DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: Great Lakes Chemical Corporation, Central Plant
Facility Address: 2226 Hayneswille Hwy, El Dorado
Facility EPA ID #: ARD043195429

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, 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?

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

____ If no - re-evaluate existing data, or

____ if data are not available skip to #6 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 "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "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 "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

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).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	X			See Attached
Air (indoors)[2]		X		Aug 2001 Risk Evaluation Report
Surface Soil (e.g., <2 ft)	X			See attached
Surface Water		X		Aug 2001 Risk Evaluation Report
Sediment		X		Aug 2001 Risk Evaluation Report
Subsurf. Soil (e.g., >2 ft)	X			See Attached
Air (outdoors)	X			EDB

____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

✓ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

The site has been utilizing the Corrective Action Strategy process. The Risk Evaluation Report (Aug 2001) indicated no organic constituents have impacted surface water or sediment receptors or outdoor air above screening levels. The Johnson and Ettinger model was used to evaluate impact to indoor air; the levels found through the model were below screening levels.

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 appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater	yes	yes	no	yes			no
Air (indoors)	—	—	—				
Soil (surface, e.g., <2 ft)	no	yes	no	yes	no	no	no
Surface Water	—	—			—	—	—
Sediment	—	—			—	—	—
Soil (subsurface e.g., >2 ft)				yes			no
Air (outdoors)	no	yes	no	yes	no		

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media – Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

___ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

X If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

___ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

Reference - Risk Evaluation Report Aug 2001

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be

"significant"[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

✓ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

The groundwater at Great Lakes Chemical Corporation is controlled and remediated through their pump and treat program. Monitoring is required in this treatment plan. All contaminated groundwater is on GLCC property.

All site workers (including construction workers) must comply with GLCC safety program. This program includes training and workers wearing the proper PPE. This training program is described in detail in GLCC's permit application.

The outdoor air was determined to be below screening values for all COC's.

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5. Can the "significant" exposures (identified in #4) be shown to be within acceptable limits?

Current Human Exposures Under Control
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_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

✓ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Great Lakes Chemical Corporation, Central Plant facility, EPA ID # ARD 091954429, located at El Dorado AR under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

____ NO - "Current Human Exposures" are NOT "Under Control."

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

Completed by (signature) Annette Cusher Date 9/30/03
(print) Annette Cusher
(title) Engineer II

Supervisor (signature) Daniel Clayton Date 9/30/03
(print) Daniel Clayton
(title) Engineering Supervisor
(EPA Region or State) State of Arkansas

Locations where References may be found:
ADEQ Central Files

Contact telephone and e-mail numbers

(name) Annette Cusher
(phone #) 501 682 0841
(e-mail) Cusher @ adeq. state. ar. us

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

NONCARCINOGENS

CONSTITUENT	Max Concentration (mg/kg)	HQ	Comment
SWMU E1A and E1B			
Barium	101	1.21E-03	
Chromium III	12.3	6.42E-06	
Phenol	4.92	1.07E-05	
Hazard Index		*1.23E-03*	less than 10
SWMU E2			
Barium	42.2	5.07E-04	
Chromium III	6.01	3.14E-06	
Hazard Index		*5.10E-04*	less than 10
SWMU E3			
Barium	253	3.04E-03	
Chromium III	8.59	4.48E-06	
Hazard Index		*3.04E-03*	less than 10
SWMU E6			
Barium	143	1.72E-03	
Chromium III	11.1	5.79E-06	
Bromomethane	1.18	7.20E-02	
Hazard Index		*7.38E-02*	less than 10
SWMU 19			
Barium	123	1.48E-03	
Chromium III	11.9	6.21E-06	
Nickel	5.91	2.31E-04	
4-Bromophenylphenylether*	3.98	2.59E-04	
Toluene	1.39	5.61E-04	
Hazard Index		*2.53E-03*	less than 10
SWMU 25			
Barium	120	1.44E-03	
Cyanide	1	6.50E-05	
1,2,4-Trichlorobenzene	0.606	8.73E-05	
Hazard Index		*5.18E-03*	less than 10
SWMU 38			
Barium	61.9	7.44E-04	
Chromium III	7.88	4.11E-06	
Nickel	2.58	1.01E-04	
Hazard Index		*8.49E-04*	less than 10

CARCINOGENS

CONSTITUENT	Max Concentration (mg/kg)	10^{-6} screening value	Intake	Risk
SWMU E6				
Methylene chloride	14.1	25	4.00E-08	5.64E-07
Chromium VI	5	80	1.25E-08	6.25E-08
Total Risk				***6.27E-07***

TABLE C-3
WATER SCREEN RESULTS SUMMARY
RISK EVALUATION REPORT COMMENT RESPONSES
GREAT LAKES CHEMICAL CORPORATION
CENTRAL PLANT, EL DORADO, ARKANSAS

Compound	Range of Detections in Ground Water (ug/L) (IBU over MSC)	Well with Maximum (IBU over MSC)	Number of Locations Detected	MCL (ug/L)	Tap Water (ug/L) Risk 10^{-6} or HQ=10	Tap Water (ug/L) Risk 10^{-6} or HQ=1	EQL	Solubility (ug/L)
Benzene	5.16 - 11,700 2.17 - 30.8	NS-003 SW-48	15	5	42	0.42	1	1.8E+06
Bromobenzene	2.42 - 7,610 6.11 - 44.2	GM-10U NS-046	10	--	200	20	1	4.7E+05
Bromoform	229 - 10,000 3,120	IP-16 IP-17	5	100	850	8.5	1	3.1E+06
Chloroform	10.4 - 3,880 2.14 - 18.2	NS-003 PM-08A	7	100	6.2	0.16	1	7.9E+06
1,2 Dibromoethane (EDB)	0.444 - 2440000 0.676 - 36200	PW-15 TR-18	28	0.05	0.076	0.00076	0.5*	3.4E+06
1,2 Dichloroethane (EDC)	2.59 - 107000 1.46 - 76900	PW-15 GW-17	46	5	12	0.12	1	8.5E+06
1,2-Dichloropropane	19.6	SD-31 (IBU)	1	5	16	0.16	1	2.8E+06
Methylene Chloride	1,130 - 299,000 5.35 - 2,320	IP-42 IP-17	16	5	430	4.3	5	1.3E+07
Toluene	2.46 - 1,660 4.89 - 186	GM-10U PM-08A&B	7	1000	7200	720	1	5.3E+05
2,4,6-Tribromophenol	119 - 25,000 55.6 - 4,010	IP-16 TR-18	16	--	1100000	11000000	10	7.0E+04
3-Methylphenol	34.4 - 532 14.5 - 18.6	NS-009R IP-17	6	--	18000	1800	10	2.3E+07
4-Methylphenol	34.4 - 532 14.5 - 18.6	NS-009R IP-17	6	--	1800	180	10	2.2E+07
Phenol	11.4 - 2,040 14.5 - 185	IP-16 PM-08A	14	--	220000	22000	10	8.3E+07
3-Bromophenol	29.1	IP-17 (MSC)	1	--	1100000	11000000	**	2.3E+07
2,6-Dibromophenol	93.1	IP-17 (MSC)	1	--	1100000	11000000	**	1.2E+05
Barium	96 - 30,900 59 - 44,000	NS-009R NS-034	86	2000	7700	2600	10	4.1E+07
Chromium (total)	29 - 2,810 64 - 10,400	TB-01 PM-20	31	100	1100 (Cr VI)	110 (Cr VI)	20	--
Lead	17 - 1,400 77 - 1,400	SW-43 GW-37	18	15	15	15	15	5.0E+07
Nickel (and compounds)	37 - 2,010 23 - 7,110	GW-32 PM-20	47	100	7300	730	20	2.5E+07
Zinc	26 - 11,500 55.9 - 21,500	SW-43 IP-40	56	--	33000	11000	20	4.3E+07

Notes:

Performance standard for ground water:

Statutory and Regulatory Performance Standard: The statutory and regulatory performance standard shall be to contain/recover ground water such that Maximum Contaminant Levels for constituents in ground water will not be exceeded at the property boundaries. Final Risk Goal Performance Standard: For constituents without a published MCL, the performance standard will be to contain/recovery ground water such that the appropriate risk level concentration will not be exceeded at the property boundaries.

Concentrations exceed one or more screening levels.

* "J" flagged between 0.05 and 0.5 ug/L.

** Laboratory library search

-- No published screening level or data

Values calculated using reference dose of 0.03 mg/kg-day (Great Lakes Chemical Corporation Toxicologist), see Attachment B

Solubility values from Region 6 table, Syracuse Research Corporation databases, Superfund Chemical Data Matrix or Risk Assessment Information System (RAIS)

TABLE C-2
SOIL SCREEN RESULTS SUMMARY
RISK EVALUATION REPORT COMMENT RESPONSES
GREAT LAKES CHEMICAL CORPORATION
CENTRAL PLANT, EL DORADO, ARKANSAS

AREA	LOCATION maximum value	DEPTH	CONSTITUENT	all concentrations in mg/kg					INDOOR AIR/ VAPORIZATION TO ENCLOSED SPACE	mg/kg		PERFORMANCE STANDARD	SWMU STATUS
				RESULTS maximum value	DAF1	INDUSTRIAL OUTDOOR 10^{-6} or HQ=1	INDUSTRIAL OUTDOOR 10^{-5} or HQ=10	Csat		SITE-SPECIFIC INDUSTRIAL SCREENING	SITE-SPECIFIC GROUND WATER SCREENING LEVEL		
SWMU C - Truck Washdown Area	C-02-SS01	3.5	Total hydrocarbons (diesel)	319									
SWMU C - Truck Washdown Area	C-02-SS01	3.5	Total hydrocarbons (gasoline)	77.7	see Attachment B	see Attachment B	see Attachment B	see Attachment B	see Attachment E	Not applicable	see Attachment B	Protection of ground water, outdoor workers, indoor workers	NO FURTHER ACTION
SWMU C - Truck Washdown Area	C-02-SS01	3.5	Total hydrocarbons (oil)	3280									
SWMU E1A - TCO Sump A	E1A-01-SS02	8	Methylene chloride	0.441	0.001	2.50E+01	2.50E+03	2.35E+03	no complete pathway	Not applicable	Not applicable	Protection of outdoor workers	NO FURTHER ACTION
SWMU E1A - TCO Sump A	E1A-01-SS02	8	Phenol	0.671	5	1.00E+05	1.00E+05	2.26E+04					
SWMU E1B - TCO Sump B	E1B-01-SS02	8	Methylene chloride	51.8	0.001	2.50E+01	2.50E+03	2.35E+03	no complete pathway	Not applicable	Not applicable	Protection of outdoor workers	NO FURTHER ACTION
SWMU E1B - TCO Sump B	E1B-01-SS02	8	Phenol	4.92	5	1.00E+05	1.00E+05	2.26E+04					
SWMU E3 - CaBr Sump	E3-02-SS02	9	Barium	253	82	5.30E+04	1.00E+05	1.70E+06	Not applicable	Not applicable	Not applicable	Protection of outdoor workers	NO FURTHER ACTION
SWMU E4 - Fine Chemicals Sump	GP-02C	16	1,2-Dibromoethane	100	0.0001	3.50E-02	3.50E+00	9.22E+02	addressed under ground water	1.17	carry over to Risk Management	Protection of outdoor workers Protection of ground water at property boundary	REQUIRES RISK MANAGEMENT
SWMU E4 - Fine Chemicals Sump	GP-03C	8	1,2-Dichloroethane	7	0.001	9.50E-01	9.50E+01	2.84E+03		31.5			
SWMU E4 - Fine Chemicals Sump	GP-03C	16	1,2-Dichloropropane	63	0.001	9.50E-01	9.50E+01	1.13E+03		31.8			
SWMU E4 - Fine Chemicals Sump	GP-03C	16	1-Bromo-2-chloroethane	15	0.0002*	--	--	2.34E+03		--			
SWMU E4 - Fine Chemicals Sump	GP-03C	16	2,4,6-Tribromophenol	7.2	--	2.30E+04	1.00E+05	--		1.0E+05			
SWMU E4 - Fine Chemicals Sump	GP-03C	24	2-Chloroethyl vinylether	1	--	--	--	9.77E+01		Not applicable			
SWMU E4 - Fine Chemicals Sump	GP-03C	16	Bromoform	130	0.04	2.70E+02	2.7E+04	2.70E+03		Not applicable			
SWMU E4 - Fine Chemicals Sump	GP-03C	8	Methylene chloride	7.8	0.001	2.50E+01	2.3E+03	2.35E+03		Not applicable			
SWMU E4 - Fine Chemicals Sump	GP-03C	16	Toluene	280	0.6	5.20E+02	5.2E+02	5.20E+02		Not applicable			
SWMU E5 - NaHS Sump	E5-01-SS02	6	Barium	554	82	5.3E+04	1.0E+05	1.70E+06	Not applicable	Not applicable	Not applicable	Protection of outdoor workers	NO FURTHER ACTION
SWMU E6 - IOB Sump	E6-02-SS01	2	Barium	143	82	5.3E+04	1.0E+05	1.70E+06	no complete pathway	Not applicable	Not applicable	Protection of outdoor workers	NO FURTHER ACTION
SWMU E6 - IOB Sump	E6-02-SS02	6	Bromomethane	1.18	0.01	1.6E+01	1.6E+02	3.07E+03					
SWMU E6 - IOB Sump	E6-02-SS02	6	Chromium VI	5	2	8.0E+01	8.0E+02	2.3E+05					
SWMU E6 - IOB Sump	E6-03-SS01	11	Methylene chloride	14.1	0.001	2.5E+01	2.3E+03	2.3E+03					
SWMU 5 - Railroad Loading Area	GP-08C	24	1,2-Dibromoethane	440	0.0001	3.5E-02	3.5E+00	9.2E+02	addressed under ground water	1.17	carry over to Risk Management	Protection of outdoor workers Protection of ground water at property boundary	REQUIRES RISK MANAGEMENT
SWMU 5 - Railroad Loading Area	GP-15C	12	1,2-Dichloroethane	100	0.001	9.5E-01	9.5E+01	2.9E+03		31.5			
SWMU 5 - Railroad Loading Area	GP-03C	16	1,2-Dichloropropane	63	0.001	9.5E-01	9.5E+01	1.1E+03		31.8			
SWMU 5 - Railroad Loading Area	GP-08C	24	1-Bromo-2-chloroethane	32	0.0002*	--	--	2.4E+03		--			
SWMU 5 - Railroad Loading Area	GP-03C	16	2,4,6-Tribromophenol	7.2	--	2.3E+04	1.0E+05	--		1.0E+05			
SWMU 5 - Railroad Loading Area	RP-12	6	2-Butanone	7.91	0.34	3.4E+04	3.4E+04	3.4E+04		Not applicable			
SWMU 5 - Railroad Loading Area	GP-03C	24	2-Chloroethyl vinylether	1	--	--	--	9.8E+01		Not applicable			
SWMU 5 - Railroad Loading Area	GP-06C	24	Acetone	1.5	0.8	7.6E+03	7.6E+04	1.0E+05		Not applicable			
SWMU 5 - Railroad Loading Area	SS-23	16	Acetonitrile	0.62	23	2.5E+03	2.5E+04	1.9E+05		Not applicable			
SWMU 5 - Railroad Loading Area	GP-03C	6	Bromoform	130	0.04	2.7E+02	2.7E+04	2.7E+03		Not applicable			
SWMU 5 - Railroad Loading Area	RP-11	22	Bromomethane	2.45	0.01	1.6E+01	1.6E+02	3.1E+03		Not applicable			
SWMU 5 - Railroad Loading Area	GP-13C	24	Dibromomethane	0.13	0.07	6.7E+02	6.7E+03	1.4E+04		Not applicable			
SWMU 5 - Railroad Loading Area	GP-08C	16	Methylene chloride	38	0.001	2.5E+01	2.3E+03	2.3E+03		Not applicable			
SWMU 5 - Railroad Loading Area	GP-03C	16	Toluene	280	0.6	5.2E+02	5.2E+02	5.2E+02		Not applicable			
SWMU 19 - Tail Brine Sludge Disp. Landfill	19-01-SL01	11	Barium	123	82	5.3E+04	1.0E+05	1.7E+06	no complete pathway	Not applicable	3.3E+03	Protection of ground water at property boundary	NO FURTHER ACTION
SWMU 19 - Tail Brine Sludge Disp. Landfill	19-01-SL01	11	Lead	39	**	2.0E+03	2.0E+03	5.0E+03		Not applicable	Not applicable		
SWMU 19 - Tail Brine Sludge Disp. Landfill	19-02-SS01	10	4-Bromophenyl phenylether	3.98	117	7.4E+02	7.4E+03	7.4E+02		Not applicable	Not applicable		
SWMU 19 - Tail Brine Sludge Disp. Landfill	19-01-SL01	10	Toluene	1.39	0.6	5.2E+02	5.2E+02	5.2E+02		Not applicable	2.4E+01		
SWMU 25 - West Side Sump Spoil Pile	25-01-SS01	in pile	1,2,4-Trichlorobenzene	0.606	0.3	3.0E+03	3.0E+03	3.0E+03	no complete pathway	Not applicable	3.5E+01	Protection of ground water at property boundary	NO FURTHER ACTION
SWMU 25 - West Side Sump Spoil Pile	25-01-SS01	in pile	Barium	129	82	5.3E+04	1.0E+05	1.7E+06			9.5E+03		

Notes:
Concentration exceeds one or more screening levels.
Value calculated, see Attachment B
Not complete pathway
-- No published screening level or data available to calculate screening level
Ground water pathway not complete for SWMU E1, E3, E5, and E6
Nonresidential pathways not complete for all SWMUs
* Based on MCL for EDB
** A screening level of 400 mg/kg has been set for lead based on Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (U.S. EPA, 1994).
EPA *Soil Screening Guidance*
Constants from Region 6 table, or calculated using data from Syracuse Research Corporation databases, Superfund Chemical Data Matrix or Risk Assessment Information System (RAIS)