DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)
Migration of Contaminated Groundwater Under Control

Facility Name: General Electric Railcar Repair Services Elkton Facility
Facility Address: Zeitler and Hope Lanes, Elkton, MD 21922
Facility EPA ID #: MDD078288354

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

yes If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, (GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

yes If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

☐ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

☐ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

A report titled "2005 OFF-SITE INVESTIGATION, GENRAL ELECTRIC RAILCAR REPAIR SERVICES FACILITY, TRIUMPH INDUSTRIAL PARK. ELKTON, CECIL COUNTY, MARYLAND" was submitted to the EPA Region III project coordinator on April 25, 2006. The results of this Fall 2005 Off-Site Groundwater Investigation (2005 OGI) are used to establish the rationale for this section of the EI. The following provides a summary of the findings.

During the 2005 OGI, groundwater samples were collected from the 50 on-site monitor wells located at the GE Railcar facility and from the 10 off-site monitor wells located east and south of the property, i.e., hydraulically down-gradient direction. The groundwater samples were analyzed for site-specific volatile organic compounds (VOCs).

Table 1(attached) presents a tabular summary of the VOC results in groundwater collected from the 60 facility monitor wells (on-site and off-site) during the Fall 2005 OGI. Included on Table 1 are the corresponding analytical detection target limits, the Maryland Department of Environment (MDE) Groundwater Standards (GS) as published in August 2001, and the EPA National Primary Drinking Water Standards' maximum concentration level, MCL, (if established and published).

Inspection of Table 1 indicates that 24 different VOCs were identified in at least one of the groundwater samples collected during the Fall 2005 OGI sampling event. Of the 24 compounds detected, further review of the results in the Table 1 indicates the MDE GS or the EPA National Primary Drinking Water Standards' MCL for the following twelve VOCs was exceeded in at least one well:

Acetone	cis-1,2-dichloroethene (DCE)	Tetrachloroethene (PCE)
Benzene	trans-1,2-dichloroethene (DCE)	Toluene
Chlorobenzene	trans-1,3-dichloropropene	Trichloroethene (TCE)
1,2-dichloroethane (DCA)	1,1,2,2-tetrachloroethane (PCA)	vinyl chloride

Acetone was reported to be in 51 groundwater samples, of which 23 results exceeded the MDE GS. An MCL has not been established for acetone. Acetone is a common lab contaminant and these results do not necessarily indicate an occurrence in the groundwater samples, further evidenced by the presence of acetone in two field blanks.

1,2-DCA was identified in seven wells sampled during the Fall 2005 OGI sampling event; however, only one well (MW-42: 0.0072 milligrams per liter (mg/L)) was above the MDE GS and EPA MCL of 0.005 mg/L.

Cis-1,2-DCE was identified in 27 wells sampled during the Fall 2005 OGI sampling event; however the EPA MCL and MDE GS of 0.070 mg/L was exceeded in only three wells (MW-42: 1.05 mg/L, MW-44: 0.644 mg/L OS-MW14: 0.0852mg/L). The occurrence of cis-1,2-DCE corresponds to areas where PCE and TCE have been identified, which is expected since it is a breakdown, or daughter, product of these two compounds.

Trans-1,3-dichloropropene was identified in one well (MW-23: 0.0031 mg/L) above the MDE GS of 0.001 mg/L. An EPA MCL has not been published for trans-1,3-dichloropropene.

Trans-1,2-DCE was identified in 18 wells sampled during the Fall 2005 OGI sampling event; however the EPA MCL and MDE Groundwater Standard of 0.100 mg/L was exceeded in only two wells (MW-42: 0.691 mg/L and MW-44: 0.408 mg/L). The occurrence of cis-1,2-DCE corresponds to areas where PCE and TCE have been identified, which is expected since it is a breakdown, or daughter, product of these two compounds.

Toluene was identified in 3 wells sampled during the Fall 2005 OGI sampling event; however the EPA MCL and MDE GS of 1.0 mg/L was exceeded in only one well (MW-12R: 1.96 mg/L). The occurrence of toluene in MW-12R corresponds to former still bottoms disposal area where paint related materials were identified during assessment and cleanup activities in the late 1980s and early 1990s, respectively.

Vinyl Chloride was identified in ten wells sampled during the Fall 2005 OGI sampling event; however the EPA MCL and MDE GS of 0.002 mg/L was exceeded in only four wells (MW-12R: 0.0193 mg/L, MW-17: 0.0068 mg/L, MW-42: 0.0836 mg/L, and MW-44: 0.030 mg/L). The occurrence of vinyl chloride corresponds to areas where PCE and TCE have been identified, which is expected since it is a breakdown, or daughter, product of these two compounds.

Footnotes:

1"Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

yes If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

☐ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) – skip to #8 and enter "NO" status code, after providing an explanation.

☐ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The results of the Fall 2005 OGI and a site investigation conducted at the facility during 2001 are used to establish the rationale for this section of the EI. The results of the 2001 site investigation (2001 SI) were presented in a report titled "SITE INVESTIGATION REPORT OF THE GENERAL ELECTRIC SERVICES FACILITY, ELKTON, MARYLAND" and submitted to the EPA Region III project coordinator on April 16, 2002.

The contaminants concentration trends noted during the site investigations (2001 SI and 2005 OGI) suggest that constituents of concern (COCs) associated with the GE Railcar facility are expected to continue to be stable and not expanding in the groundwater underlying and downgradient of the facility. The investigations noted a general trend of lower COC concentrations downgradient of the GE Railcar facility. Also, hydraulic parameters (i.e., hydraulic gradient, 0.011 feet per feet; hydraulic conductivity, $2.15^{*}\ 10^{-4}$ cm/sec; groundwater seepage velocity, 21 feet per year) provide further support that the COCs present in the groundwater are "*expected to remain within "existing area of contaminated groundwater" as defined by the monitoring locations designated at the time of this determination*". It should be noted that the EPA Region III acknowledges that other sources (i.e., not related to former operations at the GE Railcar facility) may be affecting groundwater off-site.

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

☐ If yes - continue after identifying potentially affected surface water bodies.

no If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

☐ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The results of the 2001 SI and the Fall 2005 OGI are used to establish the rationale for this section of the EI. Based on the COC concentration trends discussed in the 2001 SI and the 2005 OGI reports, it is unlikely that COCs exhibiting concentrations above MCLs or MDE GS would migrate downgradient of the GE Railcar facility and discharge into a surface water body.

The contaminants concentration trends noted during the site investigations suggest that COCs associated with the GE Railcar facility will not discharge into surface water bodies. Little Elk Creek, the nearest surface water body, is located more than 1,500 feet south of the facility (downgradient direction). Little Elk Creek is a tributary of Elk Creek, which is located more than 10,500 feet south of the facility.

The investigations noted a general trend of lower COC concentrations downgradient of the GE Railcar facility. Also, hydraulic parameters (i.e., hydraulic gradient, 0.011 feet per feet; hydraulic conductivity, $2.15^{*}\ 10^{-4}$ cm/sec; groundwater seepage velocity, 21 feet per year) provide further support that the COCs present in the groundwater are "*expected to remain within "existing area of contaminated groundwater" as defined by the monitoring locations designated at the time of this determination*".

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

☐ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

☐ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

☐ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

Skipped pursuant section # 4.

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

☐ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment[5], appropriate to the potential for impact that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

☐ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

☐ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

Skipped pursuant to Section # 4.

[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

yes If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

☐ If no - enter "NO" status code in #8.

☐ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

As part of the September 12, 2007 Settlement Agreement and Administrative Order on Consent between USEPA Region III and GE Railcar Repair Services Corporation (GE Railcar) to conduct a Remedial Investigation and Feasibility Study at the Elkton facility, GE Railcar will develop a groundwater sampling and analysis plan to evaluate the performance of any implemented remedial action.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

yes YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the General Electric Railcar Repair Services facility, located in the Triumph Industrial Park, 545 Blueball Road (off of Zietler Lane) Elkton, Cecil county Maryland 21922. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater".

☐ NO - Unacceptable migration of contaminated groundwater is observed or expected.

☐ IN - More information is needed to make a determination.

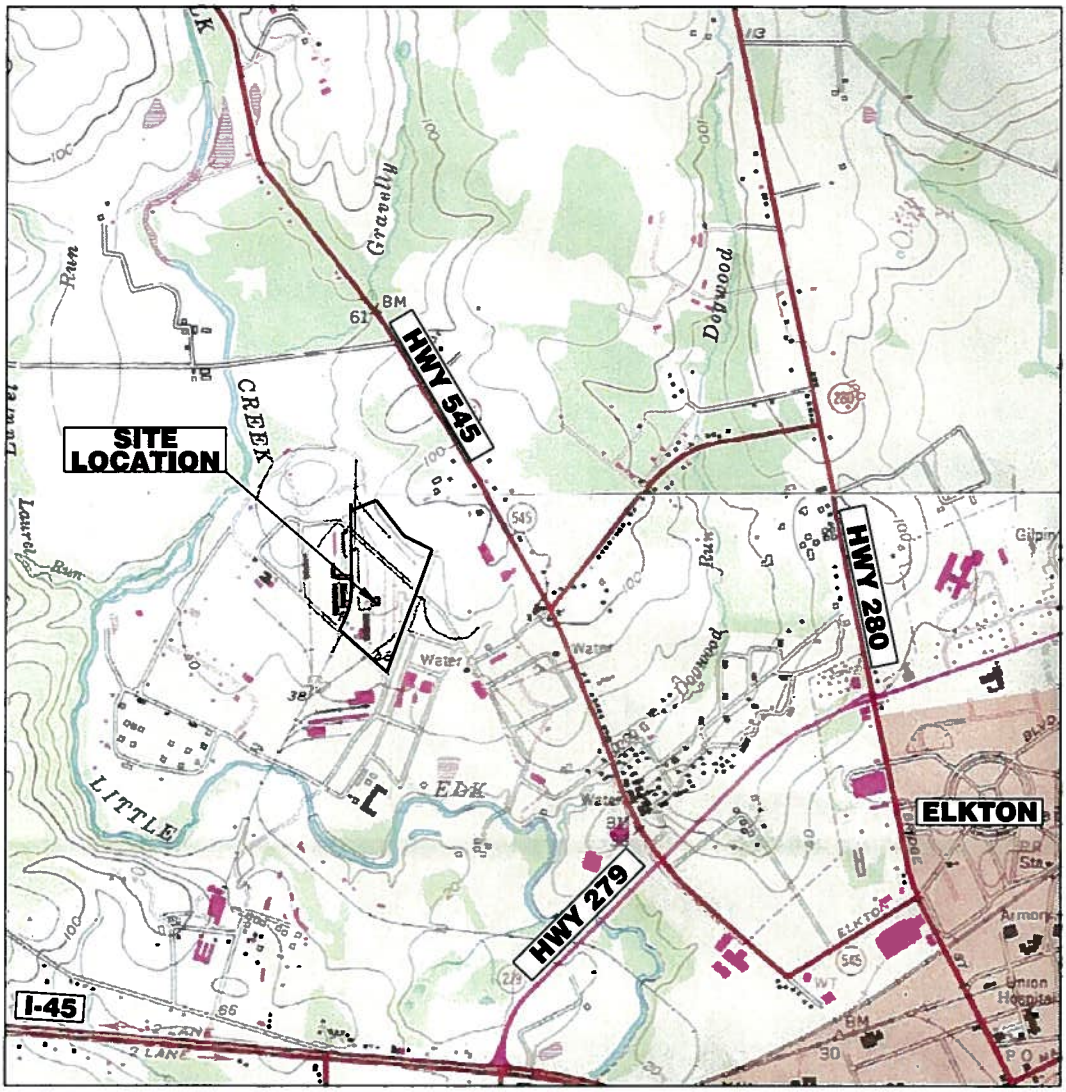
Completed by (signature) _____ Date **2/25/08**
(print) **Barbara Smith**
(title) EPA Proj. Manager

Supervisor (signature) _____ Date 4-2-2008
(print) **Robert Greaves**
(title) Chief, RCRA Operations Branch
(EPA Region or State) EPA - III

Locations where References may be found:

US EPA Region III (3WC23)
Waste & Chemicals Management Division
1650 Arch Street
Philadelphia, PA 19103

Contact telephone and e-mail numbers
(name) Barbara M. Smith
(phone #) 215-814-5786
(e-mail) smith.barbara@epamail.epa.gov



N

D 1000 2000

SCALE IN FEET

SOURCE:
USGS QUADRANGLE 7.5' SERIES ELKTON, MD.-DEL
1985 AND NEWARK WEST, MD.-DEL.-PA. 1970.

RSA Rosengarten, Smith & Associates, Inc.

FIGURE 2
2007 EPA REGION III ENVIRONMENTAL INDICATOR
SITE LOCATION MAP
GE RAILCAR
ELKTON, MARYLAND

DRAWN BY:	TTO	PROJECT NO.	2017
CHECKED BY:	CAM	DATE:	11/26/07

MONITOR WELL ELEVATION DATA	
MONITOR WELL NO.	ELEV. @ TOP OF PVC PIPE
MW-1	58.51
MW-2	58.47
MW-3	58.89
MW-4	66.35
MW-5	68.38
MW-6	76.27
MW-7	81.45
MW-8	75.38
MW-9	74.07
MW-10	80.66
MW-11	73.78
MW-12	72.27
MW-12R	71.78
MW-13	71.80
MW-14	80.39
MW-15	80.82
MW-16	80.78
MW-17	82.44
MW-18	80.63
MW-19	80.43
MW-20	58.87
MW-21	57.28
MW-22	56.32
MW-23	51.13
MW-24	97.83
MW-25	92.26
MW-26	87.83
MW-27	64.64
MW-28	75.49
MW-29	80.09
MW-30	58.38
MW-31	57.97
MW-32	54.59
MW-33	54.00
MW-34	55.16
MW-35	52.40
MW-36	50.38
MW-37	51.59
MW-38	51.75
MW-39	50.07
MW-40	53.87
MW-41	50.82
MW-42	51.60
MW-43	58.08
MW-44	50.58
S-1	75.17
S-2	79.97
S-3	71.48
S-4	70.06
S-5	61.21
S-6	58.09
OS-MW2	62.42
OS-MW3	55.93
OS-MW4	40.28
OS-MW5	38.08
OS-MW6	47.73
OS-MW11	54.66
OS-MW12	51.48
OS-MW13	33.07
OS-MW14	41.88
OS-MW15	45.25

SITE DATA

TAX MAP 28 GRID: 18 PARCELS: 300 & 458
SOURCE OF TITLE: P-300 & P-458: NDS-169-24, P-504: NDS-226-178
EXISTING ZONING: M2
DATUM: NGVD
BENCHMARK: SPOT ELEVATION TAKEN FROM CECIL COUNTY COMPREHENSIVE MAPPING PROGRAM MAP NO. 28-6.

ACREAGE DATA

PARCEL 300	17.8311 ±Acs.
PARCEL 458	10.6832 ±Acs.
TOTAL AREA	28.5143 ±Acs.

GENERAL NOTES

1) THIS TOPOGRAPHIC SURVEY IS BASED ON THE BOUNDARY SURVEY DATED 1-21-1976 BY MCA ENGINEERING COMPANY AND RECORDED WITH THE TITLE DEED AT NDS-357-176.
2) ALL PHYSICAL FEATURES SHOWN HEREON WERE FIELD LOCATED BY AMERICAN ENGINEERING & SURVEYING, INC. IN SEPT. & DEC., 2001.
3) MONITOR WELLS No. 43 & 44, AND SOIL BORINGS B-K, WERE FIELD LOCATED IN JULY, 2003.
4) SOIL BORINGS L-AA WERE FIELD LOCATED IN JANUARY, 2004.
5) OFF-SITE MONITOR WELLS Nos. 2-6, AND SOIL BORINGS BB-GG, WERE FIELD LOCATED IN MARCH, 2004.
6) OFF-SITE WELLS 11-15 AND MW-12R WERE FIELD LOCATED IN DECEMBER 2005.

LEGEND

MW42	EXISTING POTOMAC MONITOR WELL W/ NUMBER
OS-MW2	EXISTING OFF-SITE POTOMAC MONITOR WELL W/ NUMBER
S6	EXISTING SAPROLITE MONITOR WELL W/ NUMBER
PP	POWER POLE
FH	FIRE HYDRANT
65	EXISTING CONTOURS
AU	AERIAL UTILITY LINES
X	EXISTING FENCELINE

DRAWN BY: TTD	C:/DWG/GE/ELKTON/2017/08/02/FIG-1.DWG		QA/QC		
DESIGNED BY: CAM	DATE: 02/07/06				
NO.	DATE	REVISIONS	NO.	DATE	SIGNATURE
1	02/08/06	CAM - REVISED LEGEND AND ROAD NAMES	1	02/08/06	CAM
2			2	02/20/06	CHS
3			3	04/20/06	CAM
4			4		
			5		
			6		

RSA Rosengarten, Smith & Associates, Inc.
FIGURE 1
2007 EPA REGION III ENVIRONMENTAL INDICATOR
PLOT PLAN, WELL LOCATIONS, AND TOPOGRAPHIC SURVEY
GE RAILCAR
ELKTON, MARYLAND

TOPOGRAPHIC SURVEY PLAN

FOR LANDS OF
G E CAPITAL RAIL SERVICES
LOCATED IN
TRIUMPH INDUSTRIAL PARK
THIRD ELECTION DISTRICT - CECIL COUNTY - MARYLAND

OWNER
G E CAPITAL RAIL SERVICES
161 NORTH CLARK STREET
CHICAGO, IL 60601

DRAWN-CALC BY: TGS
DESIGNED BY: TGS
SCALE: 1"=100'
DATE: SEPT. 21, 2001

AMERICAN
Engineering and Surveying, Inc.
P.O. BOX 850 - NORTH EAST, MD 21901
(410) 398-5000 TEL (410) 287-3461 FAX

REFERENCE DWGS. L-8766, L-1904, L-1879
PROJECT NO. 689-7
DWG. NO. L-8768 SHEET NO. 1 OF 1 REV 6

General Electric Railcar Repair Services Facility
Elkton, Cecil County, Maryland

TABLE 1
VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
2005 SAMPLING EVENT

GE Railcar Services Corp.
RSA Project No 2017

Volatile Organic Compounds milligrams/liter	Analytical Detection Target[1]	MDE Groundwater Standard[2]	EPA National Water Standards[3]	MW-1 10/28/05 @ 1620	MW-2 10/28/05 @ 1645	MW-3 10/29/05 @ 1450	MW-4 11/01/05 @ 1353	MW-5 11/01/05 @ 1731	MW-6 11/02/05 @ 1636	MW-7 11/02/05 @ 1310	MW-8 11/02/05 @ 0855	MW-9 11/02/05 @ 1210	MW-10 11/02/05 @ 1830	MW-11 11/02/05 @ 1525	MW-12R 11/02/05 @ 1737	MW-13 11/01/05 @ 1608
Acetone	0.16	0.061	NE	0.123	0.0512	0.0957	0.0458	0.0118	0.111	<0.005	0.0065	0.487	0.0157	0.266	0.153	0.724
Benzene	0.005	0.005	0.005	<0.001	**0.0215**	<0.001	**0.0655**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.135**	0.0006 J
Bromodichloromethane	0.10	0.080	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromoform	0.10	0.080	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromomethane	0.0022	0.001	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2-Butanone	0.94	0.19	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbon Disulfide	0.083	0.10	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Carbon Tetrachloride	0.005	0.005	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorobenzene	0.10	0.011	0.10	<0.001	**0.381**	**0.0159**	**0.935**	0.0008 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.0102	**1.17**	0.0011
Chloroethane	0.016	0.0036	NE	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroform	0.10	0.080	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloromethane	0.011	0.0021	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromochloromethane	0.10	0.080	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromochloropropane	0.0002	0.001	0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	0.00005	0.001	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethane	0.16	0.080	NE	<0.001	0.0008 J	<0.001	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	0.0024	<0.001
1,2-Dichloroethane	0.005	0.005	0.005	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
1,1-Dichloroethene	0.007	0.007	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001
cis-1,2-Dichloroethene	0.070	0.070	0.070	<0.001	<0.001	0.0008 J	0.0022	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	0.0017	0.0424	0.0319
trans-1,2-Dichloroethene	0.10	0.10	0.10	<0.001	<0.001	0.0007 J	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0056	<0.001
Methylene Chloride	0.005	0.005	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloropropene	0.005	0.005	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,3-Dichloropropene	0.0073	0.001	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,3-Dichloropropene	0.0073	0.001	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	0.70	0.70	0.70	<0.001	0.0016	<0.001	0.0023	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0398	<0.001
2-Hexanone	0.027	0.15	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Isopropylbenzene	0.16	0.066	NE	<0.001	<0.001	<0.001	0.0039	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0017	<0.001
4-Methyl-2-pentanone	0.13	0.050	NE	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0115	<0.005
Methyl-tert-butyl-ether	0.020	0.020	NE	<0.001	<0.001	0.0008 J	<0.001	<0.001	0.0006 J	0.0024	0.0011	<0.001	0.0021	0.0005 J	<0.001	<0.001
Styrene	0.10	0.10	0.10	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Tetrachloroethene	0.005	0.005	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.0026	<0.001	<0.001	<0.001	0.0015	0.001	0.050	**0.0083**
1,1,2,2-Tetrachloroethane	0.0037	0.001	NE	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	0.0021	0.0023	0.0034
Toluene	1.0	1.0	1.0	<0.001	<0.001	<0.001	0.0006 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**1.96**	<0.001
1,1,1-Trichloroethane	0.20	0.20	0.20	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.0011
1,1,2-Trichloroethane	0.005	0.005	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	0.0005 J	0.0019
Trichloroethene	0.005	0.005	0.005	0.001	<0.001	<0.002	0.0015	<0.001	**0.0262**	<0.001	<0.001	<0.001	**0.0089**	0.0028	**0.0248**	**0.0637**
Vinyl Chloride	0.002	0.002	0.002	<0.001	<0.001	0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00072	**0.0193**	<0.001
Xylenes	10	10	10	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0794	<0.003

Notes:

1. Analytical detection target is equivalent to MDE Groundwater Standards as published in "MDE Clean-Up Standards for Soil and Groundwater, Interim Final Guidance, December 2000."
2. MDE Groundwater Standards as published in "MDE Clean-Up Standards, Update No. 1, August 2001."
3. EPA National Primary Drinking Water Standards. www.epa.gov/safewater
4. Concentrations exceeding MDE Non Residential Clean-Up Standard marked in bold with bold outline. Shaded cells exceed the EPA National Primary Drinking Water Standards.
5. NE = Not Established
6 NA = Not Analyzed
* Analyzed results after 6 month pilot study test

7. Data Qualifiers:
J = The analyte was positively identified; the associated numerical value is the approx. concentration of the analyte in the sample.
UJ - Not detected; quantitation limit may be inaccurate or imprecise
< - analyte not detected at or above the indicated concentration.

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QA/QC by: