), Tier 1, for Residential properties. The purpose of this investigation was to confirm or deny the presence of subsurface soil and/or groundwater contamination that may be present at the Subject Property.

The Subject Property is located at 300 N. West Street, in a residential/industrial area of Marengo, Illinois and is approximately 90-acres in size. The Subject Property is currently occupied by Arnold Magnetic Technologies, which utilizes the site for the manufacturing of magnets and the production of rolled metal products.

Prior to the Phase II Investigation, EGSL was provided with the following reporting:

- Monitoring Well Network Installation and Groundwater Flow Assessment, prepared by *Roux Associates, Inc.*, dated May 17, 1990.
- Draft Subsurface Investigation Report, prepared by Environmental Strategies Corporation, dated December 2, 1999.
- Interoffice Memorandum from Thomas Koralewski of Arnold Engineering to Dennis Shea of SPS Technologies, dated July 20, 2000, regarding subsurface soil sampling around MW-3.
- Correspondence from Thomas Koralewski of Arnold Engineering to Thomas McSwiggin of the IEPA Division of Water Pollution Control, dated August 30, 2001, regarding Water Pollution Control Permit 1999-EO-4027.
- Correspondence from Thomas Koralewski of Arnold Engineering to the IEPA Division of Water Pollution Control, dated May 22, 2003, regarding Water Pollution Control Permit 1999-EO-4027.
- Correspondence from Alan Kalaczinski of Arnold Technologies to the Illinois Emergency Management Agency (IEMA), dated July 20, 2004, regarding IEMA Incident number H20040698.
- Analytical data from STAT Analysis Corporation to Don Smith of URS, dated November 26, 2004, December 1, 2004 and December 2, 2004.
- Correspondence from Bill Buscher of the IEPA Bureau of Water to Stephen Brisson of Arnold Technologies, dated May 17, 2005, regarding Water Pollution Control Permit 2004-EO-0971.

Arnold Technologies currently and historically has utilized four wastewater treatment ponds to hold and treat wastewater produced in the manufacturing process. As such, Water Pollution Control Permit numbers 1999-EO-4027 and 2004-EO-0971 were issued for the Subject Property. In order to comply with the Terms and Conditions as stated in the permits, 14 on-site groundwater monitoring wells and one off-site groundwater monitoring wells were installed. Groundwater sampling was conducted in select wells at approximately 1-month intervals. EGSL was provided with groundwater analytical results dating from January 10, 2001 to December 19, 2005. According to analytical data, 1,1,1-Trichloroethane and Tetrachloroethene had been detected in the groundwater above IEPA Tier 1 Remediation Objectives for Class I Groundwater.

It should also be noted that FOIA information was received from the Office of the State Fire Marshal pertaining to the statuses of 12 underground storage tanks that have been historically, or are currently, located on site.

Based on the above-mentioned environmental concerns, EGSL collected 27 soil borings throughout the Subject Property. Additionally, three of the on-site groundwater monitoring wells were sampled (see Site Diagram in Appendix A). All soil and groundwater samples were submitted to STAT Analytical Corporation for analyses of Target Compound List Indicator Contaminants. According to the laboratory results:

- Tetrachloroethene (PCE) was detected at GP-3, GP-5, GP-20, GP-21 and GP-22 at concentrations that exceeded IEPA Tier 1 Remediation Objectives (ROs) for residential Properties.
- Arsenic was detected at GP-2 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Several inorganic metals were detected throughout the Subject Property at concentrations above metropolitan background concentrations.
- 1,1-Dichloroethene was detected at MW-A7 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Tetrachloroethene was detected at MW-3 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- 1,1,1-Trichloroethane was detected at MW-A6 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Iron was detected at MW-A6 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Manganese was detected at MW-3, MW-A6 and MW-A7 at concentrations that exceeded IEPA Tier 1 ROs for residential Properties.

Based on the above-mentioned analytical results, a Tier 2 Risk-Based Site Assessment was performed in regards to the chemicals of concern that exceeded Tier 1 Remediation Objectives. According to Tier 2 site-specific calculations, it has been determined that:

- The Tier 2 site-specific soil RO for Tetrachloroethene (PCE) was above all detected concentrations from the soil samples.

- Arsenic detected in GP-2 will travel approximately 145 feet before reaching its Tier 2 RO.
- 1,1-Dichloroethene detected in MW-A7 will travel approximately 5 feet before reaching its Tier 2 RO.
- Tetrachloroethene detected in MW-3 will travel approximately 7 feet before reaching its Tier 2 RO.
- 1,1,1-Trichloroethane detected in MW-A6 will travel approximately 5 feet before reaching its Tier 2 RO.
- Iron detected in MW-A6 will travel approximately 27 feet before reaching its Tier 2 RO.
- Manganese detected in MW-3 will travel approximately 53 feet before reaching its Tier 2 RO.
- Manganese detected in MW-A6 will travel approximately 148 feet before reaching its Tier 2 RO.
- Manganese detected in MW-A7 will travel approximately 72 feet before reaching its Tier 2 RO.

Based on the above-mentioned results, EGSL recommends that the Subject Property enroll into the IEPA's Site Remediation Program (SRP) in order to receive a Comprehensive No Further Remediation (NFR) letter for Residential Properties. In order to receive a NFR for the Subject Property, additional soil and groundwater sampling/modeling will be needed, as per the IEPA's discretion. It is anticipated that area of Arsenic above Tier 1 ROs will have to excavated and disposed of in accordance with federal, state and local regulations. Additionally, since the Subject Property is not located in an area with an approved groundwater ordinance, it is also anticipated that a groundwater use restriction, prohibiting the use of on-site groundwater for potable purposes, will have to be implemented for the Subject Property and/or any affected adjacent properties.

2 BACKGROUND INFORMATION

2.1 Site Location and Description

The Subject Property is located at 300 North West Street, in a residential/industrial area of Marengo, Illinois and is approximately 90-acres in size. The Subject Property is currently occupied by Arnold Magnetic Technologies, which utilizes the site for the manufacturing of magnets and the production of rolled metal products.

2.2 Previous Site Investigations

Prior to the Limited Phase II Investigation, EGSL was provided with the following reporting:

- Monitoring Well Network Installation and Groundwater Flow Assessment, prepared by *Roux Associates, Inc.*, dated May 17, 1990.

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According to the above-mentioned reports, Arnold Technologies currently and historically has utilized four wastewater treatment ponds to hold and treat wastewater produced in the manufacturing process. As such, Water Pollution Control Permit numbers 1999-EO-4027 and 2004-EO-0971 were issued for the Subject Property. In order to comply with the Terms and Conditions as stated in the permits, 14 on-site groundwater monitoring wells and one off-site groundwater monitoring wells were installed. Groundwater sampling was conducted in select wells at approximately 1-month intervals. EGSL was provided with groundwater analytical results dating from January 10, 2001 to December 19, 2005. According to analytical data, 1,1,1-Trichloroethane and Tetrachloroethene had been detected in the groundwater above IEPA Tier 1 Remediation Objectives for Class I Groundwater.

It should also be noted that FOIA information was received from the Office of the State Fire Marshal pertaining to the statuses of 12 underground storage tanks that have been historically, or are currently, located on site.

3 PHASE II SUBSURFACE SOIL INVESTIGATION ACTIVITIES

A Phase II Subsurface Soil Investigation was conducted in order to assess the potential for the presence of chemicals of concern (COC) in the subsurface soil present at the site. The investigation was conducted in accordance with 35 IAC 740 (SRP) and the COC were chosen from the Target Compound List (TCL) indicator contaminants identified in Appendix A of Part 740.

3.1 Field Sampling Procedures

EGSL utilized a Geoprobe® 6610DT track-mounted direct-push probe to advance a 5-foot by 2-inch soil sampler in order to retrieve continuous soil samples around the Subject Building. Soil samples were continuously collected to depths of 10 to 15-feet below ground surface (bgs). All soil samplers were lined with acetate tubes.

EGSL collected a total of 27 soil samples (GP-1...GP-27) from throughout the Subject Property. See Appendix A for boring locations.

All soil samples were split into two parts: one to be placed into a sealed plastic bag for headspace analysis of volatile organic vapors and the other to be placed in laboratory supplied containers for potential analysis. The bagged samples were tested in the field with Photo-Ionization Detector (PID). The PID was used to screen each soil sample from each boring location for relative concentration of VOCs and does not provide separation of the contaminants into individual constituents. The utilization of this field-screening device provided immediate on-site data for use in the assessment of the site.

A total of 27 soil samples were submitted for analysis of Target Compound List (TCL) indicator contaminants in order to analytically determine the presence and concentration of COC in the areas of concern. The depth and the type of analysis requested of the samples submitted to STAT Laboratory are listed below:

Boring Number	Depth	Location	TCL
GP-1	7.5-8.5	Adjacent to the northeast exterior of the footprint of former Building #1	X
GP-2	4-5	Northwest interior of former Building #1	X
GP-3	5-6	Central interior portion of Building #2	X
GP-4	4-5	Northwestern interior of Building #2	X
GP-5	6-7	Western interior of Building #2	X
GP-6	4-5	Northeastern interior of Building #5	X
GP-7	6-7	Northwestern interior of Building #5	X
GP-8	5-6	Western interior of Building #5	X
GP-9	5-6	Northern interior of Building #14	X

Boring Number	Depth	Location	TCL
GP-10	7.5-8.5	Adjacent to western exterior of former Building #6	X
GP-11	9-10	Adjacent to northern exterior of former Building #6	X
GP-12	8-9	North of Pond #4	X
GP-13	4-5	Adjacent to northern exterior of former Building #1	X
GP-14	4-6	Northeast exterior of Building #2	X
GP-15	5-7	Southeast exterior of Building #2	X
GP-16	6-8	Northern exterior of Building #5	X
GP-17	5-6	Northeast interior of Building #2	X
GP-18	6-8	Southern interior of Building #2	X
GP-19	5-7	Southeast interior of Building #2	X
GP-20	4-5	Northwest exterior of Building #2	X
GP-21	5-6	Northern exterior of Building #2	X
GP-22	4-6	Northern exterior of Building #2	X
GP-23	4-5	Central portion of the Subject Property	X
GP-24	5-6	Central portion of the Subject Property	X
GP-25	4-5	Western interior of former Building #6	X
GP-26	5-6	Southeastern vacant portion of the Subject Property	X
GP-27	5-6	Southwestern vacant portion of the Subject Property	X

The soil samples targeted for laboratory analysis of VOCs were packed into new 40-milliliter glass vials, pre-preserved in sodium bisulfate and methanol in accordance with EPA Method 5035. STAT Laboratory supplied all the glass vials and jars. All soil samples were stored on ice during soil sample collection activities and while being transported to STAT. Standard Chain-of-Custody procedures were followed to track the samples.

Cross-contamination during soil sampling was minimized by using an Alconox detergent wash and tap water rinse to decontaminate the sampling tools between each probe. Also, other sampling equipment and measurement tools were hand washed with an Alconox detergent wash and rinsed three times with distilled water between soil sample intervals. The tools were then placed on clean and decontaminated surfaces. Disposable latex gloves were worn during the collection of soil sampling events and were changed between each sample.

3.2 Monitoring Well Water Sampling

EGSL collected three groundwater samples from the groundwater monitoring wells, located along the northwestern portion of the Subject Property (MW-3, MW-A6, MW-A7), using a new dedicated

disposable polyethylene bailer. The groundwater samples were then transferred to the appropriate glass vials and containers for the analysis of TCL indicator contaminants. The groundwater samples were kept on ice in coolers and sent to the laboratory for analysis. Proper chain-of-custody procedures were followed.

3.3 Hydraulic Conductivity Testing

On February 15, 2006, EGSL conducted an in-situ hydraulic conductivity test (slug test) at MW-3. Slug tests are a method of obtaining approximate values for the hydraulic conductivity of the water-bearing materials in the vicinity of each respective well screen. This field procedure consists of displacing a volume of water in the well with a solid PVC "slug" of known volume and recording the change in water level as it recovers to static hydraulic conditions over time. The data collected was input into the Aqtesolv® Hydraulic Conductivity program.

The site-specific hydraulic conductivity results, as concluded from the hydraulic conductivity testing, was **6.812E-04 cm/sec**. Based on these results, the Subject Property groundwater is classified as Class I groundwater as per 35 IAC 620, Subpart B.

See Appendix D for Slug Test Field Data and Aqtesolv® Results.

4 PHASE II SUBSURFACE INVESTIGATION RESULTS

The following section presents the physical and chemical results of the Phase II investigation, which include a description of the site subsurface and regional geology and the chemical findings in the soil and groundwater samples submitted to the laboratory.

4.1 Groundwater Data

The Subject Property groundwater flow direction, as previously determined by site-specific survey data, was determined to be towards the **north-northwest**.

The Subject Property groundwater hydraulic conductivity, as determined by site-specific slug test data, was calculated to be **6.812E-04 cm/sec**. Based on these results, the Subject Property groundwater is classified as Class I groundwater as per 35 IAC 620.

4.2 Subsurface Soil Chemical Results

The analytical test results of the soil samples were compared to the Soil Remediation Objectives (SROs) derived from the Illinois Environmental Protection Agency (IEPA) "adopted" IAC 742, Tiered Approach to Corrective Action Objectives (TACO), Tier I for Industrial/Commercial

properties and for Soil Component of the Groundwater Ingestion Route (SCGIR) (Class I Groundwater).

Listed below are all chemicals of concern that were detected above IEPA Tier 1 Remediation Objectives:

Chemical	Sample Number (Depth)	Concentration Detected (mg/Kg)	TACO Tier I RO (mg/Kg)	Exposure Pathway
Tetrachloroethene (PCE)	GP-3 (5-6) GP-5 (6-7) GP-20 (4-5) GP-21 (5-6) GP-22 (4-6)	1.3 0.092 0.13 1.5 9.7	0.06 0.3	SCGIR Class I Groundwater SCGIR Class II Groundwater
TCLP Arsenic	GP-2 (4-5)	2.0	0.05 0.2	SCGIR Class I Groundwater SCGIR Class II Groundwater
Arsenic	GP-2 (4-5)	450	13.0 13.0 29 120	Residential Ingestion Background Concentration* SCGIR Class I Groundwater SCGIR Class II Groundwater
Chromium	GP-13 (4-5) GP-17 (5-6) GP-21 (5-6) GP-26 (5-6)	19.0 18.0 22.0 24.0	16.2	Background Concentration*
Cobalt	GP-14 (4-6) GP-15 (5-7) GP-20 (4-5) GP-25 (4-5)	170.0 51.0 40.0 22.0	8.9	Background Concentration*
Copper	GP-14 (4-6) GP-19 (5-7)	36.0 20.0	19.6	Background Concentration*
Iron	GP-13 (4-5) GP-21 (5-6) GP-26 (5-6)	17,000 20,000 19,000	15,900	Background Concentration*
Manganese	GP-13 (4-5)	660	636	Background Concentration*
Nickel	GP-14 (4-6) GP-15 (5-7)	160 210	18.0	Background Concentration*
Vanadium	GP-2 (4-5) GP-13 (4-5) GP-17 (5-6) GP-21 (5-6) GP-26 (5-6)	28.0 28.0 33.0 34.0 32.0	25.2	Background Concentration*

* Exceedences were compared to "Concentrations of Inorganic Chemicals in Background Soils for Counties Within Metropolitan Statistical Areas" (IAC 742: Appendix A, Table G).

4.3 Groundwater Chemical Results

The analytical test results of the groundwater samples were compared to the Groundwater Remediation Objectives (GROs) derived from the Illinois Environmental Protection Agency (IEPA) "adopted" IAC 742, Tiered Approach to Corrective Action Objectives (TACO), Tier I for Class I Groundwater.

Listed below are all chemicals of concern that were detected above IEPA Tier 1 Remediation Objectives:

Chemical	Sample Number (Depth)	Concentration Detected (mg/Kg)	TACO Tier I RO (mg/Kg)	Exposure Pathway
1,1-Dichloroethene	MW-A7	0.13	0.007 0.035	Class I Groundwater Class II Groundwater
Tetrachloroethene	MW-3	0.011	0.005	Class I Groundwater
1,1,1-Trichloroethane	MW-A6	0.46	0.2	Class I Groundwater
Iron	MW-A6	5.5	5.0 5.0	Class I Groundwater Class II Groundwater
Manganese	MW-3 MW-A6 MW-A7	0.3 1.8 0.54	0.15	Class I Groundwater

4.4 Tier 2 Analysis

Tier 2 analysis was conducted in order to determine site specific Remediation Objectives and/or the horizontal extent of chemicals of concern that exceeded Tier 1 Objectives. Site-specific parameters, in order to represent the most stringent ROs, were determined as follows:

Soil Type: Silt (3)
Class of Groundwater: Class I
Type of Environment: Residential (1)
Hydraulic Gradient (i): 1.22E-03 m/m
Hydraulic Conductivity (k): 214 m/yr
Thickness of Aquifer (da): 1.9 meters

R-15 and R-26 calculations resulted in the following observations:

- The Tier 2 site-specific soil RO for Tetrachloroethene (PCE) was determined to be 70.0 ppm, which is above all detected concentrations from the soil samples.
- Arsenic detected in GP-2 will travel approximately 145 feet before reaching its Tier 2 RO.
- 1,1-Dichloroethene detected in MW-A7 will travel approximately 5 feet before reaching its Tier 2 RO.
- Tetrachloroethene detected in MW-A3 will travel approximately 7 feet before reaching its Tier 2 RO.
- 1,1,1-Trichloroethane detected in MW-A6 will travel approximately 5 feet before reaching its Tier 2 RO.
- Iron detected in MW-A6 will travel approximately 27 feet before reaching its Tier 2 RO.
- Manganese detected in MW-3 will travel approximately 53 feet before reaching its Tier 2 RO.
- Manganese detected in MW-A6 will travel approximately 148 feet before reaching its Tier 2 RO.
- Manganese detected in MW-A7 will travel approximately 72 feet before reaching its Tier 2 RO.

See Appendix E for Tier 2 Analysis Tables.

5 CONCLUSIONS AND RECOMMENDATIONS

Based on the field and analytical test data, the following conclusions have been formulated:

- Tetrachloroethene (PCE) was detected at GP-3, GP-5, GP-20, GP-21 and GP-22 at concentrations that exceeded IEPA Tier 1 Remediation Objectives (ROs) for residential Properties.
- Arsenic was detected at GP-2 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Several inorganic metals were detected throughout the Subject Property at concentrations above metropolitan background concentrations.
- 1,1-Dichloroethene was detected at MW-A7 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Tetrachloroethene was detected at MW-3 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- 1,1,1-Trichloroethane was detected at MW-A6 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Iron was detected at MW-A6 at a concentration that exceeded IEPA Tier 1 ROs for residential Properties.
- Manganese was detected at MW-3, MW-A6 and MW-A7 at concentrations that exceeded IEPA Tier 1 ROs for residential Properties.

Based on the above-mentioned analytical results, a Tier 2 Risk-Based Site Assessment was performed in regards to the chemicals of concern that exceeded Tier 1 Remediation Objectives. According to Tier 2 site-specific calculations, it has been determined that:

- The Tier 2 site-specific soil RO for Tetrachloroethene (PCE) was above all detected concentrations from the soil samples.
- Arsenic detected in GP-2 will travel approximately 145 feet before reaching its Tier 2 RO.
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- Manganese detected in MW-A6 will travel approximately 148 feet before reaching its Tier 2 RO.
- Manganese detected in MW-A7 will travel approximately 72 feet before reaching its Tier 2 RO.

Based on the above-mentioned results, EGSL recommends that the Subject Property enroll into the

IEPA's Site Remediation Program (SRP) in order to receive a Comprehensive No Further Remediation (NFR) letter for Residential Properties. In order to receive a NFR for the Subject Property, additional soil and groundwater sampling/modeling will be needed, as per the IEPA's discretion. It is anticipated that area of Arsenic above Tier 1 ROs will have to excavated and disposed of in accordance with federal, state and local regulations. Additionally, since the Subject Property is not located in an area with an approved groundwater ordinance, it is also anticipated that a groundwater use restriction, prohibiting the use of on-site groundwater for potable purposes, will have to be implemented for the Subject Property and/or any affected adjacent properties.

6 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

This report pertains to the property located at 300 N West Street, Marengo, Illinois. Our professional services have been performed using the degree of care and skill ordinarily exercised under similar circumstances by environmental professionals practicing in this field. The representations made in this report are accurate and true to the best knowledge of the undersigned.

Sincerely,

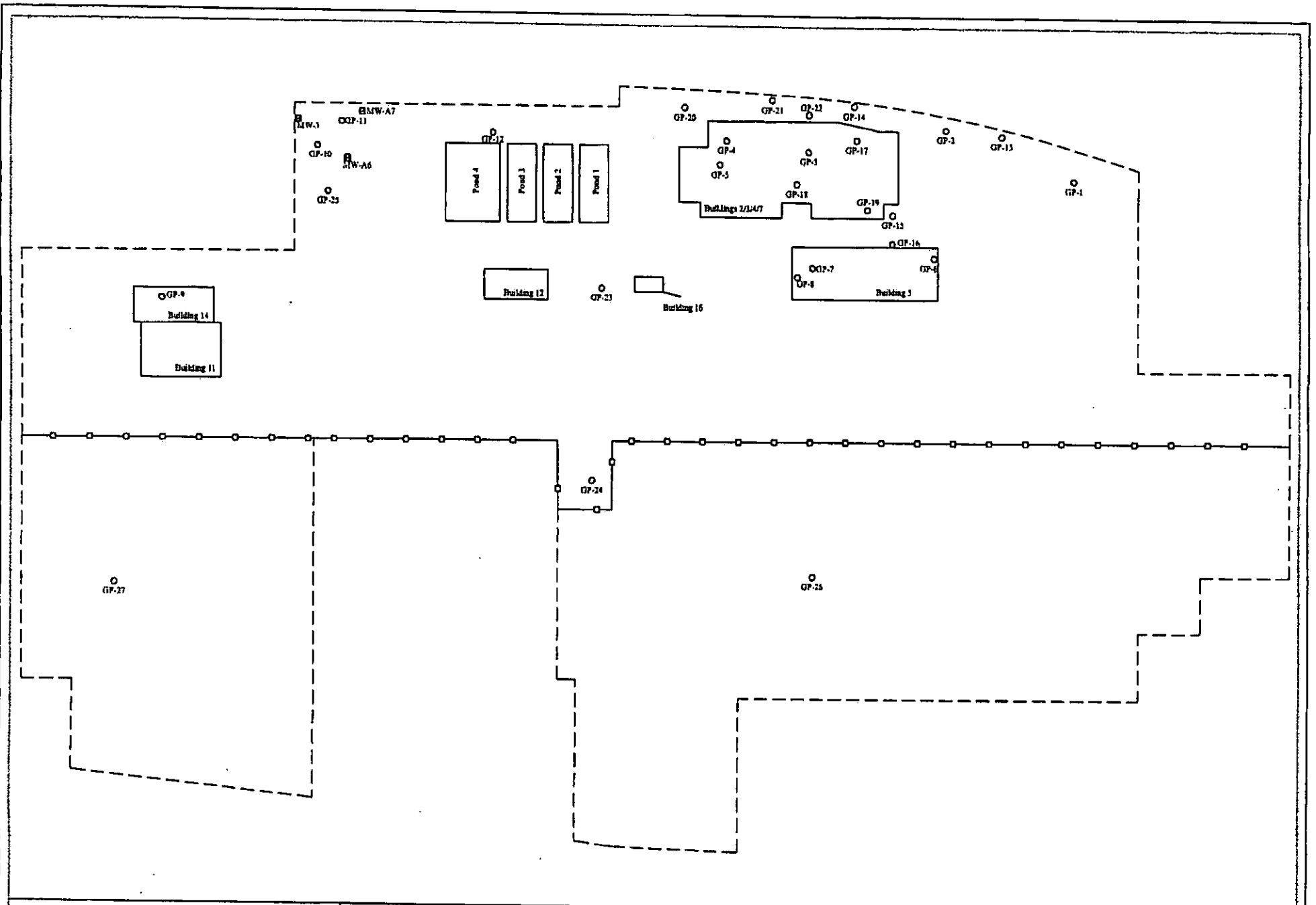
ENVIRONMENTAL GROUP SERVICES, LIMITED

Vahooman Mirkhaef
President

Bill Lennon
Project Manager

Appendix A

Soil Boring Locations

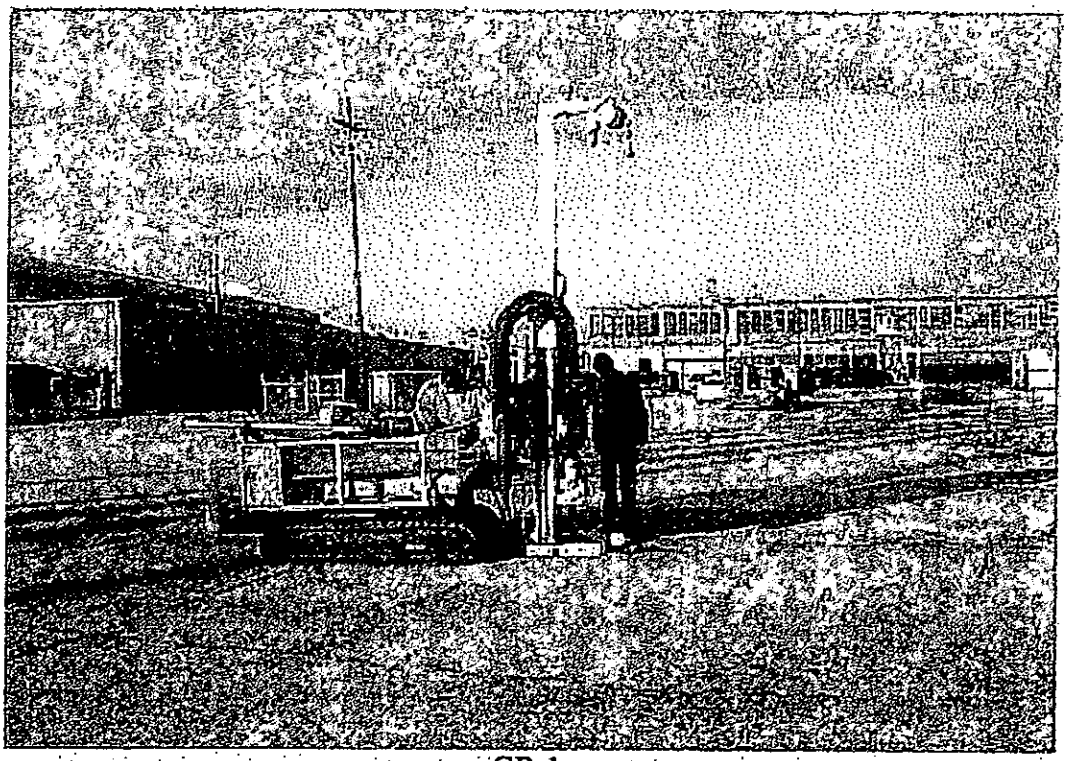


EGSL Environmental Group Services LTD. 537 West Polk Street Suite 301 Chicago, Illinois 60607	Project Name Arnold Technologies 300 West Street Marengo, Illinois	Project Number 601107 Drawing Name Boring and Well Locations	Soil Boring Location Monitoring Well Location Subject Property Boundary Fenceline	GRAPHIC SCALE 1" = 355 ft. N

R 000507

Appendix B

Photographic Documentation



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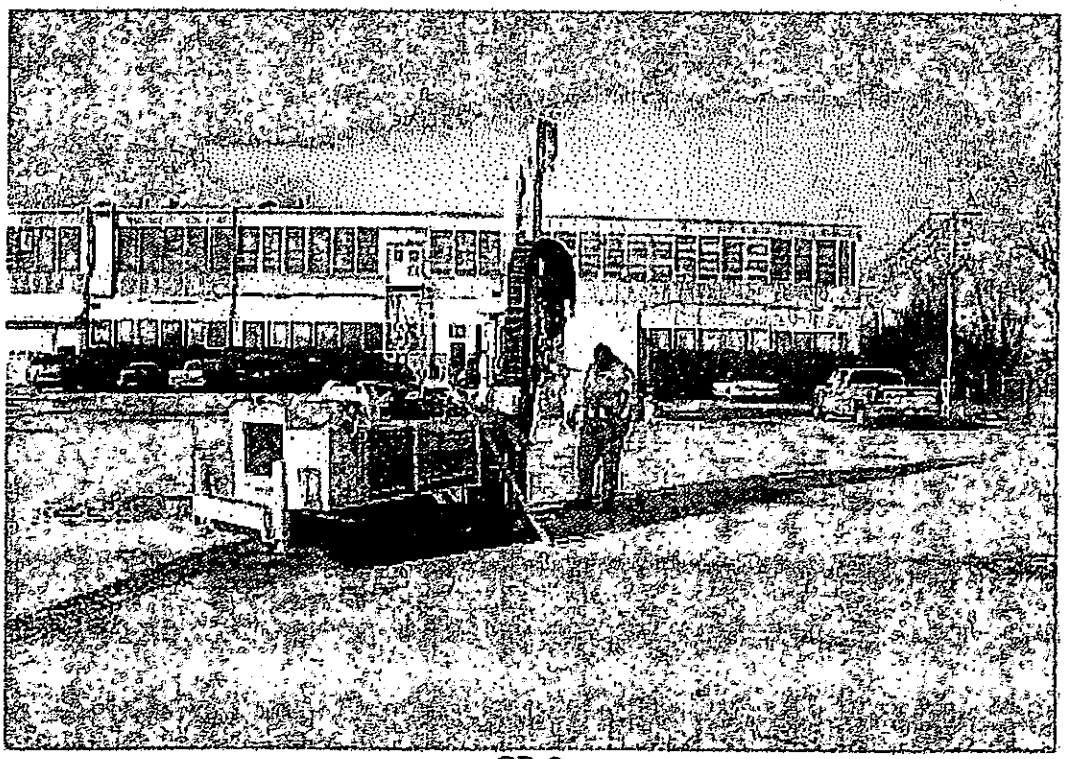
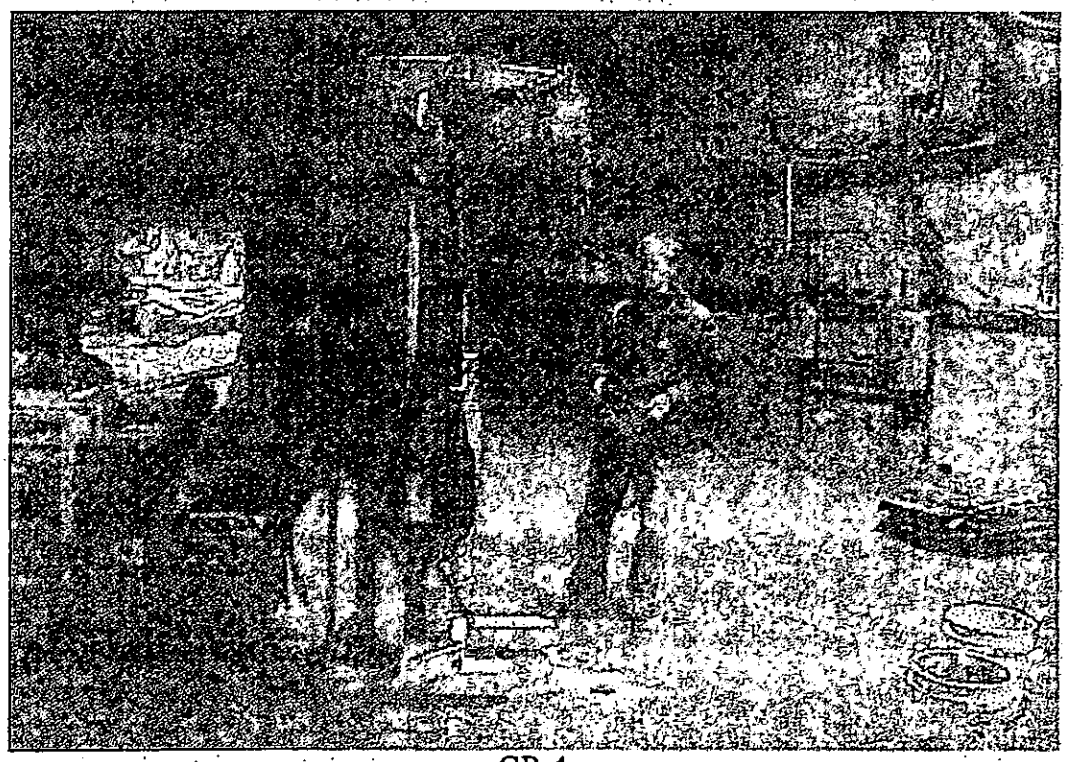


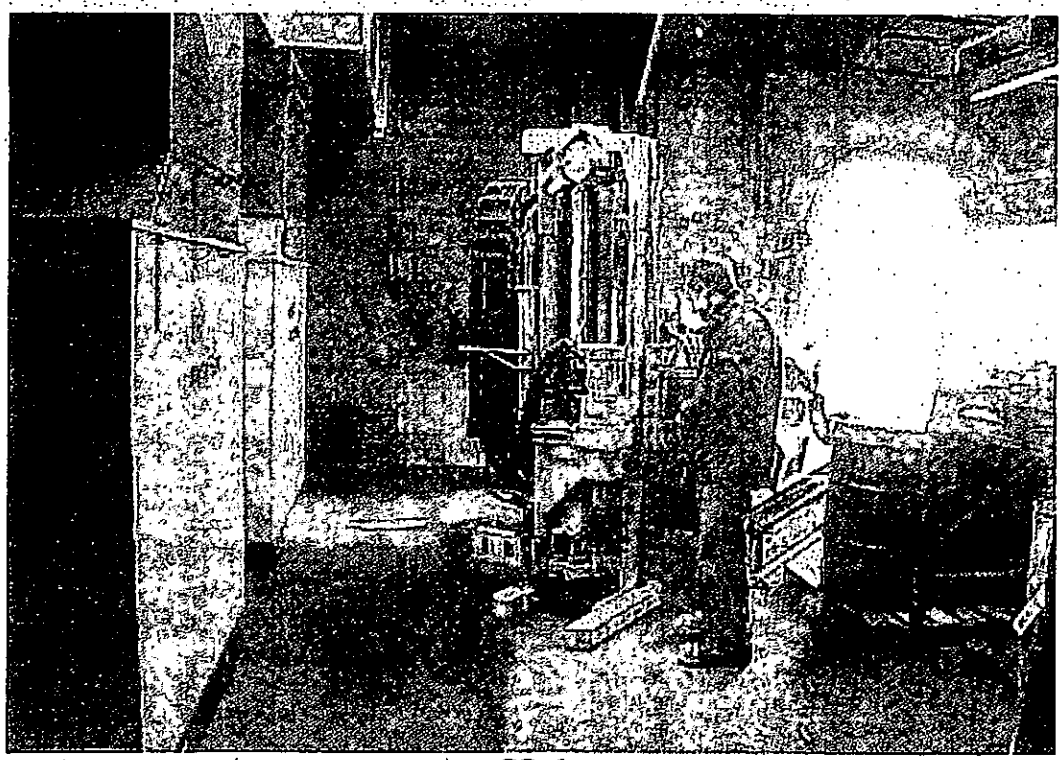
GP-2

GP-3



GP-4

GP-5



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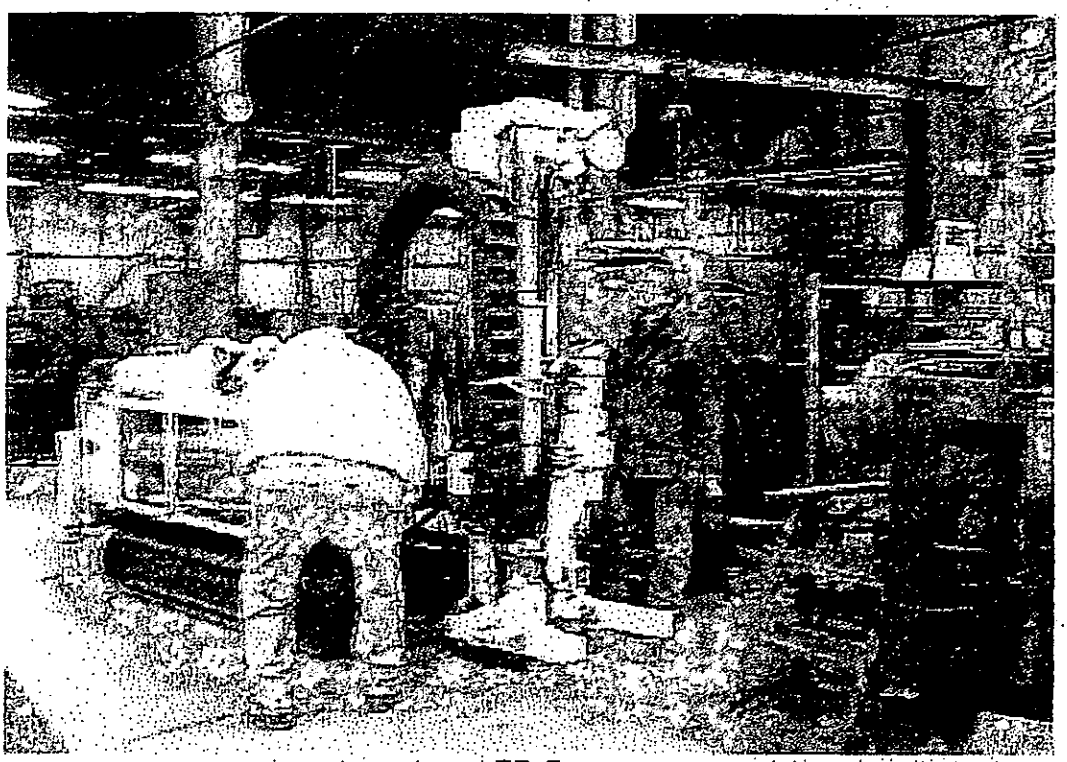
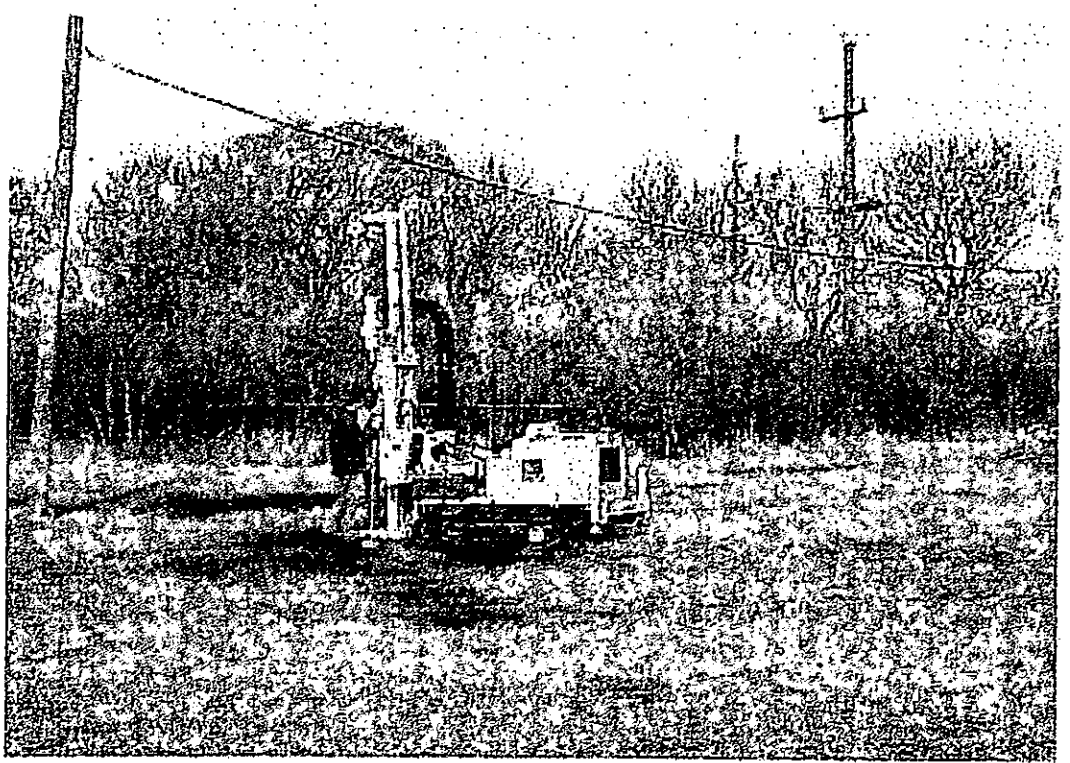


GP-7

GP-8

GP-9



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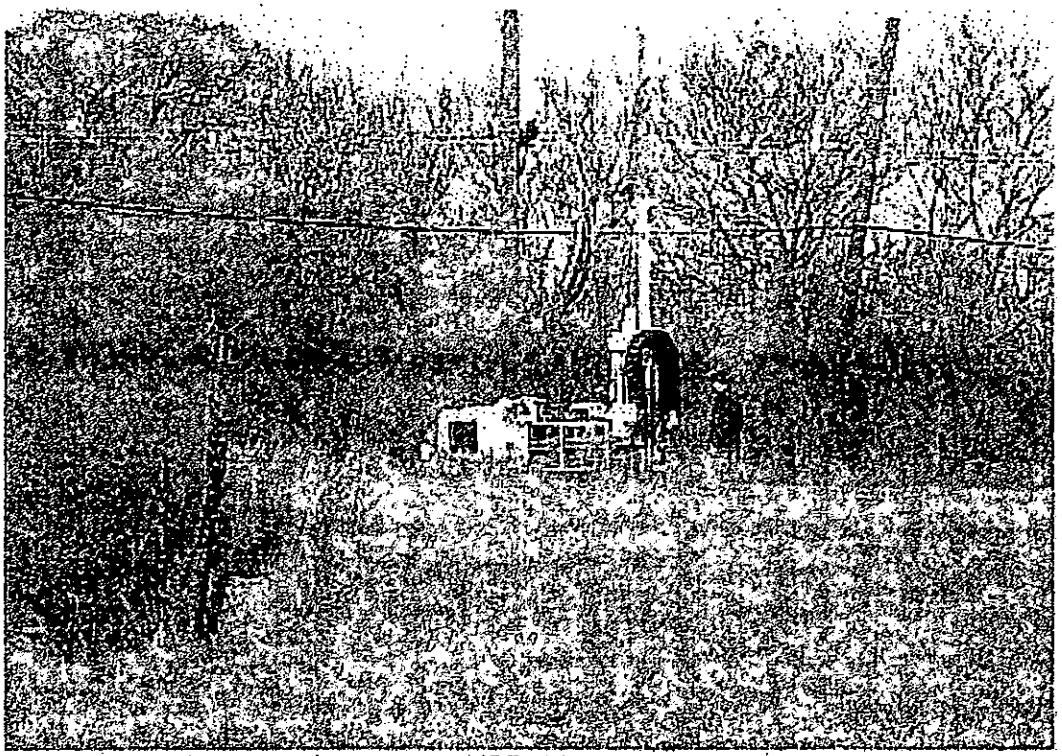

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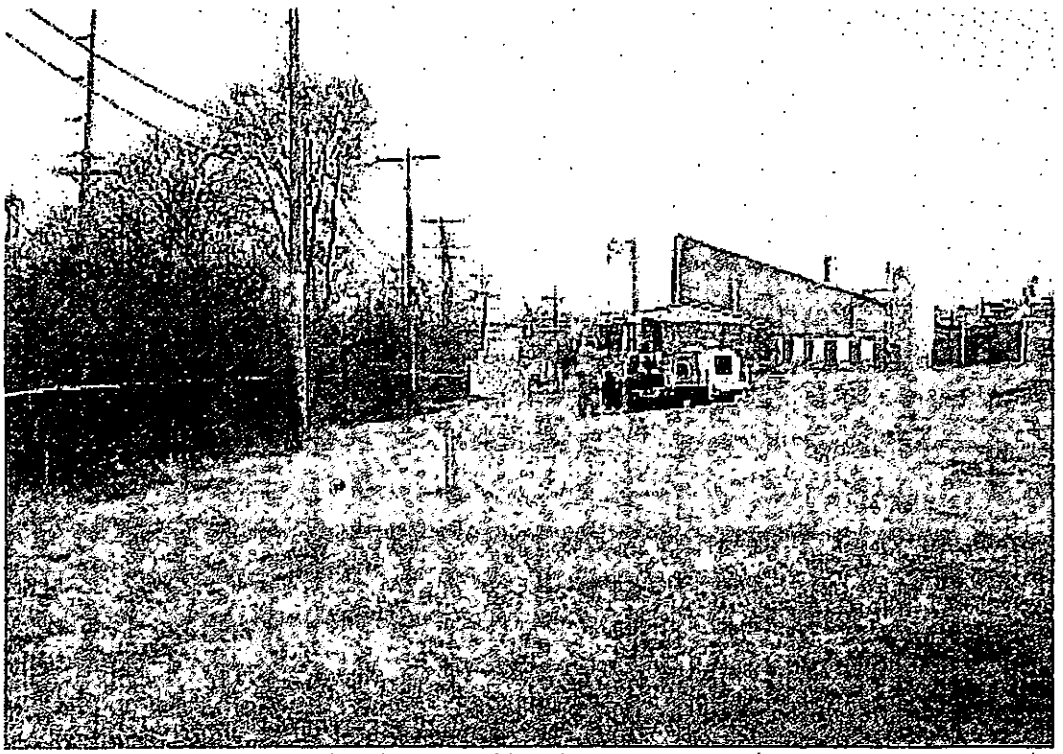

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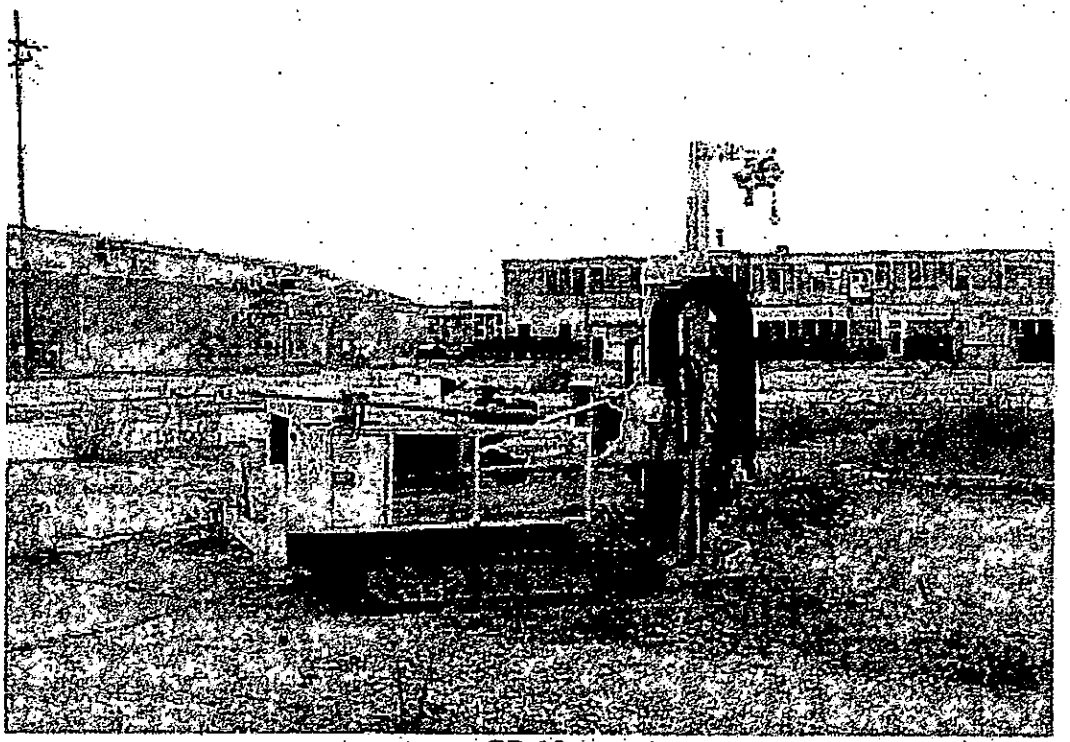
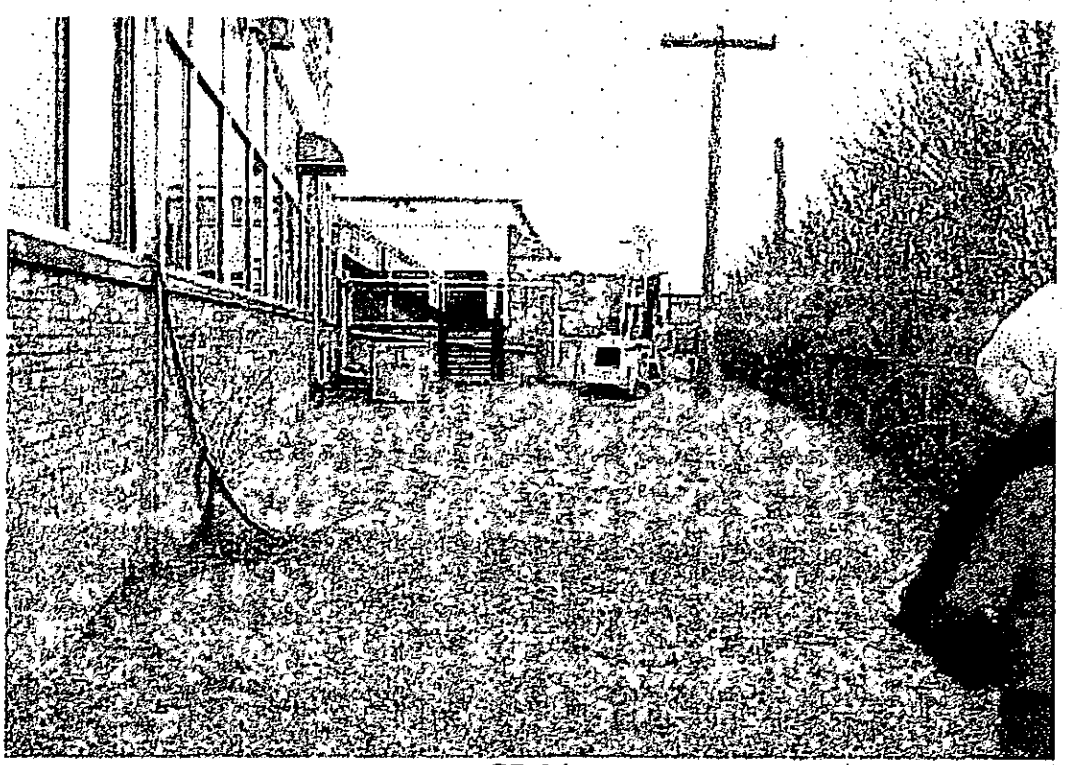
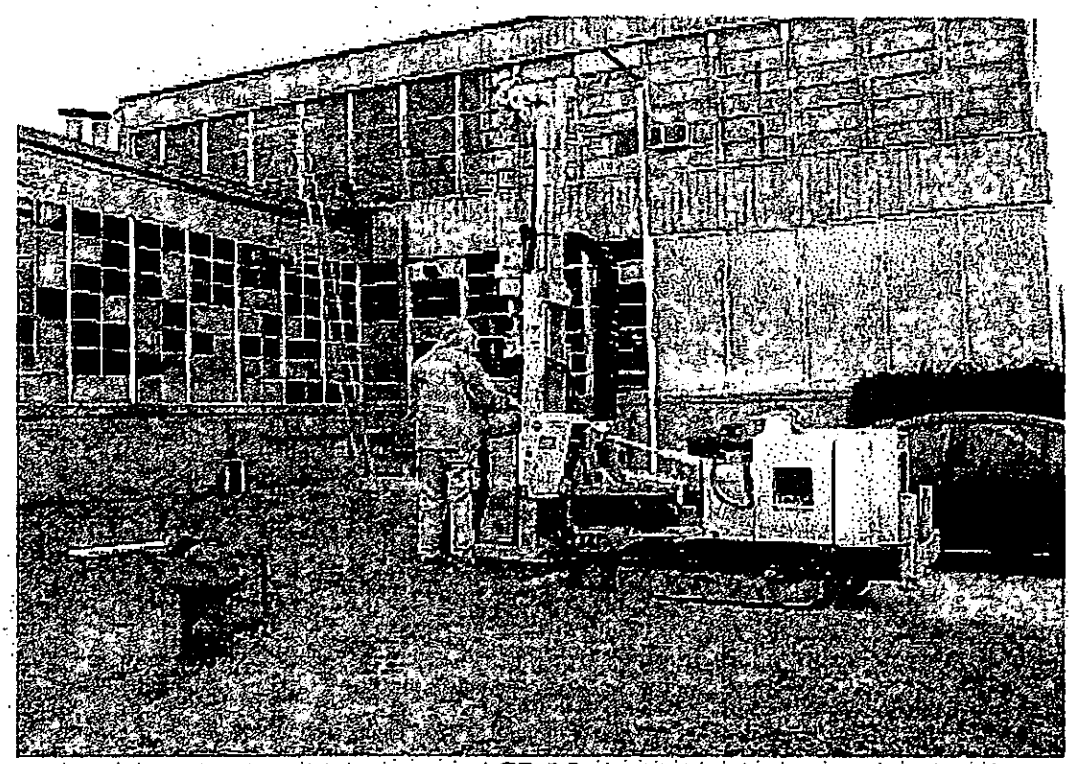


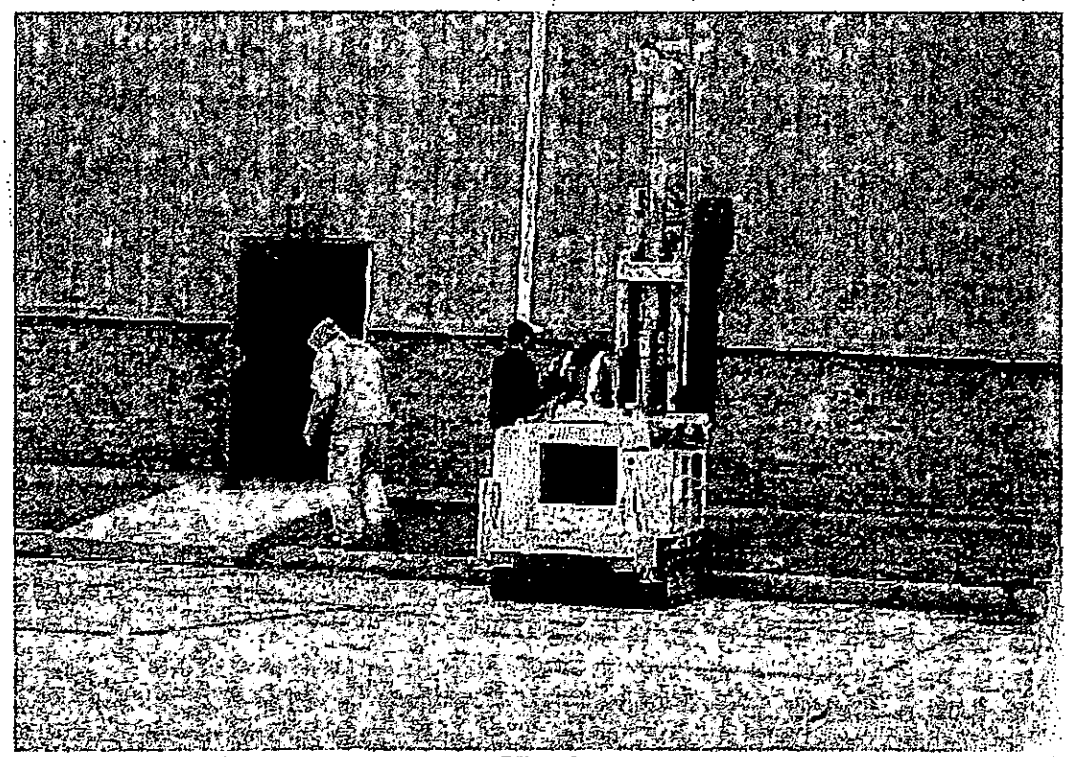
GP-13



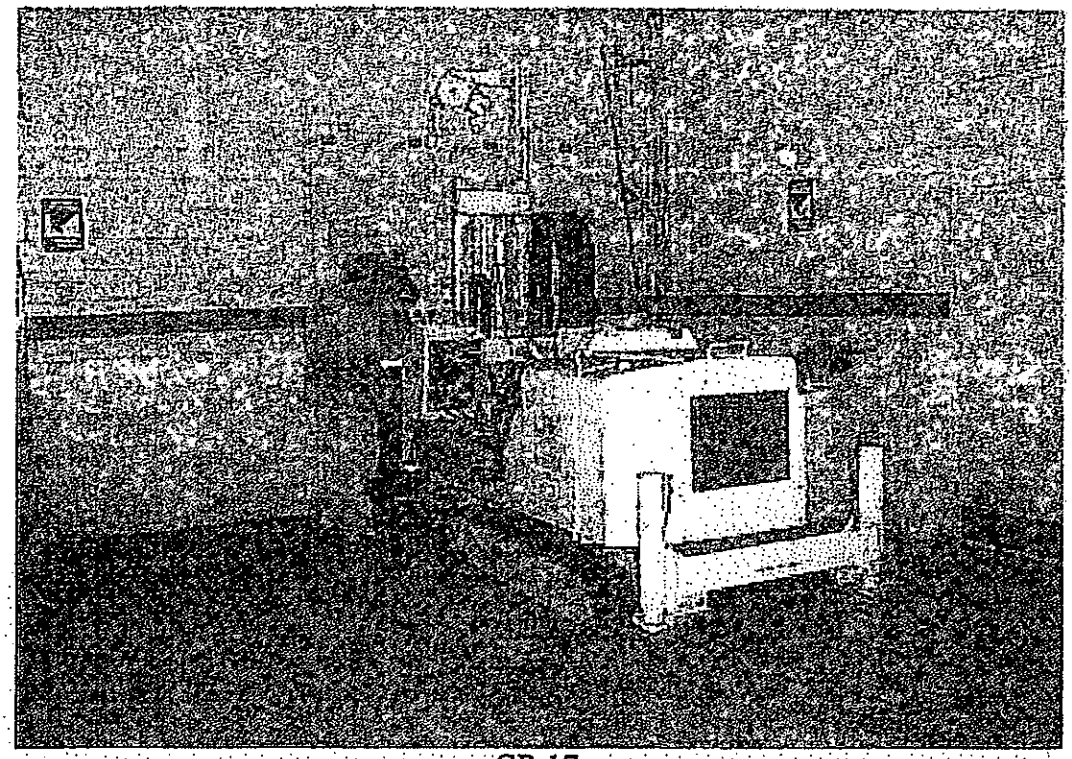
GP-14



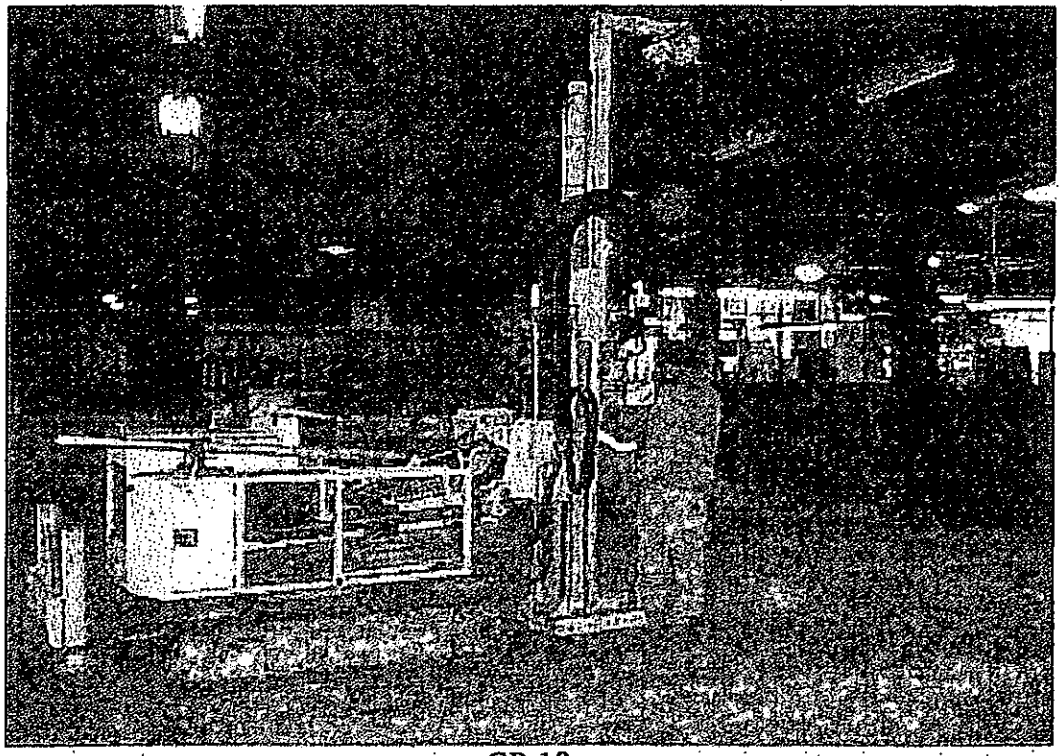
GP-15



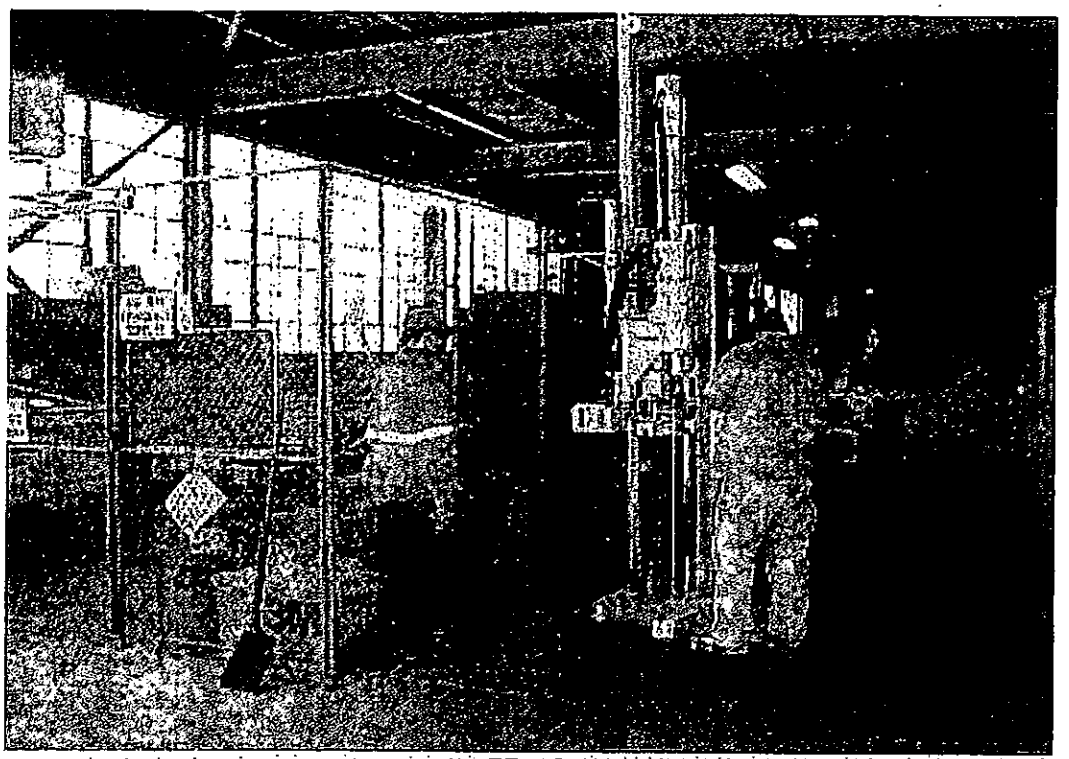
GP-16



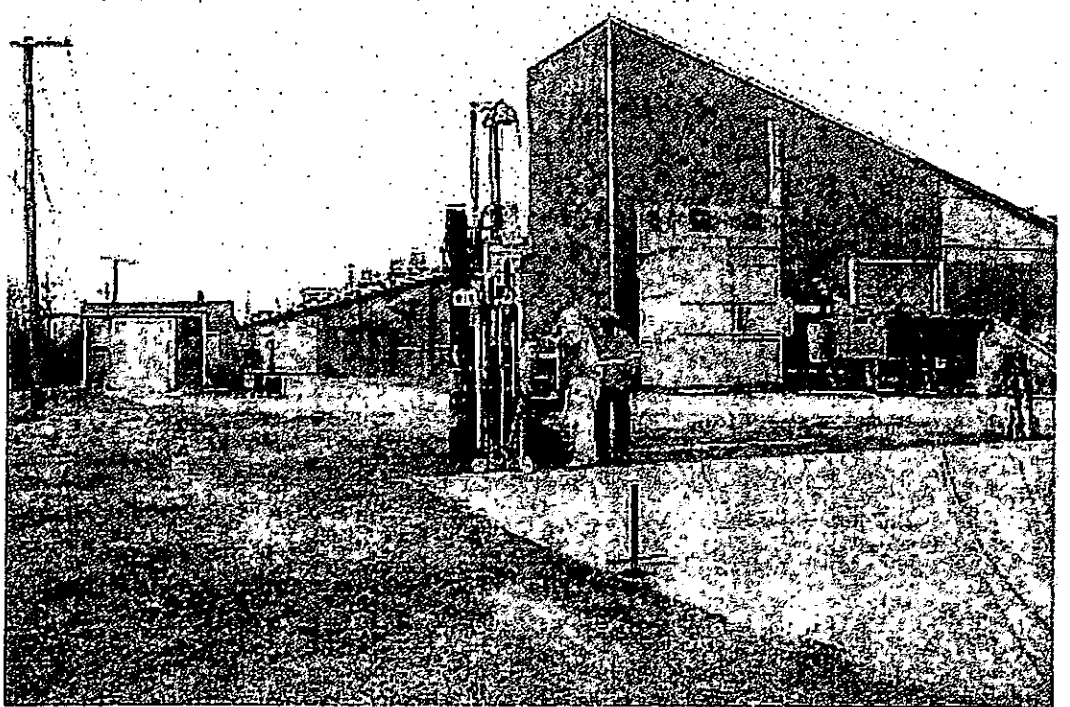
GP-17



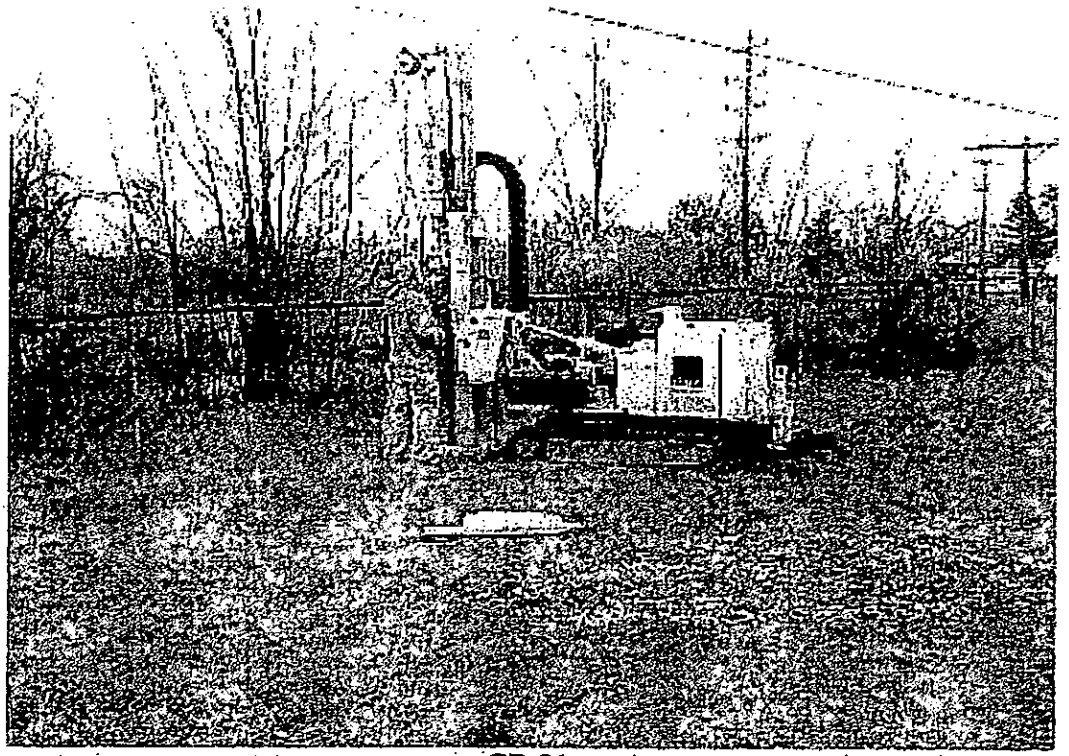
GP-18



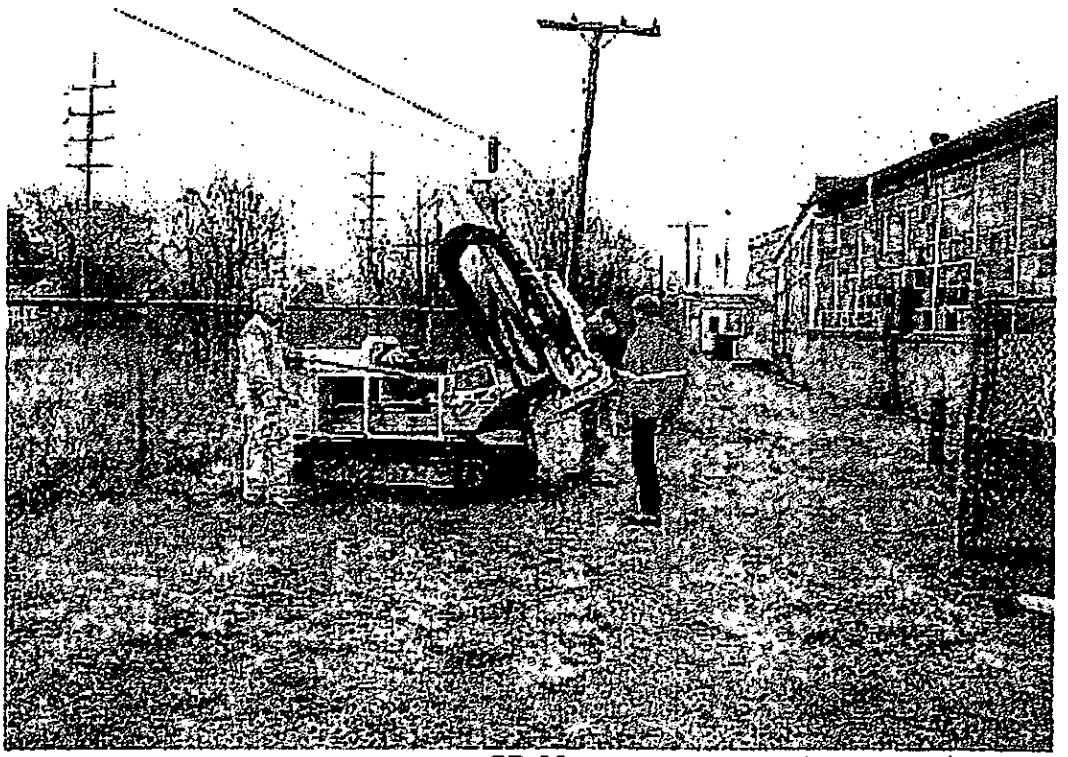
GP-19



GP-20

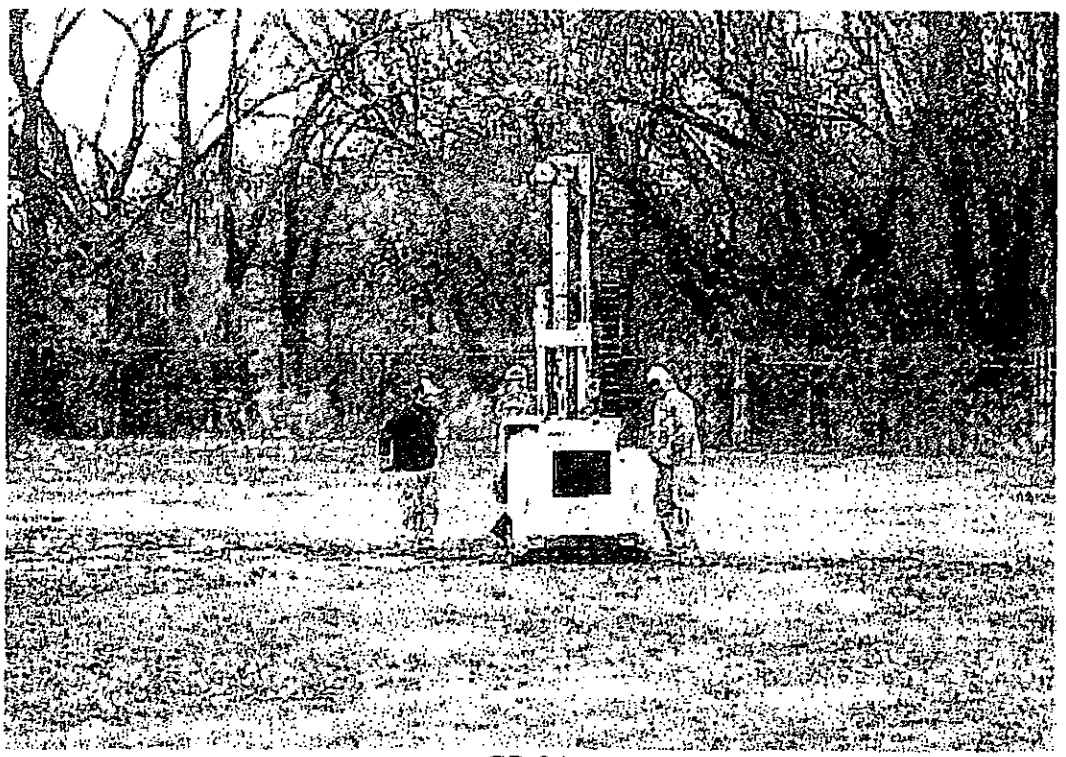


GP-21

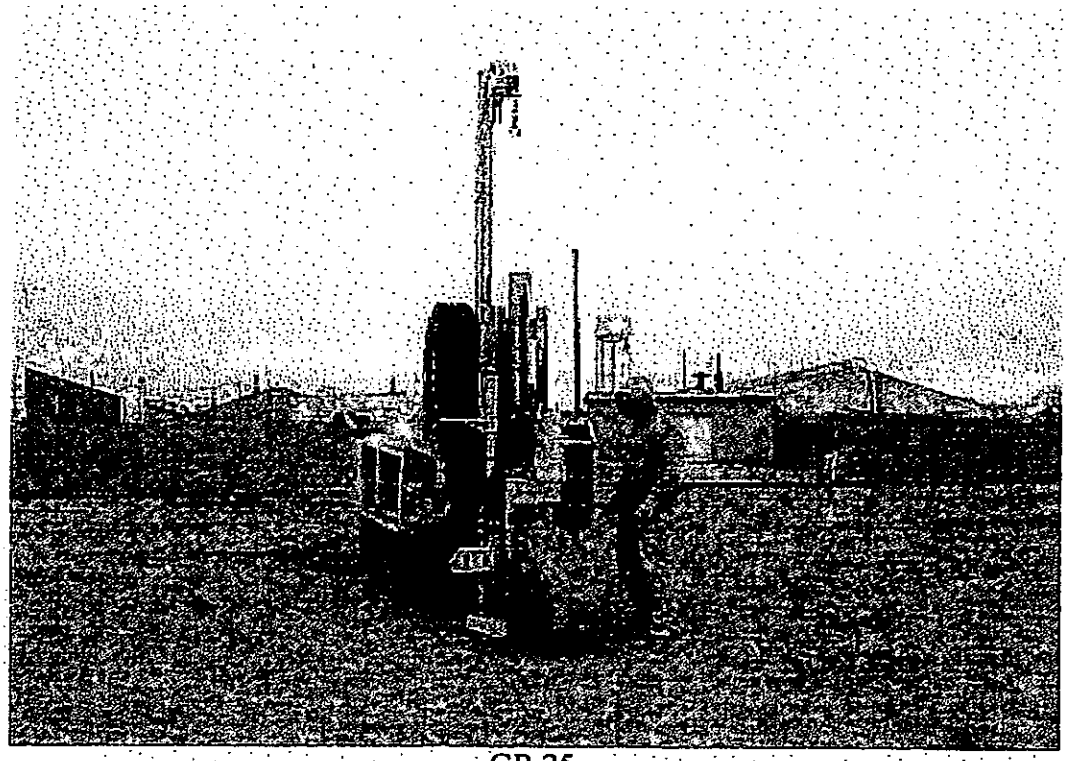


GP-22

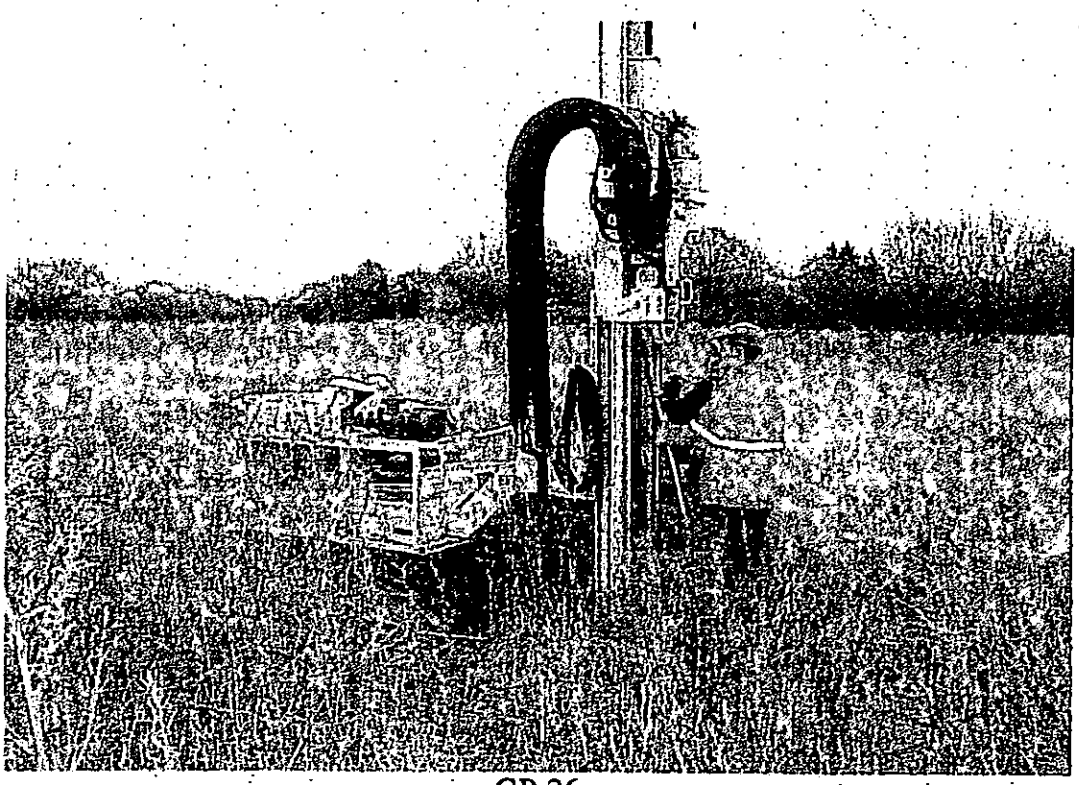
Photo of GP-23 not available.



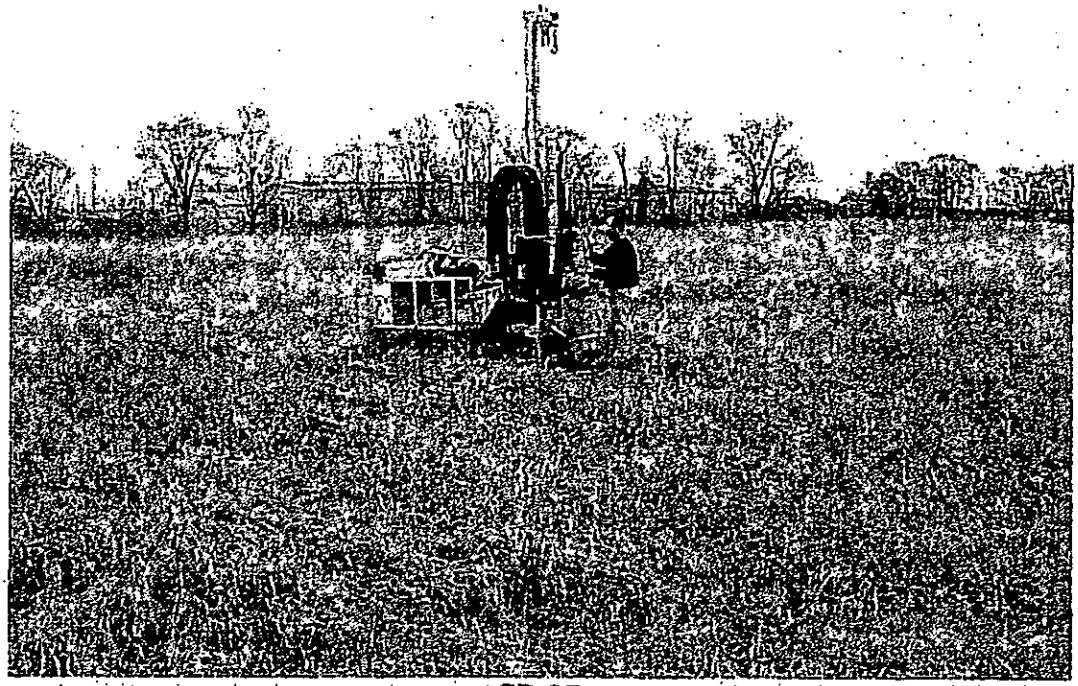
GP-24



GP-25



GP-26



GP-27

Appendix C

Soil Boring Logs

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-1
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Asphalt, stones, gravel and black soil. Dry to damp	0.0		
		2.0'				
1	55	3.0'		0.0		
		4.0'		0.0		
		5.0'		0.0		
		6.0'		0.0		
2	65	7.0'	Brown silt loam with traces of gravel. Damp to wet	0.0		
		8.0'		0.0	▨	
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth 7.5-8.5 | Rig Type Geoprobe 6610DT
Boring Depth 10.0' | Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

▨ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-2
Date 01.19.2006		Boring Location See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Concrete, stones, gravel and black soil. Dry to damp	0.0		
		2.0'	2.0'			
1	65	3.0'		0.0		
		4.0'		0.0	▨	
		5.0'		0.0		
2	75	6.0'	Brown silt loam with traces of gravel. Damp to moist	0.0		
		7.0'		0.0		
		8.0'				
		9.0'				
		10.0'	10.0'			
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-3
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete. Dry			
		1.0'		0.0		
1	60	2.0'		0.0		
		3.0'				
		4.0'		0.0		
		5.0'		0.0	▨	
2	80	6.0'	Brown silt loam with traces of gravel. Damp to moist	0.0		
		7.0'				
		8.0'		0.0		
		9.0'				
		10.0'		-.-		
		11.0'				
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-4
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete. Dry			
		1.0'		0.0		
1	55	2.0'				
		3.0'		0.0		
		4.0'				
		5.0'		0.0	▨	
2	90	6.0'	Brown silt loam with traces of gravel. Damp to moist	0.0		
		7.0'				
		8.0'		0.0		
		9.0'				
		10.0'		0.0		
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-5
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete, Dry			
		1.0'		0.0		
1	65	2.0'				
		3.0'		0.0		
		4.0'		0.0		
		5.0'		0.0		
		6.0'		0.0	▨	
2	95	7.0'	Brown silt loam with traces of gravel, Damp to moist	0.0		
		8.0'				
		9.0'		0.0		
		10.0'	10.0'			
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-6
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete. Dry			
		1.0'		0.0		
1	75	2.0'		0.0		
		3.0'				
		4.0'		0.0	▨	
		5.0'		0.0		
2	90	6.0'	Brown silt loam with traces of gravel. Damp to moist	0.0		
		7.0'				
		8.0'		0.0		
		9.0'				
			Brown sand. Damp to moist			
		10.0'		-.-		
		11.0'				
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-7
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete. Dry			
		1.0'		0.0		
1	70	2.0'		0.0		
		3.0'				
		4.0'		0.0		
		5.0'		0.0		
		6.0'		0.0	▨	
		7.0'	Brown silt loam with traces of gravel. Damp to moist			
2	95	8.0'		0.0		
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-8
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete. Dry			
		1.0'		0.0		
1	60	2.0'		0.0		
		3.0'				
		4.0'		0.0		
		5.0'		0.0	▨	
2	90	6.0'	Brown silt loam with traces of gravel. Damp to moist			
		7.0'		0.0		
		8.0'				
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-9
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'	Concrete. Dry			
		1.0'		0.0		
1	20	2.0'				
		3.0'		0.0		
		4.0'				
		5.0'		0.0		
2	85	6.0'	Brown yellowish fine to medium grained sand. Damp to moist	0.0	▨	
		7.0'				
		8.0'		0.0		
		9.0'				
		10.0'		0.0		
		10.0'		-.-		
		11.0'				
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-10
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black soil. Damp	0.0		
		1.5'				
1	75	2.0'		0.0		
		3.0'				
		4.0'		0.0		
		5.0'		0.0		
		6.0'				
2	90	7.0'	Brown yellowish fine coarse grained sand. Damp to Moist.	0.0		
		8.0'		0.0	▨	
		9.0'		0.0		
		10.0'	10.0'			
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

▨ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-11
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black soil. Damp			
1	70	2.0'		0.0		
		3.0'		0.0		
		4.0'				
		5.0'		0.0		
2	90	6.0'	Brown fine to medium grained sand. Damp to Moist.	0.0		
		7.0'		0.0		
		8.0'				
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

Sample Submitted for Analysis

Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-12
Date: 01.19.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black soil. Damp	0.0		
		2.0'	2.0'			
1	75	3.0'		0.0		
		4.0'		0.0		
		5.0'		0.0		
		6.0'		0.0		
		7.0'	Brown fine to medium grained sand. Damp to Moist.			
2	95	8.0'		0.0		
		9.0'		0.0	▨	
		10.0'	10.0'	0.0		
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller B. Lennon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-13
Date		**Boring Location**
02.15.2006		See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Asphalt/gravel.			
1	75	2.0'		0.0		
		3.0'		0.0		
		4.0'				
		5.0'	Fill material: gravel, soil, brick, wood.	0.0	▨	
2	95	6.0'		0.0		
		7.0'				
		8.0'	Brown fine to medium grained sand. Damp to Moist.	0.0		
		9.0'				
		10.0'		-.-		
		11.0'				
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-14
Date		**Boring Location**
02.15.2006		See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black organic topsoil.			
		1.5'		0.0		
1	75	2.0'				
		3.0'		0.0		
		4.0'				
		5.0'	Brown sandy loam with traces of gravel.	0.0	▨	
		5.0'				
2	95	6.0'		0.0		
		7.0'				
		8.0'	Brown fine to medium grained sand. Damp to Moist.			
		9.0'		0.0		
		10.0'				
		10.0'		-.-		
		11.0'				
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis
⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-15
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black organic topsoil.	0.0		
		1.5'				
		2.0'				
1	75	3.0'	Brown/red sand with traces of gravel.	0.0		
		3.0'				
		4.0'				
		5.0'		0.0		
		6.0'				
		7.0'		0.0		
2	95	8.0'	Brown silty loam with traces of gravel.			
		9.0'		0.0		
		10.0'	10.0'			
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

Sample Submitted for Analysis

Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-16
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'		0.0		
		2.0'	Black organic topsoil with traces of sand.			
1	75	3.0'		0.0		
		4.0'				
		5.0'		0.0		
		6.0'				
		7.0'		0.0	▨	
2	95	8.0'				
		9.0'	Brown silty loam with traces of gravel.	0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-17
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Concrete/gravel.			
1	75	2.0'		0.0		
		3.0'	Brown sand and silty loam with traces of gravel.	0.0		
		3.5'				
		4.0'				
		5.0'		0.0	▨	
		6.0'	Dark brown silty loam.		▨	
2	95	7.0'		0.0	▨	
		8.0'	Reddish-brown silty loam.			
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-18
Date 02.15.2006		**Boring Location** See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Concrete/gravel.			
1	75	2.0'		0.0		
		3.0'		0.0		
		4.0'				
		5.0'		0.0		
		6.0'				
		7.0'		0.0	▨	
2	95	8.0'				
		9.0'	Reddish-brown silty loam.	0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-19
Date		**Boring Location**
02.15.2006		See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Concrete/gravel.			
1	75	2.0'		0.0		
		3.0'		0.0		
		4.0'				
		5.0'		0.0		
2	95	6.0'		0.0		
		7.0'				
		8.0'	Reddish-brown silty loam.	0.0		
		9.0'				
		10.0'				
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weeden
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

Sample Submitted for Analysis

Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-20
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'		0.0		
		2.0'				
1	75	3.0'	Black organic soil with traces of gravel.	0.0		
		4.0'				
		5.0'	Tan-black medium sand.	0.0	▨	
		6.0'				
2	95	7.0'		0.0		
		8.0'	Reddish-brown silty loam.			
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-21
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'		0.0		
		2.0'	Black organic soil with traces of sand and gravel.			
1	75	3.0'		0.0		
		4.0'				
		5.0'		0.0	▨	
		6.0'				
2	95	7.0'		0.0		
		8.0'	Reddish-dark brown silty loam.			
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadas

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-22
Date		**Boring Location**
02.15.2006		See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'		0.0		
1	75	2.0'	Black organic soil with traces of sand and gravel.			
		3.0'	3.0'	0.0		
		4.0'				
		5.0'		0.0	▨	
		6.0'				
2	95	7.0'		0.0		
		8.0'	Reddish-dark brown silty loam.			
		9.0'		0.0		
		10.0'	10.0'			
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-23
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black organic soil with traces of sand and gravel.			
1	75	2.0'		0.0		
		3.0'		0.0		
		4.0'				
		5.0'		0.0		
2	95	6.0'		0.0		
		7.0'				
		8.0'	Reddish-dark brown silty loam.	0.0		
		9.0'				
		10.0'	10.0'			
		11.0'		-.-		
		12.0'		-.-		
		13.0'				
		14.0'		-.-		
		15.0'				
		16.0'		-.-		
		17.0'				
		18.0'		-.-		
		19.0'				
		20.0'		-.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

Sample Submitted for Analysis

Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-24
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black organic soil with traces of sand and gravel.	0.0		
		1.5'				
1	75	2.0'		0.0		
		3.0'				
		4.0'				
		5.0'		0.0	▨	
2	95	6.0'				
		7.0'		0.0		
		8.0'	Reddish-dark brown silty loam.			
		9.0'		0.0		
		10.0'				
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

▩ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-25
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'	Black organic soil with traces of sand and gravel.			
1	75	2.0'		0.0		
		3.0'	Brown sand and gravel.	0.0		
		4.0'			▨	
		5.0'		0.0		
2	95	6.0'				
		7.0'		0.0		
		8.0'				
		9.0'	Reddish-dark brown silty loam.	0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

▩ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-26
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
1	75	0.0'–5.0'	Black organic soil with traces of sand and gravel. (1.5')	0.0 0.0 0.0	▨	
2	95	5.0'–10.0'	Reddish-dark brown silty loam. (10.0')	0.0 0.0 0.0		
		10.0'–20.0'		-.- -.- -.- -.- -.-		

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis
⊠ Sample on Hold

Project Number	Site Location	Boring Number
601107	300 N West Street Marengo, Illinois	GP-27
Date: 02.15.2006		Boring Location: See Site Diagram

Core Number	Sample Recovery (%)	Depth (feet)	Detailed Soil and Rock Description	PID/FID (ppm)	Submitted to Laboratory	Comments
		0.0'				
		1.0'				
		2.0'	Black organic soil with traces of sand and gravel.	0.0		
1	75	3.0'		0.0		
		4.0'				
		5.0'		0.0	▨	
		6.0'				
2	95	7.0'		0.0		
		8.0'	Reddish-dark brown silty loam.			
		9.0'		0.0		
		10.0'				
		11.0'		-.-		
		12.0'				
		13.0'		-.-		
		14.0'				
		15.0'		-.-		
		16.0'				
		17.0'		-.-		
		18.0'				
		19.0'		-.-		
		20.0'				

Note: Stratification lines are approximate; in-situ transition between soil types may be gradual.

EGSL

Groundwater Depth n/a
Boring Depth 10.0'
Rig Type Geoprobe 6610DT
Driller J. Weedon
Geologist A. Vadan

Note: Boring backfilled unless otherwise noted.

▨ Sample Submitted for Analysis

⊠ Sample on Hold

Appendix D

Slug-test and K-value Data

Data Set: Z:\eqsl_docs\2006-Projects\2006- Environmental Consulting\601107-John Daley-300 N. West Street
Date: 03/03/06
Time: 09:50:51

PROJECT INFORMATION

Company: EGSL
Client: John Daley
Project: 601107
Location: Marengo
Test Date: 2.15.06
Test Well: MW-3

AQUIFER DATA

Saturated Thickness: 3. ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Initial Displacement: 0.87 ft
Casing Radius: 0.1 ft
Wellbore Radius: 0.1667 ft
Well Skin Radius: 0.1967 ft
Screen Length: 11. ft
Total Well Penetration Depth: 3. ft
Gravel Pack Porosity: 0.032

No. of observations: 20

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.	0.87	3.5	0.38	9.	0.08
0.5	0.77	4.	0.34	10.	0.05
1.	0.68	4.5	0.3	12.	0.04
1.5	0.61	5.	0.23	14.	0.03
2.	0.53	6.	0.18	16.	0.02
2.5	0.48	7.	0.14	18.	0.01
3.	0.43	8.	0.1		

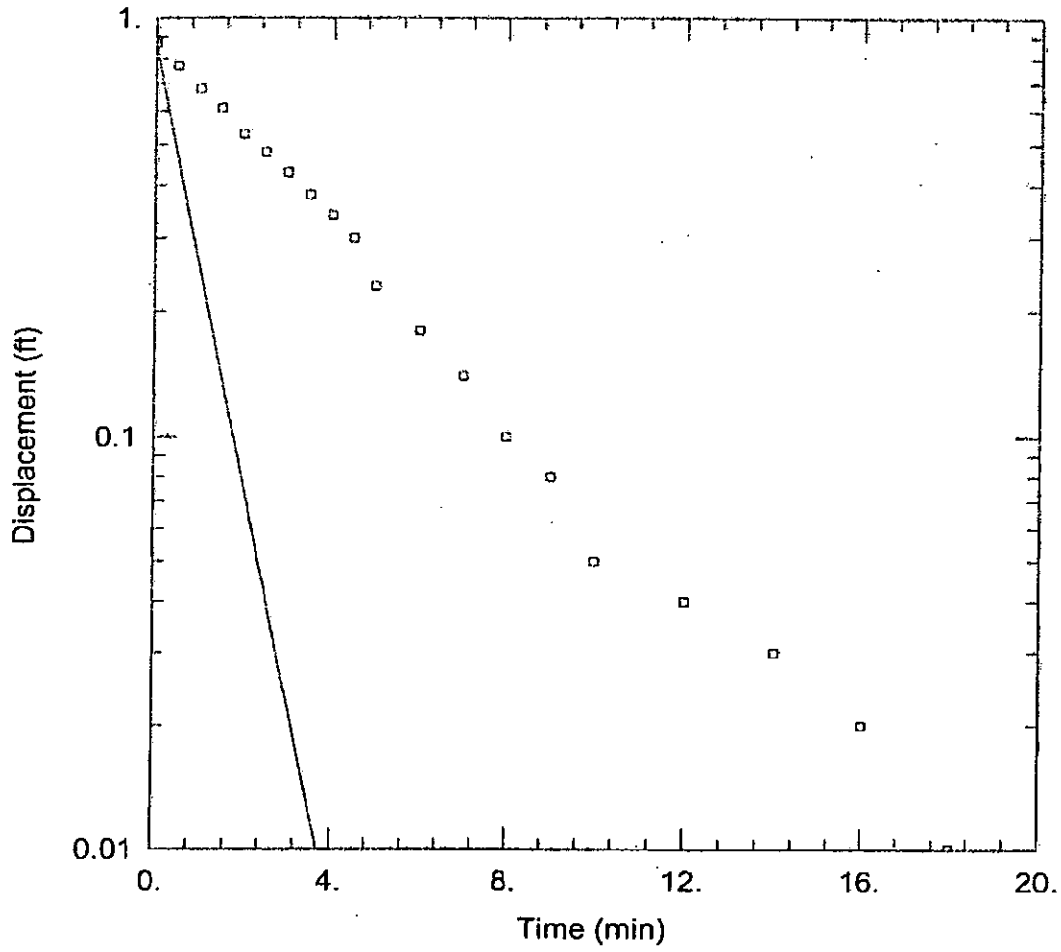
SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0006812	cm/sec
y0	0.856	ft



WELL TEST ANALYSIS

Data Set: Z:\...\k-value.aqt
Date: 03/03/06 Time: 09:51:23

PROJECT INFORMATION

Company: EGSL
Client: John Daley
Project: 601107
Test Location: Marengo
Test Well: MW-3
Test Date: 2.15.06

AQUIFER DATA

Saturated Thickness: 3. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 0.87 ft
Wellbore Radius: 0.1667 ft
Screen Length: 11. ft
Gravel Pack Porosity: 0.032
Casing Radius: 0.1 ft
Well Skin Radius: 0.1967 ft
Total Well Penetration Depth: 3. ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0006812 cm/sec y0 = 0.856 ft

Appendix E

Tier 2 Calculations

Data Input for Tier 1 and 2 Soil Objectives (SSL)

INPUT TO RED BOXES ONLY!

INPUT SOIL TYPE Below	USEPA DEFAULT = 0 GRAVEL = 1 SAND = 2 SILT = 3 CLAY = 4
3	

CLASS OF GROUNDWATER
1 OR 2
CLASS= 1

DATE=	3-Mar-06
PROJECT NAME=	[illegible]
PROJECT NUMBER=	[illegible]
CITY=	[illegible]
COUNTY=	[illegible]
PROJECT MANAGER=	[illegible]

SOIL PARAMETERS	(INH. & ING.) SURFACE SS SOIL VALUES (0-3.2 FT.)	SURFACE DEFAULT VALUES (0-3.2 FT.)	SOIL PARAMETERS	(MIG. TO GW) SUBSURFACE SS SOIL VALUES (3.2 FT. - GW)	SUBSURFACE DEFAULT VALUES (3.2 FT. - GW)
foc= (g/g) (ORGANIC CARBON)	0.006	0.006	foc= (g/g)	0.002	0.002
n= (Lp/La) (POROSITY)	0.40	0.40	n= (Lp/Ls)	0.40	0.43
Ps= (kg/L) (DENSITY)	2.65	2.65	Ps= (kg/L)	2.65	2.65
w= (gw/gs) (% MOISTURE)	0.10	0.10	w= (gw/gs)	0.10	0.10
Θw= (Lw/Ls)	0.16	0.16	Θw= (Lw/Ls)	0.16	0.16
Pb= (kg/L)	1.60	1.60	Pb= (kg/L)	1.60	1.60
Θa= (La/Ls)	0.24	0.24	Θa= (La/Ls)	0.24	0.24
(Θa^3.33/n^2)	5.39E-02	5.22E-02	(Θa^3.33/n^2)	5.39E-02	5.22E-02

SOIL pH RANGE (4.5 TO 8.0)
[illegible]
SEE "PH CUO" PAGE FOR RESULTS

TARGET RISK FACTOR (TRF)
DEFAULT = 1E-06
INPUT TRF HERE= 1E-06

RESIDENTIAL = 1
INDUSTRIAL/COMMERCIAL = 2
CONSTRUCTION WORKER = 3

TYPE OF ENVIRONMENT (1, 2 OR 3)= 1

DILUTION FACTOR
DEFAULT VALUE FOR THE DILUTION FACTOR= 20

SEE "ADDITIONAL TIER TWO PARAMETERS" FOR THE CALCULATED DILUTION FACTOR IF APPLICABLE.

INSERT DILUTION FACTOR HERE= 20

!!OPTIONAL!!

CALC. OF SITE SPECIFIC DILUTION FACTOR

			DEFAULT VALUES	
DILUTION F	1.347927822	(UNITLESS)	20	
d=(M)	3.487229907	(MIXING ZONE DEPTH CALCULATED)	2	
I=(M/YR)	0.3	(INFILTRATION)	0.3	
i=(M/M)	[illegible]	(HYDRAULIC GRADIENT)	SS	
L= (M)	[illegible]	(SOURCE LENGTH)	SS	49.2 Feet
K= (M/YR)	[illegible]	(HYDRAULIC CONDUCTIVITY)	SS	0.001 cm/sec
da= (M)	[illegible]	(ACTUAL THICKNESS OF AQUIFER)	SS	6.232 feet
n = (UNITLESS)	[illegible]	(EFFECTIVE POROSITY)	(0.3-0.2)	

SS = Site Specific Data

INPUT FOR EQUATION R-15

	Value	UNITS	CONVERSION
Distance = X =	2000.00	cm	65.60 Feet
Source Width = Sw =	350.00	cm	11.48 Feet
Source Depth = Sd =	200.00	cm	6.56 Feet
Infiltration Rate = I =	3.00E-01	cm/yr	9.51E-07 cm/sec
Hydraulic Conductivity = K =	5.88E-01	cm/d	6.81E-04 cm/sec
Hydraulic Gradient = i =	1.22E-03	cm/cm	0.1%
Total Porosity= θt =	0.36	cm^3/cm^3	NA
ax =	200	cm	6.56 Feet
az =	10	cm	0.33 Feet
ay =	66.67	cm	2.19 Feet
B 1 =	0.240	NA	NA
B 2 =	0.707	NA	NA
U =	0.1995	cm/day	2.31E-06 cm/sec

SOIL AND AQUIFER DATA

	Value	DEFAULT	UNITS
Soil Bulk Density= Ps=	1.5	1.5	g/cm^3
Vol. Water Content= θws	0.3	0.3	cm^3/cm^3
Vol. Air Content = θas	0.13	0.13	cm^3/cm^3
Specific Discharge = Ugw	26.2	SS	cm/yr
Infiltration = I	30	30	cm/yr
Width Parallel GW Flow = W	150	SS	cm
Aqu. thickness	200	200	cm
Total Organic Carbon foc	0.002	SS	g/g

NOTE: Change surface foc on "CUOs Page" to equal above foc !!!

Input Values from R-26

SS = Site Specific Data

X = DISTANCE FROM SOURCE TO COMPLIANCE BOUNDARY

GW Class= 1

CHEMICAL	Cx/Csource	LFsw	GWcomp mg/l	GWsource mg/l	Max Soil Objective using R-12 mg/kg	Max Soil Objective Using S-17 mg/kg	Solubility mg/l
TETRACHLOROETHYLENE (c)	4.44E-04	8.03E-01	0.005	1.13E+01	1.40E+01	7.00E+01	200
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

R-26 ANALYSIS

		UNITS	
Distance= X =	4400.00	cm	144.36 Feet
Source Width= Sw =	200.00	cm	6.56 Feet
Source Depth= Sd =	200.00	cm	6.56 Feet
Hydraulic Conductivity= K=	5.88E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.22E-03	cm/cm	0.1%
Total Porosity= θt =	0.36	cm^3/cm^3	NA
ax =	440.000	cm	14.4364 Feet
az =	22.000	cm	0.72 Feet
ay =	146.667	cm	4.81 Feet
B 1 =	0.062	NA	NA
B 2 =	0.321	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RBCA R12

CHEMICAL NAME	C source For Equation R-26 (mg/L)	EQUATION R-26 (CX) (mg/l)	Groundwater Standard/ Objective Class 1 or 2 (mg/L)	Degradation Constant Per Day
ARSENIC	[illegible]	[illegible]	0.05	0
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A
#N/A	[illegible]	[illegible]	#N/A	#N/A

Input Values from CUO's Page

Does not meet Objective at Distance X= [illegible]

Meets Objective at Distance X= [illegible]

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	150.00	cm	4.92 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.88E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.28E-03	cm/cm	0.1%
Total Porosity= θt =	0.38	cm^3/cm^3	NA
ax =	15.000	cm	0.49215 Feet
az =	0.750	cm	0.02 Feet
ay =	5.000	cm	0.16 Feet
B 1 =	6.847	NA	NA
B 2 =	8.957	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RBCA R12

CHEMICAL NAME	C source For Equation R-26 (mg/L)	EQUATION R-26 Cx (mg/L)	Groundwater Standard/ Objective Class I, II or III	Degradation Constant Per Day
*1,1-DICHLOROETHYLENE	0.13	1.17E-03	0.007	0.0053
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

Input Values from CUO's Page

Does not meet Objective at Distance X=
Meets Objective at Distance X=

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	200.00	cm	6.56 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.85E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.2E-03	cm/cm	0.1%
Total Porosity= Ot =	038	cm^3/cm^3	NA
ax =	20.000	cm	0.6562 Feet
az =	1.000	cm	0.03 Feet
ay =	6.667	cm	0.22 Feet
B 1 =	5.135	NA	NA
B 2 =	6.718	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RBCA R12

CHEMICAL NAME	C source For Equation R-20 (mg/L)	EQUATION R-26 Cx (mg/L)	Groundwater Standard/ Objective Class I or 2 (mg/L)	Degradation Constant (1/Day)
* TETRACHLOROETHYLENE (e)	0.011	0.00	0.005	0.00096
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

Input Values from CUO's Page

Does not meet Objective at Distance X=
Meets Objective at Distance X=

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	150.00	cm	4.92 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.85E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.23E-03	cm/cm	0.1%
Total Porosity= 0t =	0.36	cm^3/cm^3	NA
ax =	15.000	cm	0.49215 Feet
az =	0.750	cm	0.02 Feet
ay =	5.000	cm	0.16 Feet
B 1 =	6.847	NA	NA
B 2 =	8.957	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RJCA R12

CHEMICAL NAME	C source For Equation R-26 (mg/l)	EQUATION (R26) Cc (mg/l)	Groundwater Standard/ Objective, Class1,or 2	Degradation Constant= Per Day
*1,1,1-TRICHLOROETHANE	0.46	[illegible]	0.2	0.0013
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

Input Values from CUO's Page

Does not meet Objective at Distance X=
Meets Objective at Distance X=

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	850.00	cm	27.89 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.89E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.22E-03	cm/cm	0.1%
Total Porosity= Ot =	0.36	cm^3/cm^3	NA
ax =	85.000	cm	2.78885 Feet
az =	4.250	cm	0.14 Feet
ay =	28.333	cm	0.93 Feet
B 1 =	1.208	NA	NA
B 2 =	1.581	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RBCA R12

CHEMICAL NAME	C source For Equation R-26 (mg/L)	EQUATION R-26 Cx (mg/L)	Groundwater Standard/ Objective (Class II) (mg/L)	Degradation Constant (1/Day)
Iron	5.5	5.5	5	0
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

Input Values from CUO's Page

Does not meet Objective at Distance X=
Meets Objective at Distance X=

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	1600.00	cm	52.50 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.89E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.25E-03	cm/cm	0.1%
Total Porosity= θt =	0.36	cm^3/cm^3	NA
ax =	160.000	cm	5.2496 Feet
az =	8.000	cm	0.26 Feet
ay =	53.333	cm	1.75 Feet
B 1 =	0.642	NA	NA
B 2 =	0.840	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RHCA R12

CHEMICAL NAME	C source For Equation R-26 (mg/l)	EQUATION R-26 Cx (mg/l)	Groundwater Standard/ Objective Class 1 or 2 (mg/l)	Degradation Constant (1/Day)
MANGANESE	0.3	1.90E-01	0.15	0
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

Input Values from CUO's Page

Does not meet Objective at Distance X=
Meets Objective at Distance X=

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	4500.00	cm	147.65 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.88E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.22E-03	cm/cm	0.1%
Total Porosity= 0t =	0.36	cm^3/cm^3	NA
ax =	450.000	cm	14.7645 Feet
az =	22.500	cm	0.74 Feet
ay =	150.000	cm	4.92 Feet
B 1 =	0.228	NA	NA
B 2 =	0.299	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RBCA R12

CHEMICAL NAME	C Source For Equation R-26 (mg/L)	EQUATION R-26 Cx (mg/L)	Groundwater Standard Objective Class 1 or 2	Degradation Constant (1/Per Day)
MANGANESE	1.5	5.140E-01	0.15	0
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

Input Values from CLIO's Page

Does not meet Objective at Distance X=
Meets Objective at Distance X=

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

R-26 ANALYSIS

		UNITS	
Distance= X =	2350.00	cm	77.10 Feet
Source Width= Sw =	750.00	cm	24.61 Feet
Source Depth= Sd =	190.00	cm	6.23 Feet
Hydraulic Conductivity= K=	5.85E-01	cm/d	6.81E-04 cm/sec
Gradient= i =	1.13E-03	cm/cm	0.1%
Total Porosity= Ot =	0.36	cm^3/cm^3	NA
ax =	235.000	cm	7.71035 Feet
az =	11.750	cm	0.39 Feet
ay =	78.333	cm	2.57 Feet
B 1 =	0.437	NA	NA
B 2 =	0.572	NA	NA
Specific Discharge= U =	0.200	cm/day	2.31E-06 cm/sec

Input Values from RBCA R12

CHEMICAL NAME	C Source For Equation R-26 (mg/L)	EQUATION R-26 Cx (mg/L)	Groundwater Standard/ Objective (Class 1 or 2)	Degradation Constant Per Day
MANGANESE	0.54	[illegible]	0.15	0
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A
#N/A			#N/A	#N/A

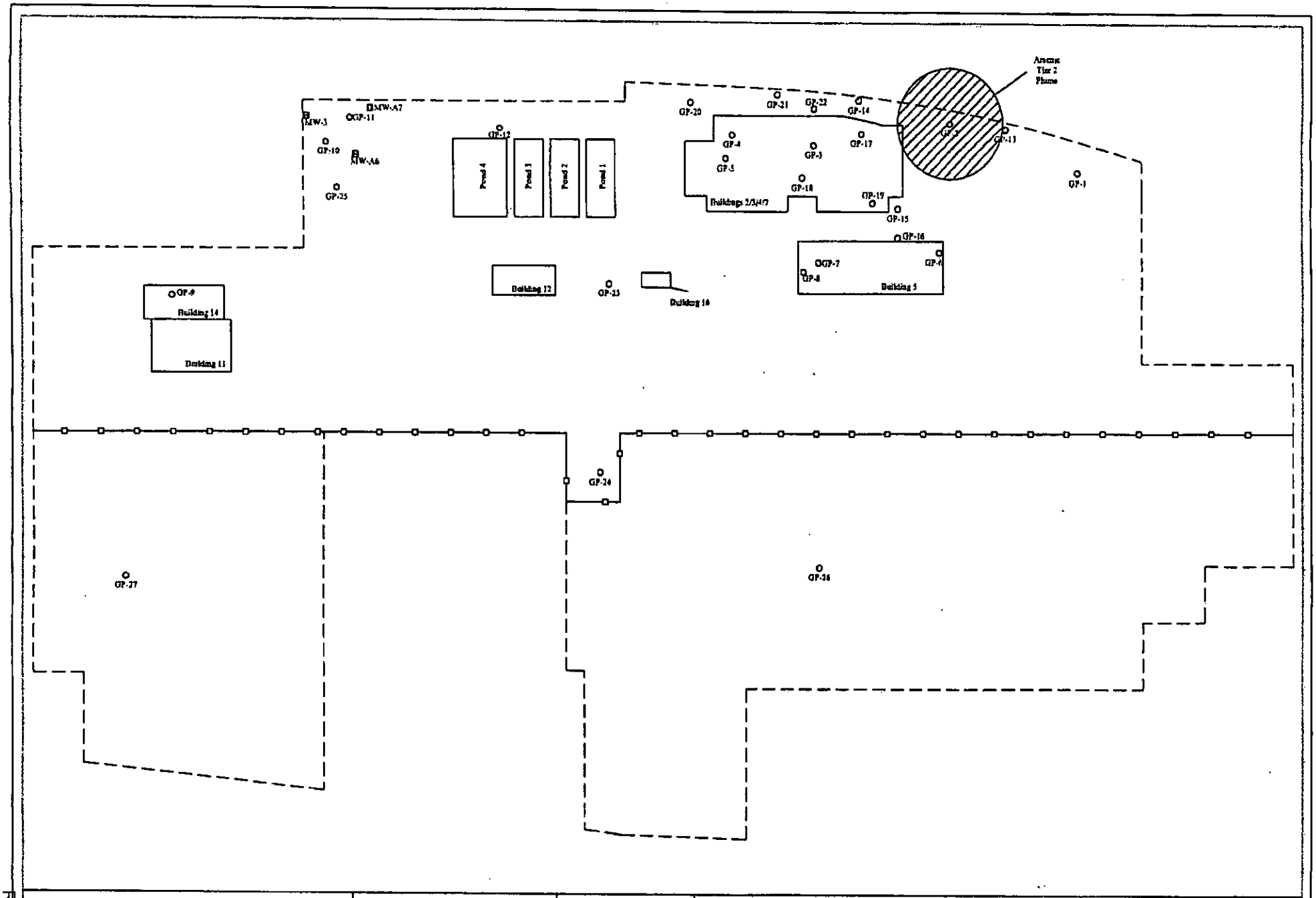
Input Values from CUO's Page

Does not meet Objective at Distance X= [illegible]
Meets Objective at Distance X= [illegible]

DATE=	3-Mar-06
PROJECT NAME=	Marengo
PROJECT NUMBER=	601107
CITY=	0
COUNTY=	0
PROJECT MANAGER=	Bill Lennon

Appendix F

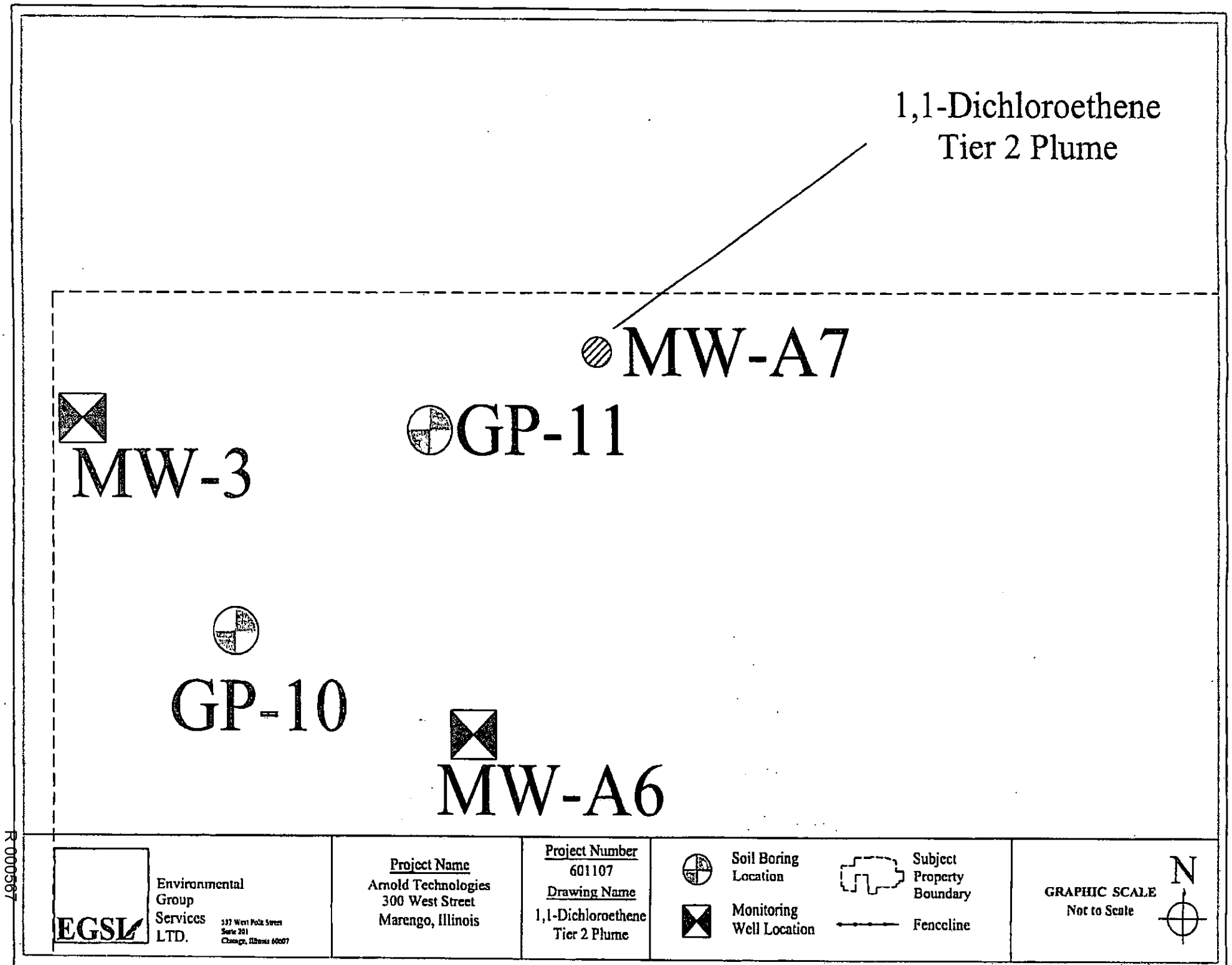
Plume Diagrams



EGSL Environmental Group Services LTD. 537 West Polk Street Suite 201 Chicago, Illinois 60607	**Project Name** Arnold Technologies 300 West Street Marengo, Illinois	**Project Number** 601107 **Drawing Name** Arsenic Tier 2 Plume	Soil Boring Location; Monitoring Well Location; Subject Property Boundary; Fenceline	GRAPHIC SCALE 1" = 355 ft. N

R 000566

R 000566



EGSL Environmental Group Services LTD. 107 West Polk Street Suite 201 Chicago, Illinois 60607

Project Name
Arnold Technologies
300 West Street
Marengo, Illinois

Project Number
601107
Drawing Name
1,1-Dichloroethene
Tier 2 Plume

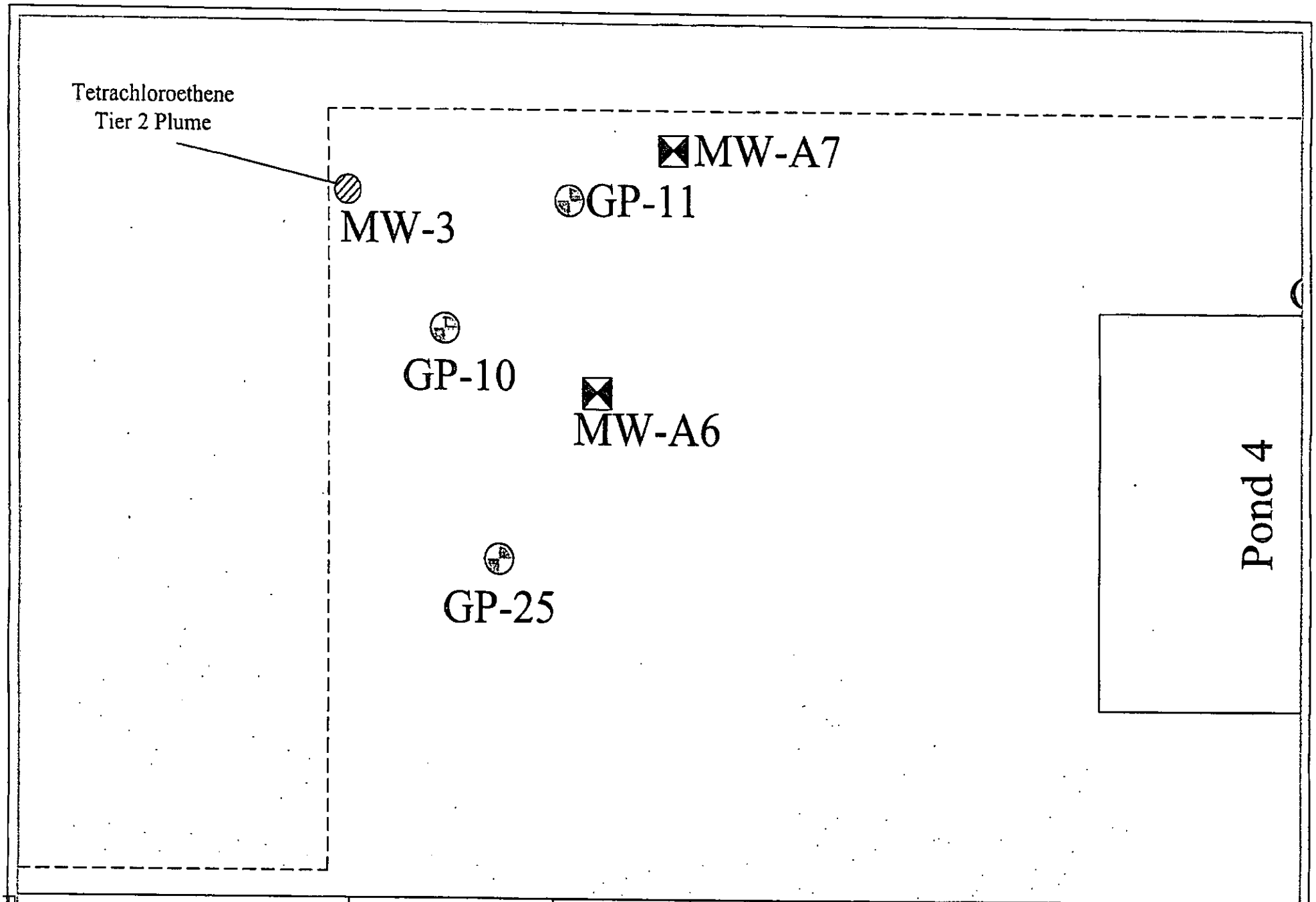
Soil Boring Location
Monitoring Well Location
Subject Property Boundary
Fenceline

GRAPHIC SCALE
Not to Scale

N

R 000567

R 000567



EGSL Environmental Group Services LTD. 337 West Polk Street Suite 201 Chicago, Illinois 60607

Project Name
Arnold Technologies
300 West Street
Marengo, Illinois

Project Number
601107
Drawing Name
Tetrachloroethene
Tier 2 Plume

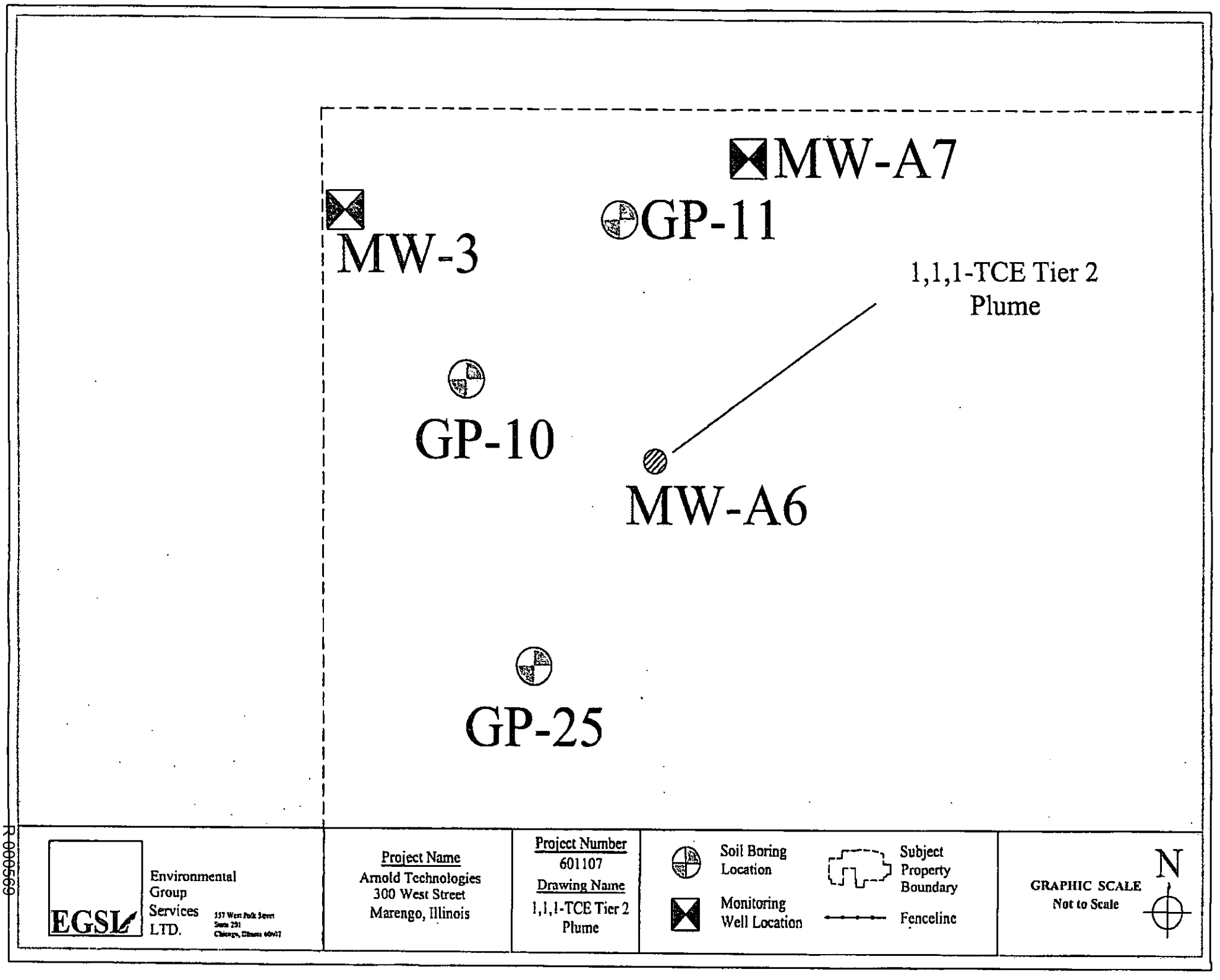
Soil Boring Location
Monitoring Well Location
Subject Property Boundary
Fenceline

GRAPHIC SCALE
Not to Scale

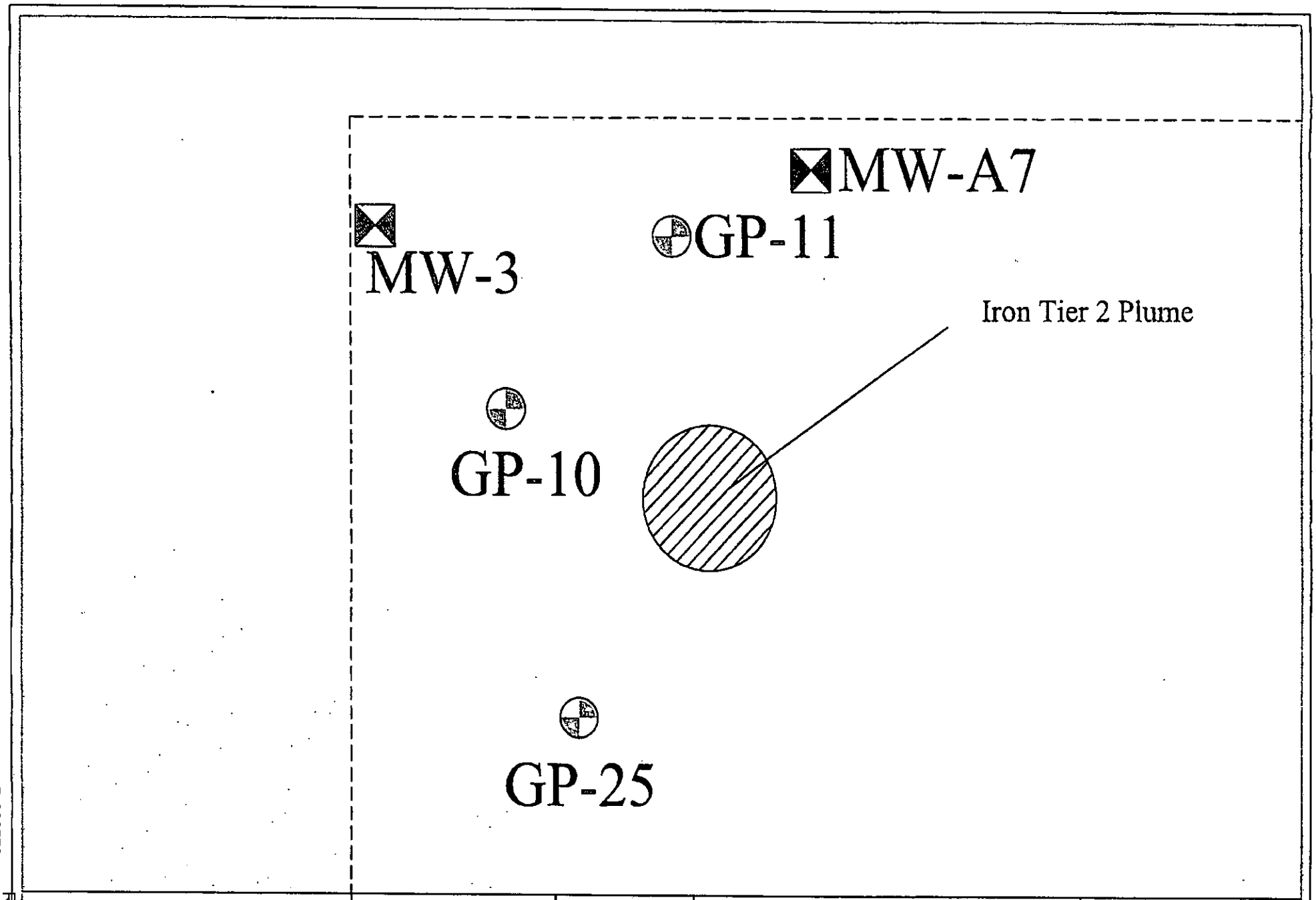
N

R 000568

R 000568



R 000569



EGSL Environmental Group Services LTD.
157 West Polk Street
Suite 201
Chicago, Illinois 60607

Project Name
Arnold Technologies
300 West Street
Marengo, Illinois

Project Number
601107
Drawing Name
Iron Tier 2 Plume

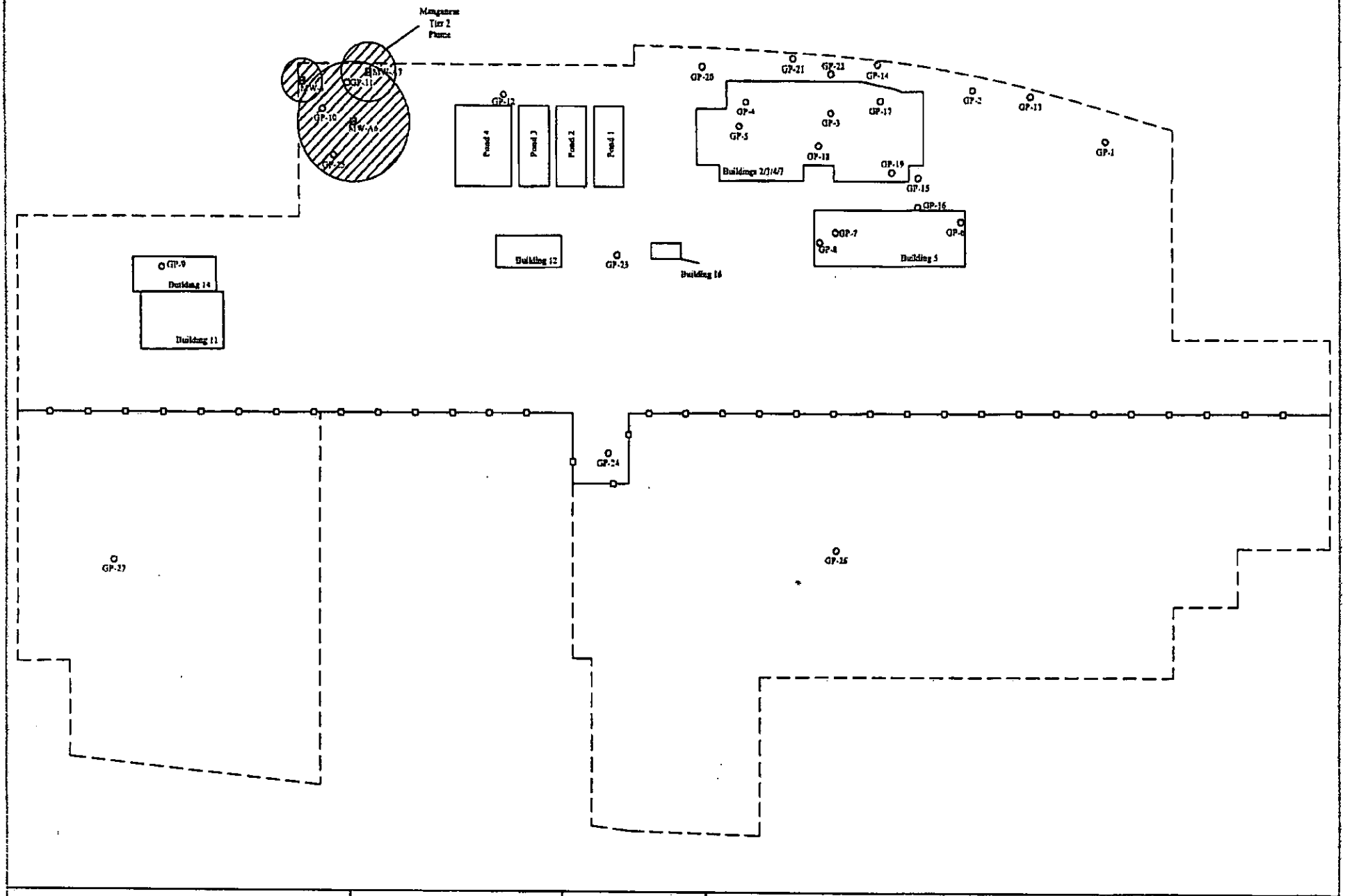
Soil Boring Location
Monitoring Well Location
Subject Property Boundary
Fenceline

GRAPHIC SCALE
Not to Scale

N

R 000570

R 000570



EGSL Environmental Group Services LTD. 557 West Polk Street Suite 201 Chicago, Illinois 60607	**Project Name** Arnold Technologies 300 West Street Marengo, Illinois	**Project Number** 601107 **Drawing Name** Manganese Tier 2 Plume	Soil Boring Location; Monitoring Well Location; Subject Property Boundary; Fenceline	GRAPHIC SCALE 1" = 355 ft. N

R 000571

Appendix G

Soil Analytical Data

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006
Client Sample ID :	GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)
Date Collected :	1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45

VOC Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
	Ingestion	Inhalation	Class I	Class II						
Acetone	7,800	100,000	16	16	< 0.05	0.066	< 0.045	< 0.046	< 0.049	< 0.041
Benzene	12	0.8	0.03	0.17	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Bromodichloromethane	10	3,000	0.6	0.6	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Bromoform	81	53	0.8	0.8	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Bromomethane	110	10	0.2	1.2	< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
2-Butanone					< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
Carbon disulfide	7,800	720	32	160	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Carbon tetrachloride	5	0.3	0.07	0.33	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Chlorobenzene	1,600	130	1	6.5	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Chloroethane					< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
Chloroform	100	0.3	0.6	2.9	< 0.005	< 0.0048	< 0.0045	0.014	< 0.0049	< 0.0041
Chloromethane					< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
Dibromochloromethane	1,600	1,300	0.4	0.4	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
1,1-Dichloroethane	7,800	1,300	23	110	< 0.005	0.048	0.01	< 0.0046	< 0.0049	< 0.0041
1,2-Dichloroethane	7	0.4	0.02	0.1	< 0.005	< 0.0048	0.0051	< 0.0046	< 0.0049	< 0.0041
1,1-Dichloroethene	700	1,500	0.06	0.3	< 0.005	0.016	0.012	0.0055	0.016	< 0.0041
cis-1,2-Dichloroethene	780	1,200	0.4	1.1	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
trans-1,2-Dichloroethene	1,600	3,100	0.7	3.4	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
1,2-Dichloropropane	9	15	0.03	0.15	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
cis-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
trans-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Ethylbenzene	7,800	400	13	19	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
2-Hexanone					< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
4-Methyl-2-pentanone					< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
Methylene chloride	85	13	0.02	0.2	< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083
Methyl tert-butyl ether	780	8,800	0.32	0.32	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Styrene	16,000	1,500	4	18	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
1,1,2,2-Tetrachloroethane					< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Tetrachloroethene	12	11	0.06	0.3	0.026	0.0082	(a)	0.054	0.0092	0.0078
Toluene	16,000	650	12	29	0.0096	< 0.0048	0.0074	0.0074	0.0083	0.0061
1,1,1-Trichloroethane	---	1,200	2	9.6	< 0.005	0.51	0.028	0.029	0.07	< 0.0041
1,1,2-Trichloroethane	310	1,800	0.02	0.3	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Trichloroethene	58	5	0.06	0.3	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Vinyl chloride	0.46	0.28	0.01	0.07	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041
Xylenes, Total	160,000	320	150	150	< 0.015	< 0.014	< 0.014	< 0.014	< 0.015	< 0.012

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-007	06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
Client Sample ID :	GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :	1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15

VOC Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
	Ingestion	Inhalation	Class I	Class II						
Acetone	7,800	100,000	16	16	< 0.042	< 0.049	< 0.057	0.056	0.056	0.095
Benzene	12	0.8	0.03	0.17	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Bromodichloromethane	10	3,000	0.6	0.6	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Bromoform	81	53	0.8	0.8	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Bromomethane	110	10	0.2	1.2	< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
2-Butanone					< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	0.012
Carbon disulfide	7,800	720	32	160	< 0.0042	< 0.0049	< 0.0057	0.0055	< 0.0052	< 0.0052
Carbon tetrachloride	5	0.3	0.07	0.33	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Chlorobenzene	1,600	130	1	6.5	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Chloroethane					< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
Chloroform	100	0.3	0.6	2.9	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Chloromethane					< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
Dibromochloromethane	1,600	1,300	0.4	0.4	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,1-Dichloroethane	7,800	1,300	23	110	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,2-Dichloroethane	7	0.4	0.02	0.1	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,1-Dichloroethene	700	1,500	0.06	0.3	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
cis-1,2-Dichloroethene	780	1,200	0.4	1.1	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
trans-1,2-Dichloroethene	1,600	3,100	0.7	3.4	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,2-Dichloropropane	9	15	0.03	0.15	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
cis-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
trans-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Ethylbenzene	7,800	400	13	19	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
2-Hexanone					< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
4-Methyl-2-pentanone					< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
Methylene chloride	85	13	0.02	0.2	< 0.0083	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
Methyl tert-butyl ether	780	8,800	0.32	0.32	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Styrene	16,000	1,500	4	18	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,1,2,2-Tetrachloroethane					< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Tetrachloroethene	12	11	0.06	0.3	0.0053	0.0091	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Toluene	16,000	650	12	29	0.0055	0.0073	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,1,1-Trichloroethane	---	1,200	2	9.6	0.0098	0.0088	< 0.0057	< 0.0054	< 0.0052	< 0.0052
1,1,2-Trichloroethane	310	1,800	0.02	0.3	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Trichloroethene	58	5	0.06	0.3	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Vinyl chloride	0.46	0.28	0.01	0.07	< 0.0042	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
Xylenes, Total	160,000	320	150	150	< 0.013	< 0.015	< 0.017	< 0.016	< 0.016	< 0.016

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006
Client Sample ID :	GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)
Date Collected :	1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45

PNA	Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
		Ingestion	Inhalation	Class I	Class II						
	Acenaphthene	4,700	---	570	2,900	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Acenaphthylene					< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Anthracene	23,000	---	12,000	59,000	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Benz(a)anthracene	0.9	---	2	8	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Benzo(a)pyrene	0.09	---	8	82	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Benzo(b)fluoranthene	0.9	---	5	25	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Benzo(g,h,i)perylene					< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Benzo(k)fluoranthene	9	---	49	250	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Chrysene	88	---	160	800	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Dibenz(a,h)anthracene	0.09	---	2	7.6	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Fluoranthene	3,100	---	4,300	21,000	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Fluorene	3,100	---	560	2,800	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Indeno(1,2,3-cd)pyrene	0.9	---	14	69	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Naphthalene	1,600	170	12	18	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Phenanthrene					< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027
	Pyrene	2,300	---	4,200	21,000	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027

R 000575

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-007	06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
Client Sample ID :	GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :	1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15

PNA	Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
		Ingestion	Inhalation	Class I	Class II						
	Acenaphthene	4,700	---	570	2,900	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Acenaphthylene					< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Anthracene	23,000	---	12,000	59,000	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benz(a)anthracene	0.9	---	2	8	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(a)pyrene	0.09	---	8	82	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(b)fluoranthene	0.9	---	5	25	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(g,h,i)perylene					< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(k)fluoranthene	9	---	49	250	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Chrysene	88	---	160	800	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Dibenz(a,h)anthracene	0.09	---	2	7.6	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Fluoranthene	3,100	---	4,300	21,000	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Fluorene	3,100	---	560	2,800	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Indeno(1,2,3-cd)pyrene	0.9	---	14	69	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Naphthalene	1,600	170	12	18	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Phenanthrene					< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Pyrene	2,300	---	4,200	21,000	< 0.027	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006
Client Sample ID :	GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)
Date Collected :	1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45

SVOC Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
	Ingestion	Inhalation	Class I	Class II						
1,2,4-Trichlorobenzene	780	3,200	5	53	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
1,2-Dichlorobenzene	7,000	560	17	43	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
1,3-Dichlorobenzene					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
1,4-Dichlorobenzene	---	11,000	2	11	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2, 2'-oxybis(1-Chloropropane)					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2,4,5-Trichlorophenol	7,800	---	270	1,400	< 0.37	< 0.38	< 0.35	< 0.38	< 0.38	< 0.36
2,4,6-Trichlorophenol	58	200	0.2	0.77	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2,4-Dichlorophenol	230	---	1	1	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2,4-Dimethylphenol	1,600	---	9	9	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2,4-Dinitrophenol	160	---	0.2	0.2	< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
2,4-Dinitrotoluene	0.9	---	0.0008	0.0008	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2,6-Dinitrotoluene	0.9	---	0.0007	0.0007	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2-Chloronaphthalene					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2-Chlorophenol	390	53,000	4	4	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2-Methylnaphthalene					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2-Methylphenol	3,900	---	15	15	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
2-Nitroaniline					< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
2-Nitrophenol					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
3,3'-Dichlorobenzidine	1	---	0.007	0.033	< 0.37	< 0.38	< 0.35	< 0.38	< 0.38	< 0.36
3-Nitroaniline					< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
4,6-Dinitro-2-methylphenol					< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
4-Bromophenyl phenyl ether					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
4-Chloro-3-methylphenol					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
4-Chloroaniline	310	---	0.7	0.7	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
4-Chlorophenyl phenyl ether					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
4-Methylphenol					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
4-Nitroaniline					< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
4-Nitrophenol					< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
Aniline					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
Benzidine					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
Benzoic acid	310,000	---	400	400	< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
Benzyl alcohol					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
Bis(2-chloroethoxy)methane					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
Bis(2-chloroethyl)ether	0.6	0.2	0.0004	0.0004	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
Bis(2-ethylhexyl)phthalate	46	31,000	3,600	31,000	< 0.19	< 0.19	< 0.18	< 0.19	0.23	< 0.18

R 000577

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :					06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006
Client Sample ID :					GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)
Date Collected :					1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values						
SVOC	Analyte	Ingestion	Inhalation	Class I	Class II						
	Butyl benzyl phthalate	16,000	930	930	930	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Carbazole	32	---	0.6	2.8	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Di-n-butyl phthalate	7,800	2,300	2,300	2,300	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Di-n-octyl phthalate	1,600	10,000	10,000	10,000	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Dibenzofuran					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Diethyl phthalate	63,000	2,000	470	470	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Dimethyl phthalate					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Hexachlorobenzene	0.4	1	2	11	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Hexachlorobutadiene					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Hexachlorocyclopentadiene	550	10	400	2,200	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Hexachloroethane	78	---	0.5	2.6	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Isophorone	15,600	4,600	8	8	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	N-Nitrosodi-n-propylamine	0.09	---	0.00005	0.00005	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	N-Nitrosodimethylamine					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	N-Nitrosodiphenylamine	130	---	1	5.6	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Nitrobenzene	39	92	0.1	0.1	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Pentachlorophenol	3	---	0.03	0.14	< 0.9	< 0.92	< 0.85	< 0.92	< 0.91	< 0.86
	Phenol	47,000	---	100	100	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18
	Pyridine					< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18

R 000578

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-007	06010357-008	06010357-009	06010357-010	06010357-011				
Client Sample ID :	GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)				
Date Collected :	1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45				

		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values						
SVOC	Analyte	Ingestion	Inhalation	Class I	Class II					
	1,2,4-Trichlorobenzene	780	3,200	5	53	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	1,2-Dichlorobenzene	7,000	560	17	43	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	1,3-Dichlorobenzene					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	1,4-Dichlorobenzene	---	11,000	2	11	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2, 2'-oxybis(1-Chloropropane)					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2,4,5-Trichlorophenol	7,800	---	270	1,400	< 0.36	< 0.36	< 0.33	< 0.34	< 0.34
	2,4,6-Trichlorophenol	58	200	0.2	0.77	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2,4-Dichlorophenol	230	---	1	1	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2,4-Dimethylphenol	1,600	---	9	9	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2,4-Dinitrophenol	160	---	0.2	0.2	< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	2,4-Dinitrotoluene	0.9	---	0.0008	0.0008	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2,6-Dinitrotoluene	0.9	---	0.0007	0.0007	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2-Chloronaphthalene					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2-Chlorophenol	390	53,000	4	4	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2-Methylnaphthalene					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2-Methylphenol	3,900	---	15	15	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	2-Nitroaniline					< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	2-Nitrophenol					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	3,3'-Dichlorobenzidine	1	---	0.007	0.033	< 0.36	< 0.36	< 0.33	< 0.34	< 0.34
	3-Nitroaniline					< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	4,6-Dinitro-2-methylphenol					< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	4-Bromophenyl phenyl ether					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	4-Chloro-3-methylphenol					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	4-Chloroaniline	310	---	0.7	0.7	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	4-Chlorophenyl phenyl ether					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	4-Methylphenol					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	4-Nitroaniline					< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	4-Nitrophenol					< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	Aniline					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	Benzidine					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	Benzoic acid	310,000	---	400	400	< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
	Benzyl alcohol					< 0.18	< 0.18	0.85	< 0.18	< 0.17
	Bis(2-chloroethoxy)methane					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	Bis(2-chloroethyl)ether	0.6	0.2	0.0004	0.0004	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
	Bis(2-ethylhexyl)phthalate	46	31,000	3,600	31,000	< 0.18	< 0.18	< 0.17	< 0.18	0.21

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-007	06010357-008	06010357-009	06010357-010	06010357-011				
Client Sample ID :	GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)				
Date Collected :	1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45				

SVOC Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values						
	Ingestion	Inhalation	Class I	Class II					
Butyl benzyl phthalate	16,000	930	930	930	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Carbazole	32	---	0.6	2.8	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Di-n-butyl phthalate	7,800	2,300	2,300	2,300	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Di-n-octyl phthalate	1,600	10,000	10,000	10,000	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Dibenzofuran					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Diethyl phthalate	63,000	2,000	470	470	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Dimethyl phthalate					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Hexachlorobenzene	0.4	1	2	11	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Hexachlorobutadiene					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Hexachlorocyclopentadiene	550	10	400	2,200	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Hexachloroethane	78	---	0.5	2.6	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Isophorone	15,600	4,600	8	8	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
N-Nitrosodi-n-propylamine	0.09	---	0.00005	0.00005	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
N-Nitrosodimethylamine					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
N-Nitrosodiphenylamine	130	---	1	5.6	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Nitrobenzene	39	92	0.1	0.1	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Pentachlorophenol	3	---	0.03	0.14	< 0.86	< 0.86	< 0.79	< 0.83	< 0.82
Phenol	47,000	---	100	100	< 0.18	< 0.18	< 0.17	< 0.18	< 0.17
Pyridine					< 0.18	< 0.18	< 0.17	< 0.18	< 0.17

R 000580

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID : 06010357-012
Client Sample ID : GP-12 (8-9)
Date Collected : 1/19/2006 13:15

SVOC Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values		
	Ingestion	Inhalation	Class I	Class II	
1,2,4-Trichlorobenzene	780	3,200	5	53	< 0.18
1,2-Dichlorobenzene	7,000	560	17	43	< 0.18
1,3-Dichlorobenzene					< 0.18
1,4-Dichlorobenzene	---	11,000	2	11	< 0.18
2, 2'-oxybis(1-Chloropropane)					< 0.18
2,4,5-Trichlorophenol	7,800	---	270	1,400	< 0.36
2,4,6-Trichlorophenol	58	200	0.2	0.77	< 0.18
2,4-Dichlorophenol	230	---	1	1	< 0.18
2,4-Dimethylphenol	1,600	---	9	9	< 0.18
2,4-Dinitrophenol	160	---	0.2	0.2	< 0.87
2,4-Dinitrotoluene	0.9	---	0.0008	0.0008	< 0.18
2,6-Dinitrotoluene	0.9	---	0.0007	0.0007	< 0.18
2-Chloronaphthalene					< 0.18
2-Chlorophenol	390	53,000	4	4	< 0.18
2-Methylnaphthalene					< 0.18
2-Methylphenol	3,900	---	15	15	< 0.18
2-Nitroaniline					< 0.87
2-Nitrophenol					< 0.18
3,3'-Dichlorobenzidine	1	---	0.007	0.033	< 0.36
3-Nitroaniline					< 0.87
4,6-Dinitro-2-methylphenol					< 0.87
4-Bromophenyl phenyl ether					< 0.18
4-Chloro-3-methylphenol					< 0.18
4-Chloroaniline	310	---	0.7	0.7	< 0.18
4-Chlorophenyl phenyl ether					< 0.18
4-Methylphenol					< 0.18
4-Nitroaniline					< 0.87
4-Nitrophenol					< 0.87
Aniline					< 0.18
Benzidine					< 0.18
Benzoic acid	310,000	---	400	400	< 0.87
Benzyl alcohol					< 0.18
Bis(2-chloroethoxy)methane					< 0.18
Bis(2-chloroethyl)ether	0.6	0.2	0.0004	0.0004	< 0.18
Bis(2-ethylhexyl)phthalate	46	31,000	3,600	31,000	< 0.18

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID : 06010357-012
Client Sample ID : GP-12 (8-9)
Date Collected : 1/19/2006 13:15

SVOC Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values		
	Ingestion	Inhalation	Class I	Class II	
Butyl benzyl phthalate	16,000	930	930	930	< 0.18
Carbazole	32	---	0.6	2.8	< 0.18
Di-n-butyl phthalate	7,800	2,300	2,300	2,300	< 0.18
Di-n-octyl phthalate	1,600	10,000	10,000	10,000	< 0.18
Dibenzofuran					< 0.18
Diethyl phthalate	63,000	2,000	470	470	< 0.18
Dimethyl phthalate					< 0.18
Hexachlorobenzene	0.4	1	2	11	< 0.18
Hexachlorobutadiene					< 0.18
Hexachlorocyclopentadiene	550	10	400	2,200	< 0.18
Hexachloroethane	78	---	0.5	2.6	< 0.18
Isophorone	15,600	4,600	8	8	< 0.18
N-Nitrosodi-n-propylamine	0.09	---	0.00005	0.00005	< 0.18
N-Nitrosodimethylamine					< 0.18
N-Nitrosodiphenylamine	130	---	1	5.6	< 0.18
Nitrobenzene	39	92	0.1	0.1	< 0.18
Pentachlorophenol	3	---	0.03	0.14	< 0.87
Phenol	47,000	---	100	100	< 0.18
Pyridine					< 0.18

R 000582

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

					Laboratory ID :	06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006	06010357-007
					Client Sample ID :	GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)	GP-7 (6-7)
					Date Collected :	1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45	1/19/2006 11:15
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values								
PCB	Analyte	Ingestion	Inhalation	Class I	Class II							
	Aroclor 1016	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089
	Aroclor 1221	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089
	Aroclor 1232	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089
	Aroclor 1242	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089
	Aroclor 1248	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089
	Aroclor 1254	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089
	Aroclor 1260	1	---	---	---	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087	< 0.089

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :					06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
Client Sample ID :					GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :					1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values					
PCB	Analyte	Ingestion	Inhalation	Class I	Class II				
	Aroclor 1016	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	Aroclor 1221	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	Aroclor 1232	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	Aroclor 1242	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	Aroclor 1248	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	Aroclor 1254	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	Aroclor 1260	1	---	---	---	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086

R 000584

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006
Client Sample ID :	GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)
Date Collected :	1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45

PEST	Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
		Ingestion	Inhalation	Class I	Class II						
	4,4'-DDD	3	---	16	80	< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	4,4'-DDE	2	---	54	270	< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	4,4'-DDT	2	---	32	160	< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	Aldrin	0.04	3	0.5	2.5	< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	alpha-BHC	0.1	0.8	0.0005	0.003	< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	alpha-Chlordane					< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	beta-BHC					< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Chlordane	1.8	72	10	48	< 0.092	< 0.091	< 0.084	< 0.093	< 0.091	< 0.087
	delta-BHC					< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Dieldrin	0.04	1	0.004	0.02	< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	Endosulfan I					< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Endosulfan II					< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	Endosulfan sulfate					< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	Endrin	23	---	1	5	< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	Endrin aldehyde					< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	Endrin ketone					< 0.0038	< 0.0037	< 0.0035	< 0.0038	< 0.0038	< 0.0036
	gamma-BHC	0.5	---	0.009	0.047	< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	gamma-Chlordane					< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Heptachlor	0.1	0.1	23	110	< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Heptachlor epoxide	0.07	5	0.7	3.3	< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Methoxychlor	390	---	160	780	< 0.0018	< 0.0018	< 0.0017	< 0.0019	< 0.0018	< 0.0017
	Toxaphene	0.6	89	31	150	< 0.11	< 0.11	< 0.1	< 0.12	< 0.11	< 0.11

R 000585

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :					06010357-007	06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
Client Sample ID :					GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :					1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values						
PEST	Analyte	Ingestion	Inhalation	Class I	Class II					
	4,4'-DDD	3	---	16	80	< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	4,4'-DDE	2	---	54	270	< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	4,4'-DDT	2	---	32	160	< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	Aldrin	0.04	3	0.5	2.5	< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	alpha-BHC	0.1	0.8	0.0005	0.003	< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	alpha-Chlordane					< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	beta-BHC					< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Chlordane	1.8	72	10	48	< 0.089	< 0.087	< 0.08	< 0.085	< 0.083	< 0.086
	delta-BHC					< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Dieldrin	0.04	1	0.004	0.02	< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	Endosulfan I					< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Endosulfan II					< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	Endosulfan sulfate					< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	Endrin	23	---	1	5	< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	Endrin aldehyde					< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	Endrin ketone					< 0.0037	< 0.0036	< 0.0033	< 0.0035	< 0.0034	< 0.0036
	gamma-BHC	0.5	---	0.009	0.047	< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	gamma-Chlordane					< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Heptachlor	0.1	0.1	23	110	< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Heptachlor epoxide	0.07	5	0.7	3.3	< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Methoxychlor	390	---	160	780	< 0.0018	< 0.0017	< 0.0016	< 0.0017	< 0.0017	< 0.0017
	Toxaphene	0.6	89	31	150	< 0.11	< 0.11	< 0.099	< 0.11	< 0.1	< 0.11

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :					06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006
Client Sample ID :					GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)
Date Collected :					1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values						
INORG	Analyte	Ingestion	Inhalation	Class I	Class II						
	Aluminum					4000	11000	4500	4700	6600	4600
	Antimony	31	—			< 2.2	< 2.1	< 1.9	< 2.2	< 2.2	2.5
	Arsenic	13.0/11.3	750			1.8	**450**	4.1	2.1	2.2	1.9
	Barium	5,500	690,000			17	53	19	21	25	19
	Beryllium	160	1,300			< 0.55	< 0.53	< 0.5	< 0.56	< 0.54	< 0.53
	Cadmium	78	1,800			< 0.55	< 0.53	< 0.5	< 0.56	< 0.54	< 0.53
	Calcium					110000	15000	120000	110000	110000	99000
	Chromium	230	270			7.5	16	8.1	8.3	10	8.2
	Cobalt	4,700	---			2.5	5.5	3	3.2	3.8	2.9
	Copper	2,900	---			7.4	13	7.2	7.3	9.3	7.2
	Cyanide	1,600	---			< 0.29	< 0.29	< 0.27	< 0.29	< 0.29	< 0.28
	Iron	—	---			7600	14000	8400	8100	9200	8000
	Lead	400	—			4.2	9.3	4	5.6	4.5	4.6
	Magnesium					54000	10000	48000	52000	50000	45000
	Manganese	3,700	69,000			180	370	200	210	230	190
	Mercury	23	10			< 0.026	< 0.028	< 0.025	< 0.027	< 0.026	< 0.026
	Nickel	1,600	13,000			7.3	12	8	8.1	9.8	7.5
	Potassium					830	750	900	1000	1300	930
	Selenium	390	---			< 1.1	< 1	< 0.99	< 1.1	< 1.1	< 1.1
	Silver	390	—			< 1.1	< 1	< 0.99	< 1.1	< 1.1	< 1.1
	Sodium					150	69	120	150	130	140
	Thallium	6.3	---			< 1.1	< 1	< 0.99	< 1.1	< 1.1	< 1.1
	Vanadium	550	---			11	28	12	12	14	12
	Zinc	23,000	---			17	31	16	17	21	16

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :					06010357-007	06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
Client Sample ID :					GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :					1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
INORG	Analyte	Ingestion	Inhalation	Class I	Class II						
	Aluminum					5900	5800	2200	5200	3900	8600
	Antimony	31	---			< 2	< 2.1	< 1.8	< 2	< 1.9	< 2
	Arsenic	13.0/11.3	750			1.6	2.3	1.1	2.7	1.6	3
	Barium	5,500	690,000			25	25	13	30	24	58
	Beryllium	160	1,300			< 0.51	< 0.52	< 0.47	< 0.5	< 0.46	< 0.51
	Cadmium	78	1,800			< 0.51	< 0.52	< 0.47	< 0.5	< 0.46	< 0.51
	Calcium					110000	110000	1000	1100	450	39000
	Chromium	230	270			10	9.9	4	13	5.8	11
	Cobalt	4,700	---			3.3	4.2	1.4	3.9	2.3	5.1
	Copper	2,900	---			7.8	8.7	2.4	5.2	3	7.9
	Cyanide	1,600	---			< 0.28	< 0.27	< 0.25	< 0.27	0.46	< 0.28
	Iron	---	---			8700	9300	3800	9800	6000	10000
	Lead	400	---			4.4	4.3	1.8	5.1	2.6	7.3
	Magnesium					50000	62000	790	1300	850	22000
	Manganese	3,700	69,000			200	240	120	300	180	550
	Mercury	23	10			< 0.026	< 0.026	< 0.024	< 0.026	< 0.025	< 0.026
	Nickel	1,600	13,000			10	12	3.7	8.1	5.7	11
	Potassium					1200	1200	180	310	210	720
	Selenium	390	---			< 1	< 1	< 0.94	< 1	< 0.93	< 1
	Silver	390	---			< 1	< 1	< 0.94	< 1	< 0.93	< 1
	Sodium					140	130	< 56	< 60	< 56	< 61
	Thallium	6.3	---			< 1	< 1	< 0.94	< 1	< 0.93	< 1
	Vanadium	550	---			13	13	8.3	20	13	20
	Zinc	23,000	---			16	17	7.3	20	11	24

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID : 06010357-002
Client Sample ID : GP-2 (4-5)
Date Collected : 1/19/2006 9:00

TCLP Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values		
	Ingestion	Inhalation	Class I	Class II	
Arsenic			0.05	0.2	

All units are mg/L unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID : 06010357-002
Client Sample ID : GP-2 (4-5)
Date Collected : 1/19/2006 9:00
pH = 7.1

		Route Specific Values for Soil		pH Specific Soil Component of Groundwater Ingestion Route Values		
		Ingestion	Inhalation	Class I	Class II	
INORG	Analyte	pH Range 6.9 to 7.24				
	Aluminum					11000
	Antimony	31	---	5	20	< 2.1
	Arsenic	13.0/11.3	750	29	120	**450**
	Barium	5,500	690,000	1,700	1,700	53
	Beryllium	160	1,300	140	17,000	< 0.53
	Cadmium	78	1,800	11	110	< 0.53
	Calcium					15000
	Chromium	230	270	See TCLP/SPLP	See TCLP/SPLP	16
	Cobalt	4,700	---	See TCLP/SPLP	See TCLP/SPLP	5.5
	Copper	2,900	---	200,000	200,000	13
	Cyanide	1,600	---	40	120	< 0.29
	Iron	---	---	See TCLP/SPLP	See TCLP/SPLP	14000
	Lead	400	---	See TCLP/SPLP	See TCLP/SPLP	9.3
	Magnesium					10000
	Manganese	3,700	69,000	See TCLP/SPLP	See TCLP/SPLP	370
	Mercury	23	10	3.3	16	< 0.028
	Nickel	1,600	13,000	180	3,500	12
	Potassium					750
	Selenium	390	---	4.5	4.5	< 1
	Silver	390	---	13		< 1
	Sodium					69
	Thallium	6.3	---	3.0	30	< 1
	Vanadium	550	---	980	See TCLP/SPLP	28
	Zinc	23,000	---	7,500	15,000	31

The actual laboratory determined pH values are listed and used for reference purposes.
NDA - No Data Available for this pH range.
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Class I / II objectives based on 35 IAC Part 742, Appendix B Tables C & D.
Bolded/Shaded values exceed the pH specific remediation objectives.

R 000590

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-001	06010357-010	06010357-011	06010357-012
Client Sample ID :	GP-1 (7.5-8.5)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :	1/19/2006 8:30	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
	pH = 8.15	pH = 8.12	pH = 7.99	pH = 8.1

		Route Specific Values for Soil		pH Specific Soil Component of Groundwater Ingestion Route Values				
		Ingestion	Inhalation	Class I	Class II			
INORG	Analyte			pH Range 7.75 to 8.24				
	Aluminum					4000	5200	3900	8600
	Antimony	31	---	5	20	< 2.2	< 2	< 1.9	< 2
	Arsenic	13.0/11.3	750	31	120	1.8	2.7	1.6	3
	Barium	5,500	690,000	2,100	2,100	17	30	24	58
	Beryllium	160	1,300	8,000	1,000,000	< 0.55	< 0.5	< 0.46	< 0.51
	Cadmium	78	1,800	430	4,300	< 0.55	< 0.5	< 0.46	< 0.51
	Calcium					110000	1100	450	39000
	Chromium	230	270	See TCLP/SPLP	See TCLP/SPLP	7.5	13	5.8	11
	Cobalt	4,700	---	See TCLP/SPLP	See TCLP/SPLP	2.5	3.9	2.3	5.1
	Copper	2,900	---	330,000	330,000	7.4	5.2	3	7.9
	Cyanide	1,600	---	40	120	< 0.29	< 0.27	0.46	< 0.28
	Iron	---	---	See TCLP/SPLP	See TCLP/SPLP	7600	9800	6000	10000
	Lead	400	---	See TCLP/SPLP	See TCLP/SPLP	4.2	5.1	2.6	7.3
	Magnesium					54000	1300	850	22000
	Manganese	3,700	69,000	See TCLP/SPLP	See TCLP/SPLP	180	300	180	550
	Mercury	23	10	8.0	40	< 0.026	< 0.026	< 0.025	< 0.026
	Nickel	1,600	13,000	3,800	76,000	7.3	8.1	5.7	11
	Potassium					830	310	210	720
	Selenium	390	---	2.4	2.4	< 1.1	< 1	< 0.93	< 1
	Silver	390	---	110		< 1.1	< 1	< 0.93	< 1
	Sodium					150	< 60	< 56	< 61
	Thallium	6.3	---	3.8	38	< 1.1	< 1	< 0.93	< 1
	Vanadium	550	---	980	See TCLP/SPLP	11	20	13	20
	Zinc	23,000	---	53,000	110,000	17	20	11	24

The actual laboratory determined pH values are listed and used for reference purposes.
NDA - No Data Available for this pH range.
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Class I / II objectives based on 35 IAC Part 742, Appendix B Tables C & D.
Bolded/Shaded values exceed the pH specific remediation objectives.

R 000591

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-004	06010357-006
Client Sample ID :	GP-4 (4-5)	GP-6 (4-5)
Date Collected :	1/19/2006 10:15	1/19/2006 10:45
	pH = 8.7	pH = 8.41

		Route Specific Values for Soil		pH Specific Soil Component of Groundwater Ingestion Route Values			
		Ingestion	Inhalation	Class I	Class II		
INORG	Analyte	pH Range 8.25 to 8.74					
	Aluminum					4700	4600
	Antimony	31	---	5	20	< 2.2	2.5
	Arsenic	13.0/11.3	750	32	130	2.1	1.9
	Barium	5,500	690,000	NDA	NDA	21	19
	Beryllium	160	1,300	NDA	NDA	< 0.56	< 0.53
	Cadmium	78	1,800	NDA	NDA	< 0.56	< 0.53
	Calcium					110000	99000
	Chromium	230	270	See TCLP/SPLP	See TCLP/SPLP	8.3	8.2
	Cobalt	4,700	---	See TCLP/SPLP	See TCLP/SPLP	3.2	2.9
	Copper	2,900	---	NDA	NDA	7.3	7.2
	Cyanide	1,600	---	40	120	< 0.29	< 0.28
	Iron	---	---	See TCLP/SPLP	See TCLP/SPLP	8100	8000
	Lead	400	---	See TCLP/SPLP	See TCLP/SPLP	5.6	4.6
	Magnesium					52000	45000
	Manganese	3,700	69,000	See TCLP/SPLP	See TCLP/SPLP	210	190
	Mercury	23	10	NDA	NDA	< 0.027	< 0.026
	Nickel	1,600	13,000	NDA	NDA	8.1	7.5
	Potassium					1000	930
	Selenium	390	---	1.8	1.8	< 1.1	< 1.1
	Silver	390	---	NDA		< 1.1	< 1.1
	Sodium					150	140
	Thallium	6.3	---	4.4	44	< 1.1	< 1.1
	Vanadium	550	---	980	See TCLP/SPLP	12	12
	Zinc	23,000	---	NDA	NDA	17	16

The actual laboratory determined pH values are listed and used for reference purposes.
NDA - No Data Available for this pH range.
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Class I / II objectives based on 35 IAC Part 742, Appendix B Tables C & D.
Bolded/Shaded values exceed the pH specific remediation objectives.

R 000592

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID : 06010357-003
Client Sample ID : GP-3 (5-6)
Date Collected : 1/19/2006 9:45
pH = 8.9

		Route Specific Values for Soil		pH Specific Soil Component of Groundwater Ingestion Route Values		
		Ingestion	Inhalation	Class I	Class II	
INORG	Analyte	pH Range 8.75 to 9.0				
	Aluminum					4500
	Antimony	31	---	5	20	< 1.9
	Arsenic	13.0/11.3	750	33	130	4.1
	Barium	5,500	690,000	NDA	NDA	19
	Beryllium	160	1,300	NDA	NDA	< 0.5
	Cadmium	78	1,800	NDA	NDA	< 0.5
	Calcium					120000
	Chromium	230	270	See TCLP/SPLP	See TCLP/SPLP	8.1
	Cobalt	4,700	---	See TCLP/SPLP	See TCLP/SPLP	3
	Copper	2,900	---	NDA	NDA	7.2
	Cyanide	1,600	---	40	120	< 0.27
	Iron	---	---	See TCLP/SPLP	See TCLP/SPLP	8400
	Lead	400	---	See TCLP/SPLP	See TCLP/SPLP	4
	Magnesium					48000
	Manganese	3,700	69,000	See TCLP/SPLP	See TCLP/SPLP	200
	Mercury	23	10	NDA	NDA	< 0.025
	Nickel	1,600	13,000	NDA	NDA	8
	Potassium					900
	Selenium	390	---	1.3	1.3	< 0.99
	Silver	390	---	NDA		< 0.99
	Sodium					120
	Thallium	6.3	---	4.9	49	< 0.99
	Vanadium	550	---	980	See TCLP/SPLP	12
	Zinc	23,000	---	NDA	NDA	16

The actual laboratory determined pH values are listed and used for reference purposes.
NDA - No Data Available for this pH range.
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Class I / II objectives based on 35 IAC Part 742, Appendix B Tables C & D.
Bolded/Shaded values exceed the pH specific remediation objectives.

R 000593

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :	06010357-005	06010357-007	06010357-008	06010357-009
Client Sample ID :	GP-5 (6-7)	GP-7 (6-7)	GP-8 (5-6)	GP-9 (5-6)
Date Collected :	1/19/2006 10:30	1/19/2006 11:15	1/19/2006 11:45	1/19/2006 12:00
	pH = 10	pH = 9.91	pH = 9.18	pH = 10.32

		Route Specific Values for Soil		pH Specific Soil Component of Groundwater Ingestion Route Values					
		Ingestion	Inhalation	Class I	Class II				
INORG	Analyte			pH Outside of Range					
	Aluminum					6600	5900	5800	2200
	Antimony	31	---	See TCLP/SPLP	See TCLP/SPLP	< 2.2	< 2	< 2.1	< 1.8
	Arsenic	13.0/11.3	750	See TCLP/SPLP	See TCLP/SPLP	2.2	1.6	2.3	1.1
	Barium	5,500	690,000	See TCLP/SPLP	See TCLP/SPLP	25	25	25	13
	Beryllium	160	1,300	See TCLP/SPLP	See TCLP/SPLP	< 0.54	< 0.51	< 0.52	< 0.47
	Cadmium	78	1,800	See TCLP/SPLP	See TCLP/SPLP	< 0.54	< 0.51	< 0.52	< 0.47
	Calcium					110000	110000	110000	1000
	Chromium	230	270	See TCLP/SPLP	See TCLP/SPLP	10	10	9.9	4
	Cobalt	4,700	---	See TCLP/SPLP	See TCLP/SPLP	3.8	3.3	4.2	1.4
	Copper	2,900	---	See TCLP/SPLP	See TCLP/SPLP	9.3	7.8	8.7	2.4
	Cyanide	1,600	---			< 0.29	< 0.28	< 0.27	< 0.25
	Iron	---	---	See TCLP/SPLP	See TCLP/SPLP	9200	8700	9300	3800
	Lead	400	---	See TCLP/SPLP	See TCLP/SPLP	4.5	4.4	4.3	1.8
	Magnesium					50000	50000	62000	790
	Manganese	3,700	69,000	See TCLP/SPLP	See TCLP/SPLP	230	200	240	120
	Mercury	23	10	See TCLP/SPLP	See TCLP/SPLP	< 0.026	< 0.026	< 0.026	< 0.024
	Nickel	1,600	13,000	See TCLP/SPLP	See TCLP/SPLP	9.8	10	12	3.7
	Potassium					1300	1200	1200	180
	Selenium	390	---	See TCLP/SPLP	See TCLP/SPLP	< 1.1	< 1	< 1	< 0.94
	Silver	390	---	See TCLP/SPLP		< 1.1	< 1	< 1	< 0.94
	Sodium					130	140	130	< 56
	Thallium	6.3	---	See TCLP/SPLP	See TCLP/SPLP	< 1.1	< 1	< 1	< 0.94
	Vanadium	550	---	See TCLP/SPLP	See TCLP/SPLP	14	13	13	8.3
	Zinc	23,000	---	See TCLP/SPLP	See TCLP/SPLP	21	16	17	7.3

The actual laboratory determined pH values are listed and used for reference purposes.
NDA - No Data Available for this pH range.
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Class I / II objectives based on 35 IAC Part 742, Appendix B Tables C & D.
Bolded/Shaded values exceed the pH specific remediation objectives.

R 000594

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

		Concentration of Chemicals in Background Soils								
	Analyte	Within MSA	Outside MSA							
	Laboratory ID :			06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006	06010357-007
	Client Sample ID :			GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)	GP-7 (6-7)
	Date Collected :			1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45	1/19/2006 11:15
PNA	Benz(a)anthracene	1.8	0.72	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
	Benzo(a)pyrene	2.1	0.98	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
	Benzo(b)fluoranthene	2.0	0.70	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
	Benzo(k)fluoranthene	1.7	0.63	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
	Chrysene	2.7	1.1	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
	Dibenz(a,h)anthracene	0.42	0.15	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
	Indeno(1,2,3-cd)pyrene	1.6	0.51	< 0.028	< 0.029	< 0.027	< 0.029	< 0.028	< 0.027	< 0.027
INORG	Aluminum	9,500	9,200	4000	**11000**	4500	4700	6600	4600	5900
	Antimony	4.0	3.3	< 2.2	< 2.1	< 1.9	< 2.2	< 2.2	2.5	< 2
	Arsenic	13.0	11.3	1.8	**450**	4.1	2.1	2.2	1.9	1.6
	Barium	110	122	17	53	19	21	25	19	25
	Beryllium	0.59	0.56	< 0.55	< 0.53	< 0.5	< 0.56	< 0.54	< 0.53	< 0.51
	Cadmium	0.6	0.50	< 0.55	< 0.53	< 0.5	< 0.56	< 0.54	< 0.53	< 0.51
	Calcium	9,300	5,525	**110000**	**15000**	**120000**	**110000**	**110000**	**99000**	**110000**
	Chromium	16.2	13.0	7.5	16	8.1	8.3	10	8.2	10
	Cobalt	8.9	8.9	2.5	5.5	3	3.2	3.8	2.9	3.3
	Copper	19.6	12.0	7.4	13	7.2	7.3	9.3	7.2	7.8
	Cyanide	0.51	0.50	< 0.29	< 0.29	< 0.27	< 0.29	< 0.29	< 0.28	< 0.28
	Iron	15,900	15,000	7600	14000	8400	8100	9200	8000	8700
	Lead	36.0	20.9	4.2	9.3	4	5.6	4.5	4.6	4.4
	Magnesium	4,820	2,700	**54000**	**10000**	**48000**	**52000**	**50000**	**45000**	**50000**
	Manganese	636	630	180	370	200	210	230	190	200
	Mercury	0.06	0.05	< 0.026	< 0.028	< 0.025	< 0.027	< 0.026	< 0.026	< 0.026
	Nickel	18.0	13.0	7.3	12	8	8.1	9.8	7.5	10
	Potassium	1,268	1,100	830	750	900	1000	**1300**	930	1200
	Selenium	0.48	0.37	< 1.1	< 1	< 0.99	< 1.1	< 1.1	< 1.1	< 1
	Silver	0.55	0.50	< 1.1	< 1	< 0.99	< 1.1	< 1.1	< 1.1	< 1
	Sodium	130	130.0	**150**	69	120	**150**	130	**140**	**140**
	Thallium	0.32	0.42	< 1.1	< 1	< 0.99	< 1.1	< 1.1	< 1.1	< 1
	Vanadium	25.2	25.0	11	**29**	12	12	14	12	13
	Zinc	95.0	60.2	17	31	16	17	21	16	16

R 000595

MSA - Metropolitan Statistical Area
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix A Table G and Urban Area Polycyclic Hydrocarbon Study.
Bolded/Shaded values exceed the within MSA background level.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

		Concentration of Chemicals in Background Soils						
	Analyte	Within MSA	Outside MSA					
	Laboratory ID :			06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
	Client Sample ID :			GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
	Date Collected :			1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
PNA	Benz(a)anthracene	1.8	0.72	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(a)pyrene	2.1	0.98	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(b)fluoranthene	2.0	0.70	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Benzo(k)fluoranthene	1.7	0.63	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Chrysene	2.7	1.1	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Dibenz(a,h)anthracene	0.42	0.15	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
	Indeno(1,2,3-cd)pyrene	1.6	0.51	< 0.027	< 0.025	< 0.026	< 0.026	< 0.027
INORG	Aluminum	9,500	9,200	5800	2200	5200	3900	8600
	Antimony	4.0	3.3	< 2.1	< 1.8	< 2	< 1.9	< 2
	Arsenic	13.0	11.3	2.3	1.1	2.7	1.6	3
	Barium	110	122	25	13	30	24	58
	Beryllium	0.59	0.56	< 0.52	< 0.47	< 0.5	< 0.46	< 0.51
	Cadmium	0.6	0.50	< 0.52	< 0.47	< 0.5	< 0.46	< 0.51
	Calcium	9,300	5,525	**110000**	1000	1100	450	**39000**
	Chromium	16.2	13.0	9.9	4	13	5.8	11
	Cobalt	8.9	8.9	4.2	1.4	3.9	2.3	5.1
	Copper	19.6	12.0	8.7	2.4	5.2	3	7.9
	Cyanide	0.51	0.50	< 0.27	< 0.25	< 0.27	0.46	< 0.28
	Iron	15,900	15,000	9300	3800	9800	6000	10000
	Lead	36.0	20.9	4.3	1.8	5.1	2.6	7.3
	Magnesium	4,820	2,700	**62000**	790	1300	850	**22000**
	Manganese	636	630	240	120	300	180	550
	Mercury	0.06	0.05	< 0.026	< 0.024	< 0.026	< 0.025	< 0.026
	Nickel	18.0	13.0	12	3.7	8.1	5.7	11
	Potassium	1,268	1,100	1200	180	310	210	720
	Selenium	0.48	0.37	< 1	< 0.94	< 1	< 0.93	< 1
	Silver	0.55	0.50	< 1	< 0.94	< 1	< 0.93	< 1
	Sodium	130	130.0	130	< 56	< 60	< 56	< 61
	Thallium	0.32	0.42	< 1	< 0.94	< 1	< 0.93	< 1
	Vanadium	25.2	25.0	13	8.3	20	13	20
	Zinc	95.0	60.2	17	7.3	20	11	24

R 000596

MSA - Metropolitan Statistical Area
All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix A Table G and Urban Area Polycyclic Hydrocarbon Study.
Bolded/Shaded values exceed the within MSA background level.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

	Laboratory ID :	06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006	06010357-007
	Client Sample ID :	GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)	GP-7 (6-7)
	Date Collected :	1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45	1/19/2006 11:15
	Analyte	Soil Saturation Limits for Chemicals With Melting Point <30°C (C_{sat})						
VOC	Acetone	100,000	< 0.05	0.066	< 0.045	< 0.046	< 0.049	< 0.041	< 0.042
	Benzene	870	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Bromodichloromethane	3,000	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Bromoform	1,900	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Bromomethane	3,200	< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083	< 0.0083
	Carbon disulfide	720	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Carbon tetrachloride	1,100	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Chlorobenzene	680	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Chloroform	2,900	< 0.005	< 0.0048	< 0.0045	0.014	< 0.0049	< 0.0041	< 0.0042
	Dibromochloromethane	1,300	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	1,1-Dichloroethane	1,700	< 0.005	0.048	0.01	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	1,2-Dichloroethane	1,800	< 0.005	< 0.0048	0.0051	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	1,1-Dichloroethene	1,500	< 0.005	0.016	0.012	0.0055	0.016	< 0.0041	< 0.0042
	cis-1,2-Dichloroethene	1,200	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	trans-1,2-Dichloroethene	3,100	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	1,2-Dichloropropane	1,100	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	cis-1,3-Dichloropropene	1,400	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	trans-1,3-Dichloropropene	1,400	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Ethylbenzene	400	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Methylene chloride	2,400	< 0.01	< 0.0096	< 0.009	< 0.0092	< 0.0099	< 0.0083	< 0.0083
	Methyl tert-butyl ether	8,800	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Styrene	1,500	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Tetrachloroethene	240	0.026	0.0082	1.3	0.054	0.092	0.0078	0.0053
	Toluene	650	0.0096	< 0.0048	0.0074	0.0074	0.0083	0.0061	0.0055
	1,1,1-Trichloroethane	1,200	< 0.005	0.51	0.028	0.029	0.07	< 0.0041	0.0098
	1,1,2-Trichloroethane	1,800	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Trichloroethene	1,300	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Vinyl chloride	1,200	< 0.005	< 0.0048	< 0.0045	< 0.0046	< 0.0049	< 0.0041	< 0.0042
	Xylenes, Total	320	< 0.015	< 0.014	< 0.014	< 0.014	< 0.015	< 0.012	< 0.013
SVOC	1,2,4-Trichlorobenzene	3,200	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
	1,2-Dichlorobenzene	560	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
	2-Chlorophenol	53,000	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
	Bis(2-chloroethyl)ether	3,300	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
	Bis(2-ethylhexyl)phthalate	31,000	< 0.19	< 0.19	< 0.18	< 0.19	0.23	< 0.18	< 0.18
	Butyl benzyl phthalate	930	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix A Table A.
Bolded/Shaded values exceed the Soil Saturation Limits.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :		06010357-001	06010357-002	06010357-003	06010357-004	06010357-005	06010357-006	06010357-007
Client Sample ID :		GP-1 (7.5-8.5)	GP-2 (4-5)	GP-3 (5-6)	GP-4 (4-5)	GP-5 (6-7)	GP-6 (4-5)	GP-7 (6-7)
Date Collected :		1/19/2006 8:30	1/19/2006 9:00	1/19/2006 9:45	1/19/2006 10:15	1/19/2006 10:30	1/19/2006 10:45	1/19/2006 11:15
Analyte	Soil Saturation Limits for Chemicals With Melting Point < 30°C (C_{sat})							
Di-n-butyl phthalate	2,300	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
Di-n-octyl phthalate	10,000	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
Diethyl phthalate	2,000	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
Hexachlorocyclopentadiene	2,200	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
Isophorone	4,600	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18
Nitrobenzene	1,000	< 0.19	< 0.19	< 0.18	< 0.19	< 0.19	< 0.18	< 0.18

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix A Table A.
Bolded/Shaded values exceed the Soil Saturation Limits.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

		Laboratory ID :	06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
		Client Sample ID :	GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
		Date Collected :	1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
	Analyte	Soil Saturation Limits for Chemicals With Melting Point <30°C (C_{sat})					
VOC	Acetone	100,000	< 0.049	< 0.057	0.056	0.056	0.095
	Benzene	870	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Bromodichloromethane	3,000	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Bromoform	1,900	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Bromomethane	3,200	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
	Carbon disulfide	720	< 0.0049	< 0.0057	0.0055	< 0.0052	< 0.0052
	Carbon tetrachloride	1,100	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Chlorobenzene	680	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Chloroform	2,900	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Dibromochloromethane	1,300	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	1,1-Dichloroethane	1,700	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	1,2-Dichloroethane	1,800	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	1,1-Dichloroethene	1,500	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	cis-1,2-Dichloroethene	1,200	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	trans-1,2-Dichloroethene	3,100	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	1,2-Dichloropropane	1,100	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	cis-1,3-Dichloropropene	1,400	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	trans-1,3-Dichloropropene	1,400	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Ethylbenzene	400	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Methylene chloride	2,400	< 0.0097	< 0.011	< 0.011	< 0.01	< 0.01
	Methyl tert-butyl ether	8,800	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Styrene	1,500	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Tetrachloroethene	240	0.0091	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Toluene	650	0.0073	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	1,1,1-Trichloroethane	1,200	0.0088	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	1,1,2-Trichloroethane	1,800	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Trichloroethene	1,300	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Vinyl chloride	1,200	< 0.0049	< 0.0057	< 0.0054	< 0.0052	< 0.0052
	Xylenes, Total	320	< 0.015	< 0.017	< 0.016	< 0.016	< 0.016
SVOC	1,2,4-Trichlorobenzene	3,200	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
	1,2-Dichlorobenzene	560	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
	2-Chlorophenol	53,000	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
	Bis(2-chloroethyl)ether	3,300	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
	Bis(2-ethylhexyl)phthalate	31,000	< 0.18	< 0.17	< 0.18	0.21	< 0.18
	Butyl benzyl phthalate	930	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix A Table A.
Bolded/Shaded values exceed the Soil Saturation Limits.

Client: Environmental Group Services, Ltd.
Project: Marengo
Laboratory: STAT ANALYSIS

Laboratory ID :		06010357-008	06010357-009	06010357-010	06010357-011	06010357-012
Client Sample ID :		GP-8 (5-6)	GP-9 (5-6)	GP-10 (7.5-8.5)	GP-11 (9-10)	GP-12 (8-9)
Date Collected :		1/19/2006 11:45	1/19/2006 12:00	1/19/2006 12:30	1/19/2006 12:45	1/19/2006 13:15
Analyte	Soil Saturation Limits for Chemicals With a Melting Point < 30°C (C_{sat})					
Di-n-butyl phthalate	2,300	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
Di-n-octyl phthalate	10,000	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
Diethyl phthalate	2,000	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
Hexachlorocyclopentadiene	2,200	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
Isophorone	4,600	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18
Nitrobenzene	1,000	< 0.18	< 0.17	< 0.18	< 0.17	< 0.18

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix A Table A.
Bolded/Shaded values exceed the Soil Saturation Limits.

Supplemental Residential TACO Report

Client: Environmental Group Services, Ltd.
Project: Marengo 2
Laboratory: STAT ANALYSIS

Laboratory ID :	06020309-001	06020309-002	06020309-003	06020309-004	06020309-005	06020309-006
Client Sample ID :	GP-13 (4-5)	GP-14 (4-6)	GP-15 (5-7)	GP-16 (6-8)	GP-17 (5-6)	GP-18 (6-8)
Date Collected :	2/15/2006 7:30	2/15/2006 7:45	2/15/2006 8:00	2/15/2006 8:15	2/15/2006 8:30	2/15/2006 8:45

		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values						
VOC	Analyte	Ingestion	Inhalation	Class I	Class II					
	Acetone	7,800	100,000	16	16	< 0.054	< 0.045	< 0.042	< 0.04	0.05	< 0.045
	Benzene	12	0.8	0.03	0.17	< 0.0054	0.0057	< 0.0042	< 0.004	< 0.005	< 0.0045
	Bromodichloromethane	10	3,000	0.6	0.6	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Bromoform	81	53	0.8	0.8	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Bromomethane	110	10	0.2	1.2	< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	2-Butanone					< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	Carbon disulfide	7,800	720	32	160	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Carbon tetrachloride	5	0.3	0.07	0.33	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Chlorobenzene	1,600	130	1	6.5	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Chloroethane					< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	Chloroform	100	0.3	0.6	2.9	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Chloromethane					< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	Dibromochloromethane	1,600	1,300	0.4	0.4	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	1,1-Dichloroethane	7,800	1,300	23	110	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	1,2-Dichloroethane	7	0.4	0.02	0.1	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	1,1-Dichloroethene	700	1,500	0.06	0.3	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	cis-1,2-Dichloroethene	780	1,200	0.4	1.1	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	trans-1,2-Dichloroethene	1,600	3,100	0.7	3.4	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	1,2-Dichloropropane	9	15	0.03	0.15	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	cis-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	trans-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Ethylbenzene	7,800	400	13	19	< 0.0054	0.0048	< 0.0042	< 0.004	< 0.005	< 0.0045
	2-Hexanone					< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	4-Methyl-2-pentanone					< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	Methylene chloride	85	13	0.02	0.2	< 0.011	< 0.0089	< 0.0084	< 0.0081	< 0.01	< 0.009
	Methyl tert-butyl ether	780	8,800	0.32	0.32	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Styrene	16,000	1,500	4	18	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	1,1,2,2-Tetrachloroethane					< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Tetrachloroethene	12	11	0.06	0.3	< 0.0054	< 0.0045	< 0.0042	< 0.004	0.018	< 0.0045
	Toluene	16,000	650	12	29	< 0.0054	0.011	0.0081	0.0052	< 0.005	0.0069
	1,1,1-Trichloroethane	---	1,200	2	9.6	< 0.0054	0.005	< 0.0042	< 0.004	0.0099	< 0.0045
	1,1,2-Trichloroethane	310	1,800	0.02	0.3	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Trichloroethene	58	5	0.06	0.3	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Vinyl chloride	0.46	0.28	0.01	0.07	< 0.0054	< 0.0045	< 0.0042	< 0.004	< 0.005	< 0.0045
	Xylenes, Total	160,000	320	150	150	< 0.016	< 0.013	< 0.013	< 0.012	< 0.015	< 0.014

R 000601

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo 2
Laboratory: STAT ANALYSIS

Laboratory ID :	06020309-007	06020309-008	06020309-009	06020309-010	06020309-011	06020309-012
Client Sample ID :	GP-19 (5-7)	GP-20 (4-5)	GP-21 (5-6)	GP-22 (4-6)	GP-23 (4-5)	GP-24 (5-6)
Date Collected :	2/15/2006 9:00	2/15/2006 9:30	2/15/2006 9:45	2/15/2006 10:00	2/15/2006 10:15	2/15/2006 10:30

VOC	Analyte	Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values							
		Ingestion	Inhalation	Class I	Class II						
	Acetone	7,800	100,000	16	16	< 0.043	< 0.05	< 0.044	0.05	< 0.044	< 0.045
	Benzene	12	0.8	0.03	0.17	< 0.0043	< 0.005	0.0057	< 0.0045	< 0.0044	< 0.0045
	Bromodichloromethane	10	3,000	0.6	0.6	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Bromoform	81	53	0.8	0.8	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Bromomethane	110	10	0.2	1.2	< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	2-Butanone					< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	Carbon disulfide	7,800	720	32	160	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Carbon tetrachloride	5	0.3	0.07	0.33	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Chlorobenzene	1,600	130	1	6.5	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Chloroethane					< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	Chloroform	100	0.3	0.6	2.9	< 0.0043	0.0055	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Chloromethane					< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	Dibromochloromethane	1,600	1,300	0.4	0.4	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	1,1-Dichloroethane	7,800	1,300	23	110	< 0.0043	0.035	< 0.0044	0.011	< 0.0044	< 0.0045
	1,2-Dichloroethane	7	0.4	0.02	0.1	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	1,1-Dichloroethene	700	1,500	0.06	0.3	< 0.0043	< 0.005	< 0.0044	< 0.0045	0.006	< 0.0045
	cis-1,2-Dichloroethene	780	1,200	0.4	1.1	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	trans-1,2-Dichloroethene	1,600	3,100	0.7	3.4	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	1,2-Dichloropropane	9	15	0.03	0.15	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	cis-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	trans-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Ethylbenzene	7,800	400	13	19	< 0.0043	< 0.005	0.0047	< 0.0045	< 0.0044	< 0.0045
	2-Hexanone					< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	4-Methyl-2-pentanone					< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	Methylene chloride	85	13	0.02	0.2	< 0.0087	< 0.0099	< 0.0088	< 0.009	< 0.0088	< 0.0091
	Methyl tert-butyl ether	780	8,800	0.32	0.32	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Styrene	16,000	1,500	4	18	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	1,1,2,2-Tetrachloroethane					< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Tetrachloroethene	12	11	0.06	0.3	< 0.0043	0.13	15	9.7	< 0.0042	< 0.0045
	Toluene	16,000	650	12	29	0.0076	< 0.005	0.011	0.0072	0.0071	0.0054
	1,1,1-Trichloroethane	---	1,200	2	9.6	< 0.0043	0.25	< 0.0044	0.031	0.046	< 0.0045
	1,1,2-Trichloroethane	310	1,800	0.02	0.3	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Trichloroethene	58	5	0.06	0.3	< 0.0043	0.0069	< 0.0044	0.0055	< 0.0044	< 0.0045
	Vinyl chloride	0.46	0.28	0.01	0.07	< 0.0043	< 0.005	< 0.0044	< 0.0045	< 0.0044	< 0.0045
	Xylenes, Total	160,000	320	150	150	< 0.013	< 0.015	< 0.013	< 0.014	< 0.013	< 0.014

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.

Client: Environmental Group Services, Ltd.
Project: Marengo 2
Laboratory: STAT ANALYSIS

					Laboratory ID :	06020309-013	06020309-014	06020309-015
					Client Sample ID :	GP-25 (4-5)	GP-26 (5-6)	GP-27 (5-6)
					Date Collected :	2/15/2006 11:00	2/15/2006 11:15	2/15/2006 11:30
		Route Specific Values for Soil		Soil Component of Groundwater Ingestion Exposure Route Values				
VOC	Analyte	Ingestion	Inhalation	Class I	Class II			
	Acetone	7,800	100,000	16	16	< 0.044	0.059	< 0.041
	Benzene	12	0.8	0.03	0.17	< 0.0044	< 0.0051	< 0.0041
	Bromodichloromethane	10	3,000	0.6	0.6	< 0.0044	< 0.0051	< 0.0041
	Bromoform	81	53	0.8	0.8	< 0.0044	< 0.0051	< 0.0041
	Bromomethane	110	10	0.2	1.2	< 0.0087	< 0.01	< 0.0083
	2-Butanone					< 0.0087	< 0.01	< 0.0083
	Carbon disulfide	7,800	720	32	160	< 0.0044	< 0.0051	< 0.0041
	Carbon tetrachloride	5	0.3	0.07	0.33	< 0.0044	< 0.0051	< 0.0041
	Chlorobenzene	1,600	130	1	6.5	< 0.0044	< 0.0051	< 0.0041
	Chloroethane					< 0.0087	< 0.01	< 0.0083
	Chloroform	100	0.3	0.6	2.9	< 0.0044	< 0.0051	< 0.0041
	Chloromethane					< 0.0087	< 0.01	< 0.0083
	Dibromochloromethane	1,600	1,300	0.4	0.4	< 0.0044	< 0.0051	< 0.0041
	1,1-Dichloroethane	7,800	1,300	23	110	< 0.0044	< 0.0051	< 0.0041
	1,2-Dichloroethane	7	0.4	0.02	0.1	< 0.0044	< 0.0051	< 0.0041
	1,1-Dichloroethene	700	1,500	0.06	0.3	< 0.0044	< 0.0051	< 0.0041
	cis-1,2-Dichloroethene	780	1,200	0.4	1.1	< 0.0044	< 0.0051	< 0.0041
	trans-1,2-Dichloroethene	1,600	3,100	0.7	3.4	< 0.0044	< 0.0051	< 0.0041
	1,2-Dichloropropane	9	15	0.03	0.15	< 0.0044	< 0.0051	< 0.0041
	cis-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0044	< 0.0051	< 0.0041
	trans-1,3-Dichloropropene	6.4	1.1	0.004	0.02	< 0.0044	< 0.0051	< 0.0041
	Ethylbenzene	7,800	400	13	19	< 0.0044	< 0.0051	< 0.0041
	2-Hexanone					< 0.0087	< 0.01	< 0.0083
	4-Methyl-2-pentanone					< 0.0087	< 0.01	< 0.0083
	Methylene chloride	85	13	0.02	0.2	< 0.0087	< 0.01	< 0.0083
	Methyl tert-butyl ether	780	8,800	0.32	0.32	< 0.0044	< 0.0051	< 0.0041
	Styrene	16,000	1,500	4	18	< 0.0044	< 0.0051	< 0.0041
	1,1,2,2-Tetrachloroethane					< 0.0044	< 0.0051	< 0.0041
	Tetrachloroethene	12	11	0.06	0.3	< 0.0044	< 0.0051	< 0.0041
	Toluene	16,000	650	12	29	0.006	< 0.0051	< 0.0041
	1,1,1-Trichloroethane	---	1,200	2	9.6	< 0.0044	< 0.0051	< 0.0041
	1,1,2-Trichloroethane	310	1,800	0.02	0.3	< 0.0044	< 0.0051	< 0.0041
	Trichloroethene	58	5	0.06	0.3	< 0.0044	< 0.0051	< 0.0041
	Vinyl chloride	0.46	0.28	0.01	0.07	< 0.0044	< 0.0051	< 0.0041
	Xylenes, Total	160,000	320	150	150	< 0.013	< 0.015	< 0.012

All units are mg/Kg unless otherwise noted.
Based on 35 IAC Part 742, Appendix B Table A.
Bolded/Shaded values exceed the lowest remediation objective.