

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:

Gorell Enterprises, Inc. formerly Season All Industries

Facility Address:

1380 Wayne Avenue, Indiana, PA 15701

Facility EPA ID #:

PAD 008 964 868

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 nonhuman (ecological) receptors is intended to be developed in the future.

**Definition of "Current Human Exposures Under Controls" 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 "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated groundwater 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"<sup>1</sup> 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 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 (for any media)– skip to #8 and enter "IN" status code.

Rationale and Reference(s):

The Gorell Enterprises, Inc. facility is located on a 17-acre site at the northeast corner of Wayne Avenue and Indiana Springs Road in Indiana, Pennsylvania. Vinyl replacement windows are currently manufactured at the site. The site was formerly operated as an aluminum fabrication facility, starting in 1947. Several environmental investigations have been conducted at the site, including sampling by EPA/PADEP. A groundwater pump and treat system has been in operation from 1995-2012, when Gorell filed for bankruptcy and was purchased by Troika Holdings LLC.

The known groundwater contamination is the contamination associated with chlorinated solvent and aromatic hydrocarbon releases that occurred at the former Gorell facility. The contamination was the result of the historic chemical use for degreasing and painting of extruded aluminum products. The VOC contamination at Gorell was discovered in groundwater studies conducted in the early to mid-1990s. As the groundwater investigations progressed, it became apparent that the contamination had migrated to the south beneath the former Fisher Scientific property.

Five interconnected distinct groundwater flow regimes have been identified beneath the Gorell and Fisher facilities including, in order of depth, the Overburden (approximately 10-20 ft. thick), Massive Sandstone (approximately 16-30 ft. thick), Upper Shale (approximately 10-16 ft. thick), Intermediate Shale (approximately 18-25 ft. thick) and Deep Shale (approximately 65 ft. below the ground surface (bgs)). The upper three groundwater flow regimes are localized and are representative of the shallowest portions of the hydrogeologic cell that contains the site vicinity. The Intermediate and Deep Shale flow regimes are more regional in character and exhibit characteristics of lower portions of the area hydrogeologic cell

Wells screened into the Overburden and Massive Sandstone water regimes were found to contain trace concentrations of chlorinated organic compounds below EPA's maximum contaminant levels (MCLs). Groundwater samples from wells tapped into the deeper Upper Shale and Intermediate Shale water regimes contained trichloroethylene (TCE) (974 µg/l), 1,1-dichloroethene (1,1-DCE) (70 µg/l), and vinyl chloride (20 µg/l). EPA's MCLs for these contaminants are 5 µg/l, 7 µg/l, and 2 µg/l, respectively. These wells are located

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<sup>1</sup>"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).

between the southern face of the former Fisher Scientific Building and Indian Springs Road. Trace concentrations of TCE, 1,1-DCE, 1,1-dichloroethane (1,1-DCA), cis-1,2-DCE, and vinyl chloride either below or within EPA's allowable risk range were detected in deep monitoring wells MW-33 and MW-34 located to the west of the former Fisher Scientific building near Stoney Run Creek.

A ground water recovery and treatment system to address the aromatic and chlorinated solvent groundwater contamination on the former Gorell Enterprises, Inc. facility was placed into operation in March 1996. The groundwater remediation system was modified in 2003 with the addition of several recovery wells and continued to operate until 2012 when Gorell filed for bankruptcy. One round of groundwater sampling (September 2014) has been conducted since the treatment system was shut down; however, none of the wells on the former Fisher Scientific property were sampled at that time. TCE concentrations in the most contaminated well on the Gorell property, MW-20d (screening the Upper Shale water regime) rebounded from as low as 80 µg/l in 2007 to 1,170 µg/l in the September 2014 sample. It should be noted that in 2005, MW-20d exhibited a TCE concentration of 974 µg/l which corresponded to TCE concentrations of 82 µg/l in MW-32d and 67 µg/l in MW-30d, both of which are located on the former Fisher Scientific property.

Ref: Baseline Remedial Investigation Report, Former Gorell Facility, prepared by Johnstown Environmental Management Corp. (JEMCOR), June 2015; Remedial Progress at the Gorell Enterprises, Inc. Site, prepared by Horizon Environmental, May 22, 2007.

A covenant for groundwater and soil use restrictions are pending, based on EPA input. There are presently no completed pathways between "contamination" and human receptors at this facility.

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3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"<sup>2</sup> 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"<sup>2</sup> )
- \_\_\_\_\_ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"<sup>2</sup>) - 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):

A contractor for the former Gorell facility ran PADEP's Quick Domenico and EPA's BioChlor Natural Attenuation groundwater models, which predicted that all of the modeled groundwater concentrations at the downgradient (southern) property boundary of the and former Fisher Scientific facility would be at or below the associated PADEP Act 2 medium specific concentrations (MSCs) for used aquifers.

Troika Holdings, LLC, the current owner of the former Gorell facility, intends to prevent future exposures to any remaining groundwater contamination through activity use limitations (AULs) to be specified in an environmental covenant. 3-Ring Realty, the current owner of the former Fisher Scientific facility and owner of Troika Holdings as well, intends to place similar AULs in an environmental covenant for the Fisher property as well.

Both the Fisher and Gorell facilities, as well as the surrounding area, are supplied with water from the Indiana County Municipal Services Authority (ICMSA). Water for this portion of ICMSA's supply system comes from an intake located on Crooked Creek approximately seven miles north of the facility. The system is interconnected with lines operated by the Pennsylvania-American Water Company, which utilizes surface intakes on Two Lick Creek located approximately two miles south of Indiana, PA. No historical facility activities are expected to have any impacts on these surface water intakes. There are two residential wells located approximately 600 feet upgradient and to the west on the opposite side of Stoney Run Creek. These wells have been previously sampled with no VOC contamination detected. The Pennsylvania Groundwater Information System (PaGWIS) indicated the presence of a domestic well approximately 250 ft. south

<sup>2</sup> "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.

(downgradient) of the Fisher Scientific site at the McNaughton Brothers Moving building, but the property owner has indicated the well is no longer in use. The next closest downgradient well per PaGWIS is a domestic well located approximately 1,500 feet southwest of the Fisher Scientific Facility on the opposite side of Stoney Run Creek. Since no groundwater contamination exists in the southern portion of the Facility, this well would not be expected to be impacted from any releases to groundwater at the Facility.

Ref: Baseline Remedial Investigation Report, Former Gorell Facility, prepared by Johnstown Environmental Management Corp. (JEMCOR), June 2015; Remedial Progress at the Gorell Enterprises, Inc. Site, prepared by Horizon Environmental, May 22, 2007

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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):

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Because Stoney Run Creek is a losing stream at least in the northern portion of the Facility, the groundwater contamination would not be expected to impact that water body. Whether Stoney Run Creek continues to be a losing stream has never been studied. However, no contaminants were ever detected in any of the four monitoring wells installed in the southern portion of the Fisher Scientific facility during eleven years of Gorell groundwater monitoring (1985-1996) associated with the former dry well area. Based on the above, there is no reasonable risk to the Stoney Run Creek.

Ref: Baseline Remedial Investigation Report, Former Gorell Facility, prepared by Johnstown Environmental Management Corp. (JEMCOR), June 2015; Remedial Progress at the Gorell Enterprises, Inc. Site, prepared by Horizon Environmental, May 22, 2007

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5. Is the **discharge** of "contaminated" groundwater into surface water likely to be "**insignificant**" (i.e., the maximum concentration<sup>3</sup> 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<sup>3</sup> 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 judgment/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 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 concentration<sup>3</sup>s greater than 100 times their appropriate "level(s)," and if 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):  
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<sup>3</sup> As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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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<sup>4</sup>)?

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<sup>5</sup> 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 a "NO" status, 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):

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<sup>4</sup> 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.

<sup>5</sup> 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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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):

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