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: **GAR Electroforming, Inc.**
Facility Address: **11 Augusta Road, Danbury, CT**
Facility EPA ID #: **CTD064834914**

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?

__x__ 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).

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?

__x__ 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):

Background

GAR is a manufacturer of precision microforms. Wastewaters generated from facility operations included hexavalent chromium and cyanides as a result of plating operations. These wastewaters were treated to form metal hydroxide sludge wastes which were subsequently landfilled on site in two sludge lagoons. GAR closed the lagoons in June of 1988 under an approved closure plan. GAR also installed groundwater monitoring wells as part of an approved "Alternate Ground Water Monitoring System Plan." *Annual Ground Water Monitoring Report - 1989*, dated February, 1990. By 1993, GAR had reduced the frequency of GW sampling events from quarterly to semi-annually and has been sampling GW semi-annually to this date.

GAR was informed of its Corrective Action requirements by letter dated January 25, 1996. EPA met with GAR on May 14, 1996 to discuss Corrective Action. GAR subsequently signed a Voluntary Corrective Action agreement on July 1, 1996. However, citing "The Small Business Regulatory Enforcement Fairness Act of 1996 (Act)" which purports to "grant[] substantial new rights to small businesses [and] other small entities," GAR appealed to the Honorable Joseph I. Lieberman, United States Senate, and the Honorable Gary A. Franks, Representative in Congress for the Fifth District of Connecticut, requesting regulatory relief under the Act. Apparently encouraged by communique with the offices of Joseph Lieberman and Gary Franks, GAR appealed to John DeVillars, director, EPA Region I for relief of its Corrective Action obligations. Pursuant to established procedural EPA policy, RCRA Facility Manager Raphael Cody and Corrective Action Section Chief, Matthew Hoagland, prepared a response to a "JDV gram" regarding GAR and forwarded said response to the EPA front office. After many attempts in contacting the front office regarding the status of this response, EPA's Corrective Action program decided to address other priorities until a more suitable opportunity arose to address Corrective Action requirements at GAR.

As of today, April 27, 1999, no resolution of this outstanding issue has occurred. Therefore, it is decided to use the available groundwater data and information on GAR obtained from records to evaluate GAR with respect to the environmental indicators. Because EPA's administrative record does not provide GW data beyond 1990, EPA requested and received from the CTDEP, copies of annual GW monitoring reports for the period of 1993 through 1998. Groundwater data for the period of 1991 through 1992 was not available from the State as this data had been archived.

Groundwater

GAR is located in an industrial park in Danbury, CT. Groundwater in the industrial park is classified "GB." CTDEP's Surface Water Protection Criteria (SWPC) applies to the site groundwater.

A review of the available historic groundwater data for the site was conducted and is presented in the attached Table; Table 1 includes data from the periods 1989-1990 and 1995-1998. The data indicates that two, apparently transient exceedences, of the SWPC for nickel and perchloroethylene (PCE) occurred in 1990 for the referenced period. In addition, the information indicates a declining trend in constituent concentrations. This trend is depicted in the attached graphs for MW-1 and MW-5, the two on-site wells which exhibit elevated concentrations of VOCs. The available data and information also suggests that the presence of VOCs in the groundwater at the site is likely attributable to the general industrial background of the area. For instance, MW-1, which exhibited most of the higher concentrations of VOCs, is located upgradient of GAR. Risdon Corporation, CTD001168558, is located immediately upgradient of GAR as is another facility (based on conversation with CTDEP; facility not identified here). Note also that the sludge lagoons are located downgradient of the facility which lends further credence to the inference that the origin of VOCs in site groundwater is not the result of facility operations. Based on the ground water data and the available historical information concerning GAR operations it does not seem likely that a source of VOCs is located on the site or can be attributed to GAR operations. It is interesting, however, that MW-5 located downgradient of the sludge lagoons exhibits elevated concentrations of the same VOCs as exhibited at MW-1, yet MW-3 located slightly upgradient of MW-5 does not exhibit elevated concentrations of the same VOCs. It could be that a preferential hydraulic channel exists between MW-5 and MW-1 (boring logs for the wells are not available). However, in any event, the concentrations at both MW-1 and MW-5 do not exceed CTDEP Surface Water Criteria which would indicate, along with the general declining trend in concentrations, that the groundwater is undergoing natural attenuation.

With respect to the presence of metals at the site, in closing the sludge lagoons, GAR removed both the sludge and approximately two to three feet of underlying soils. After closure, the data indicates that dissolved-phase metal concentrations have remained below CTDEP SWPC with the exception of the single transient exceedence of nickel (MW-3 on 3/90).

Hydrology. Groundwater elevation across the site is relatively shallow with a slight hydraulic gradient of approximately 0.0058 to 0.071 ft/ft. *Annual Ground Water Monitoring Report - 1989*, February, 1990 at p. 27. However, a visual analysis of the data for 1989 indicates a smaller average hydraulic gradient (hg). Using the site groundwater contours for 1989, the hg was re-calculated: for 1989, the hydraulic gradient ranged from 0.0004 to 0.0026 ft/ft (avg hg = 0.0012 ft/ft). The seepage velocity for the site was calculated to be 0.00025 to 0.014 ft/day. *Id.* However, in light of the re-calculated hg's, the seepage velocity is likely lower on average.

This data suggests that advective transport mechanisms do not contribute significantly to the migration of dissolved-phase contaminants to, across or from the site - *i.e.*, site dissolved-phase contaminants are effectively contained on site. Furthermore, the available groundwater data for 1989 indicates that total organic carbon in groundwater ranged from 3.2 to 48 *mg/l* across the site which is consistent with the presence of the site to a wetlands. It is highly probable that dissolved-phase chlorinated VOCs are degrading by way of in-situ anaerobic co-metabolic dehalogenation; the high residence time due to the relatively slow hydraulic transport at the site would tend to increase the likelihood that chlorinated VOCs are degraded as they cross the site.

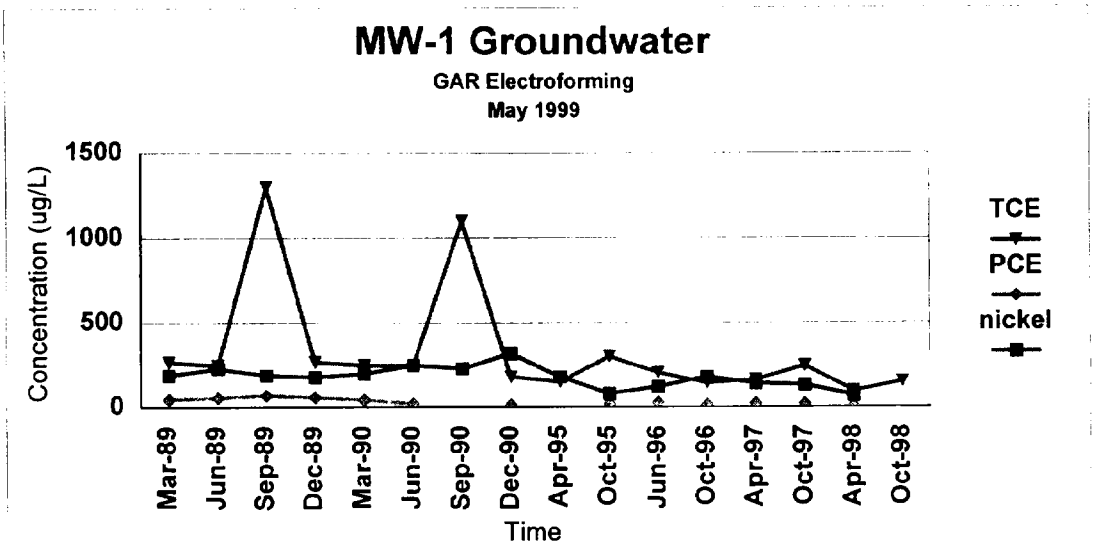
Footnotes:

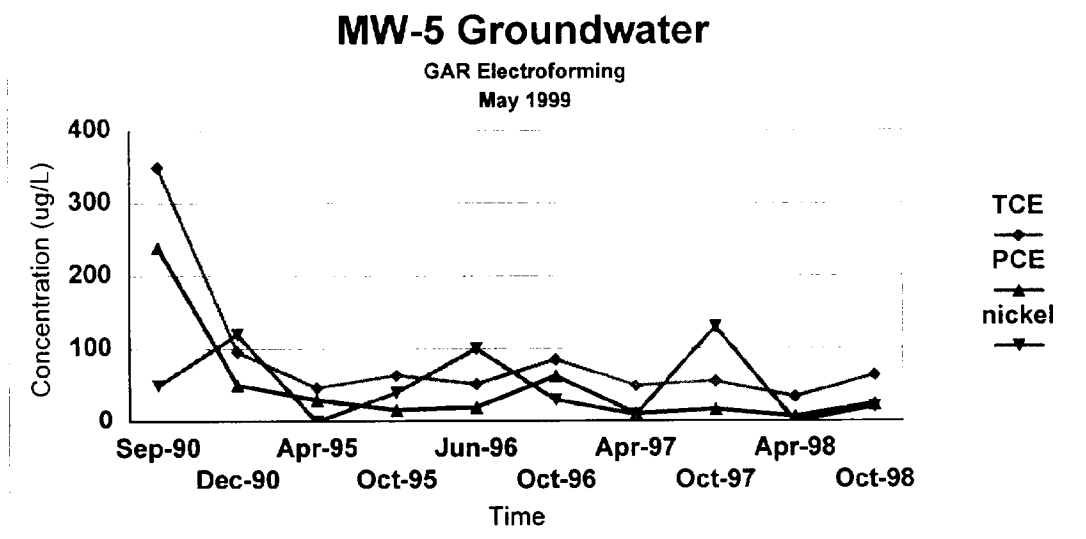
[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

Summary of Groundwater Monitori

GAR Electroforming, Danbury, CT

	Concentration (ug/l)																MCL	Amb. SW Qual. Std.	CTDEP SW	Exceed CTDEP?
	3/14/89	6/7/89	9/25/89	12/19/89	3/90	6/90	9/90	12/90	4/95	10/95	6/96	10/96	4/97	10/97	4/98	10/98	ug/l	ug/l	ug/l	
MW-1																				
11-DCE	13	16	76	15	12	-	68	7.1	-	-	-	-	-	-	-	-	7	-	96	
11-DCA	6.7	13	50	13	12	14	31	7.7	-	-	-	-	-	-	-	-	-	-	-	
trans-12-DCE	19	22	93	21	17	15	72	13	-	-	-	-	-	-	-	-	70	-	-	
111-TCA	120	90	160	110	180	86	280	59	-	26	-	-	-	-	-	-	200	-	62000	
TCE	270	250	1300	270	250	250	1100	180	150	302	205	141	162	246	95	150	5	-	2340	
PCE	50	58	72	61	46	25	-	18	-	21	29	17	24	22	8	-	5	-	88	
chromium	-	-	-	-	10	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns	100 (tot)	11 (Cr6+)	110 (Cr6+)	
nickel	190	230	190	180	200	250	230	320	180	80	120	180	140	130	70	-	100	160	880	
cyanide	-	-	-	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns	200	5.2	52	
MW-2																				
11-DCE	-	-	-	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			96	
11-DCA	-	-	-	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			-	
trans-12-DCE	2.8	6	4.3	2.8	2.8	-	4.2	4.1	ns	ns	ns	ns	ns	ns	ns	ns			-	
111-TCA	2	2.6	-	2.4	-	2.9	-	3.6	ns	ns	ns	ns	ns	ns	ns	ns			62000	
TCE	45	87	41	32	36	26	40	80	ns	ns	ns	ns	ns	ns	ns	ns			2340	
PCE	9.6	20	10	8.3	7.2	5	7.8	12	ns	ns	ns	ns	ns	ns	ns	ns			88	
chromium	-	-	-	-	10	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			110 (Cr6+)	
nickel	410	380	260	480	510	370	380	490	ns	ns	ns	ns	ns	ns	ns	ns			880	
cyanide	-	-	-	-	-	20	-	-	ns	ns	ns	ns	ns	ns	ns	ns			52	
MW-3																				
11-DCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			96	
11-DCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
trans-12-DCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
111-TCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			62000	
TCE	10	18	29	16	13	18	17	15	3	7	4	14	7.6	7	-	10			2340	
PCE	2.1	3.7	4.7	3.1	2.6	-	-	-	-	-	-	-	-	-	-	-			88	
chromium	-	-	-	-	50	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			110 (Cr6+)	
nickel	-	80	110	80	990	60	200	110	50	40	140	130	90	170	40	50			880	Y
cyanide	-	-	-	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			52	
MW-4																				
11-DCE	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			96	
11-DCA	6.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
trans-12-DCE	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	
111-TCA	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			62000	
TCE	270	20	30	25	18	19	48	43	8	18	11	5	7.6	16	-	10			2340	
PCE	-	3.9	2.9	2.3	-	-	4.8	4.1	-	-	-	-	-	-	-	-			88	
chromium	-	-	-	-	30	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			110 (Cr6+)	
nickel	40	90	70	140	120	70	110	120	80	80	190	150	140	210	160	90			880	
cyanide	-	-	-	-	-	-	-	-	ns	ns	ns	ns	ns	ns	ns	ns			52	
MW-5																				
11-DCE							-	-	-	-	-	-	-	-	-	-			96	
11-DCA							-	2.2	-	-	-	-	-	-	-	-			-	
trans-12-DCE							-	6	-	-	-	-	-	-	-	-			-	
111-TCA							48	8.9	10	-	-	-	-	-	-	-			62000	
TCE							350	96	47	64	52	65	50	56	34	64			2340	
PCE							240	51	30	16	20	63	11	17	7	24			88	Y
chromium							-	-	ns	ns	ns	ns	ns	ns	ns	ns			110 (Cr6+)	
nickel							50	120	-	40	100	30	10	130	-	20			880	
cyanide							-	-	ns	ns	ns	ns	ns	ns	ns	ns			52	
MW-6																				
11-DCE							-	-	-	-	-	-	-	-	-	-			96	
11-DCA							-	-	-	-	-	-	-	-	-	-			-	
trans-12-DCE							3.9	3.7	-	-	-	-	-	-	-	-			-	
111-TCA							-	4.6	-	-	-	-	-	-	-	-			62000	
TCE							150	130	16	13	6	4	7.5	9.6	-	8			2340	
PCE							28	25	-	-	-	-	-	-	-	-			88	
chromium							-	-	ns	ns	ns	ns	ns	ns	ns	ns			110 (Cr6+)	
nickel							530	550	420	560	520	460	360	370	230	220			880	
cyanide							-	-	ns	ns	ns	ns	ns	ns	ns	ns			52	
MW-7																				
11-DCE							-	-	-	-	-	-	-	-	-	-			96	
11-DCA							-	-	-	-	-	-	-	-	-	-			-	
trans-12-DCE							-	-	-	-	-	-	-	-	-	-			-	
111-TCA							2.8	2.4	-	-	-	-	-	-	-	-			62000	
TCE							73	65	13	15	10	10	8.3	16	-	11			2340	
PCE							5.5	7.8	-	-	-	-	-	-	-	-			88	
chromium							-	-	ns	ns	ns	ns	ns	ns	ns	ns			110 (Cr6+)	
nickel							560	610	630	490	810	720	790	650	660	490			880	
cyanide							-	-	ns	ns	ns	ns	ns	ns	ns	ns			52	


MW-1 Groundwater
GAR Electroforming
May 1999
Concentration (ug/L)
1500
1000
500
0
Mar-89
Jun-89
Sep-89
Dec-89
Mar-90
Jun-90
Sep-90
Dec-90
Apr-95
Oct-95
Jun-96
Oct-96
Apr-97
Oct-97
Apr-98
Oct-98
Time
TCE
PCE
nickel


MW-5 Groundwater
GAR Electroforming
May 1999
Concentration (ug/L)
400
300
200
100
0
Sep-90
Dec-90
Apr-95
Oct-95
Jun-96
Oct-96
Apr-97
Oct-97
Apr-98
Oct-98
Time
TCE
PCE
nickel

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)?

_____ 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]).

__x__ 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):

It is probable that migration of contaminated groundwater has stabilized since the available hydraulic data suggests that advective transport mechanisms do not contribute significantly to the migration of dissolved-phase contaminants to, across or from the site - *i.e.*, site dissolved-phase contaminants are effectively contained on site. Furthermore, the available groundwater data for 1989 indicates that total organic carbon in groundwater ranged from 3.2 to 48 *mg/l* across the site. It is likely that dissolved-phase chlorinated VOCs are degrading by way of in-situ anaerobic co-metabolic dehalogenation; the high residence time due to the relatively slow hydraulic transport would tend to increase the likelihood that chlorinated VOCs are degraded as they slowly cross the site. Finally, the off-site migration of dissolved-phase contaminants, if any, would be expected to be captured by adsorption onto wetland soils since the wetland is located immediately downgradient; the wetland acts to prevent further migration of contaminants - in this sense, contaminants are "stabilized" to the immediate site area. Moreover, the data reveals a steadily declining trend in dissolved-phase concentrations as a function of time suggesting that groundwater is naturally attenuating and therefore stabilizing.

Accordingly, it is recommended that a "YE" status code for CA750 be entered for GAR at this time.

[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.

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

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

_____ 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):

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):

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

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):_____

_____

_____

_____

_____

_____

[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.

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?"

_____ 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):

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).

__x__ 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 **GAR Electroforming** facility , EPA ID # **CTD064834914**, located at **11 Augusta Drive, Danbury, CT**. 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" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

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

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

Completed by (signature) _____ Date: 4/30/99
(print) Raphael Cody Revised: 5/12/99
(title) RCRA Facility Manager

Supervisor (signature) _____ Date 6/4/99
(print) Matt Hoagland
(title) Chief, RCRA Corrective Action
(EPA Region or State) Region I

Locations where References may be found:

See facility files

STATE contact telephone and e-mail numbers

(name)_____
(phone #)_____
(e-mail)_____