

US EPA ARCHIVE DOCUMENT

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:	<u>KRATON Polymers U.S. LLC</u>
Facility Address:	<u>2982 Washington Blvd., Belpre, OH 45714-0235</u>
Facility EPA ID #:	<u>OHD 004 343 117</u>

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 #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 "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).

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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):

References:

- *Administrative Record for Shell Chemical Company, OHD 004 343 117, Belpre, Ohio*, including Statement of Basis dated November 5, 2001, Index to Administrative Record, and Documents Shell-001 through Shell-121.
- A series of Semiannual Groundwater Monitoring Reports for monitoring events conducted in May and December 2001, May and December 2002, and May 2003.
- *Final Decision and Response to Comments for Shell Chemical Company, Belpre, Ohio, OHD 004 343 117*, April 23, 2002.
- *Administrative Order on Consent*, EPA Docket No. RCRA-05-2003-0007, effective March 17, 2003.

Rationale: There are four distinct areas at the KRATON Polymers facility where groundwater is contaminated by either:

- 1,1,1-trichloroethane (TCA) and 1,1-dichloroethene (DCE)
 - benzene
 - arsenic, or
 - LNAPL containing ethylbenzene, styrene, toluene, and xylenes.
- A. Groundwater beneath and downgradient from the former North Side Burn Pit (AOC E) contains 1,1,1-TCA and 1,1-DCE above maximum contaminant levels which are specified as the Groundwater Performance Standards (GWPS) in the Administrative Order on Consent. During the most recent May 2003 semiannual groundwater monitoring event, the maximum detected concentration of 1,1,1-TCA at monitoring well MW-48 was 2.60 mg/l and 0.063 mg/l for 1,1-DCE. The respective GWPS are 0.2 mg/l and 0.007 mg/l. The areal extent of the contaminant plume exceeding GWPS is approximately 400' by 800', or approximately seven acres.
- B. Groundwater immediately downgradient from the Tank Farm (AOC D) contains benzene above the GWPS. During the most recent May 2003 semiannual groundwater monitoring event, benzene was detected at 0.0078 mg/l at monitoring well MW-B-19. The GWPS is 0.005 mg/l. Three nearby wells (less than 200'

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).

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away) did not have any detectable concentrations of benzene.

- C. Groundwater beneath the Lower Slag Ponds (SWMU 93) contains arsenic above the GWPS. During the most recent May 2003 semiannual groundwater monitoring event, arsenic was detected at 0.148 mg/l in an unfiltered turbid sample at monitoring well MW-44. The GWPS is 0.01 mg/l. The filtered sample from monitoring well MW-44 contained 0.059 mg/l of arsenic. Historical arsenic concentrations (since August 1998) in unfiltered samples at MW-44 range from 0.067 to 0.18mg/l. Monitoring well MW-44 is located between Davis Creek and the Lower Slag Ponds (SWMU 93), with groundwater flow toward and into Davis Creek.
- D. Groundwater beneath the NOVA portion of the facility contains LNAPL composed of ethylbenzene, styrene, toluene, and xylenes. LNAPL has been consistently detected at monitoring well MW-5N and sporadically at well MW-8N. The maximum extent of LNAPL is less than 100 feet square. Dissolved concentrations of ethylbenzene, styrene, and toluene have been detected in groundwater at monitoring well MW-8N at concentrations above GWPS. The most recent May 2003 data detected dissolved concentrations at 28, 51, and 8.5 mg/l, respectively. The respective GWPS are 0.7, 0.1, and 1.0 mg/l. Arsenic was also detected above the GWPS (0.01 mg/l) at 0.26 mg/l.
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)?

- X 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):

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.

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References:

- *Administrative Record for Shell Chemical Company, OHD 004 343 117, Belpre, Ohio*, including Statement of Basis dated November 5, 2001, Index to Administrative Record, and Documents Shell-001 through Shell-121.
- A series of Semiannual Groundwater Monitoring Reports for monitoring events conducted in May and December 2001, May and December 2002, and May 2003.
- *Final Decision and Response to Comments for Shell Chemical Company, Belpre, Ohio, OHD 004 343 117*, April 23, 2002.
- *Administrative Order on Consent*, EPA Docket No. RCRA-05-2003-0007, effective March 17, 2003.

Rationale: The facility is located on an upper and lower terrace of the Ohio River. The hydrogeology is described as 40' to 100' thick alluvial sand and gravel deposits overlying shale bedrock with groundwater encountered in the alluvial deposits from 5' to 50' below ground surface. Groundwater flow is generally southward toward Davis Creek and the Ohio River. Groundwater gradients are relatively flat beneath the facility except beneath the Lower Slag Ponds where localized groundwater mounding is present.

EPA selected a groundwater remedy consisting of source controls and monitored natural attenuation (MNA). Source controls consist of the removal of VOC-contaminated soil exceeding the defined soil performance standards for protecting groundwater found in the Administrative Order on Consent. LNAPL is also being manually recovered beneath the NOVA portion of the facility, with a total of 15 gallons recovered since December 2000. Contaminated soil removal from source areas is expected to be completed by December 1, 2003. This action is expected to expedite the achievement of GWPS for site-related VOCs.

- A. Groundwater elevation data has consistently demonstrated that contaminated groundwater beneath the Former North Side Burn Pit (AOC E) migrates toward Davis Creek, with discharge to surface water near its confluence with the Ohio River. Monitoring wells located downgradient along Davis Creek (MW-12A, MW-13, MW-33, MW-14, MW-15, and MW-39) have historically detected no VOCs except 1,1,1-TCA at MW-13 and MW-33. In the most recent May 2003 semiannual sampling event, 1,1,1-TCA was detected at 0.021 mg/l at well MW-13, or only 10% of the GWPS. Since 1986, 1,1,1-TCA concentrations at MW-13 have ranged from 0.005 to 0.12 mg/l. A Mann-Kendall trend analysis of 1,1,1-TCA at well MW-13 shows 99.4% confidence in a decreasing concentration trend. At well MW-33, 1,1,1-TCA concentrations at MW-33 have ranged from 0.006 to 0.013 mg/l since 1996. A Mann-Kendall trend analysis of 1,1,1-TCA at well MW-33 shows 99.6% confidence in a decreasing concentration trend.

MNA processes in the 1,1,1-TCA/1,1-DCE plume were assessed based on evaluation of primary and secondary lines of evidence in accordance with current EPA guidance ("Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites," OSWER Directive 9200.4-7P, April 21, 1999; and "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater," EPA/600/R-98/128, September 1998). Based on statistical evaluation of historical monitoring data collected semiannually since 1983, the primary line of evidence demonstrates concentrations of benzene, 1,1,1-TCA and 1,1-DCE to be stable or decreasing. Monitoring conducted since the CMS shows these persistent trends. Secondary lines of evidence for active natural attenuation through hydrolysis and aerobic biodegradation include the presence of 1,1-DCE, a degradation byproduct of 1,1,1-TCA, and BIOCHLOR modeling indicating a stable plume, and is corroborated by the monitoring well groundwater results.

Monitoring wells screened at the base of the alluvial deposits aquifer did not detect any site-related constituents and dissolved concentrations in the upper portion of the aquifer are not indicative of the presence of DNAPL. In addition, the alluvial aquifer is underlain by low permeability shale bedrock, with no underlying deeper aquifer. Therefore, there is no significant potential for vertical migration.

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- B. Benzene above the GWPS has been detected only at well MW-B-19 at the southeast corner of the Tank Farm (AOC D). Groundwater elevation data has consistently demonstrated that contaminated groundwater beneath the Tank Farm (AOC D) would flow toward Davis Creek. Monitoring wells located approximately 400' south (downgradient) along Davis Creek (MW-12A, MW-13, MW-33, MW-14, MW-15, and MW-39) have never detected benzene.

Since 1991, benzene concentrations at MW-B-19 have ranged from 0.078 (most recent June 2003 sample) to 0.25 mg/l. A Mann-Kendall trend analysis of benzene at well MW-B-19 shows >99.9% confidence in a decreasing concentration trend.

- C. Groundwater data for wells monitoring the Lower Slag Ponds (SWMU 93) show that only one of three wells immediately downgradient have an arsenic concentration exceeding the GWPS. A Mann-Kendall trend analysis of arsenic at MW-44 shows 46% confidence in a stable concentration trend. Hydraulic data shows Davis Creek to be a gaining stream in the area of the Lower Slag Ponds. Contaminated groundwater at MW-44 discharges immediately to Davis Creek located 100' to the west.
- D. Monitoring wells installed in 1999 at the perimeter of the NOVA portion of the facility found no groundwater impacts from the LNAPL, no dissolved VOCs, and no arsenic as detected near the center of the NOVA portion of the facility (approximately 300 feet away). The most recent May 2003 data shows no VOCs detected in the perimeter monitoring wells. An LNAPL monitoring and recovery program conducted since December 2000 shows no migration of LNAPL. Monitoring data collected from October 1999 to May 2003 shows a stable concentration trend for toluene. Stable trends have yet to develop for the other major plume constituents, ethylbenzene and styrene. However, geochemical data indicates active biodegradation, with a strong correlation of methane in the LNAPL/VOC plume.

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

 X 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):

References:

- *Administrative Record for Shell Chemical Company, OHD 004 343 117, Belpre, Ohio*, including Statement of Basis dated November 5, 2001, Index to Administrative Record, and Documents Shell-001 through Shell-121.
- A series of Semiannual Groundwater Monitoring Reports for monitoring events conducted in May and December 2001, May and December 2002, and May 2003.
- *Final Decision and Response to Comments for Shell Chemical Company, Belpre, Ohio, OHD 004 343 117*, April 23, 2002.
- *Administrative Order on Consent*, EPA Docket No. RCRA-05-2003-0007, effective March 17, 2003.

Rationale: A., the 1,1,1-TCA/1,1-DCE plume emanating from the former North Side Burn Pit (AOC E),

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and C., the arsenic plume emanating from the Lower Slag Ponds (SWMU 93), both discharge to Davis Creek based on monitoring well data, potentiometric surface maps, and surface water elevations. Groundwater issues B. (benzene) and D. (LNAPL) do not involve any discharge to surface water.

5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration³ 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 concentration³ 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.

 X If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration³ 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 concentrations³ 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):

References:

- *Administrative Record for Shell Chemical Company, OHD 004 343 117, Belpre, Ohio*, including Statement of Basis dated November 5, 2001, Index to Administrative Record, and Documents Shell-001 through Shell-121.
- A series of Semiannual Groundwater Monitoring Reports for monitoring events conducted in May and December 2001, May and December 2002, and May 2003.
- *Final Decision and Response to Comments for Shell Chemical Company, Belpre, Ohio, OHD 004 343 117*, April 23, 2002.
- *Administrative Order on Consent*, EPA Docket No. RCRA-05-2003-0007, effective March 17, 2003.

Rationale: Only one of the two plumes discharging to Davis Creek is potentially significant as described below:

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

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- A. Monitoring well MW-13, which monitors the 1,1,1-TCA/1,1-DCE plume just before it discharges to Davis Creek, has a historical maximum concentration of 0.097 mg/l (November 1990). More recently, the maximum 1,1,1-TCA concentration from six sampling episodes since January 2001 is 0.022 mg/l or 1.1 times the GWPS. Therefore, the discharge of 1,1,1-TCA-contaminated groundwater into the surface water of Davis Creek is likely to be insignificant; and
- C. Groundwater containing arsenic above the GWPS has been detected at one of three wells located downgradient of the Lower Slag Ponds and hydraulically upgradient of Davis Creek. Groundwater containing arsenic above the GWPS is discharging to Davis Creek. Concentrations vary from 7 to 15 times the GWPS. The average concentration since 1998 is 11.5 times the GWPS. Therefore, the discharge of arsenic-contaminated groundwater is potentially significant.
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 implemented⁴)?

 X 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.

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.

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

Rationale and Reference(s):

References:

- *Administrative Record for Shell Chemical Company, OHD 004 343 117, Belpre, Ohio*, including Statement of Basis dated November 5, 2001, Index to Administrative Record, and Documents Shell-001 through Shell-121.
- A series of Semiannual Groundwater Monitoring Reports for monitoring events conducted in May and December 2001, May and December 2002, and May 2003.
- *Final Decision and Response to Comments for Shell Chemical Company, Belpre, Ohio, OHD 004 343 117*, April 23, 2002.
- *Administrative Order on Consent*, EPA Docket No. RCRA-05-2003-0007, effective March 17, 2003.

Rationale: The one plume discharging to Davis Creek is currently acceptable as described below:

- C. Appendix B.3 of the RFI Report provides calculations that demonstrate that contaminated groundwater discharging to Davis Creek from the Lower Slag Ponds is very small compared to the stream flow and that the arsenic concentrations in groundwater are sufficiently low that arsenic contributions from groundwater are immeasurably small.

As calculated in the RFI Report, the flow rate of Davis Creek is conservatively estimated at 130,000 ft³ per day (66% of the permitted daily discharge) , while the groundwater flow rate to Davis Creek is estimated to be 75 ft³ per day. At an assumed groundwater concentration of 0.067 mg/l, the arsenic concentration in Davis Creek attributable to groundwater discharge from the Lower Slag Ponds is calculated to be 0.000039mg/l or 0.39% the GWPS.

In comparison, the average arsenic concentration in the Lower Slag Ponds that discharged to Davis Creek under an NPDES permit over the same time period was 0.0414 mg/l. The permitted flow at the outfall is 195,000 ft³ per day and the outfall generally comprises 100% of the flow in Davis Creek except during storm events. The permitted outflow from the slag ponds is 2600 times the estimated groundwater flow. The concentration of arsenic in Davis Creek attributable to outflow from the Lower Slag Ponds is calculated to be 0.0413mg/l or 410% the GWPS. Based on the allowable permitted discharge of arsenic from the Lower Slag Ponds, we conclude that the discharge of arsenic-contaminated groundwater into Davis Creek, that on occasion exceeds 10 times the GWPS, is likely to be insignificant.

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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?”
- X 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):

References:

- *Administrative Record for Shell Chemical Company, OHD 004 343 117, Belpre, Ohio*, including Statement of Basis dated November 5, 2001, Index to Administrative Record, and Documents Shell-001 through Shell-121.
- A series of Semiannual Groundwater Monitoring Reports for monitoring events conducted in May and December 2001, May and December 2002, and May 2003.
- *Final Decision and Response to Comments for Shell Chemical Company, Belpre, Ohio, OHD 004 343 117*, April 23, 2002.
- *Administrative Order on Consent*, EPA Docket No. RCRA-05-2003-0007, effective March 17, 2003.

Rationale: As part of the final remedy, EPA selected monitored natural attenuation to address contaminated groundwater. Semiannual groundwater monitoring program is required for groundwater issues A., B., C., and D. Monitoring wells located downgradient of AOC D, AOC E, the Lower Slag Ponds (SWMU 93), and at the NOVA portion of the facility are monitored for site-related constituents. Other on-site wells, screened at the water table and the base of the aquifer are also being monitored as part of the semiannual program. A total of 37 monitoring wells are sampled for site-related constituents on a semiannual basis.

Statistical concentration trends will continue to be evaluated at well MW-B-19 monitoring the benzene plume; wells MW-48, MW-50, MW-35, MW-22, MW-B-8, MW-17, MW-33, and MW-13 monitoring the 1,1,1-TCA plume; wells MW-48, MW-50, MW-35, and MW-17 monitoring the 1,1-DCE plume; well MW-44 monitoring the arsenic plume; and well MW-8N monitoring the ethylbenzene, toluene, and styrene plume.

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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 KRATON Polymers U.S. LLC facility, EPA ID # OHD 004 343 117, located at Belpre, Ohio. 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 Sept. 26, 2003
 (print) Kenneth S. Bardo
 (title) Environmental Scientist

Supervisor (signature) _____ Date _____
 (print) George Hamper
 (title) Section Chief
 (EPA Region or State) Region 5

Locations where References may be found:

- *RCRA 7th Floor File room* - Administrative Record for RCRA 3008(h) Consent Order, KRATON Polymers U.S. LLC, OHD 004 343 117.
- *Washington County Public Library, 2101 Washington Blvd., Belpre, OH 45714* - Administrative Record for KRATON Polymers - Belpre Plant.

Contact telephone and e-mail numbers

(name) Kenneth S. Bardo
(phone #) (312) 886-7566
(e-mail) bardo.kenneth@epa.gov