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:	**Beazer/INDSPEC Properties**
Facility Address:	**133 Main Street, Petrolia, Pennsylvania**
Facility EPA ID #:	**PAD004336731**

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).

Facility History

The INDSPEC Chemical Corporation (INDSPEC) plant is located in the Borough of Petrolia, Armstrong County, Pennsylvania. Records show that in 1915, a portion of the present plant property was acquired by Bear Creek Manufacturing Company. In approximately 1918, the company became known as Pennsylvania Coal Products (PCP). Between 1929 and 1945 PCP acquired additional parcels, and the plant began to produce resorcinol, a chemical used primarily as an adhesive to bond rubber to steel belts/cords in the manufacture of tires. The chemical resorcinol is also used in the pharmaceutical industry.

The plant is situated along the South Branch of Bear Creek. Bear Creek flows through a fairly steep-walled, narrow valley. The valley floor where the plant is located ranges from 300 to 500 feet wide. The main process and materials storage and handling areas at the plant are located along the valley floor. Portions of the plant are also located to the east of Bear Creek, on the eastern slope of the valley. The plant property originally totaled approximately 320 acres and included these areas and an undeveloped area along the valley floor to the north of the Main Plant. In 1947, the plant was purchased by Koppers Company, Inc. Koppers then sold the plant to INDSPEC in 1989, retaining the undeveloped property to the north of the main plant and a small area where a treatment plant that treats groundwater pumped from a collection system is located. In 1990, Koppers was renamed Beazer East, Inc.

Within the Main Plant area, the Bear Creek stream channel is narrow, (approximately 15 feet wide on average) and is bordered by a steep embankment to the east. In some areas, the Bear Creek is routed through formed concrete channels with vertical sides up to 10 feet high. A number of the plant buildings are located immediately adjacent to, or within just a few feet of the creek. The creek is characterized by rapid fluctuations in flow, and flooding of the plant has occurred at various times in the past.

INDSPEC (Koppers) entered into a Consent Order and Agreement (COA) with the Pennsylvania Department of Environmental Protection (PADEP) on August 12, 1987. As a result of this order, Koppers among other things, installed a groundwater collection system for the collection and treatment of contaminated shallow groundwater in the vicinity of the plant that addressed the elimination of non-permitted point source discharges and the abatement of ground-water discharges to Bear Creek. After the water is cleaned up at the facilities groundwater treatment system, it is discharged to the South Branch of Bear Creek under National Pollutant Discharge Elimination System (NPDES) permit No. PA0210218.

INDSPEC (the current owner of the facility) and Beazer East (former owner of the facility and current owner of part of facility property) entered into an additional COA in May 2003 with PADEP to address the release or threatened releases of hazardous substances, contaminants, and industrial waste at the INDSPEC plant. The constituents of potential concern (COPCs) are resorcinol (also known as m-dihydroxybenzene or 1,3-dihydroxybenzene), meta-benzene disulfonic acid (m-BDSA), para-phenol sulfonic acid (p-PSA), benzene sulfonic acid (BSA), and trihydroxydiphenyl (THD). The groundwater addressed by the COA includes groundwater impacted by disposal of facility waste on non-contiguous properties, groundwater impacted by the releases at the facility. The COA identifies the impacted area as the "Bear Creek Area Chemical Site." Per the COA, all homes within an area identified as the "OU2 Public Water Supply Remedial Response Area" ("the Response Area") are currently being provided bottled water by Beazer/PADEP and will be connected to a public water supply system. The water line is presently in the process of being installed at Petrolia, and as of the writing of this EI the main line of the system is under construction. As part of the COA, Beazer/INDSPEC is also conducting additional groundwater investigation work to identify if any additional residences should receive bottled water/ public water and thus be within the Response Area. If additional residences are determined to be impacted, per the COA, PADEP will provide public water to the residence(s).

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):

Contaminants detected in groundwater under the facility, at levels above EPA Region III Risk-Based Concentrations (RBCs) and apparently due to releases from the facility include benzene, trichloroethene, tetrachloroethene, vinyl chloride, arsenic, beryllium, phenol, 2-chlorophenol, bis(2-chloroethyl)ether, 4-methylphenol, 4-chlorophenyl-phenylether, pentachlorophenol, 3-3'-dichlorobenzidine, nitrobenzene, thallium and vanadium. Based on water level measurements and associated groundwater flow maps, these groundwater contaminants are not expected to migrate to or impact any residential wells. See Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15, 2005) and Environmental Indicator Forms and Supporting Documentation, Beazer/INDSPEC Properties, Petrolia, Pennsylvania (September 16, 2004), for a complete listing of sample results.

The extent of the groundwater contamination beyond the property line of the facility is based on PADEP's evaluation of groundwater data available at the time of the issuance of the 2003 COA, and includes all private residences with wells impacted by releases of resorcinol, m-BDSA, p-PSA, BSA and THD from the INDSPEC facility as well as other sources. There are no RBCs or other known criteria protective of human health for these compounds. The 2003 COA identifies 5 ug/l as a Medium Specific Concentration (MSC) for resorcinol under the PA Land Recycling Act. The groundwater data consisted of the "Bear Creek Data Base" of private well sampling results obtained and tabulated by PADEP. These residences are being provided bottled water and/or connected to public water at this time and may be using impacted groundwater for non-potable purposes such as bathing and washing.

Additional groundwater investigations are being conducted to confirm that no additional residences require bottled/public water. Results of the facility investigation work are found in Langan (9/16/04 and 7/15/05) and include monitoring well sampling, water level measurements, an evaluation of groundwater flow directions in multiple water bearing zones. Based on these, and previous residence and groundwater investigations, there appear to be no private wells outside of the Response Area which are impacted by releases of these compounds from the facility.

---

[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).

A description of the contaminants of potential concern found in groundwater is as follows:

- Resorcinol (also known as m-dihydroxybenzene or 1,3-dihydroxybenzene) is used in pharmaceutical products for skin conditions such as acne, dermatitis, eczema, psoriasis, calluses, and warts. Resorcinol is also an active ingredient in several types of hair dyes and is also used as an adhesive in tire manufacturing.
- Meta-benzene disulfonic acid (m-BDSA) is generated during the manufacturing process of oil detergents and other chemicals
- Benzene sulfonic Acid (BSA) is used in the manufacture of resorcinol, as well as tanning agents, resins, and pharmaceuticals.
- Para-phenol sulfonic acid (p-PSA) is used primarily as an additive in electroplating baths, and in the manufacture of dyes and plasticisers. The zinc salt of p-PSA (or zinc phenolsulfonate) is commonly used in antiperspirant products.
- Trihydroxydiphenyl (THD) is used in the formulation of binders, used to hold together foundry sand which are used to make cores for the casting process in foundries.

While the Public Health Assessment for the Bear Creek Area Site (ATSDR, August 1, 2005) discusses the toxicity of these compounds, it does not provide risk-based levels for these compounds in groundwater or other media. The ATSDR did conclude that "past exposure to these constituents in drinking water posed an ***Indeterminate Public Health Hazard***. Domestic water supplies, consisting of private wells, domestic springs, and commercial/public water supplies, were sampled between September 2000 and January 2003. No data is available for these wells prior to this time period. Therefore, the actual concentrations of contaminants that individuals may have been exposed to in the past (prior to 2000) are unknown. In addition, very limited cancer and non-cancer toxicological data is available for the contaminants of concern, particularly sulfonic acids. The available toxicity information is inadequate to determine if the estimated dosed for past exposures posed a public health hazard."

The ATSDR also concluded that "currently, individuals with contaminated water supplies are receiving bottled water for drinking water purposes. These individuals continue to use water containing resorcinol and sulfonic acids for non-drinking purposes, such as showering and bathing. Using the available data and information provided by ATSDR's toxicological evaluation, current exposures from showering and bathing are not likely to result in adverse health effects and pose ***No Apparent Public Health Hazard***."

Neither ATSDR, nor EPA, nor PADEP has developed health based guidelines or standards for resorcinol, sulfonic acids, or calcium petronates as of the writing of this groundwater EI.

Shallow groundwater underlying the active operations area of the facility is currently being recovered by a groundwater interceptor system and treated at the facility. As a result, there is potential for incidental exposure of workers to impacted groundwater. Construction workers may also incidentally contact this groundwater, which occurs at 1' to 2' below ground surface at certain locations. Per Langan (9/28/04), the facility's Hazard Communication Program identifies health and safety measures for controlling worker exposure to recovered groundwater. These controls should mitigate any unacceptable risk associated with exposure of workers to groundwater. Construction workers may incidentally contact impacted facility groundwater. Per Langan (9/28/04), facility policy provides that the facility Environmental Manager be notified of any activities which involve disturbance of subsurface materials (i.e., excavations or de-watering activities). This policy should mitigate any unacceptable risks associated with exposure of construction workers on facility property to groundwater or subsurface soils.

Ref.: Public Health Assessment for: Bear Creek Chemical Area, Butler and Armstrong counties, Pennsylvania, U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substance and Disease Registry (August 1, 2005).

Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15 2005). Prepared by Langan Engineering and Environmental Services.

Environmental Indicator Forms and Supporting Documentation, Beazer/INDSPEC Properties, Petrolia, Pennsylvania. Prepared by Langan Engineering and Environmental Services (September 16, 2004).

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):

Beazer/INDSPEC has been under a Consent Order and Agreement with PADEP since August 12, 1987 to address groundwater contamination at their Petrolia, PA facility. The extent of the groundwater contamination is based on PADEP's evaluation of groundwater data available at the time of the issuance of the 2003 COA. The previously referenced Bear Creek data base includes all private residences with wells impacted and potentially impacted by releases of the contaminants of concern. These residences are being provided bottled water at this time or connected to public water, and may be using impacted groundwater for non-potable purposes such as bathing and washing. The COA identifies the impacted area as the "Bear Creek Area Chemical Site". Per the COA, all homes within an area identified as the "OU2 Public Water Supply Remedial Response Area" ("the Response Area") are currently being provided bottled water by Beazer/PADEP, and will at a future date be connected to the public water supply system. The water line is presently in the process of being installed at Petrolia, and as of the writing of this EI the main line of the system is under construction. EPA believes that the contaminants of potential concern at this facility and now found in the groundwater, are not migrating beyond the area designated as the OU2 Public Water Supply Remedial Response Area.

Ref.: Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15 2005). Prepared by Langan Engineering and Environmental Services.

Environmental Indicator Forms and Supporting Documentation, Beazer/INDSPEC Properties, Petrolia, Pennsylvania. Prepared by Langan Engineering and Environmental Services (September 16, 2004).

---

[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?

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):

Impacted groundwater under the INDSPEC facility discharges to the South Branch of Bear Creek.

Ref.: Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15 2005). Prepared by Langan Engineering and Environmental Services.

Environmental Indicator Forms and Supporting Documentation, Beazer/INDSPEC Properties, Petrolia, Pennsylvania. Prepared by Langan Engineering and Environmental Services (September 16, 2004).

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)?

.

X 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):

The Human Health EI for this facility has determined that there are no unacceptable Human Health exposure impacts from discharges of contaminated groundwater from this facility.

Surface water samples were collected at seven permanent staff gauge locations within the South Branch of Bear Creek in July 2004 and again in October 2004. The data from these sampling events is presented in Table 3 of the Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15, 2005), prepared by Langan Engineering and Environmental Services. There are no existing water quality criteria for resorcinol (also known as m-dihydroxybenzene or 1,3-dihydroxybenzene), meta-benzene disulfonic acid (m-BDSA), para-phenol sulfonic acid (p-PSA), benzene sulfonic acid (BSA), and trihydroxydiphenyl (THD). For this site-specific case, detected levels of these compounds were compared to proposed ambient water quality criteria (as proposed by the facility) for acute and chronic exposure for ecological receptors. There were no exceedences of the proposed criteria, for these compounds in surface water samples. THD or Trihydroxydiphenyl was not included in AMEC's Proposed Ambient Water Quality Criteria because the facility was only finding very low ppb levels in Bear Creek. After consulting with their consultant (AMEC), it was determined that it would be very difficult to develop a risk based number for THD since it typically consists of several compounds. Additionally, there is an extremely limited supply of THD standard, so running any testing with THD would be impractical. Based on the composition of THD, the facility is using sulfonates/resorcinol as indicator compounds in the stream. Since the facility found no

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

concentrations of sulfonates or resorcinol over AMEC's criteria, no issues have been identified in the stream relating to THD.

Additionally, for wells located adjacent to Bear Creek (GM-9, GM-11, GM-12), groundwater concentrations from the groundwater monitoring events were compared to the proposed ambient water quality criteria, and in no well location is the concentration greater than 10 times the Proposed Ambient Water Quality Criteria in stream value. The analytical results of samples collected from wells GM-9, GM-11, GM-12 were then compared to the 10 times PADEP non-residential used aquifer groundwater standards, and no constituents were found to exceed these screening criteria, with the exception of aluminum, iron, and manganese. These metals are considered secondary contaminants, and are subject to secondary maximum contaminant levels (MCLs). These are non-enforceable Federal Guidelines regarding the taste, odor, and color of drinking water. The presence of iron and manganese in the wells is likely due to the regional geology and historical mining activities. A study by the US Geological Survey (USGS) noted that metals and trace elements were naturally present in the rocks and soils in the basin. Widespread detection of these metals and trace elements indicates natural sources not associated with a specific land use. Generally, the water quality in this basin was not significantly different from water quality in similar shale and sandstone aquifers located throughout Pennsylvania and any impacts to surface water should be considered background in nature.

Under these circumstances, any impacts to eco-receptors can be mitigated by corrective measures to be selected as part of the final remedy phase. Therefore the discharge of **"contaminated**" groundwater into surface water is likely to be **"insignificant**."

Ref.: Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15 2005). Prepared by Langan Engineering and Environmental Services.

Environmental Indicator Forms and Supporting Documentation, Beazer/INDSPEC Properties, Petrolia, Pennsylvania. Prepared by Langan Engineering and Environmental Services (September 16, 2004).

Development of Ambient Water Quality Criteria for Benzene Metadisulfonic Acid, Benzene Monosulfonic Acid, p-Phenol Sulfonic Acid, and Resorcinol, AMEC Earth & Environmental, Boston, Massachusetts (March 8, 2004)

"Quality of Ground Water at Selected Sites in the Upper Mahoning Creek Basin, Pennsylvania". Fact Sheet pp. 176-196 (July 1996)

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

na 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.

na 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.

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

Rationale and Reference(s):

Not applicable, see item 5

---

[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?"

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):

A program for continued groundwater monitoring will be developed after the Remedial Investigation has been completed and the Remedial Investigation / Risk Assessment Report is submitted to PADEP in October 2005.

Ref.: Documentation of Environmental Indicator Determination, RCRA Corrective Action, Environmental Indicator (EI) RCRIS Code (CA 750), Migration of Contaminated Groundwater under control, Beazer/INDSPEC Properties (July 15 2005). Prepared by Langan Engineering and Environmental Services.

Environmental Indicator Forms and Supporting Documentation, Beazer/INDSPEC Properties, Petrolia, Pennsylvania. Prepared by Langan Engineering and Environmental Services (September 16, 2004).

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 **Beazer/INDSPEC Properties** facility, EPA ID # **PAD004336731**, located at **133 Main Street, Petrolia, Pennsylvania.** 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) /s/ Date 9/30/05
(print) Grant Dufficy
(title) RCRA Project Manager

Supervisor (signature) /s/ Date 9/30/05
(print) Paul Gotthold
(title) Chief, PA Operations Branch
(EPA Region or State)

Locations where References may be found:

US Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029
Waste and Chemicals Management Division

Contact telephone and e-mail numbers:

(name) Darius Ostraukas
(phone #) 215-814-3360
(e-mail) ostraukas.darius@epa.gov