

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

PEOPLE OF THE STATE OF ILLINOIS,	)	
Complainant,	)	
	)	
v.	)	
	)	PCB No. 17 – 45
MAGNA TAX SERVICE CO., INC.,	)	(Enforcement – Land)
Respondent.	)	
	)	

**NOTICE OF FILING**

PLEASE TAKE NOTICE that today I have filed with the Office of the Clerk of the Pollution Control Board the Amended Affirmative Defenses of Respondent. Copies of these documents are hereby served upon you.

To: Pollution Control Board, Attn: Clerk  
100 West Randolph Street  
James R. Thompson Center, Suite 11-500  
Chicago, Illinois 60601-3218  
(via electronic filing)

Rachel Medina  
Assistant Attorney General  
Environmental Bureau  
500 South Second Street  
Springfield, Illinois 62706  
(Via Email: rmedina@atg.state.il.us)

Carol Webb, Hearing Officer  
Illinois Pollution Control Board  
1021 North Grand Avenue East  
P.O. Box 19274  
Springfield, Illinois 62794-9274  
(Via Email: carol.webb@illinois.gov)

Respectfully submitted,  
**MAGNA TAX SERVICE CO., INC.**

Dated: May 8, 2017

By: /s/William D. Ingersoll  
One of its Attorneys

**BROWN, HAY & STEPHENS, LLP**

William D. Ingersoll  
Registration No. 6186363  
wingersoll@bhslaw.com  
Claire A. Manning  
Registration No. 3124724  
cmanning@bhslaw.com  
205 S. Fifth Street, Suite 700  
P.O. Box 2459  
Springfield, IL 62705-2459  
(217) 544-8491



attached Exhibit A<sup>1</sup>.

3. Section 58.9 of the Act provides in pertinent part:

Sec. 58.9. Liability.

(a) Cost assignment.

(1) Notwithstanding any other provisions of this Act to the contrary, including subsection (f) of Section 22.2, in no event may the Agency, the State of Illinois, or any person bring an action pursuant to this Act or the Groundwater Protection Act to require any person to conduct remedial action or to seek recovery of costs for remedial activity conducted by the State of Illinois or any person beyond the remediation of releases of regulated substances that may be attributed to being proximately caused by such person's act or omission or beyond such person's proportionate degree of responsibility for costs of the remedial action of releases of regulated substances that were proximately caused or contributed to by 2 or more persons.

(2) Notwithstanding any provisions in this Act to the contrary, including subsection (f) of Section 22.2, in no event may the State of Illinois or any person require the performance of remedial action pursuant to this Act against any of the following:

(A) A person who neither caused nor contributed to in any material respect a release of regulated substances on, in, or under the site that was identified and addressed by the remedial action taken pursuant to this Title.

4. IEPA records, as available on its website, pertaining to both the Site Remediation Program NFR issued in 2008 and the pending Leaking Underground Storage Tank Program review of Incident #H-2013-1007 show that the Site has not been actively operated in any manner relating to the complained of chemical constituents since 1985 or before. This was prior to any ownership by Respondent.

5. Chemical constituents alleged in the Complaint, at paragraphs 8 and 12, as being at or on the Site did not first come to be located at the Site at any time the Site was owned by Respondent, nor as a result of any activities by Respondent. Therefore, Respondent was not a proximate cause of a release or threatened release of any of the chemical constituents alleged in

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<sup>1</sup> Copy of recorded NFR as downloaded from the Document Explorer on the IEPA website.

the Complaint to be at or on the Site.

6. Each of the Complaint's five counts are generally based on the alleged existence of these chemical constituents at or on the Site. Each count requests a "cease and desist" order. Except for the impossible option of obtaining a landfill permit (Count III), an order to cease and desist would require the removal and proper disposal of the chemical constituents alleged to be at or on the Site. Since Respondent was not and is not the proximate cause of these chemical constituents being located at or on the Site, such relief should be barred through the application of the limitations on liability in Section 58.9.

**AFFIRMATIVE DEFENSE II**  
**COUNTS IV AND V**

1 – 2. Respondent realleges and incorporates by reference paragraphs 1 and 2 of Affirmative Defense I as if fully set forth herein as paragraphs 1 and 2 of this Affirmative Defense II.

3. Section 58.10 of the Act provides in pertinent part:

Sec. 58.10. Effect of completed remediation; liability releases.

(a) The Agency's issuance of the No Further Remediation Letter signifies a release from further responsibilities under this Act in performing the approved remedial action and shall be considered prima facie evidence that the site does not constitute a threat to human health and the environment and does not require further remediation under this Act, so long as the site is utilized in accordance with the terms of the No Further Remediation Letter.

4. Counts IV and V of the Complaint particularly allege the existence of these chemical constituents at or on the Site as causing some kind of environmental risk, either water pollution or water pollution hazard. Since the Site was issued an NFR Letter, Section 58.10 of the Act allows the prima facie conclusion that the Site "does not constitute a threat to human health and the environment and does not require further remediation under this Act." The

Complaint makes no allegations of rebutting this conclusion. The Complaint's request in both Counts IV and V for an order requiring Respondent to perform new response action is not authorized by the Act pursuant to Section 58.10.

WHEREFORE, Respondent respectfully requests that the Board deny Complainant any relief that would require any performance of a response action or expend any money in furtherance of any response action or other removal of materials from the Site.

Respectfully submitted,  
**MAGNA TAX SERVICE CO., INC.**

Dated: May 8, 2017

By: /s/William D. Ingersoll  
One of its Attorneys

**BROWN, HAY & STEPHENS, LLP**

William D. Ingersoll  
Registration No. 6186363  
wingersoll@bhslaw.com  
Claire A. Manning  
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205 S. Fifth Street, Suite 700  
P.O. Box 2459  
Springfield, IL 62705-2459  
(217) 544-8491

CERTIFICATE OF E-MAIL SERVICE

I, William D. Ingersoll, certify that I have this date served the attached Notice of Filing and Amended Affirmative Defenses by e-mail as described below and from my e-mail address as indicated below, upon the following persons:

To: Carol Webb  
Hearing Officer  
Illinois Pollution Control Board  
carol.webb@illinois.gov

Rachel Medina  
Assistant Attorney General  
Environmental Bureau  
rmedina@atg.state.il.us

The number of pages in this e-mail transmission is fifty-eight (58).

Dated: May 8, 2017

**BROWN, HAY & STEPHENS, LLP**

William D. Ingersoll  
Registration No. 6186363  
wingersoll@bhslaw.com  
205 S. Fifth Street, Suite 700  
P.O. Box 2459  
Springfield, IL 62705-2459  
(217) 544-8491

By: /s/William D. Ingersoll  
William D. Ingersoll



ATTORNEYS AT LAW SINCE 1895

VIA CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Robert E. O'Hara  
Illinois Environmental Protection Agency  
Bureau of Land/RPMS  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, IL 62794-9276

September 30, 2008

**RECORDED  
NFR**

Re: Recording of No Further Remediation Letter  
0290255010/Coles  
Mattoon/Young Radiator  
**SALtech**

Dear Mr. O'Hara:

Pursuant to the No Further Remediation Letter, dated September 9, 2008, enclosed please find a certified copy of the No Further Remediation Letter, as recorded on September 24, 2008 by the Office of the Recorder of Coles County.

If you have any questions with respect to this matter, please feel free to contact me.

Very truly yours,

Joseph R. Brendel

**RELEASABLE**

OCT 09 2008

**REVIEWER MD**

JRB/dld

Enclosure

cc: Todd R. Shingleton (w/encl.) (via U.S. Mail)  
Dennis D. Ballinger (w/encl.) (via U.S. Mail)

Pittsburgh

Philadelphia

Princeton

Wheeling

Thorpe Reed & Armstrong, LLP  
One Oxford Centre  
301 Grant Street, 14th Floor  
Pittsburgh, PA 15219-1425  
412 394 7711  
412 394 2555 Fax

00930376.DOC

**RECEIVED**

OCT 03 2008

**IEPA/BOL**

PREPARED BY:

Name: Todd R. Shingleton  
Wabtec Corporation

Address: 1001 Air Brake Avenue  
Wilmerding, PA 15148

RETURN TO:

Name: Todd R. Shingleton  
Wabtec Corporation

Address: 1001 Air Brake Avenue  
Wilmerding, PA, 15148

200800710182  
Filed for Record in  
COLES COUNTY, ILLINOIS  
SUE RENNELS  
09-24-2008 At 02:37 pm.  
ENVIR DISCL 91.00  
RHSP Fund 10.00

**RECORDED  
NFR**

**RECEIVED**

**OCT 03 2008**

**IEPA/BOL**

**RELEASABLE**

**OCT 09 2008**

**REVIEWER MD**

**THE ABOVE SPACE FOR RECORDER'S OFFICE**

The remediation applicant must submit this Environmental No Further Remediation Letter within 45 days of its receipt, to the Office of the Recorder of Coles County.

Illinois State EPA Number: 0290255010

American Geosciences, Inc., the Remediation Applicant, whose address is 3925 Reed Bouleyard, Suite 400, Murrysville, PA 15668 has performed investigative and/or remedial activities for the remediation site depicted on the attached Site Base Map and identified by the following:

- 1. Legal description or Reference to a Plat Showing the Boundaries:

Tract 1:

All of Blocks One Hundred-Five (105) and One Hundred-Six (106) and the North One-Half (1/2) of Block One Hundred-Twenty (120) in the Original Town, now City of Mattoon, including the strip of ground that originally was between said Block One Hundred-Six (106) and said Block One Hundred-Twenty (120), which strip of ground was originally a portion of Prairie Avenue in said City of Mattoon, and that part of Prairie Avenue from the West Side of Twelfth (12<sup>th</sup>) Street to the West Side of Thirteenth (13<sup>th</sup>) Street, and which portion of said Prairie Avenue has been vacated by the City Council of the City of Mattoon, and also the strip of ground that originally was between said Block One Hundred-Five (105) and said Block One Hundred-Six (106), which strip of ground was originally a part of Thirteenth (13th) Street, lying between the South line of Richmond Avenue and the North line of Prairie Avenue, and that part of Thirteenth (13<sup>th</sup>) Street from the South Side of Prairie Avenue to the North Side of Alley between Prairie Avenue and Broadway Avenue, in said City of Mattoon, and which portions of said Thirteenth (13th) Street that have been vacated by the City Council of the City of Mattoon; all situated in the City of Mattoon, County of Coles and State of Illinois.

Tract 2:

Lots One (1), Two (2), Three (3), Four (4), Five (5) and Six (6) in Block One-Hundred Twenty-One (121) in the Original Town, now City of Mattoon, situated in the County of Coles, State of Illinois.

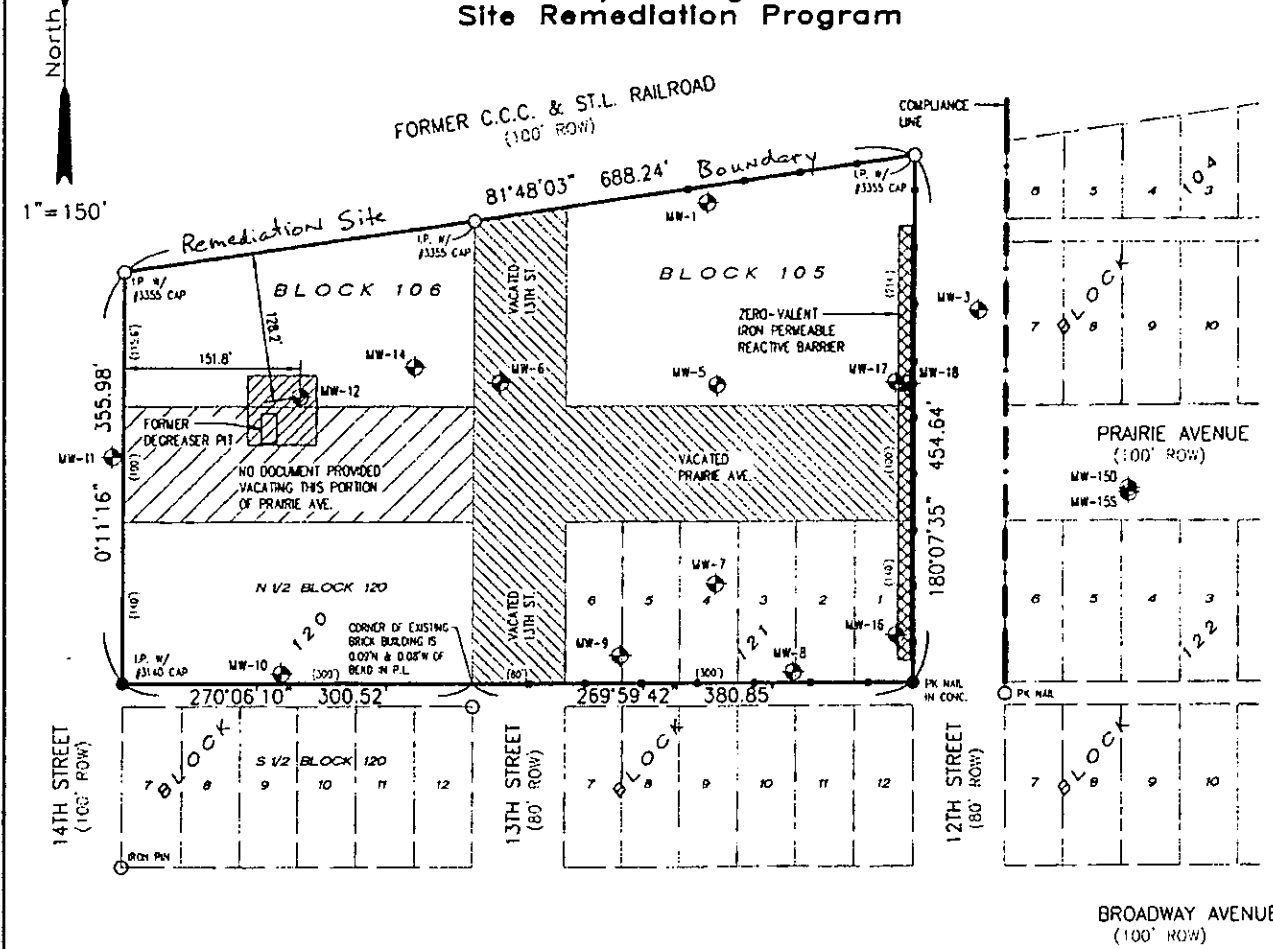
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2. Common Address: 120 North 14th Street, Mattoon, IL
3. Real Estate Tax Index/Parcel Index Number: Tract 1: 07-1-03651-000; Tract 2: 07-1-03867-000
4. Remediation Site Owner: Magna Tax Services Co., Inc.
5. Land Use: Industrial/Commercial
6. Site Investigation: Focused

# Site Base Map

0290255010 / Coles  
Mattoon / Young Radiator  
Site Remediation Program

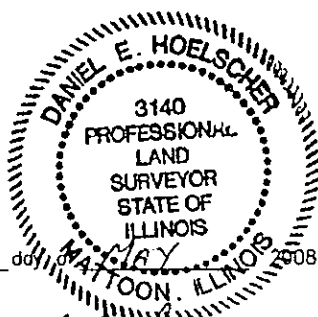


**NOTES:**

1. FIELD WORK FOR BOUNDARY SURVEY COMPLETED MAY 7, 2008.
2. NO SUBSURFACE EXPLORATION WAS MADE.
3. NO ENCROACHMENTS ARE SHOWN ON THIS SITE BASE MAP.
4. PERMEABLE REACTIVE BARRIER AND ENGINEERED BARRIER WERE SCALED FROM DRAWINGS PROVIDED BY CLIENT.
5. AZIMUTHS ARE BASED ON ASSUMED NORTH.

**LEGEND**

- SURVEY MARKER FOUND
- SURVEY MARKER SET
- ( ) RECORD DISTANCE/AZIMUTH
- MW-B ⊕ MONITORING WELL LOCATION
- — — — — EXISTING FENCE
- ▨ PERMEABLE REACTIVE BARRIER
- ▧ ENGINEERED BARRIER (60'x60')
- ▩ VACATED STREET
- ▨ NO RECORD PROVIDED OF VACATED ST.



Dated this 13TH day of MAY, 2008 A.D.

*Daniel E. Hoelscher*

Daniel E. Hoelscher, I.P.L.S. #3140  
LICENSE EXPIRES NOVEMBER 30, 2008

F.B. #435 SHEET 1 OF 1

Job No. 7208047  
Date MAY 12, 2008  
Drawn S. EWING  
Checked DEH  
Revised \_\_\_\_\_

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123 North 15th Street  
Mattoon, IL 61938  
Phone: 217.235.3177

**SITE REMEDIATION PROGRAM**  
**TABLE A: REGULATED SUBSTANCES OF CONCERN**  
**0290255010/Young Radiator**

**Volatile Organic Compounds**

CAS No.	Compound Name
67-64-1	Acetone
107-02-8	Acrolein (Propenal)
79-10-7	Acrylic Acid
107-13-1	Acrylonitrile
71-43-2	Benzene
314-40-9	Bromacil
108-86-1	Bromobenzene
74-97-5	Bromochloromethane
75-27-4	Bromodichloromethane
75-25-2	Bromoform
74-83-9	Bromomethane
106-99-0	1,3-Butadiene
71-36-3	n-Butanol (Butanol)
78-93-3	2-Butanone (MEK)
104-51-8	n-Butylbenzene
135-98-9	sec-Butylbenzene
98-06-6	tert-Butylbenzene
105-60-2	Caprolactam
75-15-0	Carbon Disulfide
56-23-5	Carbon Tetrachloride
108-90-7	Chlorobenzene
124-48-1	Chlorodibromomethane (Dibromochloromethane)
75-00-3	Chloroethane
67-66-3	Chloroform
74-87-3	Chloromethane
95-49-8	2-Chlorotoluene
106-43-4	4-Chlorotoluene
108-94-1	Cyclohexanone
96-12-8	1,2-Dibromo-3-Chloropropane
74-95-3	Dibromomethane
106-93-4	1,2-Dibromomethane
75-34-3	1,1-Dichloroethane
107-06-2	1,2-Dichloroethane
75-35-4	1,1-Dichloroethene
156-60-5	<i>trans</i> -1,2-Dichloroethene
156-59-2	<i>cis</i> -1,2-Dichloroethene
75-71-8	Dichlorodifluoromethane
78-87-5	1,2-Dichloropropane
142-28-9	1,3-Dichloropropane
594-20-7	2,2-Dichloropropane
563-58-6	1,1-Dichloropropene

(Illinois EPA Site Remediation Program Environmental Notice)

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10061-02-6	<i>trans</i> -1,3-Dichloropropene
10061-01-5	<i>cis</i> -1,3-Dichloropropene
111-90-0	Diethylene Glycol Monoethyl Ether
123-91-1	1,4-Dioxane
64-17-5	Ethanol
141-78-6	Ethyl Acetate
140-88-5	Ethyl Acrylate
100-41-4	Ethylbenzene
107-21-1	Ethylene Glycol
111-76-2	Ethylene Glycol Monobutyl Ether
103-11-8	2-Ethylhexyl Acrylate
50-00-0	Formaldehyde
98-01-1	Furfural
110-54-3	Hexane
591-78-6	2-Hexanone
74-88-4	Iodomethane (Methyl Iodide)
78-83-1	Isobutyl Alcohol (Isobutanol)
67-63-0	Isopropyl Alcohol (Isopropanol)
98-82-4	Isopropylbenzene (Cumene)
99-87-6	p-Isopropyltoluene
67-56-1	Methyl Alcohol (Methanol)
79-20-9	Methyl Acetate
108-87-2	Methylcyclohexane
75-09-2	Methylene Chloride
108-10-1	4-Methyl-2-Pentanone (MIBK)
1634-04-4	Methyl Tertiary Butyl Ether (MTBE)
91-20-3	Naphthalene
109-60-4	n-Propyl Acetate
103-65-1	n-Propylbenzene
57-55-6	Propylene Glycol
107-98-2	Propylene Glycol Monoethyl Ether
100-42-5	Styrene
127-18-4	Tetrachloroethene
630-20-6	1,1,1,2-Tetrachloroethane
79-34-5	1,1,2,2-Tetrachloroethane
109-99-9	Tetrahydrofuran
79-01-6	Trichloroethene
71-55-6	1,1,1-Trichloroethane
79-00-5	1,1,2-Trichloroethane
75-69-4	Trichlorofluoromethane
96-18-4	1,2,3-Trichloropropane
95-63-6	1,2,4-Trimethylbenzene
99-35-4	1,3,5-Trimethylbenzene
108-88-3	Toluene
108-05-4	Vinyl Acetate
75-01-4	Vinyl Chloride
1330-20-7	Xylenes (total)

(Illinois EPA Site Remediation Program Environmental Notice)

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## Semivolatile Organic Compounds

CAS No.	
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
62-53-3	Aniline
120-12-7	Anthracene
25057-89-0	Bentazon
100-52-7	Benzaldehyde
92-87-5	Benzidine
56-55-3	Benzo(a)anthracene
50-32-8	Benzo(a)pyrene
205-99-2	Benzo(b)fluoranthene
191-24-2	Benzo(g,h,i)perylene
207-08-9	Benzo(k)fluoranthene
100-51-6	Benzyl Alcohol
65-85-0	Benzoic acid
111-44-4	bis(2-Chloroethyl)ether
111-91-1	bis(2-Chloroethoxy)methane
117-81-7	bis(2-Ethylhexyl)phthalate
101-55-3	4-Bromophenyl-phenyl ether
1689-84-5	Bromoxycil
85-68-7	Butyl benzyl phthalate
98-54-4	para-tert-Butylphenol
86-74-8	Carbazole
1563-66-2	Carbofuran
106-47-8	4-Chloroaniline
59-50-7	4-Chloro-3-methylphenol
91-58-7	2-Chloronaphthalene
95-57-8	2-Chlorophenol
7005-72-3	4-Chlorophenyl-phenyl ether
218-01-9	Chrysene
53-70-3	Dibenzo(a,h)anthracene
132-64-9	Dibenzofuran
95-50-1	1,2-Dichlorobenzene
541-73-1	1,3-Dichlorobenzene
106-46-7	1,4-Dichlorobenzene
91-94-1	3,3'-Dichlorobenzidine
120-83-2	2,4-Dichlorophenol
84-66-2	Diethylphthalate
105-67-9	2,4-Dimethylphenol
131-11-3	Dimethylphthalate
99-65-0	1,3-Dinitrobenzene
84-74-2	Di-n-butylphthalate
534-52-1	4,6-Dinitro-2-methylphenol
51-28-5	2,4-Dinitrophenol
121-14-2	2,4-Dinitrotoluene
606-20-2	2,6-Dinitrotoluene

(Illinois EPA Site Remediation Program Environmental Notice)

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117-84-0	Di- <i>n</i> -octyl phthalate
206-44-0	Fluoranthene
86-73-7	Fluorene
118-74-1	Hexachlorobenzene
87-68-3	Hexachlorobutadiene
77-47-4	Hexachlorocyclopentadiene
67-72-1	Hexachloroethane
193-39-5	Indeno(1,2,3- <i>cd</i> )pyrene
78-59-1	Isophorone
101-14-4	4,4'-Methylene bis(2-chloroaniline)
59-50-7	3-Methyl-4-Chlorophenol
101-77-9	4,4'-Methylenedianiline
91-57-6	2-Methylnaphthalene
95-48-7	2-Methylphenol ( <i>o</i> -Cresol)
108-39-4	3-Methylphenol
106-44-5	4-Methylphenol ( <i>p</i> -Cresol)
109-06-8	2-Methylpyridine
88-74-4	2-Nitroaniline
99-09-2	3-Nitroaniline
100-01-6	4-Nitroaniline
98-95-3	Nitrobenzene
55-63-0	Nitroglycerin
88-75-5	2-Nitrophenol
100-02-7	4-Nitrophenol
86-30-6	N-Nitrosodiphenylamine
621-64-7	N-Nitroso-di- <i>n</i> -propylamine
108-60-1	2,2'-oxybis(1-chloropropane)
82-68-8	Pentachloronitrobenzene
87-86-5	Pentachlorophenol
85-01-8	Phenanthrene
108-95-2	Phenol
129-00-0	Pyrene
121-82-4	RDX (Cyclonite)
118-79-6	2,4,6-Tribromophenol
87-61-6	1,2,3-Trichlorobenzene
120-82-1	1,2,4-Trichlorobenzene
99-35-4	1,3,5-Trinitrobenzene
95-95-4	2,4,5-Trichlorophenol
88-06-2	2,4,6-Trichlorophenol
118-96-7	2,4,6-Trinitrotoluene

PROPERTY OWNER CERTIFICATION OF THE NFR LETTER UNDER THE SITE REMEDIATION PROGRAM

Where the Remediation Applicant (RA) is not the sole owner of the remediation site, the RA shall obtain the certification by original signature of each owner, or authorized agent of the owner(s), of the remediation site or any portion thereof who is not an RA. The property owner(s), or the duly authorized agent of the owner(s) must certify, by original signature, the statement appearing below. This certification shall be recorded in accordance with Illinois Administrative Code 740.620.

Include the full legal name, title, the company, the street address, the city, the state, the ZIP code, and the telephone number of all other property owners. Include the site name, street address, city, ZIP code, county, Illinois inventory identification number and real estate tax index/parcel index number.

A duly authorized agent means a person who is authorized by written consent or by law to act on behalf of a property owner including, but not limited to:

- 1. For corporations, a principal executive officer of at least the level of vice-president;
2. For a sole proprietorship or partnership, the proprietor or a general partner, respectively; and
3. For a municipality, state or other public agency, the head of the agency or ranking elected official.

For multiple property owners, attach additional sheets containing the information described above, along with a signed, dated certification for each. All property owner certifications must be recorded along with the attached NFR letter.

Property Owner Information
Owner's Name: MAGNA TAX SERVICE CO., INC
Title: PRESIDENT - DENNIS D. BALLINGER
Company:
Street Address: 119 W. WILLIAM ST SUITE 300 POST OFFICE BOX 1452
City: DECATUR State: IL Zip Code: 62525 Phone: (217) 429-5050
Site Information
Site Name: MATTOON / YOUNG RADIATOR
Site Address: 120 NORTH 14TH STREET MATTOON, IL
City: MATTOON State: IL Zip Code: 61938 County: COLES
Illinois inventory identification number: 0290255010 / COLES
Real Estate Tax Index/Parcel Index No. 07-1-03651-000 & 07-1-03867-000
I hereby certify that I have reviewed the attached No Further Remediation Letter and that I accept the terms and conditions and any land use limitations set forth in the letter.
Owner's Signature: BY Dennis D. Ballinger, PRESIDENT Date: 12 SEPTEMBER 2008
SUBSCRIBED AND SWORN TO BEFORE ME this 13 day of Sep, 2008
Notary Public: Patricia M. Lindgren
"OFFICIAL SEAL" PATRICIA M. LINDGREN NOTARY PUBLIC, STATE OF ILLINOIS MY COMMISSION EXPIRES 05-16-2009

The Illinois EPA is authorized to require this information under Sections 415 ILCS 5/58 - 58.12 of the Environmental Protection Act and regulations promulgated thereunder. If the Remediation Applicant is not also the sole owner of the remediation site, this form must be completed by all owners of the remediation site and recorded with the NFR Letter. Failure to do so may void the NFR Letter. This form has been approved by the Forms Management Center. All information submitted to the Site Remediation Program is available to the public except when specifically designated by the Remediation Applicant to be treated confidentially as a trade secret or secret process in accordance with the Illinois Compiled Statutes, Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines.



SERVICES    PROGRAMS    PRESS    PUBLICATIONS    DEPARTMENTS    CONTACT

**CORPORATION FILE DETAIL REPORT**

Entity Name	MAGNA TAX SERVICE CO., INC.	File Number	54788789
Status	GOODSTANDING		
Entity Type	CORPORATION	Type of Corp	DOMESTIC BCA
Incorporation Date (Domestic)	09/02/1987	State	ILLINOIS
Agent Name	DENNIS D BALLINGER	Agent Change Date	09/02/1987
Agent Street Address	119 W WILLIAM ST SUITE 300	President Name & Address	DENNIS D BALLINGER 381 GREENWAY LANE DECATUR 62521
Agent City	DECATUR	Secretary Name & Address	DENNIS D BALLINGER 381 GREENWAY LANE DECATUR 62521
Agent Zip	62523	Duration Date	PERPETUAL
Annual Report Filing Date	07/23/2008	For Year	2008

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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

(217) 782-6761      ROD R. BLAGOJEVICH, GOVERNOR      DOUGLAS P. SCOTT, DIRECTOR

September 9, 2008

CERTIFIED MAIL

7007 0220 0000 0150 6888

Todd R. Shingleton  
Wabtec Corporation  
1001 Air Brake Avenue  
Wilmerding, PA 15148

Re: 0290255010 /Coles  
Mattoon /Young Radiator  
Site Remediation Program/Technical Reports  
No Further Remediation Letter

Dear Mr. Shingleton:

The *Remedial Action Completion Report* (Date March 2007/Log Number 07-33177) and the *Revised Results of Additional Groundwater Monitoring* (dated April 2, 2008/Log No. 0837294), as prepared by Parsons and American Geosciences, Inc. respectively for the above referenced Remediation Site, has been reviewed by the Illinois Environmental Protection Agency ("Illinois EPA") and demonstrates that the remedial action was completed in accordance with the *Revised Remedial Action Plan* (dated February 2003/Log No. 03-0760).

The Remediation Site, consisting of 6.25 acres, is located at 120 North 14th Street, Mattoon, Illinois. Pursuant to Section 58.10 of the Illinois Environmental Protection Act ("Act") (415 ILCS 5/1 et seq.), your request for a no further remediation determination is granted under the conditions and terms specified in this letter. The Remediation Applicant, as identified on the Illinois EPA's Site Remediation Program DRM-1 Form received August 29, 2008 is Young Radiator Co., Inc. c/o Wabtec Corporation.

This focused No Further Remediation Letter ("Letter") signifies a release from further responsibilities under the Act for the performance of the approved remedial action. This Letter shall be considered prima facie evidence that the Remediation Site described in the attached Illinois EPA Site Remediation Program Environmental Notice and shown in the attached Site Base Map does not constitute a threat to human health and the environment for the specified recognized environmental conditions so long as the Site is utilized in accordance with the terms and conditions of this Letter.

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

PRINTED ON RECYCLED PAPER

Conditions and Terms of Approval

Level of Remediation and Land Use Limitations

- 1) The land use specified in this Letter may be revised if:
  - a) Further investigation or remedial action has been conducted that documents the attainment of objectives appropriate for the new land use.
  - b) A new Letter is obtained and recorded in accordance with Title XVII of the Act and regulations adopted thereunder.
- 2) The Remediation Site is restricted to Industrial/Commercial land use.
- 3) The recognized environmental conditions, as characterized by the focused site investigation, consist of the following:
  - a) Regulated substances of concern that have been successfully addressed are detailed in the attached Table A.

Engineering Controls:

- 4) The concrete cap barrier, as shown in the attached Site Base Map, must remain over the contaminated soils. This concrete cap barrier must be properly maintained as an engineered barrier to inhibit inhalation and ingestion exposure to the contaminated media.

Institutional Controls:

- 5) No person shall construct, install, maintain, or operate a well at the Remediation Site. All water supplies and water services for the Remediation Site must be obtained from a public water supply system. The provisions of this institutional control shall be applicable to all water usage (e.g., domestic, industrial/commercial uses and outdoor watering).
- 6) The City of Mattoon agrees through the use of a highway authority agreement dated October 10, 2005, to allow contaminated groundwater, adjacent to the boundary of the Site located at 120 North 14<sup>th</sup> Street, to remain beneath its highway right-of-way. The highway owner also agrees that the contaminated groundwater shall not be utilized as potable or other domestic supply water.

Other Terms

- 7) At a minimum, a safety plan should be developed to address possible worker exposure in the event that any future excavation and construction activities may occur within the contaminated soil that lies beneath the concrete engineered barrier. Any excavation within the contaminated soil will require implementation of a safety plan consistent with NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, OSHA regulations (particularly in 29 CFR 1910 and 1926), state and local regulations, and other USEPA guidance. Soil excavated below the engineered barrier must be returned to the same depth from which it was excavated or properly managed or disposed in accordance with applicable state and federal regulations.

- 8) Where the Remediation Applicant is not the sole owner of the Remediation Site, the Remediation Applicant shall complete the attached *Property Owner Certification of the No Further Remediation Letter under the Site Remediation Program* Form. This certification, by original signature of each property owner, or the authorized agent of the owner(s), of the Remediation Site or any portion thereof who is not a Remediation Applicant shall be recorded along with this Letter.
- 9) Further information regarding this Remediation Site can be obtained through a written request under the Freedom of Information Act (5 ILCS 140) to:

Illinois Environmental Protection Agency  
Attn: Freedom of Information Act Officer  
Bureau of Land-#24  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, IL 62794-9276

- 10) Pursuant to Section 58.10(f) of the Act (415 ILCS 5/58.10(f)), should the Illinois EPA seek to void this Letter, the Illinois EPA shall provide notice to the current titleholder and to the Remediation Applicant at the last known address. The notice shall specify the cause for the avoidance, explain the provisions for appeal, and describe the facts in support of this cause. Specific acts or omissions that may result in the avoidance of the Letter under Sections 58.10(e)(1)-(7) of the Act (415 ILCS 5/58.10(e)(1)-(7)) include, but shall not be limited to:
  - a) Any violation of institutional controls or the designated land use restrictions;
  - b) The failure to operate and maintain preventive or engineering controls or to comply with any applicable groundwater monitoring plan;
  - c) The disturbance or removal of contamination that has been left in-place in accordance with the Remedial Action Plan. Access to soil contamination may be allowed if, during and after any access, public health and the environment are protected consistent with the Remedial Action Plan;
  - d) The failure to comply with the recording requirements for this Letter;
  - e) Obtaining the Letter by fraud or misrepresentation;
  - f) Subsequent discovery of contaminants, not identified as part of the investigative or remedial activities upon which the issuance of the Letter was based, that pose a threat to human health or the environment;
  - g) The failure to pay the No Further Remediation Assessment Fee within forty-five (45) days after receiving a request for payment from the Illinois EPA;
  - h) The failure to pay in full the applicable fees under the Review and Evaluation Services Agreement within forty-five (45) days after receiving a request for payment from the Illinois EPA.

11) Pursuant to Section 58.10(d) of the Act, this Letter shall apply in favor of the following persons:

- a) Young Radiator Co., Inc. c/o Wabtec Corporation;
- b) The owner and operator of the Remediation Site;
- c) Any parent corporation or subsidiary of the owner of the Remediation Site;
- d) Any co-owner, either by joint-tenancy, right of survivorship, or any other party sharing a relationship with the owner of the Remediation Site;
- e) Any holder of a beneficial interest of a land trust or inter vivos trust, whether revocable or irrevocable, involving the Remediation Site;
- f) Any mortgagee or trustee of a deed of trust of the owner of the Remediation Site or any assignee, transferee, or any successor-in-interest thereto;
- g) Any successor-in-interest of the owner of the Remediation Site;
- h) Any transferee of the owner of the Remediation Site whether the transfer was by sale, bankruptcy proceeding, partition, dissolution of marriage, settlement or adjudication of any civil action, charitable gift, or bequest;
- i) Any heir or devisee of the owner of the Remediation Site;
- j) Any financial institution, as that term is defined in Section 2 of the Illinois Banking Act and to include the Illinois Housing Development Authority, that has acquired the ownership, operation, management, or control of the Remediation Site through foreclosure or under the terms of a security interest held by the financial institution, under the terms of an extension of credit made by the financial institution, or any successor-in-interest thereto; or
- k) In the case of a fiduciary (other than a land trustee), the estate, trust estate, or other interest in property held in a fiduciary capacity, and a trustee, executor, administrator, guardian, receiver, conservator, or other person who holds the remediated site in a fiduciary capacity, or a transferee of such party.

12) This letter, including all attachments, must be recorded as a single instrument within forty-five (45) days of receipt with the Office of the Recorder of Coles County. For recording purposes, the Illinois EPA Site Remediation Program Environmental Notice attached to this Letter should be the first page of the instrument filed. This Letter shall not be effective until officially recorded by the Office of the Recorder of Coles County in accordance with Illinois law so that it forms a permanent part of the chain of title for the Remediation Site.

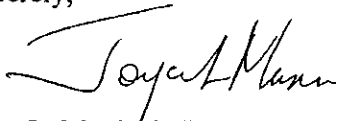
13) Within thirty (30) days of this Letter being recorded by the Office of the Recorder of Coles County, a certified copy of this Letter, as recorded, shall be obtained and submitted to the Illinois EPA to:

Robert E. O'Hara  
Illinois Environmental Protection Agency  
Bureau of Land/RPMS  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, IL 62794-9276

14) In accordance with Section 58.10(g) of the Act, a No Further Remediation Assessment Fee based on the costs incurred for the Remediation Site by the Illinois EPA for review and evaluation services will be applied in addition to the fees applicable under the Review and Evaluation Services Agreement. Request for payment of the No Further Remediation Assessment Fee will be included with the billing statement.

If you have any questions regarding this correspondence, you may contact the Illinois EPA project manager, Mr. Tim Murphy at (217) 524-4823.

Sincerely,



Joyce L. Munie, P.E., Manager  
Remedial Project Management Section  
Division of Remediation Management  
Bureau of Land

Attachments (2): Property Owner Certification of No Further Remediation Letter under the  
Site Remediation Program Form  
Notice to Remediation Applicant

cc:

Magna Tax Service  
Mr. Dennis Ballinger  
119 West William Street P.O. Box 1452  
Decatur, IL 62525

Harry Gant, VP  
Young Radiator Company  
2825 Four Mile Road  
Racine, WI 53404

CITY OF MATTOON  
HIGHWAY AUTHORITY AGREEMENT

OVERVIEW

The purpose of this document is to notify the City of Mattoon of the extent of hydrocarbon and chlorinated solvent impact within soil and/or groundwater and to provide the necessary initial information needed to enter into a highway authority agreement, pursuant to 35 IAC 742.1020.

Applicant Information

Operator: Wabtec Corporation  
Address: 1001 Air Brake Avenue  
Wilmerding, Pennsylvania 15148

Telephone No: (412) 825-1609

Fax No: (412) 825-1789

Name and Title of Person Authorized to Sign for Operator: Todd R. Shingleton

Applicant's Attorney

Name:  
Address:

Environmental Consultant

Name: American Geosciences, Inc.  
Address: 3925 Reed Boulevard, Suite 400  
Murrysville, PA 15668  
Attention: David R. Perry

Telephone No:

Telephone No: (724) 733-7003

Property Adjacent to the Right-of-Way

Address: Former Young Radiator Facility  
120 North 14<sup>th</sup> Street  
Mattoon, IL

Right-of-Way(s) requiring Highway Agreement

Highway Number(s): NA  
Street Name (if any): 12<sup>th</sup> Street

(Check one or both)

Soil Impact in Right-of-Way       Groundwater Impact in Right-of-Way

Regulatory Information

IEPA LPC Number: 0290255010  
IEPA Project Manager: Timothy Murphy

IEPA Status:  
(Check one)

Conditional Approval       Approval Pending  
 Other: Site in enrolled in IEPA's Site Remediation Program. Remedial action (permeable reactive barrier) was completed in 2004. Currently performing groundwater monitoring.



MASTER AGREEMENT

TIERED APPROACH TO CORRECTIVE-ACTION OBJECTIVES AGREEMENT

This Agreement is entered into this 10<sup>th</sup> day of October, 2005 pursuant to 35 Ill. Admin. Code Section 742.1020 by and between Wabtec Corporation referred to herein as "Operator," and the City of Mattoon ("City"), as follows:

1. This Agreement is not binding upon the City until it is executed by the undersigned representative of the City and prior to execution this Agreement constitutes an offer by Operator. The duly authorized representatives of Operator have signed this Agreement and this Agreement is binding upon them, their successors and assigns.

2.a. Operator is pursuing a corrective action of a Site and of the right-of-way adjacent to the boundary of the Site located at 120 North 14<sup>th</sup> Street (the "Site").

2.b. Attached as Exhibit A are site maps prepared by Operator which show the area of estimated contaminant impacted soil and/or groundwater at the time of this Agreement in the right-of-way above 35 Ill. Admin. Code Part 742 Tier 1 industrial/commercial levels. Also shown in Exhibit A are tables prepared by Operator showing the concentration of contaminants of concern, hereafter "Contaminants," in soil and/or groundwater within the Site and which shows the applicable Tier 1 soil remediation objectives for industrial/commercial property and Tier 1 objectives for groundwater of the Illinois Pollution Control Board ("IPCB") which are exceeded along the boundary of the Site adjacent to the Right-of-Way. The right-of-way, and only the right-of-way, as described in Exhibit B, hereinafter the "Right-of-Way," adjacent to the site is subject to this Agreement. As the drawings in the Exhibits are not surveyed plats, the boundary of the Right-of-Way in the Exhibits may be an approximation of the actual right-of-way lines. The Right-of-Way is impractical to sample for Contaminants; however, the Operator believes that the area of the Right-of-Way is adequate to encompass soil and/or groundwater within the Right-of-Way possibly impacted with Contaminants from a release at the Site.

2.c. The Illinois Environmental Protection Agency has assigned LPC number 0290255010 to this Site.



2.d. Operator has developed risk-based, site specific soil and/or groundwater remediation objectives which were approved by the Illinois Environmental Protection Agency ("IEPA") under 35 Ill. Admin Code Part 742.

2.e. Under these rules, use of risk-based, site specific remediation objectives in the Right-of-Way require the use of a Highway Authority Agreement as defined in 35 Ill. Admin. Code Section 742.1020.

3. The City holds a fee simple interest or a dedication for highway purposes in the Right-of-Way, or the Right-of-Way is a platted street, and has jurisdiction of the Right-of-Way. For purposes of this Agreement, "jurisdiction" means that the City exercises access control over the use of groundwater beneath the Right-of-Way and over access to the soil beneath the Right-of-Way because it requires a permit for that access.

4.a. Under 35 Ill. Admin. Code Section 742.1020, this Agreement is intended to be an acceptable "Highway Authority Agreement" to IEPA, as the City is willing to agree that it will not allow the use of groundwater under the highway Right-of-Way as a potable or other domestic supply of water and that it will limit access as described herein to soil under the highway Right-of-Way that is contaminated from the release at levels above industrial/commercial Tier I remediation objectives.

4.b. The IEPA and Illinois Attorney General ("AG") must review and approve this Agreement, and this Agreement shall be referenced in the IEPA's "No Further Remediation" determination in the chain of title for the Site in the county where the Site is located.

4.c. This Agreement shall be null and void as a Highway Authority Agreement should the IEPA or AG not approve it or should it not be referenced in the "No Further Remediation" determination, provided, however, that this Agreement shall be effective between the Operator and the City immediately upon signature by their representatives.

5. The City promises IEPA and the Operator that it will prohibit the use of groundwater that is contaminated from the release at the Site at levels above Tier I remediation objectives beneath its Right-of-Way as a potable or other domestic supply of water and will limit access to soil as described herein under the Right-of-Way that is contaminated from the release at the Site at levels above Tier I

remediation objectives. As the pavement in the Right-of-Way may be considered an engineered barrier, the Operator agrees to reimburse the City for maintenance activities requested by Operator in writing in order to maintain it as a barrier. The City does not otherwise agree to perform maintenance of the Right-of-Way, nor does it agree that the highway Right-of-Way will always remain a highway or that it will maintain the Right-of-Way as an engineered barrier.

6. The Operator agrees to indemnify and hold harmless the City, and other highway authorities, if any, maintaining the highway Right-of-Way by an agreement with the City, and the City's agents, contractors or employees for all obligations asserted against or costs incurred by them, including attorney's fees and court costs, associated with the release of Contaminants from the Site, except if said obligations or costs are caused by the negligence of them.

7. As an additional consideration, Operator agrees to reimburse the City for the reasonable costs it has incurred in protecting human health and the environment, including, but not limited to, identifying, investigating, handling, storing and disposing of contaminated soil and groundwater in the Right-of-Way as a result of the release of contaminants at this Site.

8. This Agreement shall be binding upon all successors in interest to the Operator for highway Right-of-Way. A successor in interest to the City would include a highway authority to which the City would transfer jurisdiction of the highway.

9. Violation of the terms of this Agreement by the Operator, or their successors in interest, may be grounds for voidance of this Agreement as a Highway Authority Agreement. Violation of the terms of this Agreement by the City will not void this Agreement, unless the IEPA has determined that the violation is grounds for voiding this Agreement as a Highway Authority Agreement and the City has not cured the violation within such time as IEPA has granted to cure the violation.

10. This Agreement shall continue in effect from the date of this Agreement until the Right-of-Way is demonstrated to be suitable for unrestricted use and there is no longer a need for this Agreement as a Highway Authority Agreement, and the IEPA has, upon written request to the IEPA by the Operator

and notice to the City, amended the notice in the chain of title of the Site to reflect unencumbered future use of that highway Right-of-Way.

11. This Agreement does not limit the City's ability to construct, reconstruct, improve, repair, maintain and operate a highway upon its property or to allow others to use the highway Right-of-Way by permit. To that extent, the City reserves the right and the right of those using its property under permit to remove contaminated soil or groundwater above Tier 1 industrial/commercial remediation objectives from its Right-of-Way and to dispose of them as they deem appropriate not inconsistent with applicable environmental regulations so as to avoid causing a further release of the Contaminants and to protect human health and the environment. Prior to taking any such action, the City will first give Operator written notice, unless there is an immediate threat to the health or safety to any individual or to the public, that it intends to perform a site investigation in the Right-of-Way and remove or dispose of contaminated soil or groundwater to the extent necessary for its work. Failure to give notice is not a violation of this Agreement. The removal or disposal shall be based upon the site investigation (which may be modified by field conditions during excavation), which Operator may review or may perform, if requested to do so by the City. If practicable, as determined by the City, the City may request Operator to remove and dispose of the contaminated soil and/or groundwater necessary for the City's work in advance of that work. The Operator shall reimburse the reasonable costs incurred by the City to perform the site investigation and to dispose of any contaminated soil or groundwater, provided, however, that if notice to Operator has not been given and there was no immediate threat to health or safety, reimbursement for those costs shall be limited to \$10,000.00. There is a rebuttable presumption that the Contaminants found in the highway Right-of-Way arose from the release of Contaminants from the Site. Should Operator not reimburse the reasonable costs under the conditions set forth herein, this Agreement shall be null and void, at the City's option, upon written notice to Operator by the City that those costs have not been reimbursed. Operator may cure that problem within twenty working days by making payment, or may seek to enjoin that result.

12. Written notice required by this Agreement shall be mailed to the following:

If to Operator:

Name: Todd R. Shingleton  
Company: Wabtec Corporation  
Street: 1001 Air Brake Avenue  
City, State, Zip: Wilmerding, PA 15148

If to City

Name: City Clerk, City of Mattoon  
Street: 208 North 19<sup>th</sup> Street  
City, State, Zip: Mattoon, Illinois 61938

13. The City's sole responsibility under this Agreement with respect to others using the highway Right-of-Way under permit from the City is to include the following, or similar language, in the future standard permit provisions and to make an effort to notify its current permit holders of the following:

As a condition of this permit, the permittee shall request the Illinois Environmental Protection Agency to identify sites in the Right-of-Way where access to contaminated soil or groundwater is governed by Tiered Approach to Corrective-Action Objectives ("TACO") Agreements. The permittee shall take measures before, during and after any access to these sites to protect worker safety and human health and the environment. Excavated, contaminated soil should be managed off-site in accordance with all environmental laws.

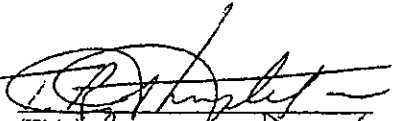
Operator hereby releases the City from liability for breach of its Agreement by others under permit and indemnifies the City against claims that may arise from others under permit causing a breach of this Agreement. Operator agrees that its personnel, if any, at the Site who are aware of this Agreement will notify anyone they know is excavating in the Right-of-Way about this Agreement.

14. Should the City breach this Agreement, Operator's sole remedy is for an action for damages in the Illinois Court of Claims. Any and all claims for damages against the City, its agents, contractors, employees or its successors in interest arising at any time for a breach of paragraph 5 of this Agreement are limited to an aggregate maximum of \$50,000.00. No other breach of the City, its agents, contractors, employees and its successors in interest of a provision of this Agreement is actionable in either law or

equity by Operator against the City or them and Operator hereby releases the City, its agents, contractors, employees and its successors in interest for any cause of action it may have against them, other than as allowed in this paragraph, arising under this Agreement or environmental laws, regulations or common law governing the contaminated soil or groundwater in the highway Right-of-Way. Should the City convey, vacate or transfer jurisdiction of that highway Right-of-Way, Operator may pursue an action under this Agreement against the successors in interest, other than a State agency, in a court of law.

15. This Agreement is entered into by the City in recognition of laws passed by the General Assembly and regulations adopted by the Pollution Control Board which encourage a tiered-approach to remediation of environmental contamination. This Agreement is entered into by the City in the spirit of those laws and under its right and obligations as a highway authority. Should any provisions of this Agreement be struck down as beyond the authority of the City, however, this Agreement shall be null and void.

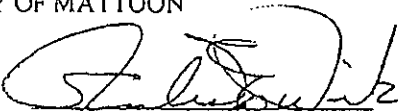
IN WITNESS WHEREOF, Operator, Wabtec Corporation, has caused this Agreement to be signed by its duly authorized representative.

BY:   
(Title) Corporate Director  
Environment & Safety

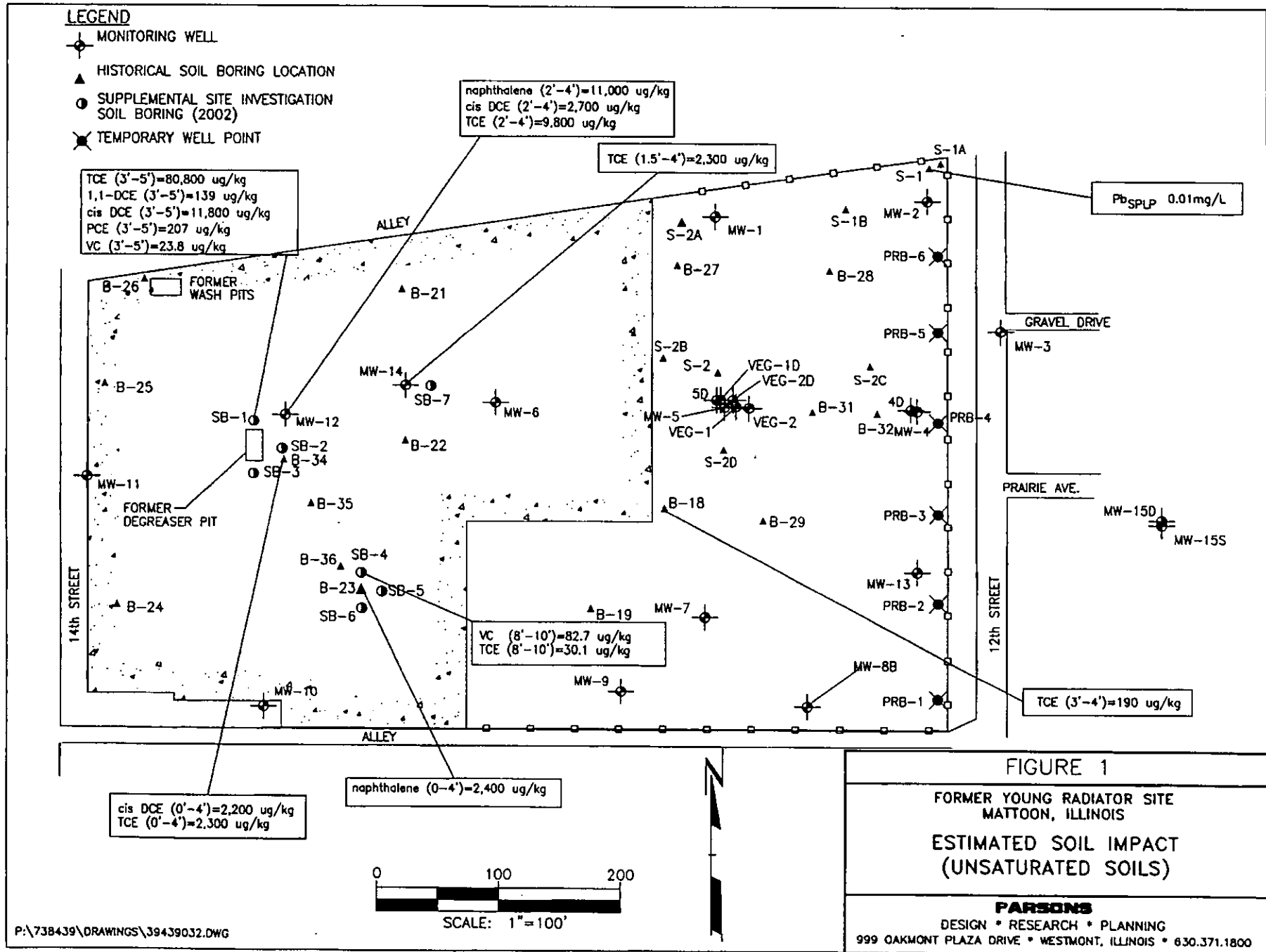
DATE: 10-10-2005

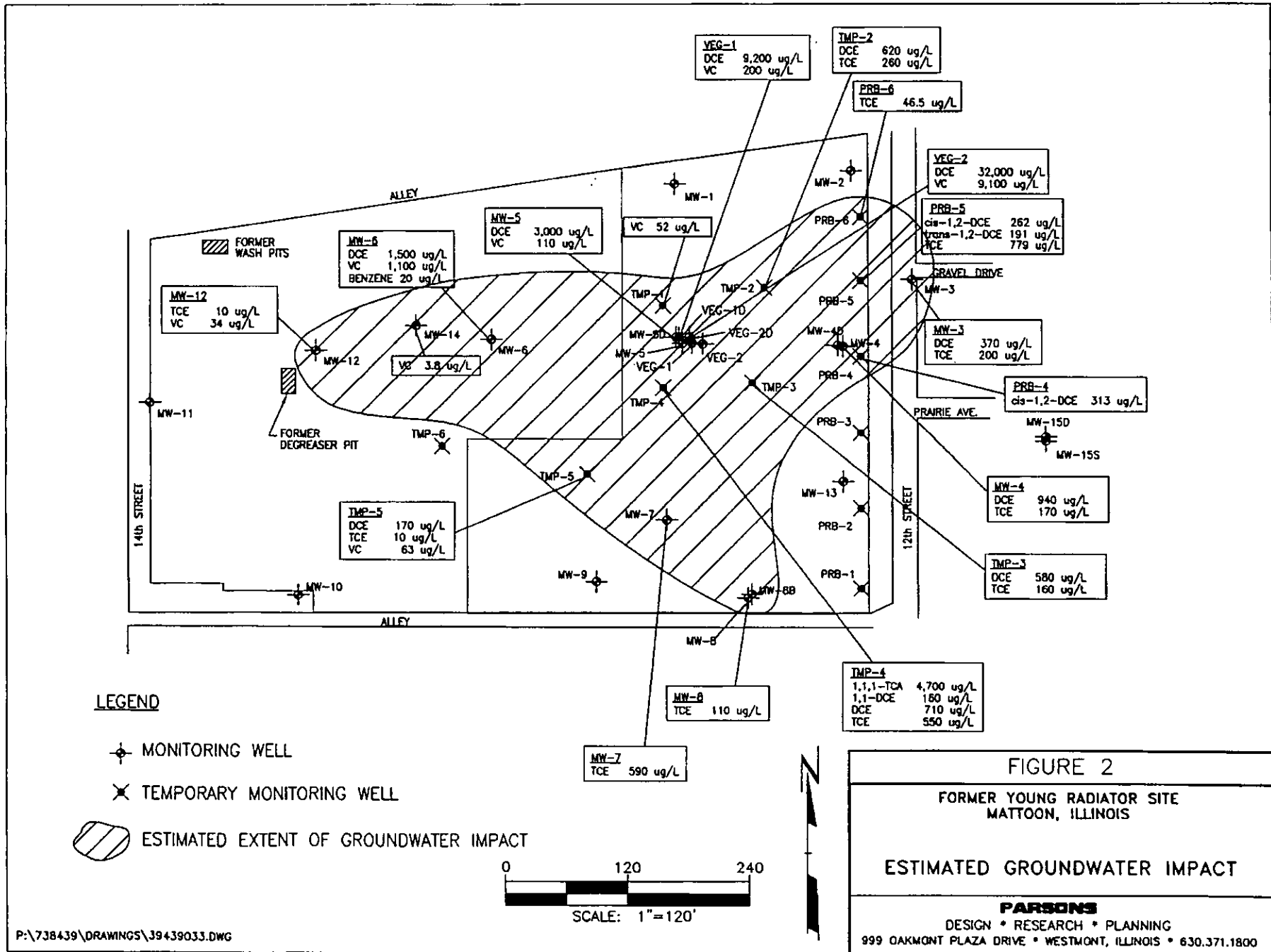
IN WITNESS WHEREOF, the City has caused this Agreement to be signed by its Mayor.

CITY OF MATTOON

BY:   
Charles E. White, Mayor

DATE: \_\_\_\_\_





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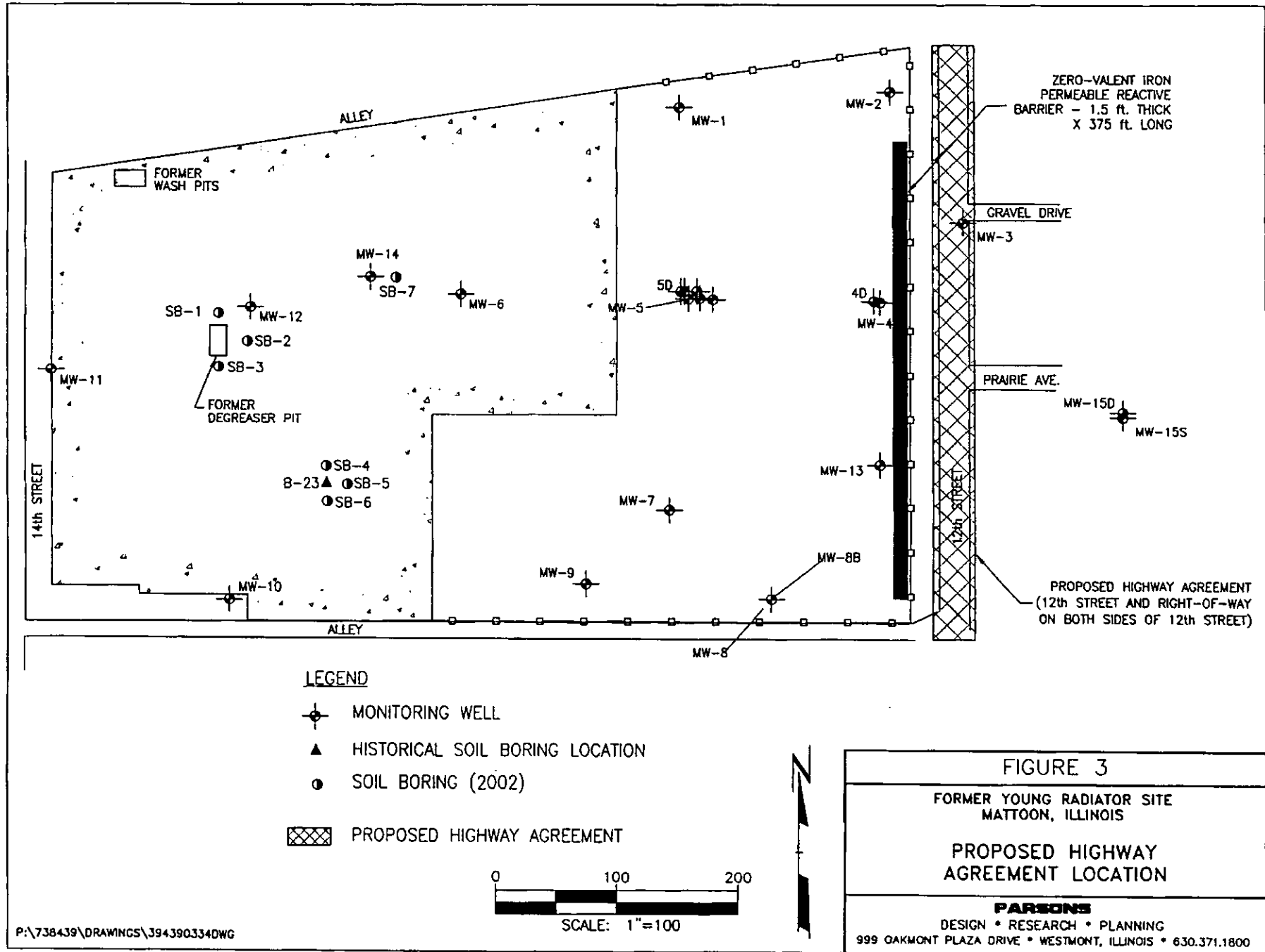




TABLE 1  
SOIL ANALYTICAL DATA RESULTS - METALS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	IAC Part 742 Ind/Comm Soil Ingestion Objective (mg/kg)	IAC Part 742 Ind/Comm Soil Inhalation Objective (mg/kg)	IAC Part 742 Migration to Class 1 GW Objective (mg/L)	IAC Part 742 Background Concentrations non-Metro. Areas (mg/kg)	S-1 8/98 (mg/kg)	S-1 (resample) 8/16/2001 (mg/kg)	S-1A 8/16/2001 (mg/kg)	S-1B 8/16/2001 (mg/kg)	S-1C 8/16/2001 (mg/kg)	S-2 8/98 (mg/kg)
<b>Total Metals (mg/kg)</b>										
Antimony	820	NA	NA	3.3	ND	--	--	--	--	ND
Arsenic	11.3	1,200	NA	11.3	22	9.8	7.2	5.5	5.9	3.9
Beryllium	1	2,100	NA	0.56	0.77	--	--	--	--	ND
Cadmium	2,000	2,800	NA	0.50	ND	--	--	--	--	13
Chromium	10,000	420	NA	13	110	--	--	--	--	25
Copper	82,000	NA	NA	8.9	300	--	--	--	--	170
Lead	400	NA	NA	20.9	1400	24	71	20	16	610
Mercury	610	540,000	NA	0.05	0.29	--	--	--	--	0.043
Nickel	41,000	21,000	NA	13	15	--	--	--	--	15
Selenium	10,000	NA	NA	0.37	ND	--	--	--	--	ND
Silver	10,000	NA	NA	0.50	3.1	--	--	--	--	3.9
Thallium	160	NA	NA	0.42	ND	--	--	--	--	ND
Zinc	610,000	NA	NA	60	1,300	--	--	--	--	1,100
<b>TCLP/SPLP Metals (mg/L)</b>										
Arsenic	NA	NA	0.05	NA	ND	--	--	--	--	ND
Cadmium	NA	NA	0.005	NA	--	--	--	--	--	0.2
Chromium	NA	NA	0.1	NA	ND	--	--	--	--	ND
Copper	NA	NA	0.65	NA	0.05	--	--	--	--	1.2
Lead	NA	NA	0.0075	NA	0.64	0.01	--	--	--	2.4
Mercury	NA	NA	0.002	NA	ND	--	--	--	--	--
Silver	NA	NA	0.05	NA	ND	--	--	--	--	ND
Zinc	NA	NA	5	NA	2.1	--	--	--	--	8.9

Notes:

NA: Not Applicable

--: Not Analyzed

ND: Not detected

1400

Exceeds Tier 1 Soil Component of Migration to Class 1 Groundwater Remediation Objective

0.64

Exceeds Tier 1 Soil Ingestion Remediation Objective

TABLE 1  
SOIL ANALYTICAL DATA RESULTS - METALS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	IAC Part 742 Ind/Comm Soil Ingestion Objective (mg/kg)	IAC Part 742 Ind/Comm Soil Inhalation Objective (mg/kg)	IAC Part 742 Migration to Class 1 GW Objective (mg/L)	S-2 (resample) 8/16/2001 (mg/kg)	S-2A 8/16/2001 (mg/kg)	S-2B 8/16/2001 (mg/kg)	S-2C 8/16/2001 (mg/kg)	S-2D 8/16/2001 (mg/kg)	B-23 8/98 (mg/kg)	B-24 8/98 (mg/kg)	B-25 8/98 (mg/kg)	B-26 8/98 (mg/kg)
<b>Total Metals (mg/kg)</b>												
Antimony	820	NA	NA	--	--	--	--	--	ND	ND	ND	ND
Arsenic	11.3	1,200	NA	--	--	--	--	--	2.7	4.9	5.8	2.6
Beryllium	1	2,100	NA	--	--	--	--	--	0.57	0.54	0.53	ND
Cadmium	2,000	2,800	NA	--	--	--	--	--	ND	ND	ND	ND
Chromium	10,000	420	NA	--	--	--	--	--	14	17	11	12
Copper	82,000	NA	NA	--	--	--	--	--	13	15	17	11
Lead	400	NA	NA	16	16	20	52	11	10	12	23	6.8
Mercury	610	540,000	NA	--	--	--	--	--	ND	0.12	0.39	5.9
Nickel	41,000	21,000	NA	--	--	--	--	--	11	18	12	16
Selenium	10,000	NA	NA	--	--	--	--	--	ND	ND	ND	ND
Silver	10,000	NA	NA	--	--	--	--	--	ND	ND	ND	ND
Thallium	160	NA	NA	--	--	--	--	--	ND	ND	ND	ND
Zinc	610,000	NA	NA	--	--	--	--	--	56	46	70	79
<b>TCLP/SPLP Metals (mg/L)</b>												
Arsenic	NA	NA	0.05	--	--	--	--	--	--	ND	ND	--
Cadmium	NA	NA	0.005	ND (0.0010)	--	--	--	--	--	--	--	--
Chromium	NA	NA	0.1	--	--	--	--	--	--	--	--	--
Copper	NA	NA	0.65	ND (0.010)	--	--	--	--	--	ND	ND	--
Lead	NA	NA	0.0075	0.0056	--	--	--	--	--	--	ND	--
Mercury	NA	NA	0.002	--	--	--	--	--	--	--	ND	ND
Silver	NA	NA	0.05	--	--	--	--	--	--	--	--	--
Zinc	NA	NA	5	0.037	--	--	--	--	--	--	--	--

Notes:

NA: Not Applicable

--: Not Analyzed

ND: Not detected

1400

0.64

Exceeds Tier 1 Soil Component of Migration to Class 1 Groundw

Exceeds Tier 1 Soil Ingestion Remediation Objective

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	QST B-1 (4-6.3') (mg/kg)	QST B-1 (11-11.8') (mg/kg)	QST B-2 (11-13.8') (mg/kg)	QST B-3 (7-9') (mg/kg)	QST B-4 (9-11') (mg/kg)	QST B-5 (9-11') (mg/kg)	QST B-6 (6.5-9') (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	0.053	0.016	ND (0.012)	ND (0.023)	ND (0.012)	0.014	0.063
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	0.011	ND (0.006)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.006)	0.011	ND (0.006)	ND (0.012)	0.15	9.2	ND (0.006)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	0.019	ND (0.006)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	0.012	0.010	ND (0.006)	ND (0.006)	ND (0.006)	0.008	ND (0.006)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Tetrachloroethene	110	20	0.06	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	0.015	ND (0.006)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.006)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	ND (0.006)	0.007	0.018	0.13	1.3	56	ND (0.006)
Vinyl chloride	7.9	1.1	0.01	--	--	--	--	--	--	--
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	QST B-7 (7.2-9') (mg/kg)	QST B-8 (9-10.7') (mg/kg)	QST B-9 (11-11.5') (mg/kg)	QST B-10 (11-13') (mg/kg)	QST B-11 (4-6.5') (mg/kg)	STS 4D (16-20') (field lab) (mg/kg)	STS 4D (20-24') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	0.016	0.016	0.015	0.024	0.061	--	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.007)	ND (0.006)	ND (0.010)	ND (0.010)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.007)	ND (0.006)	0.19	0.29
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.007)	ND (0.006)	ND (0.010)	ND (0.010)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	0.01	0.01	0.01	0.012	ND (0.006)	ND (0.010)	ND (0.010)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	ND (0.010)	ND (0.010)
Tetrachloroethene	110	20	0.06	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.007)	ND (0.006)	ND (0.010)	ND (0.010)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.006)	ND (0.006)	ND (0.006)	ND (0.007)	ND (0.006)	ND (0.010)	ND (0.010)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	0.25	0.054	ND (0.006)	ND (0.007)	ND (0.006)	ND (0.010)	ND (0.010)
Vinyl chloride	7.9	1.1	0.01	--	--	--	--	--	ND (0.010)	ND (0.010)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	STS 4D (28-32') (field lab) (mg/kg)	STS 5D (5-6') (field lab) (mg/kg)	STS 5D (10.5-12') (field lab) (mg/kg)	STS 5D (20-24') (field lab) (mg/kg)	STS B-12 (2-4') (field lab) (mg/kg)	STS B-12 (12-16') (field lab) (mg/kg)	STS B-14 (1.5-4') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	--	--	--	--	--	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (2.5)	ND (0.010)	ND (0.050)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.010)	ND (0.010)	1.9	ND (0.010)	2.7	0.12	ND (0.050)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.010)	ND (0.010)	0.02	ND (0.010)	ND (2.5)	ND (0.010)	ND (0.050)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (2.5)	ND (0.010)	ND (0.050)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	11	ND (0.010)	ND (0.050)
Tetrachloroethene	110	20	0.06	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (2.5)	ND (0.010)	ND (0.050)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (2.5)	ND (0.010)	ND (0.050)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	ND (0.010)	ND (0.010)	3.9	0.12	9.8	ND (0.010)	2.3
Vinyl chloride	7.9	1.1	0.01	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (2.5)	ND (0.010)	ND (0.050)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	STS B-14 (12-16') (field lab) (mg/kg)	STS B-18 (3-4') (field lab) (mg/kg)	STS B-18 (12-16') (field lab) (mg/kg)	STS B-19 (4-8') (field lab) (mg/kg)	STS B-19 (12-16') (field lab) (mg/kg)	STS B-20 (4-8') (field lab) (mg/kg)	STS B-20 (12-16') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	--	--	--	--	--	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	0.017	0.087	0.28	ND (0.010)	ND (0.010)	0.01	0.016
trans-1,2-Dichloroethene	41,000	3,100	0.7	0.018	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Tetrachloroethene	110	20	0.06	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	0.026	0.19	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Vinyl chloride	7.9	1.1	0.01	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	STS B-21 (8-12') (field lab) (mg/kg)	STS B-21 (12-16') (field lab) (mg/kg)	STS B-21 (12-16') (re-run) (mg/kg)	STS B-21 (12-16') (mg/kg)	STS B-22 (0-4') (field lab) (mg/kg)	STS B-22 (4-8') (field lab) (mg/kg)	STS B-22 (12-16') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	--	ND (1)	0.041	--	--	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.250)	ND (0.025)	ND (1)	ND (0.005)	--	ND (0.010)	ND (0.010)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.250)	0.38	ND (1)	0.059	--	ND (0.010)	ND (0.010)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.250)	0.63	ND (1)	0.014	--	ND (0.010)	ND (0.010)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	ND (0.250)	ND (0.025)	ND (1)	ND (0.005)	--	ND (0.010)	ND (0.010)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.250)	ND (0.025)	ND (1)	--	--	ND (0.010)	ND (0.010)
Tetrachloroethene	110	20	0.06	ND (0.250)	ND (0.025)	ND (1)	ND (0.005)	--	ND (0.010)	ND (0.010)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.250)	ND (0.025)	ND (1)	ND (0.005)	--	ND (0.010)	ND (0.010)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	2.4	8.2	22	0.4	--	ND (0.010)	ND (0.010)
Vinyl chloride	7.9	1.1	0.01	ND (0.250)	ND (0.025)	ND (1)	ND (0.005)	--	ND (0.010)	ND (0.010)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	ND	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	ND	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	ND	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	STS B-23 (0-4') (field lab) (mg/kg)	STS B-24 (0-4') (field lab) (mg/kg)	STS B-26 (8-12') (field lab) (mg/kg)	STS B-26 (8-12') (mg/kg)	STS B-26 (12-16') (field lab) (mg/kg)	STS B-27 (0-4') (mg/kg)	STS B-27 (12-16') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	--	--	0.034	--	0.033	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
trans-1,2-Dichloroethene	41,000	3,100	0.7	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	ND (0.010)	--	ND (0.010)	--	ND (0.010)
Tetrachloroethene	110	20	0.06	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
Toluene	410,000	42 <sup>a</sup>	12	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	0.013
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
Vinyl chloride	7.9	1.1	0.01	--	--	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.005)	ND (0.010)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	11,000	ND	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	2,400	ND	--	--	--	--	--
Phenanthrene	NA	NA	NA	680	ND	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives



TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class 1 GW Objective (mg/kg)	STS B-28 (4-8') (field lab) (mg/kg)	STS B-28 (8-12') (mg/kg)	STS B-28 (12-16') (field lab) (mg/kg)	STS B-29 (8-12') (field lab) (mg/kg)	STS B-29 (8-12') (field lab-DUP) (mg/kg)	STS B-29 (8-12') (mg/kg)	STS B-29 (12-16') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	0.027	--	--	--	0.036	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.25)	ND (0.005)	ND (0.010)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.010)	ND (0.005)	ND (0.010)	0.45	0.33	0.13	ND (0.010)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.010)	ND (0.005)	ND (0.010)	0.013	ND (0.25)	ND (0.005)	ND (0.010)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.25)	0.017	ND (0.010)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.010)	--	ND (0.010)	ND (0.010)	ND (0.25)	--	ND (0.010)
Tetrachloroethene	110	20	0.06	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.25)	ND (0.005)	ND (0.010)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.25)	ND (0.005)	ND (0.010)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	ND (0.010)	ND (0.005)	ND (0.010)	1.3	1.5	0.12	ND (0.010)
Vinyl chloride	7.9	1.1	0.01	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.25)	ND (0.005)	ND (0.010)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class 1 Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class 1 Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	STS B-30 (2-4') (field lab) (mg/kg)	STS B-30 (12-16') (field lab) (mg/kg)	STS B-31 (2-4') (mg/kg)	STS B-31 (8-12') (field lab) (mg/kg)	STS B-31 (12-16') (field lab) (mg/kg)	STS B-32 (40-42') (field lab) (mg/kg)	STS B-32 (36-42') (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	--	0.054	--	--	--	ND (0.025)
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.010)	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.005)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.010)	ND (0.010)	0.086	0.23	0.036	ND (0.010)	ND (0.005)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.010)	ND (0.010)	0.0095	0.018	ND (0.010)	ND (0.010)	0.013
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	ND (0.010)	ND (0.010)	0.018	ND (0.010)	ND (0.010)	ND (0.010)	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.010)	ND (0.010)	--	ND (0.010)	ND (0.010)	ND (0.010)	--
Tetrachloroethene	110	20	0.06	ND (0.010)	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.005)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.005)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	ND (0.010)	ND (0.010)	ND (0.005)	0.19	ND (0.010)	ND (0.010)	ND (0.005)
Vinyl chloride	7.9	1.1	0.01	ND (0.010)	ND (0.010)	ND (0.005)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.005)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	STS B-33 (4-8') (field lab) (mg/kg)	STS B-33 (12-16') (field lab) (mg/kg)	STS B-33 (28-32') (field lab) (mg/kg)	STS B-34 (0-4') (field lab) (mg/kg)	STS B-34 (12-16') (field lab) (mg/kg)	STS B-34 (12-16') (field lab - DUP) (mg/kg)	STS B-35 (4-8') (field lab) (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	--	--	--	--	--	--	--
Benzene	100	1.6	0.03	--	--	--	--	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--	--	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	ND (0.010)	ND (0.25)	ND (0.010)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.010)	ND (0.010)	ND (0.010)	2.2	0.19	ND (0.25)	ND (0.010)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	ND (0.010)	ND (0.25)	ND (0.010)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--	--	--	--	--
Methylene Chloride	760	24	0.02	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	ND (0.010)	ND (0.25)	ND (0.010)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	ND (0.010)	ND (0.25)	ND (0.010)
Tetrachloroethene	110	20	0.06	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	ND (0.010)	ND (0.25)	ND (0.010)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	ND (0.010)	ND (0.25)	ND (0.010)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--	--	--	--	--
Trichloroethene	520	8.9	0.06	ND (0.010)	ND (0.010)	ND (0.010)	2.3	1.5	5.4	ND (0.010)
Vinyl chloride	7.9	1.1	0.01	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.050)	0.046	ND (0.25)	ND (0.010)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--	--	--	--	--
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	--	--	--	--	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Phenanthrene	NA	NA	NA	--	--	--	--	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

**TABLE 2**  
**SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS**  
**FORMER YOUNG RADIATOR SITE**  
**MATTOON, ILLINOIS**

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class 1 GW Objective (mg/kg)	STS B-35 (12-16') (field lab) (mg/kg)	STS B-36 (4-8') (field lab) (mg/kg)	STS B-36 (12-16') (field lab) (mg/kg)
<b>VOCs</b>						
Acetone	200,000	100,000	16	--	--	ND (0.025)
Benzene	100	1.6	0.03	--	--	--
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	--	--	--
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	ND (0.010)	ND (0.010)	ND (0.25)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	--	--	--
cis-1,2-Dichloroethene	20,000	1,200	0.4	ND (0.010)	ND (0.010)	ND (0.25)
trans-1,2-Dichloroethene	41,000	3,100	0.7	ND (0.010)	ND (0.010)	ND (0.25)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	--	--	--
Methylene Chloride	760	24	0.02	ND (0.010)	ND (0.010)	ND (0.25)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (0.010)	ND (0.010)	3.1
Tetrachloroethene	110	20	0.06	ND (0.010)	ND (0.010)	ND (0.25)
Toluene	410,000	42 <sup>a</sup>	12	ND (0.010)	ND (0.010)	ND (0.25)
1,1,1-Trichloroethane	NA	1,200	2	--	--	--
Trichloroethene	520	8.9	0.06	ND (0.010)	ND (0.010)	ND (0.25)
Vinyl chloride	7.9	1.1	0.01	ND (0.010)	ND (0.010)	ND (0.25)
Xylenes (total)	410,000 <sup>a</sup>	320	150	--	--	--
<b>SVOCs</b>						
2-Methylnaphthalene	NA	NA	NA	--	--	--
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--
Phenanthrene	NA	NA	NA	--	--	--

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class 1 Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class 1 Groundwater and the Soil Inhalation Objectives

TABLE 2  
SOIL ANALYTICAL DATA RESULTS - ORGANIC COMPOUNDS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

	Tier 1 Ind/Comm Soil Ingestion Objective (mg/kg)	Tier 1 Ind/Comm Soil Inhalation Objective (mg/kg)	Tier 1 Migration to Class I GW Objective (mg/kg)	Degreaser Pit (2002)			B-23 (2002)			MW-14 (2002)
				Parsons SB-1 (3-5') 11/5/2002 (mg/kg)	Parsons SB-2 (5-7.5') 11/5/2002 (mg/kg)	Parsons SB-3 (4-5') 11/5/2002 (mg/kg)	Parsons SB-4 (8-10') 11/5/2002 (mg/kg)	Parsons SB-5 (5-7') 11/5/2002 (mg/kg)	Parsons SB-6 (3-5') 11/5/2002 (mg/kg)	Parsons SB-7 (7-9') 11/5/2002 (mg/kg)
<b>VOCs</b>										
Acetone	200,000	100,000	16	ND (0.0662)	ND (0.0592)	ND (0.0637)	0.275	ND (0.0598)	ND (0.0588)	ND (0.0623)
Benzene	100	1.6	0.03	ND (0.0027)	ND (0.0024)	ND (0.0026)	ND (0.0024)	ND (0.0024)	ND (0.0024)	0.003
Carbon Disulfide	20,000 <sup>a</sup>	9 <sup>a</sup>	32	ND (0.00265)	0.00344	0.00395	0.0226	ND (0.00239)	0.0106	ND (0.00249)
1,1-Dichloroethane	200,000	130 <sup>a</sup>	23	0.516	0.0238	0.00624	ND (0.00235)	ND (0.00239)	ND (0.00235)	ND (0.00249)
1,1-Dichloroethene	1,800 <sup>a</sup>	300 <sup>a</sup>	0.06	0.139	ND (0.00237)	ND (0.00255)	ND (0.00235)	ND (0.00239)	ND (0.00235)	ND (0.00249)
cis-1,2-Dichloroethene	20,000	1,200	0.4	11.8	0.0242	0.0119	0.104	ND (0.00239)	ND (0.00235)	ND (0.00249)
trans-1,2-Dichloroethene	41,000	3,100	0.7	0.0922	ND (0.00237)	ND (0.00255)	0.00305	ND (0.00239)	ND (0.00235)	ND (0.00249)
Ethylbenzene	20,000 <sup>a</sup>	58 <sup>a</sup>	13	0.0104	1.24	ND (0.0026)	0.0211	0.0211	ND (0.0024)	0.0052
Methylene Chloride	760	24	0.02	ND (0.00662)	ND (0.00592)	ND (0.00637)	ND (0.00587)	ND (0.00598)	ND (0.00588)	ND (0.00623)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	--	--	--	--	--	--	--
Tetrachloroethene	110	20	0.06	0.207	ND (0.00237)	ND (0.00255)	ND (0.00235)	ND (0.00239)	ND (0.00235)	ND (0.00249)
Toluene	410,000	42 <sup>a</sup>	12	0.0034	0.0043	0.003	0.0102	ND (0.0024)	ND (0.0024)	0.0094
1,1,1-Trichloroethane	NA	1,200	2	1.86	0.00486	ND (0.00255)	ND (0.00235)	ND (0.00239)	ND (0.00235)	ND (0.00249)
Trichloroethene	520	8.9	0.06	30.8	0.0276	0.0358	0.0827	ND (0.00239)	ND (0.00235)	0.00312
Vinyl chloride	7.9	1.1	0.01	0.0238	ND (0.00237)	ND (0.00255)	0.0301	ND (0.00239)	ND (0.00235)	ND (0.00249)
Xylenes (total)	410,000 <sup>a</sup>	320	150	0.0141	0.129	0.0133	0.059	0.0094	ND (0.0024)	0.0126
<b>SVOCs</b>										
2-Methylnaphthalene	NA	NA	NA	3.12	8.64	ND (2.15)	ND (4.1)	3.08	ND (4.19)	ND (2.06)
Naphthalene	4,100 <sup>a</sup>	1.8 <sup>a</sup>	12	ND (2.23)	ND (2.11)	ND (2.15)	ND (4.1)	ND (2.05)	ND (4.19)	ND (2.06)
Phenanthrene	NA	NA	NA	ND (2.23)	4.42	ND (2.15)	ND (4.1)	ND (2.05)	ND (4.19)	ND (2.06)

Notes:

a) Tier 1 Construction Worker Objective

NA: Not Available

--: Not Analyzed

ND: Not detected

1.3	Exceeds the Tier 1 Soil Migration to Class I Groundwater Objective
1.3	Exceeds the Tier 1 Soil Inhalation Objective
1.3	Exceeds both the Tier 1 Soil Migration to Class I Groundwater and the Soil Inhalation Objectives

TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-1 Monitoring Well 8/22/1995	MW-1 Monitoring Well 8/5/1998	MW-1 Monitoring Well 8/16/2001	MW-2 Monitoring Well 8/22/1995	MW-2 Monitoring Well 8/5/1998	MW-2 Monitoring Well 8/16/2001	MW-3 Monitoring Well 8/22/1995
<b>Field Measurements</b>									
pH	NA	--	--	--	6.88	--	--	7.22	--
Conductivity	NA	mS/cm	--	--	1.17	--	--	1.08	--
Temperature	NA	degrees C	--	--	18.4	--	--	17.5	--
Oxidation-reduction potential	NA	mV	--	--	61	--	--	74	--
Dissolved Oxygen	NA	mg/L	--	--	2.71	--	--	2.82	--
Ferrous Iron	NA	mg/L	--	--	--	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND	ND	0.13	ND	ND	0.016	ND
Benzene	0.005	mg/L	ND (0.005)	ND	ND (0.001)	ND (0.005)	ND	ND (0.001)	ND (0.005)
2-Butanone	NA	mg/L	ND	ND	ND (0.005)	ND	ND	ND (0.005)	ND
1,1-Dichloroethane	0.7	mg/L	ND	ND	ND (0.001)	ND	ND	ND (0.001)	ND
1,1-Dichloroethene	0.007	mg/L	ND	ND	ND (0.001)	ND	ND	ND (0.001)	ND
cis-1,2-Dichloroethene	0.07	mg/L	0.038	0.014	--	ND (0.005)	0.0041	--	0.31
trans-1,2-Dichloroethene	0.1	mg/L	ND (0.005)	ND	--	ND (0.005)	ND	--	ND (0.005)
1,2-Dichloroethene, total	0.07	mg/L	--	--	0.033	--	--	0.0051	--
Ethylbenzene	0.7	mg/L	ND	ND	ND (0.001)	ND	ND	ND (0.001)	ND
1,1,1-Trichloroethane	0.2	mg/L	ND	ND	ND (0.001)	ND	ND	ND (0.001)	ND
Trichloroethene	0.005	mg/L	0.009	ND	ND (0.001)	ND (0.005)	0.0033	0.002	0.38
Vinyl chloride	0.002	mg/L	ND (0.01)	ND	ND (0.002)	ND (0.01)	ND	ND (0.002)	ND (0.001)
Xylenes (total)	10	mg/L	ND	ND	ND (0.003)	ND	ND	ND (0.003)	ND
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	--	--	--	--	--	--
Ethane	NA	ug/L	--	--	--	--	--	--	--
Ethene	NA	ug/L	--	--	--	--	--	--	--
Chloride	200	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	--	--
Sulfate	400	mg/L	--	--	--	--	--	--	--
Sulfide	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:  
 --: Not Analyzed  
 NA: Not Applicable  
 ND: Not detected  
 Shading indicates an exceedance of the IAC Part 742 standard

TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-3 Monitoring Well 8/5/1998	MW-3 Monitoring Well 5/17/2001	MW-3 Monitoring Well 8/15/2001	MW-3 Monitoring Well 1/17/2002	MW-3 Monitoring Well 5/1/2002	MW-4 Monitoring Well 8/22/1995	MW-4 Monitoring Well 8/5/1998
<b>Field Measurements</b>									
pH	NA	--	--	6.72	6.8	6.81	6.91	--	--
Conductivity	NA	mS/cm	--	0.763	0.87	0.534	0.583	--	--
Temperature	NA	degrees C	--	18.2	24.05	9.7	13.8	--	--
Oxidation-reduction potential	NA	mV	--	214	77	161	--	--	--
Dissolved Oxygen	NA	mg/L	--	2.61	1.1	2.18	5.9	--	--
Ferrous Iron	NA	mg/L	--	0.04	0.03	0.02	0.07	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
Benzene	0.005	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.05)	ND
2-Butanone	NA	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
1,1-Dichloroethane	0.7	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
1,1-Dichloroethene	0.007	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
cis-1,2-Dichloroethene	0.07	mg/L	0.27	--	--	--	--	1.1	1.4
trans-1,2-Dichloroethene	0.1	mg/L	ND	--	--	--	--	ND (0.05)	ND
1,2-Dichloroethene, total	0.07	mg/L	--	0.35	0.37	0.27	0.24	--	--
Ethylbenzene	0.7	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
1,1,1-Trichloroethane	0.2	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
Trichloroethene	0.005	mg/L	0.21	0.14	0.2	0.12	0.11	1.5	0.39
Vinyl chloride	0.002	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.1)	ND
Xylenes (total)	10	mg/L	ND	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND	ND
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	ND (2.8)	ND (10)	ND (10)	ND (10)	--	--
Ethane	NA	ug/L	--	ND (5.6)	ND (10)	ND (10)	ND (10)	--	--
Ethene	NA	ug/L	--	ND (5.0)	ND (10)	ND (10)	ND (10)	--	--
Chloride	200	mg/L	--	24	27	30	33	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	0.68	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	0.18	0.11	0.14	--	--	--
Sulfate	400	mg/L	--	44	43	39	44	--	--
Sulfide	NA	mg/L	--	ND (1.0)	ND (1.0)	ND (1.0)	1.2	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	360	--	--
Alkalinity	NA	mg/L	--	--	--	--	340	--	--
Iron	NA	mg/L	--	--	--	--	0.07	--	--
Manganese	NA	mg/L	--	--	--	--	0.003	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:  
 --: Not Analyzed  
 NA: Not Applicable  
 ND: Not detected  
 Shading indicates an exceedance of the IAC Part 742 standard

TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-4 Monitoring Well 5/17/2001	MW-4 Monitoring Well 8/15/2001	MW-4 Monitoring Well 1/17/2002	MW-4 Monitoring Well 5/1/2002	MW-4D Monitoring Well 8/12/1998	MW-4D Monitoring Well 8/15/2001	MW-4D Monitoring Well 5/1/2002
<b>Field Measurements</b>									
pH	NA	--	7.33	6.86	6.94	6.84	--	7.31	7.13
Conductivity	NA	mS/cm	0.88	0.902	0.677	0.62	--	1.13	0.735
Temperature	NA	degrees C	14.6	18.78	12.7	11.8	--	16.3	13.4
Oxidation-reduction potential	NA	mV	137	265	-12	--	--	-111	--
Dissolved Oxygen	NA	mg/L	9.44	2.52	1.54	3.25	--	0.72	1.36
Ferrous Iron	NA	mg/L	0.15	0	0.75	0.11	--	--	0.92
<b>VOCs</b>									
Acetone	0.7	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
Benzene	0.005	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
2-Butanone	NA	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
1,1-Dichloroethane	0.7	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
1,1-Dichloroethene	0.007	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
cis-1,2-Dichloroethene	0.07	mg/L	--	--	--	--	1.6	--	--
trans-1,2-Dichloroethene	0.1	mg/L	--	--	--	--	0.019	--	--
1,2-Dichloroethene, total	0.07	mg/L	1	0.94	1.5	0.84	--	1.2	1.1
Ethylbenzene	0.7	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
1,1,1-Trichloroethane	0.2	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
Trichloroethene	0.005	mg/L	0.33	0.17	ND (0.1)	0.16	0.028	ND (0.1)	ND (0.1)
Vinyl chloride	0.002	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	0.12	ND (0.1)	ND (0.1)
Xylenes (total)	10	mg/L	ND (0.05)	ND (0.1)	ND (0.1)	ND (0.05)	ND	ND (0.1)	ND (0.1)
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	ND (2.8)	ND (10)	240	ND (10)	--	--	--
Ethane	NA	ug/L	ND (5.6)	ND (10)	ND (10)	ND (10)	--	--	--
Ethene	NA	ug/L	ND (5.0)	ND (10)	ND (10)	ND (10)	--	--	--
Chloride	200	mg/L	22	17	41	19	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	ND (0.20)	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	0.076	0.091	ND (0.050)	--	--	--	--
Sulfate	400	mg/L	100	92	92	74	--	--	--
Sulfide	NA	mg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	410	--	--	--
Alkalinity	NA	mg/L	--	--	--	320	--	--	--
Iron	NA	mg/L	--	--	--	1.4	--	--	--
Manganese	NA	mg/L	--	--	--	0.047	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

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GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS**

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-5 Monitoring Well 8/22/1995	MW-5 Monitoring Well 8/5/1998	MW-5 Monitoring Well 8/28/2000	MW-5 Monitoring Well 11/6/2000	MW-5 Monitoring Well 2/16/2001	MW-5 Monitoring Well 5/17/2001	MW-5 Monitoring Well 8/15/2001
<b>Field Measurements</b>									
pH	NA	--	--	--	6.39	6.4	5.59	7	6.8
Conductivity	NA	mS/cm	--	--	1.04	1.02	1.47	1.05	1.25
Temperature	NA	degrees C	--	--	20.7	18.2	10.8	14.5	23.1
Oxidation-reduction potential	NA	mV	--	--	6	-61	-69	70	-118
Dissolved Oxygen	NA	mg/L	--	--	1.04	2.85	1.47	5.32	1.13
Ferrous Iron	NA	mg/L	--	--	0.47	0.17	3.72	0.74	3.35
<b>VOCs</b>									
Acetone	0.7	mg/L	ND	ND	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Benzene	0.005	mg/L	ND	ND	ND (0.1)	ND (0.02)	ND (0.1)	ND (0.1)	ND (0.1)
2-Butanone	NA	mg/L	ND	ND	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
1,1-Dichloroethane	0.7	mg/L	ND	ND	ND (0.1)	ND (0.02)	ND (0.1)	ND (0.1)	ND (0.1)
1,1-Dichloroethene	0.007	mg/L	ND	ND	ND (0.1)	ND (0.02)	ND (0.1)	ND (0.1)	ND (0.1)
cis-1,2-Dichloroethene	0.07	mg/L	8.4	18	--	--	--	--	--
trans-1,2-Dichloroethene	0.1	mg/L	ND (1)	ND	--	--	--	--	--
1,2-Dichloroethene, total	0.07	mg/L	--	--	1.7	3.5	2.7	2.4	3
Ethylbenzene	0.7	mg/L	ND	ND	ND (0.1)	ND (0.02)	ND (0.1)	ND (0.1)	ND (0.1)
1,1,1-Trichloroethane	0.2	mg/L	ND	ND	ND (0.1)	ND (0.02)	ND (0.1)	ND (0.1)	ND (0.1)
Trichloroethene	0.005	mg/L	11	21	0.52	3	0.11	0.57	ND (0.1)
Vinyl chloride	0.002	mg/L	ND (2)	ND	ND (0.1)	ND (0.04)	ND (0.1)	ND (0.1)	0.11
Xylenes (total)	10	mg/L	ND	ND	ND (0.1)	ND (0.06)	ND (0.1)	ND (0.1)	ND (0.1)
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	--	210	--	870	140	1200
Ethane	NA	ug/L	--	--	ND (2.0)	--	6	ND (5.6)	ND (10)
Ethene	NA	ug/L	--	--	11	--	10	ND (5.0)	ND (10)
Chloride	200	mg/L	--	--	62	--	55	67	61
Nitrogen, nitrate	10	mg/L	--	--	ND (0.2)	--	ND (0.2)	--	--
Nitrogen, nitrite	NA	mg/L	--	--	ND (0.2)	--	ND (0.2)	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	ND (0.050)	ND (0.050)
Sulfate	400	mg/L	--	--	66	--	14	36	46
Sulfide	NA	mg/L	--	--	ND (1.0)	--	1.2	ND (1.0)	ND (1.0)
Total Organic Carbon	NA	mg/L	--	--	7.9	--	13	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	ND (5.0)	--	--	--
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

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TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-5 Monitoring Well 1/17/2002	MW-5 Monitoring Well 5/1/2002	MW-5D Monitoring Well 8/28/2000 9/5/2000	MW-6 Monitoring Well 8/22/1995	MW-6 Monitoring Well 8/5/1998	MW-6 Monitoring Well 8/16/2001	MW-7 Monitoring Well 8/22/1995
<b>Field Measurements</b>									
pH	NA	--	6.49	6.59	7.02	--	--	6.77	--
Conductivity	NA	mS/cm	1.05	0.504	0.762	--	--	1.18	--
Temperature	NA	degrees C	12.5	12.6	17.9	--	--	16.79	--
Oxidation-reduction potential	NA	mV	175	--	94	--	--	-80	--
Dissolved Oxygen	NA	mg/L	0.25	1.47	3.38	--	--	0.18	--
Ferrous Iron	NA	mg/L	4.1	4.62	0.49	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND (0.2)	ND (0.1)	0.075	ND	ND	ND (0.05)	ND
Benzene	0.005	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	0.015	ND	0.02	ND (0.005)
2-Butanone	NA	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	ND	ND	ND (0.05)	ND
1,1-Dichloroethane	0.7	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	ND	ND	ND (0.01)	ND
1,1-Dichloroethene	0.007	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	ND	ND	ND (0.01)	ND
cis-1,2-Dichloroethene	0.07	mg/L	--	--	--	3.4	2	--	0.017
trans-1,2-Dichloroethene	0.1	mg/L	--	--	--	0.033	ND	--	ND (0.005)
1,2-Dichloroethene, total	0.07	mg/L	2.6	1.4	ND (0.01)	--	--	1.5	--
Ethylbenzene	0.7	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	ND	ND	ND (0.01)	ND
1,1,1-Trichloroethane	0.2	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	ND	ND	ND (0.01)	ND
Trichloroethene	0.005	mg/L	ND (0.2)	0.1	ND (0.01)	ND (0.005)	ND	ND (0.01)	0.65
Vinyl chloride	0.002	mg/L	ND (0.2)	0.1	ND (0.01)	0.65	1.2	1.1	ND (0.01)
Xylenes (total)	10	mg/L	ND (0.2)	ND (0.1)	ND (0.01)	ND	ND	ND (0.03)	ND
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	3300	1700	970	--	--	--	--
Ethane	NA	ug/L	ND (10)	ND (10)	ND (2.0)	--	--	--	--
Ethene	NA	ug/L	ND (10)	ND (10)	ND (2.0)	--	--	--	--
Chloride	200	mg/L	64	35	5.1	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	ND (0.20)	ND (0.2)	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	ND (0.2)	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	ND (0.050)	--	--	--	--	--	--
Sulfate	400	mg/L	59	35	30	--	--	--	--
Sulfide	NA	mg/L	ND (1.0)	ND (1.0)	ND (1.0)	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	21	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	ND (5.0)	ND (4.9)	--	--	--	--	--
Hardness	NA	mg/L	--	450	--	--	--	--	--
Alkalinity	NA	mg/L	--	340	--	--	--	--	--
Iron	NA	mg/L	--	4.5	--	--	--	--	--
Manganese	NA	mg/L	--	3.2	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

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 --: Not Analyzed  
 NA: Not Applicable  
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**TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS**

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-7 Monitoring Well 8/5/1998	MW-7 Monitoring Well 8/16/2001	MW-8, Monitoring Well 8/22/1995	MW-8 Monitoring Well 8/5/1998	MW-8 Monitoring Well 8/16/2001	MW-9 Monitoring Well 8/22/1995	MW-9 Monitoring Well 8/5/1998
<b>Field Measurements</b>									
pH	NA	--	--	6.92	--	--	6.92	--	--
Conductivity	NA	mS/cm	--	1.24	--	--	0.819	--	--
Temperature	NA	degrees C	--	18.6	--	--	18.07	--	--
Oxidation-reduction potential	NA	mV	--	72	--	--	144	--	--
Dissolved Oxygen	NA	mg/L	--	1.01	--	--	1.75	--	--
Ferrous Iron	NA	mg/L	--	--	--	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND	ND (0.025)	ND	ND	ND (0.005)	ND	ND
Benzene	0.005	mg/L	ND	ND (0.005)	ND (0.005)	ND	ND (0.001)	ND (0.005)	ND
2-Butanone	NA	mg/L	ND	ND (0.025)	ND	ND	ND (0.005)	ND	ND
1,1-Dichloroethane	0.7	mg/L	ND	ND (0.005)	ND	ND	ND (0.001)	ND	ND
1,1-Dichloroethene	0.007	mg/L	ND	ND (0.005)	ND	ND	ND (0.001)	ND	ND
cis-1,2-Dichloroethene	0.07	mg/L	0.0052	--	0.012	ND	--	ND (0.005)	0.0078
trans-1,2-Dichloroethene	0.1	mg/L	ND	--	ND (0.005)	ND	--	ND (0.005)	ND
1,2-Dichloroethene, total	0.07	mg/L	--	ND (0.01)	--	--	0.0046	--	--
Ethylbenzene	0.7	mg/L	ND	ND (0.005)	ND	ND	ND (0.001)	ND	ND
1,1,1-Trichloroethane	0.2	mg/L	ND	ND (0.005)	ND	ND	0.0013	ND	ND
Trichloroethene	0.005	mg/L	0.41	0.59	0.13	ND	0.11	ND (0.005)	0.19
Vinyl chloride	0.002	mg/L	ND	ND (0.01)	ND (0.01)	ND	ND (0.002)	ND (0.01)	ND
Xylenes (total)	10	mg/L	ND	ND (0.015)	ND	ND	ND (0.003)	ND	ND
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	--	--	--	--	--	--
Ethane	NA	ug/L	--	--	--	--	--	--	--
Ethene	NA	ug/L	--	--	--	--	--	--	--
Chloride	200	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	--	--
Sulfate	400	mg/L	--	--	--	--	--	--	--
Sulfide	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

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FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-9 Monitoring Well 8/16/2001	MW-10 Monitoring Well 8/22/1995	MW-10 Monitoring Well 8/5/1998	MW-10 Monitoring Well 8/16/2001	MW-11 Monitoring Well 8/22/1995	MW-11 Monitoring Well 8/5/1998	MW-11 Monitoring Well 8/16/2001
<b>Field Measurements</b>									
pH	NA	--	6.79	--	--	6.95	--	--	6.66
Conductivity	NA	mS/cm	1.13	--	--	0.977	--	--	0.424
Temperature	NA	degrees C	20.3	--	--	17.1	--	--	20.1
Oxidation-reduction potential	NA	mV	139	--	--	91	--	--	-64
Dissolved Oxygen	NA	mg/L	1.09	--	--	0.7	--	--	1.36
Ferrous Iron	NA	mg/L	--	--	--	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND (0.005)	ND	ND	ND (0.005)	ND	ND	ND (0.005)
Benzene	0.005	mg/L	ND (0.001)	ND (0.005)	ND	ND (0.001)	ND	ND	ND (0.001)
2-Butanone	NA	mg/L	ND (0.005)	ND	ND	ND (0.005)	ND	ND	ND (0.005)
1,1-Dichloroethane	0.7	mg/L	ND (0.001)	ND	ND	ND (0.001)	ND	ND	ND (0.001)
1,1-Dichloroethene	0.007	mg/L	ND (0.001)	ND	ND	ND (0.001)	ND	ND	ND (0.001)
cis-1,2-Dichloroethene	0.07	mg/L	--	ND (0.005)	ND	--	ND (0.005)	ND	--
trans-1,2-Dichloroethene	0.1	mg/L	--	ND (0.005)	ND	--	ND (0.005)	ND	--
1,2-Dichloroethene, total	0.07	mg/L	ND (0.001)	--	--	ND (0.001)	--	--	ND (0.002)
Ethylbenzene	0.7	mg/L	ND (0.001)	ND	ND	ND (0.001)	ND	ND	ND (0.001)
1,1,1-Trichloroethane	0.2	mg/L	ND (0.001)	ND	ND	ND (0.001)	ND	ND	ND (0.001)
Trichloroethene	0.005	mg/L	ND (0.001)	ND (0.005)	ND	ND (0.001)	ND (0.005)	ND	ND (0.001)
Vinyl chloride	0.002	mg/L	ND (0.002)	ND (0.01)	ND	ND (0.002)	ND (0.01)	ND	ND (0.002)
Xylenes (total)	10	mg/L	ND (0.003)	ND	ND	ND (0.003)	ND	ND	ND (0.003)
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	--	--	--	--	--	--
Ethane	NA	ug/L	--	--	--	--	--	--	--
Ethene	NA	ug/L	--	--	--	--	--	--	--
Chloride	200	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	--	--
Sulfate	400	mg/L	--	--	--	--	--	--	--
Sulfide	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:  
 --: Not Analyzed  
 NA: Not Applicable  
 ND: Not detected  
 Shading indicates an exceedance of the IAC Part 742 standard

TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-12 Monitoring Well 8/12/1998	MW-12 Monitoring Well 8/16/2001	MW-13 Monitoring Well 8/12/1998	MW-13 Monitoring Well 8/16/2001	MW-14 Monitoring Well 8/12/1998	MW-14 Monitoring Well 8/16/2001	MW-15S Monitoring Well 5/17/2001
<b>Field Measurements</b>									
pH	NA	--	--	6.92	--	6.77	--	7.19	7.1
Conductivity	NA	mS/cm	--	0.721	--	0.97	--	0.96	0.939
Temperature	NA	degrees C	--	19.98	--	17.54	--	18.1	15.5
Oxidation-reduction potential	NA	mV	--	-132	--	74	--	-140	-23
Dissolved Oxygen	NA	mg/L	--	0.03	--	0.09	--	0.91	--
Ferrous Iron	NA	mg/L	--	--	--	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND	ND (0.005)	ND	ND (0.005)	ND	ND (0.005)	ND (0.01)
Benzene	0.005	mg/L	ND	ND (0.001)	ND	ND (0.001)	ND	ND (0.001)	ND (0.01)
2-Butanone	NA	mg/L	ND	ND (0.005)	ND	ND (0.005)	ND	ND (0.005)	ND (0.01)
1,1-Dichloroethane	0.7	mg/L	ND	0.047	ND	ND (0.001)	ND	ND (0.001)	ND (0.01)
1,1-Dichloroethene	0.007	mg/L	ND	ND (0.001)	ND	ND (0.001)	ND	ND (0.001)	ND (0.01)
cis-1,2-Dichloroethene	0.07	mg/L	0.44	--	ND	--	0.0068	--	--
trans-1,2-Dichloroethene	0.1	mg/L	0.0029	--	ND	--	0.0067	--	--
1,2-Dichloroethene, total	0.07	mg/L	--	0.0092	--	ND (0.002)	--	0.009	ND (0.01)
Ethylbenzene	0.7	mg/L	ND	ND (0.001)	ND	ND (0.001)	ND	ND (0.001)	ND (0.01)
1,1,1-Trichloroethane	0.2	mg/L	ND	0.0015	ND	ND (0.001)	ND	ND (0.001)	ND (0.01)
Trichloroethene	0.005	mg/L	0.053	0.01	ND	ND (0.001)	0.0046	ND (0.001)	ND (0.01)
Vinyl chloride	0.002	mg/L	1.5	0.034	ND	ND (0.002)	ND	0.0038	ND (0.01)
Xylenes (total)	10	mg/L	ND	ND (0.003)	ND	ND (0.003)	ND	ND (0.003)	ND (0.01)
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	--	--	--	--	--	--
Ethane	NA	ug/L	--	--	--	--	--	--	--
Ethene	NA	ug/L	--	--	--	--	--	--	--
Chloride	200	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	--	--
Sulfate	400	mg/L	--	--	--	--	--	--	--
Sulfide	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:

--: Not Analyzed

NA: Not Applicable

ND: Not detected

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TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	MW-15S Monitoring Well 8/15/2001	MW-15D Monitoring Well 8/15/2001	TMP-1 Temporary Well #1 8/28/2000	TMP-2 Temporary Well #2 8/28/2000	TMP-3 Temporary Well #3 8/28/2000	TMP-4 Temporary Well #4 8/28/2000	TMP-5 Temporary Well #5 8/28/2000
<b>Field Measurements</b>									
pH	NA	--	6.76	7.42	6.41	6.5	6.35	6.44	6.02
Conductivity	NA	mS/cm	1.07	0.89	0.89	0.776	0.771	0.693	0.652
Temperature	NA	degrees C	21.1	17.6	23.9	19.4	20.1	22.8	20.9
Oxidation-reduction potential	NA	mV	-62	-140	-53	53	-16	-14	-19
Dissolved Oxygen	NA	mg/L	0.56	0.72	1.2	1.63	9.9	2.46	1.78
Ferrous Iron	NA	mg/L	0.16	--	--	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND (0.01)	ND (0.01)	0.022	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.01)
Benzene	0.005	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.01)
2-Butanone	NA	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.01)
1,1-Dichloroethane	0.7	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	0.41	ND (0.01)
1,1-Dichloroethene	0.007	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	0.16	ND (0.01)
cis-1,2-Dichloroethene	0.07	mg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	0.1	mg/L	--	--	--	--	--	--	--
1,2-Dichloroethene, total	0.07	mg/L	ND (0.01)	ND (0.01)	0.015	0.62	0.58	0.71	0.17
Ethylbenzene	0.7	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.01)
1,1,1-Trichloroethane	0.2	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	4.7	ND (0.01)
Trichloroethene	0.005	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	0.26	0.16	0.55	0.01
Vinyl chloride	0.002	mg/L	ND (0.01)	ND (0.01)	0.052	ND (0.05)	ND (0.05)	ND (0.05)	0.063
Nylenes (total)	10	mg/L	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.01)
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	280	--	--	--	--	--	--
Ethane	NA	ug/L	ND (10)	--	--	--	--	--	--
Ethene	NA	ug/L	ND (10)	--	--	--	--	--	--
Chloride	200	mg/L	26	--	--	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	ND (0.05)	--	--	--	--	--	--
Sulfate	400	mg/L	37	--	--	--	--	--	--
Sulfide	NA	mg/L	ND (1.0)	--	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:  
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TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	TMP-6 Temporary Well #6 8/28/2000	TMP-7 Temporary Well #7 11/7/2000	TMP-8 Temporary Well #8 11/7/2000	TMP-9 Temporary Well #9 11/7/2000	TMP-10 Temporary Well #10 11/7/2000	TMP-11 Temporary Well #11 11/7/2000	TMP-12 Temporary Well #12 11/7/2000
<b>Field Measurements</b>									
pH	NA	--	6.8	6.05	6.04	5.93	5.82	5.79	5.98
Conductivity	NA	mS/cm	0.889	0.965	0.507	0.47	1.28	1.73	1.13
Temperature	NA	degrees C	19.9	18.5	18.3	18.6	18.3	18.5	18.4
Oxidation-reduction potential	NA	mV	-4	-28	-25	-1	-7	-13	-21
Dissolved Oxygen	NA	mg/L	0.5	0.62	1.81	3.19	1.5	2.08	1.22
Ferrous Iron	NA	mg/L	--	--	--	--	--	--	--
<b>VOCs</b>									
Acetone	0.7	mg/L	ND (0.01)	--	--	--	--	--	--
Benzene	0.005	mg/L	ND (0.01)	--	--	--	--	--	--
2-Butanone	NA	mg/L	ND (0.01)	--	--	--	--	--	--
1,1-Dichloroethane	0.7	mg/L	ND (0.01)	--	--	--	--	--	--
1,1-Dichloroethene	0.007	mg/L	ND (0.01)	--	--	--	--	--	--
cis-1,2-Dichloroethene	0.07	mg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	0.1	mg/L	--	--	--	--	--	--	--
1,2-Dichloroethene, total	0.07	mg/L	0.028	--	--	--	--	--	--
Ethylbenzene	0.7	mg/L	ND (0.01)	--	--	--	--	--	--
1,1,1-Trichloroethane	0.2	mg/L	ND (0.01)	--	--	--	--	--	--
Trichloroethene	0.005	mg/L	ND (0.01)	--	--	--	--	--	--
Vinyl chloride	0.002	mg/L	ND (0.01)	--	--	--	--	--	--
Xylenes (total)	10	mg/L	ND (0.01)	--	--	--	--	--	--
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	--	--	--	--	--	--	--
Ethane	NA	ug/L	--	--	--	--	--	--	--
Ethene	NA	ug/L	--	--	--	--	--	--	--
Chloride	200	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate	10	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	--	--
Sulfate	400	mg/L	--	--	--	--	--	--	--
Sulfide	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	--	--	--	--	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	930	2600	ND (25)	60000	43000	500
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:  
 --: Not Analyzed  
 NA: Not Applicable  
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TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	VegOil Pilot Test						
			VEG-1 Monitoring Well 8/28/2000	VEG-1 Monitoring Well 11/6/2000	VEG-2 Monitoring Well 8/28/2000	VEG-2 Monitoring Well 11/6/2000	VEG-2 Monitoring Well 2/16/2001	VEG-2 Monitoring Well 5/17/2001	VEG-2 Monitoring Well 8/15/2001
<b>Field Measurements</b>									
pH	NA	--	6.19	5.45	6.49	6.23	5.56	6.86	6.9
Conductivity	NA	mS/cm	0.928	1.91	0.773	0.792	0.97	1.11	1.38
Temperature	NA	degrees C	21.3	16.6	19.8	18	11	15.1	19.9
Oxidation-reduction potential	NA	mV	39	-56	108	-56	-217	-138	-146
Dissolved Oxygen	NA	mg/L	0.01	1.26	0.54	0.57	1.08	2.4	0.55
Ferrous Iron	NA	mg/L	0.34	13.25	0.78	2.23	9.3	3.14	4.33
<b>VOCs</b>									
Acetone	0.7	mg/L	ND (0.02)	ND (0.25)	ND (0.2)	ND (0.25)	ND (1)	ND (2.5)	ND (1)
Benzene	0.005	mg/L	ND (0.02)	ND (0.05)	ND (0.2)	ND (0.050)	ND (1)	ND (0.5)	ND (1)
2-Butanone	NA	mg/L	ND (0.02)	0.61	ND (0.2)	ND (0.25)	ND (1)	ND (2.5)	ND (1)
1,1-Dichloroethane	0.7	mg/L	ND (0.02)	ND (0.05)	ND (0.2)	ND (0.050)	ND (1)	ND (0.5)	ND (1)
1,1-Dichloroethene	0.007	mg/L	ND (0.02)	ND (0.05)	ND (0.2)	ND (0.050)	ND (1)	ND (0.5)	ND (1)
cis-1,2-Dichloroethene	0.07	mg/L	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	0.1	mg/L	--	--	--	--	--	--	--
1,2-Dichloroethene, total	0.07	mg/L	0.41	9.2	7.4	19	36	44	32
Ethylbenzene	0.7	mg/L	ND (0.02)	ND (0.05)	ND (0.2)	ND (0.050)	ND (1)	ND (0.5)	ND (1)
1,1,1-Trichloroethane	0.2	mg/L	ND (0.02)	ND (0.05)	ND (0.2)	ND (0.050)	ND (1)	ND (0.5)	ND (1)
Trichloroethene	0.005	mg/L	0.11	ND (0.05)	1.3	7.1	ND (1)	3	ND (1)
Vinyl chloride	0.002	mg/L	ND (0.02)	0.2	0.22	0.67	1.4	2.8	9.1
Xylenes (total)	10	mg/L	ND (0.02)	ND (0.15)	ND (0.2)	ND (0.150)	ND (1)	ND (0.5)	ND (1)
<b>Water Quality Parameters</b>									
Methane	NA	ug/L	110	--	83	--	500	670	580
Ethane	NA	ug/L	ND (2.0)	--	5.4	--	68	70	120
Ethene	NA	ug/L	5.7	--	2.2	--	ND (5.0)	ND (5.0)	ND (10)
Chloride	200	mg/L	42	--	33	--	52	50	66
Nitrogen, nitrate	10	mg/L	ND (0.2)	--	ND (0.2)	--	ND (0.2)	--	--
Nitrogen, nitrite	NA	mg/L	ND (0.2)	--	ND (0.2)	--	ND (0.2)	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--	ND (0.050)	ND (0.050)
Sulfate	400	mg/L	55	--	43	--	6.6	5.7	2.2
Sulfide	NA	mg/L	ND (1.0)	--	ND (1.0)	--	ND (1.0)	ND (1.0)	ND (1.0)
Total Organic Carbon	NA	mg/L	12	--	18	--	86	--	--
Total Organic Carbon, dissolved	NA	mg/L	--	--	--	--	--	--	--
Oil and Grease, total recoverable	NA	mg/L	--	330	--	ND (5.0)	--	--	ND (4.8)
Hardness	NA	mg/L	--	--	--	--	--	--	--
Alkalinity	NA	mg/L	--	--	--	--	--	--	--
Iron	NA	mg/L	--	--	--	--	--	--	--
Manganese	NA	mg/L	--	--	--	--	--	--	--
Calcium	NA	mg/L	--	--	--	--	--	--	--
Magnesium	NA	mg/L	--	--	--	--	--	--	--
Potassium	NA	mg/L	--	--	--	--	--	--	--
Sodium	NA	mg/L	--	--	--	--	--	--	--

Notes:  
 --: Not Analyzed  
 NA: Not Applicable  
 ND: Not detected  
 Shading indicates an exceedance of the IAC Part 742 standard



**TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS**

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	VegOil Pilot Test				
			VEG-2 Monitoring Well 1/17/2002	VEG-2 Monitoring Well 5/1/2002	VEG-1D Monitoring Well 8/28/2000	VEG-2D Monitoring Well 8/28/2000	VEG-2D Monitoring Well 8/15/2001
<b>Field Measurements</b>							
pH	NA	—	6.58	6.58	7.41	7.37	7.38
Conductivity	NA	mS/cm	0.827	0.846	1.01	0.816	0.94
Temperature	NA	degrees C	11.2	12.7	24.5	24.9	17.1
Oxidation-reduction potential	NA	mV	147	—	124	115	-159
Dissolved Oxygen	NA	mg/L	0.09	0.94	5.07	5.54	0.95
Ferrous Iron	NA	mg/L	3.15	4.32	8.5	55	—
<b>VOCs</b>							
Acetone	0.7	mg/L	ND (2)	ND (1)	0.024	0.023	ND (0.01)
Benzene	0.005	mg/L	ND (2)	ND (1)	ND (0.01)	ND (0.01)	ND (0.01)
2-Butanone	NA	mg/L	ND (2)	ND (1)	0.049	0.16	ND (0.01)
1,1-Dichloroethane	0.7	mg/L	ND (2)	ND (1)	ND (0.01)	ND (0.01)	ND (0.01)
1,1-Dichloroethene	0.007	mg/L	ND (2)	ND (1)	ND (0.01)	ND (0.01)	ND (0.01)
cis-1,2-Dichloroethene	0.07	mg/L	—	—	—	—	—
trans-1,2-Dichloroethene	0.1	mg/L	—	—	—	—	—
1,2-Dichloroethene, total	0.07	mg/L	41	26	0.19	0.18	0.018
Ethylbenzene	0.7	mg/L	ND (2)	ND (1)	ND (0.01)	ND (0.01)	ND (0.01)
1,1,1-Trichloroethane	0.2	mg/L	ND (2)	ND (1)	ND (0.01)	ND (0.01)	ND (0.01)
Trichloroethene	0.005	mg/L	ND (2)	ND (1)	0.094	0.024	ND (0.01)
Vinyl chloride	0.002	mg/L	8.3	5.3	ND (0.01)	ND (0.01)	0.015
Xylenes (total)	10	mg/L	ND (2)	ND (1)	ND (0.01)	ND (0.01)	ND (0.01)
<b>Water Quality Parameters</b>							
Methane	NA	ug/L	2400	2200	2300	440	—
Ethane	NA	ug/L	ND (500)	ND (1000)	ND (2.0)	ND (2.0)	—
Ethene	NA	ug/L	ND (10)	22	ND (2.0)	3	—
Chloride	200	mg/L	78	44	40	28	—
Nitrogen, nitrate	10	mg/L	—	ND (0.2)	0.2	0.49	—
Nitrogen, nitrite	NA	mg/L	—	—	ND (0.2)	ND (0.2)	—
Nitrogen, nitrate + nitrite	NA	mg/L	ND (0.050)	—	—	—	—
Sulfate	400	mg/L	22	ND (2.0)	86	61	—
Sulfide	NA	mg/L	ND (1.0)	ND (1.0)	2	2.4	—
Total Organic Carbon	NA	mg/L	—	—	120	1300	—
Total Organic Carbon, dissolved	NA	mg/L	—	—	—	—	—
Oil and Grease, total recoverable	NA	mg/L	4.9	ND (4.9)	—	—	ND (4.8)
Hardness	NA	mg/L	—	540	—	—	—
Alkalinity	NA	mg/L	—	320	—	—	—
Iron	NA	mg/L	—	15	—	—	—
Manganese	NA	mg/L	—	3.7	—	—	—
Calcium	NA	mg/L	—	—	—	—	—
Magnesium	NA	mg/L	—	—	—	—	—
Potassium	NA	mg/L	—	—	—	—	—
Sodium	NA	mg/L	—	—	—	—	—

Notes:  
 —: Not Analyzed  
 NA: Not Applicable  
 ND: Not detected  
 Shading indicates an exceedance of the IAC Part 742 standard

TABLE 3  
GROUNDWATER ANALYTICAL DATA RESULTS  
FORMER YOUNG RADIATOR SITE  
MATTOON, ILLINOIS

Sample ID: Sample Location: Sampling Date:	IAC Part 742 Class I GW Objective (mg/L)	Units	Permeable Reactive Barrier Wall				
			PRB-1 Temp. Well 11/5/2002	PRB-3 Temp. Well 11/5/2002	PRB-4 Temp. Well 11/5/2002	PRB-5 Temp. Well 11/5/2002	PRB-6 Temp. Well 11/5/2002
<b>Field Measurements</b>							
pH	NA	--	7.14	6.58	7.07	7.26	7.04
Conductivity	NA	mS/cm	933	510	722	826	784
Temperature	NA	degrees C	14.95	15.05	14.01	13.2	12.99
Oxidation-reduction potential	NA	mV	-54.9	99	-28	-30.2	23.2
Dissolved Oxygen	NA	mg/L	2.92	4.87	2.48	3.37	4.29
Ferrous Iron	NA	mg/L	--	--	--	--	--
<b>VOCs</b>							
Acetone	0.7	mg/L	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Benzene	0.005	mg/L	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
2-Butanone	NA	mg/L	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethane	0.7	mg/L	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
1,1-Dichloroethene	0.007	mg/L	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
cis-1,2-Dichloroethene	0.07	mg/L	ND (0.001)	0.0073	0.313	0.262	0.0254
trans-1,2-Dichloroethene	0.1	mg/L	ND (0.001)	ND (0.001)	0.004	0.191	ND (0.001)
1,2-Dichloroethene, total	0.07	mg/L	--	--	--	--	--
Ethylbenzene	0.7	mg/L	ND (0.001)	0.0012	0.0025	ND (0.001)	ND (0.001)
1,1,1-Trichloroethane	0.2	mg/L	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)
Trichloroethene	0.005	mg/L	ND (0.001)	0.0017	0.0031	0.779	0.0465
Vinyl chloride	0.002	mg/L	ND (0.001)	ND (0.001)	ND (0.001)	0.0012	ND (0.001)
Xylenes (total)	10	mg/L	ND (0.001)	0.004	0.0122	0.0013	ND (0.001)
<b>Water Quality Parameters</b>							
Methane	NA	ug/L	--	--	--	--	--
Ethane	NA	ug/L	--	--	--	--	--
Ethene	NA	ug/L	--	--	--	--	--
Chloride	200	mg/L	--	1.61	15.4	21.4	--
Nitrogen, nitrate	10	mg/L	--	0.13	0.32	0.1	--
Nitrogen, nitrite	NA	mg/L	--	--	--	--	--
Nitrogen, nitrate + nitrite	NA	mg/L	--	--	--	--	--
Sulfate	400	mg/L	--	21.4	63.4	24.5	--
Sulfide	NA	mg/L	--	--	--	--	--
Total Organic Carbon	NA	mg/L	--	3.75	4.05	2.67	--
Total Organic Carbon, dissolved	NA	mg/L	--	2.99	3.36	2.41	--
Oil and Grease, total recoverable	NA	mg/L	--	--	--	--	--
Hardness	NA	mg/L	--	--	--	--	--
Alkalinity	NA	mg/L	--	208	296	416	--
Iron	NA	mg/L	--	128	339	316	--
Manganese	NA	mg/L	--	--	--	--	--
Calcium	NA	mg/L	--	133	488	912	--
Magnesium	NA	mg/L	--	60.3	217	400	--
Potassium	NA	mg/L	--	13.1	27.4	37.3	--
Sodium	NA	mg/L	--	9.57	28.3	35	--

Notes:  
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 Shading indicates an exceedance of the IAC Part 742 standard