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: **United Environmental Group, Inc.**
Facility Address: **241 McAleer Road, Sewickley, Pennsylvania 15143**
Facility EPA ID #: **PAD987283140**

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 nonhuman (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 facilty?

____ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

X 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):
United Environmental Group, Inc. facility (UEG or facility), a company formed in 1993, is located at 241 McAleer Road, Sewickley, Ohio Township, Allegheny County, Pennsylvania. UEG was a residual and hazardous waste treatment, storage, and disposal (TSD) facility that received and processed residual and hazardous waste for the retail petroleum industry. All waste was processed at UEG or shipped off site for proper disposal. UEG was not a burial facility or incinerator.

On May 21, 2013, the Pennsylvania Department of Environmental Protection (PADEP) received the Hazardous Waste Permit Renewal Application from UEG. By email, UEG notified that they were no longer pursuing a permit, as they had closed the facility in June 2013. The hazardous waste permit expired on October 31, 2013; however, the residual waste processing permit remains active. At the site visit, UEG stated the facility was not in operation. Prior to closing the facility, in May 2013, the tanks were cleaned and sludges removed. As rainwater still runs through the process system, the facility is still discharging to the Allegheny County Sanitation Authority (ALCOSAN). Some of the equipment was auctioned by Yoder & Frey, heavy equipment auctions.

Prior to UEG, Penn Tank Disposal, Inc. (PTD or facility), formerly located at 237 McAleer Road, cleaned used tanks, some containing gasoline and waste oil high in lead in the sludge, and operated under USEPA Identification (ID) number PAD982662116. According to the Part A hazardous waste permit application, the facility initiated activities on November 30, 1987. PTD is not registered in the USEPA's Envirofacts database. Petroleum Industry Maintenance, Inc. (PIM or facility), located at 289-B McAleer Road (PAD982662116), was a company categorized as a Service Station Equipment Installation and Repair Contractor. (Note: UEG and PIM shared the facility location; however, they conducted business in separate buildings. A lease line separated the operations.) PIM operated under USEPA ID PAD987283140. PIM also used ID PAD982662116, per the USEPA's database. PIM is registered in the USEPA's Envirofacts database; it states the facility was never regulated as a TSD facility, just as a protective filer.

Documentation indicates that on January 1, 1993, PTD merged into PIM. At the same time, PIM filed paperwork to change its name to UEG. PIM and PTD were registered as fictitious names under UEG. PIM and PTD were sister companies that were situated adjacent one another on the same property. As a result of the 1993 merger, PTD's USEPA ID number was discontinued, while PIM's USEPA ID number was assigned to UEG. Information provided in this report focuses on operations conducted under USEPA IDs PAD982662116 and PAD987283140. It was noted that there would be no change in waste management activities.

UEG, located at 241 McAleer Road (PAD987283140), was a large quantity generator (LQG) of hazardous waste and a transporter/transfer facility of hazardous waste that received hazardous waste from off site. UEG was a transporter/transfer facility of used oil.

[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).

Ownership
On January 1, 1993, Penn Tank Disposal, Inc. (PTD) (an S Corporation) merged into Petroleum Industry Maintenance, Inc. (PIM) (a C Corporation) and at the same time, PIM amended its corporate papers so as to have its name changed to United Environmental Group, Inc. (UEG). At that time, they also registered PTD and PIM as fictitious names to be divisions of UEG. The two companies were sister companies that were situated adjacent one another on the same property. They requested PTD's USEPA ID, PAD982662116, be deleted and that the name on PIM's USEPA ID, PAD987283140, be changed to UEG. Also, the address numbers changed as the local township had reissued new numbers for each 50 feet of road frontage.

On March 12, 1998, UEG explained the ownership of the facility in detail to the USEPA via letter. A handwritten note by the USEPA on the letter stated "deactivated PAD982662116" and updated ownership information for PAD987283140.

The UEG property (241 McAleer Road, 6.232 acres; Parcel 608-H-97) is owned by Klesic Enterprises LP (Allegheny County tax records). Operations were performed in the eastern portion of the property (1.5 leased acres), along McAleer Road. Klesic Enterprises LP also owns the property north of this property (43,560 square feet; Parcel 608-H-175), which appears to be used in the operations as outside storage, and the property east of McAleer Road (39,770 square feet; Parcel 608-H-88), which appears to be used for parking and open land. Parcels 608-H-97 and 608-H-88 were purchased by Richard M. and Joan E. Stanley on July 12, 1984; parcel 608-H-175 was purchased on May 5, 1997. All three parcels were sold to Klesic Enterprises LP on December 1, 1999. A 1995 drawing of the drum storage layout identifies a lease line across the property.

Site Layout/Background
The facility is situated on the eastern portion of a larger wooded property, located on the west side of McAleer Road, south of the intersection with Anderson Road. The operations area (two buildings), including parking and storage is approximately 140 feet wide by 670 feet long. Per the current aerial photograph (Google Earth, August 29, 2012), the north end of the property was utilized for storage of trailers, tanks, and construction materials on gravel/crushed rock; the central portion of the property contains two two-story buildings and a smaller single-story building surrounded by concrete pads, and ASTs, piping storage, and construction material situated on asphalt and a concrete pad; the south end of the property was the waste drum storage area (hazardous and non-hazardous waste storage and construction materials) on concrete pads. A fence surrounds the facility. The roofs drain to the stormwater drainage system. In addition, a stormwater catch basin/drain was observed during the 2014 site visit in the gravel parking lot at the north end of the facility.

The facility is located in a small valley with residential homes in the valley to the north and residential developments located above and to the west (460 feet away). A wooded piece of property is located across McAleer Road, adjacent Highway 279. South of the facility, is a large cleared undeveloped property.

At the shutdown of the facility, the following are the hazardous waste UEG was permitted to accept, whether from bulk tankers and off loaded into the catch (receiving) basin and run through the tank system (process system) or stored in containers in designated hazardous storage locations until shipped off site for proper treatment or disposal:

USEPA Code	Contaminant/Characteristic	Description
D001	Ignitability	Gasoline/water mixtures, jet fuels, light-end distillates
D006	Cadmium/Toxicity	Waste oil tank bottom sludges containing inorganic compounds
D007	Chromium/Toxicity	Waste oil tank bottom sludges containing inorganic compounds
D008	Lead/Toxicity	Waste oil tank bottom sludges containing inorganic compounds
D018	Benzene/Toxicity	Liquids and solids containing gasoline or related compounds

Per the USEPA's Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspection (CEI) dated January 13, 2009, the facility's waste included incoming and outgoing wastes as described below.

Incoming Wastes: Typical incoming wastes included 1) tank contents (gasoline, oil), 2) petroleum-contaminated waters (inside or outside the tank), 3) petroleum-contaminated soils from around the tanks (came in as a residual waste, exempted as hazardous), 4) brines or gas condensates from the oil and gas industry, and 5) tanks(which could have contained oil residues [sludge]). Although these represented typical waste streams, the facility took in other ignitable wastes.

Outgoing Wastes: Typical outgoing UEG-generated wastes included 1) wastes transferred in from generators, and 2) tank scrapings (residues, sludge) (typically shipped as hazardous), soils, absorbents, and biotreatment sludge. Note: The biotreatment unit was operational during the 2014 site visit.

Per the USEPA's January 13, 2009 RCRA CEI, the facility's regulatory classifications included:

- Hazardous waste TSD – for incoming wastes
- Hazardous waste generator – for outgoing wastes (some of which are repackaged incoming wastes) and on-site generated waste
- Hazardous waste biological treatment – for treating petroleum-contaminated wastewaters (part of TSD permit)
- Hazardous waste transporter
- Residual waste transfer/processing – incoming wastes (typically soils) and cutting of tanks
- Residual waste generator outgoing wastes
- Residual waste permit by rule (PBR) – wastewater treatment

An estimate of the maximum inventory of hazardous wastes ever onsite calculated from the year 2003 included:

- 7,400 tons of petroleum-contaminated water processed and discharged to the ALCOSAN
- 646 55-gallon drums of hazardous material (D001, D006, D007, D008, D018) and used waste oil - 142.1 tons shipped off site for proper treatment and disposal
- 1,250 tons of recovered product shipped off site for recycling

Other permits issued to the facility included:

- PADEP Hazardous Waste Transporter License – PA-AH 0431 (issued August 2, 1991, held through present)
- PADEP Waste Haulers Transportation Authorization – WH-2694, expired October 31, 2012
- PADEP Storage Tank Registration/Permitting – 02-32564, issued August 5, 1989, expired October 4, 2012
- ALCOSAN Industrial Discharge Permit – P2-0105 (issued on April 1, 1998, expires on March 31, 2015)
- Public Service Commission of West Virginia, Alliance for Uniform Materials Transportation (Ohio [OH] & West Virginia [WV]) – UPW-0446182WV (issued July 13, 1998, application submitted)
- US Department of Transportation (USDOT) – Hazardous Materials Registration – 062812552045U
- USDOT - Hazardous Materials Registration – HMCO 021819
- Public Utilities Commission of OH Motor Carrier Division
- PADEP Air Quality Control Permit – AQ-330-001 (issued June 12, 1992; expiration date – none specified)
- PADEP Residual Waste Processing and Transfer Facility Permit – 301224 (issued September 24, 1992). On July 19, 2012, PADEP issued the permit renewal for the operation of UEG's residual waste TSD in accordance with Article V of the Solid Waste Management Act.

Operations
Operations at the facility consisted of decommissioning tanks, temporary storage and transfer of waste, and treatment of residual and hazardous wastes. All operations were limited to the treatment, storage and disposal of petroleum-based wastes (Preparedness, Prevention and Contingency (PPC) Plan, September 2003).

The January 13, 2009 USEPA CEI summarized the process overview/waste streams. The facility typically received shipments of RCRA hazardous and non-hazardous waste for treatment, storage and subsequent transportation off site for disposal. Waste typically arrived at the facility in bulk transportation containers (e.g., tanker truck) or 55-gallon drums. Upon arrival at the facility, bulk shipments of waste were scanned for radiation, and a sample of the material was obtained

from the transportation container for waste fingerprint analysis. The waste sample was typically tested for pH, flash point, halogenated solvents, solids, product and water content, and visual comparison to the accepted waste profile analysis submitted by the generator. If the waste met the accepted waste profile, the material was accepted at the facility for treatment and/or storage.

The tanker truck was staged in the facility's permitted containment pad where the waste was discharged into a catch basin connected to settling tank/receiving basin P-1 (concrete 1,900 gallon below grade four chambered basin covered with Plexiglas; receiving basin). If high solids were present in the waste stream, a pre-filter was used to remove solids from the waste stream prior to discharge into the catch basin. Waste from tank P-1 was transferred to oil/water separator tank P-2 (2,000 gallon underground storage tank [UST]). Recovered product/petroleum/fuel was subsequently sent off site for recovery. Recovered contaminated water from the oil/water separator was placed in process tanks T-1 (10,000 gallon UST), T-2 (8,000 gallon UST), T-3 (8,000 gallon UST) or T-4 (equalization tank; 8,000 gallon UST). Contaminated water from tanks T-1, T-2, T-3 and T-4 was sent to P-3 (biological treatment unit - 8,415 gallon aboveground storage tank [AST]) where the contaminated wastewater was aerated and biologically treated to remove petroleum contamination from the waste stream. From P-3, the wastewater was transferred to P-4 (2,000 gallon AST) for gravity separation treatment of solids/sludge from the wastewater, which then fed into P-5 which was a carbon adsorption unit that provided final polishing of the wastewater prior to discharge to ALCOSAN under industrial discharge permit P2-0105. The facility's discharge was monitored quarterly as required under the pre-treatment permit. ALCOSAN also reportedly conducted semiannual testing of the facility's discharge into their wastewater treatment system. The solids recovered from the wastewater treatment system were collected in a filter bag and characterized for subsequent off site disposal. The waste solids were typically non-hazardous waste. Pre-tank P-5 attainment samples were collected annually and analyzed for volatile organic compounds (VOCs) (Method SW-846 8260B).

Tank Decommissioning - Tank decommissioning consisted of the decommissioning of carbon steel and fiberglass tanks used for the storage of petroleum-based product and wastes. Upon arrival at the facility, the tanks were inspected to determine the amount of product or waste in the tank. The tanks were required to contain less than 2 centimeters (cm) of product or waste and be inerted prior to transport to the facility. In the event that this did not occur, UEG drained the tank of any remaining product or waste. The tank was then steamed or ventilated until vapor free. Once vapor free, access was obtained and the tank was tested for combustible gas(es) and oxygen content. Personnel cut open the tanks, entered the tanks, and removed all sludges that were present. The sludges were placed into USDOT approved containers. The tank was then cleaned within Drainage Area 1 (DA-1) of the concrete containment area, cut into sections, and sent to a scrap or re-melt facility.

The tank wash-down water, which typically contained trace amounts of petroleum-based product as well as any stormwater collected on the concrete containment pad, flowed to a catch basin and then to a process tank. The wastewater flowed to an oil/water separator. The wastewater was then conveyed to the process tanks, equalization tank, and a thin-film aerobic digester (biological treatment system) for treatment.

Transfer Facility - The facility also provided temporary storage of petroleum-based wastes including soil and other wastes. The excavation of USTs frequently revealed surrounding soil that was contaminated by the contents of the tank. UEG removed, transported and safely stored the petroleum-contaminated soil at the facility until disposal arrangements at an approved facility were made. These wastes were regulated under UEG's residual waste permit. Other wastes that were stored within the waste storage area of the concrete containment pad included the following: portable contaminated floating booms and absorbent pads utilized in the cleanup of spills of refined petroleum products such as gasoline, kerosene and oils; spent activated carbon contaminated by petroleum-based products; and fuel and oil filters from virgin petroleum filtering.

Residual and Hazardous Waste Treatment - Residual and hazardous waste storage consisted of both tank and container storage. Historically, treatment consisted of stripping liquid phases of regulated material from USTs or bulk tankers (and similar wastes such as condensate waters from natural gas pipelines (drip gas water) and transferring the product into another tank to be shipped off site for eventual re-distillation. The wastewater remaining after this stripping activity was treated within a biological treatment system and was then discharged to the ALCOSAN. Note: the air stripper (not operating) was observed in the operations building during the 2014 site visit.

For drums of waste received at the facility, samples from each drum were collected for the fingerprint analyses; and after meeting the waste profile characterization, the waste was accepted for treatment/storage at the facility. Once accepted, the drums of waste were staged in one of the three permitted waste storage areas (HAZ-1, HAZ-2, HAZ-3) on the permitted containment pad, segregated based on material compatibility, type and classification. Liquid wastes were pumped into the catch basin and were treated in the facility's treatment system. Hazardous waste solids were kept in drums and were subsequently shipped off site for disposal.

Per the 2003 hazardous waste permit, UEG could store the following wastes in containers: D001- gasoline/water mixtures (ignitable wastes), jet fuel mixtures, and other fuels/light end distillates; D006 - tank bottom sludge (cadmium); D007 - tank bottom sludge (chromium); D008 - tank bottom sludge (lead); and D018 - gasoline containing liquids and solids or related materials (benzene). The facility could not store containers of hazardous waste in excess of one year unless documentation was provided that demonstrated that the waste was to be processed or removed from the facility within a specified timeframe and in accordance with applicable regulations. The facility was permitted to store its own generated waste in the designated areas.

The January 13, 2009 USEPA CEI addressed the permit status: UEG was a LQG of hazardous waste, and was permitted to store and treat hazardous waste at the facility under permit PAD987283140. The facility was permitted to store up to 240 55-gallon drums of hazardous waste including gasoline/water mixtures, jet fuel mixtures and other fuels/light end distillates (D001), tank bottom sludge (D006, D007, D008) and gasoline-containing liquids and solids or related materials (D018) in three locations for up to one year. The facility was also permitted to store/treat hazardous waste in several USTs (T-1, T-2, T-3, and T-4), a concrete-lined tank (P-1), oil/water separator (P-2) and three wastewater treatment tanks (P-3, P-4 and P-5).

UEG also accepted recovered product in the form of product remaining in storage tanks which was suitable for re-refining and off-spec products which were not suitable for their intended use. These recovered products were stored separately from the processed wastes and were routinely shipped off site for re-refining.

The source of air emissions was the petroleum-contaminated wastewater processing and related handling. UEG used a carbon adsorption unit to eliminate odors and VOCs from the treatment process' exhausted air (Air Quality Control Permit AQ-330-001).

Other historic permits issued to the facility include a National Pollutant Discharge Elimination System (NPDES) permit PA0098353 issued by the PADEP Bureau of Water Quality Management for operating a tank disposal facility and resultant water discharge (issued to PTD on August 5, 1988; expired on August 5, 1993), a Water Quality Management (WQM) II permit 0287205 issued by the PADEP Bureau of Water Quality Management for the discharge of water into Bear Run (issued to PTD on August 12, 1988; reported not in use [Form HW-C 1993]), an Allegheny County Sanitary Authority Permit – P2-0100 (issued to UEG on September 24, 1992; expired on March 31, 1996), and a Small Quantity Hazardous Waste Transportation License Permit – PA-AH S190 (issued to PTD on September 9, 1992; deleted on January 1, 1993).

Closure

On May 21, 2013, PADEP received the Hazardous Waste Permit Renewal Application from UEG. By email, UEG notified that they were no longer pursuing a permit, as they had closed the facility in June 2013. The hazardous waste permit expired on October 31, 2013; however, the residual waste processing permit remains active. Per the Closure Post-Closure Plans of the permit application, UEG intends to accomplish "clean closure", not a partial closure, in regard to all portions of the facility. This "clean closure" approach will minimize, if not completely eliminate the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere. This will remove the need for Post Closure activities. The expected length of time to accomplish this from the initiating of closure activities until the issuance of the Closure Report/Certification and documentation from an independent Pennsylvania Registered Professional Engineer is 170 days. This may change due to unforeseen circumstances, and if such, an amended Closure Plan will be submitted. Closure details are provided in the permit application with the following schedule for closure:

Day 1-45	Removal and disposal of all hazardous waste drums and other equipment from waste storage area.
Day 46-60	Decontamination of waste storage pad via sandblasting, removal and disposal of residue. Wash down pad, rinsate to be treated in biological treatment system.
Day 61-75	Decontamination of all catch basins, receiving/retention tank, oil/water separator, piping, pumps and other equipment associated with the storage tank system.
Day 76-106	Removal and disposal of all waste from process tanks, recovered product and equalization tanks. Clean tanks and dispose of any residuals. Test tanks for integrity.
Day 107-115	Removal and disposal of contents within the biological treatment system. Decontamination of biological treatment system, disposal of residues from biological treatment system as well as wastes generated from decontamination of all equipment used during closure activities.
Day 116-146	Removal of all USTs and testing of surrounding soils. UEG will also test soils below and adjacent to concrete containment pad (waste storage pad and loading/unloading areas) and vapor monitoring results from observation wells. Sampling and analysis of groundwater from all monitoring wells on site will also be accomplished. (UEG intends to place groundwater monitoring wells around the waste facility upon issuance of the hazardous waste permit. At the same time UEG will be conducting a subsurface characterization of the facility). All USTs will be closed as per PADEP UST Regulations.
Day 147-170	Closure report/certification and documentation from an independent Pennsylvania Registered Professional Engineer

Waste Types and Quantities

As summarized previously, the facility typically received shipments of RCRA hazardous and non-hazardous waste for treatment, storage and subsequent transportation off site for disposal. Waste typically arrived at the facility in bulk transportation containers (e.g., tanker truck) or 55 gallon drums. Upon arrival at the facility, bulk shipments of waste were scanned for radiation and a sample of the material was obtained from the transportation container for waste fingerprint analysis. The waste sample was typically tested for pH, flash point, halogenated solvents, solids, product and water content, and visual comparison to the accepted waste profile analysis submitted by the generator.

If the waste met the accepted waste profile, the material was accepted at the facility for treatment and/or storage. The tanker truck was staged in the facility's permitted containment pad where the waste was discharged into a catch basin connected to tank P-1. If high solids were present in the waste stream, a pre-filter was used to remove solids from the waste stream prior to discharge into the catch basin. Waste from tank P-1 was transferred to tank P-2, which was an oil/water separator. Recovered product/petroleum/fuel was subsequently sent off site for recovery. Recovered contaminated water from the oil/ water separator was placed in process tanks T-1, T-2, T-3 or T-4. Contaminated water from T-1, T-2, T-3 and T-4 was sent to tank P-3 where the contaminated wastewater was aerated and biologically treated to remove petroleum contamination from the waste stream. From tank P-3, the wastewater was transferred to tank P-4 for gravity separation of treatment solids/sludge from the wastewater, which then fed into tank P-5, a carbon adsorption unit that provided final polishing of the wastewater prior to discharge to ALCOSAN under industrial discharge permit P2-0105. The facility's discharge was monitored quarterly as required underthe pretreatment permit. The solids recovered from the wastewater treatment system were collected in a filter bag and characterized for subsequent off site disposal. The waste solids were typically non-hazardous waste. Pre-tank P-5 attainment samples were collected annually and analyzed for VOCs.

Due to the varied characteristics of the wastes processed, the processing of each waste stream differed. Additionally, because of variation in characteristics such as solids and water content, individual loads of similar wastewater were processed differently.

Tank Bottoms - Tank bottoms are the residues remaining when a UST or AST has been emptied to the limits of the tank's pump system. When a storage tank was cleaned, usually for removal or upgrade, it was necessary to completely remove residual product and residues. Typically, these residues consisted of the fuel, most often gasoline or diesel, condensed water, and often in the case of older steel tanks, rust. Tank bottoms typically contain benzene, toluene, ethylbenzene, and xylenes (BTEX), as well as several other additives in minute amounts.

Tank bottoms were received by UEG throughout the year, with the greatest volumes received during the construction season. Tank bottoms represented approximately 40 percent of the wastewaters received for processing.

Hole Waters - When a UST was removed, if there has been contamination to the surrounding soil from the tank, its lines and/or dispensers, the water which came in contact with these soils became contaminated with the fuel and required treatment. Although hole waters exceeded PADEP limits for the concentrations of storage tank contaminants in water and required treatment, they typically contained very limited BTEX and other contamination.

As with tank bottoms, hole waters were received throughout the year, with the greatest volumes received during the construction season. Hole water represented approximately 20 percent of the volume of wastewaters received for processing.

Drip Gas Water - UEG also accepted drip gas waters, the condensate which accumulates in natural gas pipelines and pump stations, for treatment. These wastewaters typically were high in benzene and toluene and had low flash points.

Drip gas waters were received primarily in the spring and summer months when the gas companies were performing annual maintenance; it represented approximately 40 percent of the wastewaters received for processing.

UEG processed approximately 6,000 gallons per day (gpd) of combined wastewaters for an average five day week although there was seasonal variation in the amounts and types of wastewaters received for processing.

Wastewater Received in Drums – The waste was to be processed according to the contents as described above.

Recovered Product - Recovered product, waste petroleum products which, although not suitable for use by the provider, nonetheless has significant petroleum content and was suitable for direct shipment to a rerefiner.

Wastewater from Tank Dismantling - The dismantling of storage tanks results in liquids from the tank bottoms and from petroleum-contaminated water from steam cleaning performed to make the tanks acceptable for recycling as scrap metal (steel tanks) or disposal as residual waste (fiberglass tanks).

Operations Pad Cleanup Wastewater - Because the operations pad was used for the storage and processing of solid wastes such as soils from tank excavations, routine cleaning of the pad was required. After the solid wastes have been collected, routine washdowns of the pad were required. These wash waters were collected in one catch basin (CB), where solids were to settle into the sumps.

Stormwater Runoff - Because of the requirement to treat the stormwater runoff and snowmelt from the waste processing areas of the pad, a stormwater drainage system was designed to collect this water at several locations. The drainage areas all discharge to tank P-1.

Wastes Received but not Processed by UEG – Waste streams related to the above wastes which were received by UEG for processing and treatment by others were non-hazardous and hazardous waste oils and hazardous petroleum sludges. Waste oils were drummed and sludges were transferred to drums and shipped to off site recyclers.

Per the 2013 hazardous waste permit application, the facility was permitted to store/treat in the following tanks/units:

Tank No.	Tank Capacity (gallons)	Waste Management Unit/Other
T-1	10,000	Process tank
T-2	8,000	Process tank
T-3	8,000	Process tank
T-4	8,000	Equalization tank
T-5A/T5B	6,000/4,000	Recovered product tank
P-1	1,900	Sludge receiving basin
P-2	2,000	Oil/water separator
P-3	8,415	Biological treatment unit
P-4	2,000	Settling tank
P-5	N/A	Carbon adsorption unit

For drums of waste received at the facility, samples from each drum were collected for the aforementioned fingerprint analyses; and after meeting the waste profile characterization, they were accepted for treatment/storage at the facility. Once accepted, the drums of waste were staged in one of the three permitted waste storage areas (HAZ-1, HAZ-2, HAZ-3) on the permitted containment pad. Liquid wastes were pumped into the aforementioned catch basin and were treated in the facility's previously described treatment system. Hazardous waste solids were placed in drums and were subsequently shipped off site for disposal.

The Waste Analysis Plan (WAP), dated October 2000, described the chemical and physical nature of the residual and hazardous wastes received and treated at UEG. The following hazardous wastes were identified.

USEPA Code	Contaminant/Characteristic	Description
D001	Ignitability	Gasoline/water mixtures, jet fuels, light-end distillates
D006	Cadmium/Toxicity	Waste oil tank bottom sludges containing inorganic compounds
D007	Chromium/Toxicity	Waste oil tank bottom sludges containing inorganic compounds
D008	Lead/Toxicity	Waste oil tank bottom sludges containing inorganic compounds
D018	Benzene/Toxicity	Liquids and solids containing gasoline or related compounds

Analytical parameters to evaluate waste included: percent solids, percent water, percent petroleum-based product, specific gravity (optional test), pH, flash point, compatibility, total halogens (waste oil only), and polychlorinated biphenyls (PCBs) (waste oil only).

Per the 2003 hazardous waste permit, the facility was permitted to store the following wastes in containers: D001 - gasoline/water mixtures, jet fuel mixtures, and other fuels/light end distillates; D006 - tank bottom sludge containing cadmium; D007 - tank bottom sludge containing chromium; D008 - tank bottom sludge containing lead; and D018 - gasoline containing liquids and solids or related materials containing benzene.

Releases
UEG removed one 2,000-gallon UST that contained a gas/water mixture (recovered oil) and associated equipment in January 1997. No obvious contamination was observed during the removal activities. A total of three post-excavation samples were collected from beneath the UST and were analyzed for VOCs, total petroleum hydrocarbons (TPH) gasoline range organics (GRO) (TPH-GRO), total solids, total lead and total organic halides (TOX). Low levels of benzene, toluene, total xylenes, methyl tert-butyl ether (MTBE), and naphthalene were detected. All of the detected constituents were within the Cleanup Standards for Contaminated Soils (PADEP August 1996), and the Act 2 regulations. Evaluation of the detected constituents to PADEP's current Statewide Health Standard, residential medium-specific concentrations

(MSCs) indicate the concentrations are below the MSCs. Groundwater was not encountered in the excavation, nor was any determination of groundwater depth or quality made.

Available analytical data for groundwater samples collected from the tank area observation wells since the 3rd quarter of 2004 indicate that typically TPH-GRO was not detected at a reporting limit of 0.10 mg/L (or less) in most of the observation well samples. Observation well OW-1 exhibited detections ranging from 0.391 to 11.10 mg/L. Observation well OW-2 exhibited detections ranging from 0.49 to 8.20 mg/L. Observation well OW-5 exhibited detections ranging from 0.14 to 14.60 mg/L. For these three wells, the highest concentrations were detected in 2004 and 2005. The last sampling data dated March 22, 2013, did not detect TPH in any of the observation wells (all <0.1 mg/L). No TPH-GRO has been detected outside the tank excavation at wells OW-6 and OW-7.

Occasionally, the observation wells have been sampled and analyzed for BTEX, MTBE, cumene, naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. Except for September 25, 2005, March 28, 2007 and June 22, 2007, the samples were nondetect at the reporting limit. On September 25, 2005, the three wells in the tank excavation exhibited benzene above the PADEP Statewide Health Standard MSC of 5 ug/L. On March 28, 2007 and June 22, 2007, only OW-5 exhibited benzene above the MSC. None of these constituents were detected outside the tank excavation at wells OW-6 and OW-7.

SWMUs

The following residual and hazardous waste management units (for treatment and storage) were identified in the September 1999 PPC plan.

Waste Management Unit	Classification	Quantity
Tanks		
Process Tank 1 (T-1)	Process/Hazardous	10,000 gallon
Process Tank 2 (T-2)	Process/Hazardous	8,000 gallon
Process Tank 3 (T-3)	Process/Hazardous	8,000 gallon
Equalization Tank (T-4)	Process/Hazardous	8,000 gallon
Recovered Product Tank (T-5A and T-5B)	Registered USTs	6,000 gallon and 4,000 gallon
Retention Tank (T-6) (Proposed - cancelled[1])	Process/Hazardous	20,000 gallon
Oil/Water Separator (P-2)	Process	2,000 gallon
Waste Storage Areas		
Waste Storage Area HAZ-1 (waste oil sludge)	Hazardous	75 drums @ 55 gallon/each = 4,125 gallon
Waste Storage Area HAZ-2 (gasoline sludge)	Hazardous	75 drums @ 55 gallon/each = 4,125 gallon
Waste Storage Area HAZ-3 (waste oil sludge)	Hazardous	75 drums@ 55 gallon/each = 4,125 gallon
Waste Storage Area NH-1 (carbon/ filters, absorbents)	Non-hazardous	50 drums @ 55 gallon/each = 2,750 gallon[2]
Waste Storage Area NH-2 (sludge)	Non-hazardous	80 drums@ 55 gallon/each = 4,400 gallon[2]
Waste Storage Area NH-3 (liquid)	Non-hazardous	80 drums @55 gallon/each = 4,400 gallon[2]
Waste Storage Area NH-4 (oil)	Non-hazardous	80 drums @ 55 gallon/each = 4,400 gallon[2]
Waste Storage Area NH-5 (soil)	Non-hazardous	80 drums@ 55 gallon/each = 4,400 gallon[2]
Soil Stockpiles (2)		325 tons total
Other		
Wastewater Retention Basin (T-7) (Proposed – cancelled[1])	Process/NA	16,000 gallon
Receiving Basin (P-1) (Proposed[1] to be removed – present in 2014)[2]	Hazardous	1,900 gallon net
Biological Treatment Unit (P-3)	Hazardous	8,415 gallon net
Bulk Mixing Unit (Settling Tank) (P-4) (Proposed - installed[1])	Hazardous	2,000 gallon net
Carbon Adsorption (P-5)	Hazardous	NA
In-line Filters (F-1) (Proposed – cancelled[1])	Hazardous	NA
Trench Drain (DA-2; proposed - cancelled)[2]		1 @ 55 gallon/each = 55 gallon
Catch Basins (CB-1; CB-2 and CB-3; proposed - cancelled)[2]		3 @ 75 gallon/each = 225 gallon

Notes:
[1] Listed in September 1999 Tank System Management Plan
[2] Listed in September 1999 Closure Plan

The Tank System Management Plan of the draft permit (September 1999) did not include DA-2 or CB-1, CB-2 and CB-3. It did, however, include in-line filters (F-1).

The final PPC plan in the draft permit (2003) did not include T-6, T-7, DA-2, or CB-1, CB-2 and CB-3. It did, however, include F-1.

RCRA-Permitted Containment Pad
The storage containment area for non-hazardous and hazardous waste is a concrete pad surrounded by a concrete wall or curb except at the entrance to the area where historically movable plastic containment barriers were used. The movable barriers were moved to allow heavy equipment or tanker trucks into the containment area. The containment pad is sloped to a catch basin which drains to tank P-1. During the 2014 site visit, it was observed that the movable plastic containment barrier had been replaced by a wide rolled concrete curb.

Containers were closed at all times with the exception of when waste was being added or removed. All container filling or emptying activities was performed within thelimits of the concrete containment area. All containers were handled with equipment suitable to move, open, stack or transport containerized wastes. Overpacks (85 gallon drums) were located on-site to transfer any container which was damaged or leaking. All containerized flammable wastes were offset at least 50 feet from the lease line. Fire protection equipment was located within the concrete containment pad. Proper drum storage and adequate aisle space prevented damage from moving equipment. Hazardous drums were positioned in rows of two, six deep and stacked no more than two high. Aisle space was kept at a minimum of 13 feet. Labels faced outward for easy identification of Generator, Contents and Date of Arrival. All containers and areas where containers were stored were inspected at least daily for leaks and deterioration, proper labeling and aisle space.

The concrete containment pad used for drum storage is of steel reinforced concrete construction approximately ten inches thick and utilizes a six inch high concrete curb and rolled berm around the perimeter for containment of any spill, leak or accumulated precipitation. It utilizes an impermeable liner. The concrete pad, concrete curb and perimeter curbs were checked periodically for deterioration and immediately repaired if found to be damaged. Containers stored within the concrete containment pad were protected from standing liquids by means of drainage via the slope of the concrete containment pad. The portions of the concrete containment pad used for waste processing and storage sloped to a catch basin, which conveyed any liquids (rinsate water, leaks, spillage, precipitation, snow melt, runon, etc.) to the solid/sludge settlement process tank, which then flowed into the oil/water separator and associated process tanks for proper treatment and disposal, all via gravity feed.

Storage bays utilized for storage of non-hazardous waste are located within the permitted containment pad (temporary staging).

- NH-1 (carbon, filters, absorbents) - 50 drums
- NH-2 (sludge) - 80 drums
- NH-3 (liquid) - 80 drums
- NH-4 (oil) - 80 drums
- NH-5 (soil) - temporary staging - 80 drums

Hazardous waste storage area 1 (HAZ-1) is located within the permitted containment pad. Historically, 55-gallon drums of hazardous waste (gasoline/debris/solids) were stored in this area (maximum 75 drums).

Hazardous waste storage area 2 (HAZ-2) is located within the permitted containment pad. Historically, containers and drums of hazardous waste (waste oil/gasoline sludges) were stored in this area(maximum 75 drums).

Hazardous waste storage area 3 (HAZ-3) is located within the permitted containment pad. Historically, 55-gallon drums of hazardous waste (gasoline/water mix/liquids) were stored in this area (maximum 75 drums).

Groundwater Monitoring
The facility was required to conduct quarterly groundwater monitoring via observation wells located both up and downgradient of USTs T-2, T-4 and P-2 because they are not equipped with secondary containment. According to PADEP, secondary containment requirements for these tanks were waived as UEG tested the tanks to prove that the tanks were not leaking, along with quarterly monitoring of groundwater near these tanks to verify that the tanks remain leak-free (January 13, 2009 CEI).

Receiving basin P-1 and P-2 and process tanks T-1, T-2, T-3 and T-4 are all USTs except P-1 which is a below grade concrete basin with a Plexiglas cover at grade (includes an air treatment system for P-1). Tanks P-3 (biological treatment unit) and P-4 (settling tank) are located within the support building and monitored by an on-site technician. Tank P-5 (carbon polishing tank) did not receive waste that contains more than 500 ppm organics. A floor drain in the building was observed during the 2014 site visit. Its discharge point was unknown. Also located in the support building was a laboratory.

The observation wells (OW-1, OW-2, OW-5, OW-6, and OW-7 [no water detected in OW-3 and OW-4]) located at the facility were sampled and analyzed for TPH-GRO on a quarterly basis.

OW-1, 2 and 5 were installed in the pea gravel fill of the tank excavation of T-1, T-2 and T-3 at depths ranging from 13.84 to 16.17 feet below ground surface (bgs). The bottom of the tank excavation is approximately 14 feet bgs. The wells are constructed of four-inch diameter polyvinyl-chloride (PVC); screen unit is 0.001 slot; and there is a cap on the bottom and a locking cap on the top. Observation wells OW-6 and OW-7 are two-inch diameter wells; a bottom cap; a locking cap, and cast iron stand up locking protective risers. The upper screen portion of each well is installed in fill material comprising the hill-side slope between the facility and McAleer Road and the lower portion of the screen units are installed in the stream valley fill material that was carved out by the meandering of Bear Run, which runs north to south along the eastern side of McAleer Road in front of the facility. OW-3 and OW-4 are one-inch diameter PVC wells; open at the bottom; no screen unit; 2.4 and 4.2 feet in length, respectively, with a locking cap. They are installed just outside the tank excavation, in shallow fill above the Pittsburgh Red Bed unit. Neither OW-3 nor OW-4 has ever recorded groundwater. If groundwater contamination in the tank excavation and/or wells OW-06 and OW-7 was discovered, PADEP was to be immediately notified for guidance.

Analytical results available since the 3rd quarter 2004 indicate that typically TPH-GRO was not detected at a reporting limit of 0.10 mg/L (or less) in most observation well samples. Observation well OW-1 exhibited detections ranging from 0.391 to 11.10 mg/L. Observation well OW-2 exhibited detections ranging from 0.49 to 8.20 mg/L. Observation well OW-5 exhibited detections ranging from 0.14 to 14.60 mg/L. For these three wells, the highest concentrations were detected in 2004 and 2005. The last sampling data, March 22, 2013, did not detect TPH in any of the observation wells (all <0.1 mg/L). TPH-GRO has not been detected outside the tank excavation at wells OW-6 and OW-7.

Occasionally, the observation wells have been sampled and analyzed for BTEX, MTBE, cumene, naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. Except for September 25, 2005, March 28, 2007 and June 22, 2007, the samples were nondetect at the reporting limit. On September 25, 2005, the three wells in the tank excavation exhibited benzene above the PADEP Statewide Health Standard MSC of 5 ug/L. On March 28, 2007 and June 22, 2007, only OW-5 exhibited benzene above the MSC. None of these constituents were detected outside the tank excavation at wells OW-6 and OW-7.

While there is no evidence that the Pittsburgh Red Beds transmit water vertically, field examination of road cuts and hillside cuts around the facility indicated there are horizontal seeps. It is possible that water enters and exits the tank cavity along horizontal bedding planes. There is no correlation in groundwater elevation between observation wells OW-1, 2 and 5, which are installed in the pea gravel fill of the tank cavity and wells OW-6 and OW-7 in which the upper screen portion of each well is installed in fill material comprising the hill-side slope between the facility and McAleer Road and the lower portion of the screen interval is installed in the stream valley fill material that was carved out by the meandering of Bear Run. The only groundwater gradient measured at the site was from OW-6 toward OW-7. On March 22, 2013 the gradient in the fill material of the stream valley channel was approximately 0.031 ft/ft to the north (UEG, 2013).

If any contamination was detected in the tank excavation, all tank excavation water was to be extracted, removing the possibility of contaminated water moving along horizontal bedding planes into the Pittsburgh Red Bed unit and the problem was to be immediately addressed.

The catch basin located along the west side of McAleer Road was sampled and analyzed for BTEX, cumene, MTBE and naphthalene. All reviewed samples were nondetect at the reporting limit of 5 micrograms per liter (ug/L).

AOCs
No AOCs have been formally identified for this facility.

Storage Tanks
The facility is identified as 0-232564 in the PADEP Storage Tank Program. A summary of the tanks historically and currently registered to UEG in the PADEP Storage Tank Program, both USTs and ASTs, is included in the following table.

Tank ID	Size	Type	Contents	Installation Date	Removal Date
ASTs					
002 (001 – 2004 inspection)	6,000	steel	gasoline	4/1991	
USTs					
001	500	steel	used motor oil	3/1988	
002	2,000	steel	gas/water mixture	3/1988	11/1997
003 (002 – 2012 inspection) (T-5a)	6,000*	steel	hydrocarbons from the connected oil/water separator	2/1998	
004 (003 – 2012 inspection) (T-5b)	4,000	steel	oil, diesel, gasoline and other hydrocarbons from customers	2/1998	

*Tanks 003 and 004 are one double-walled tank with a single wall inside wall.

Tightness Testing
On January 30, 2013, PADEP received the hydrostatic tightness testing results on USTs T-1, T-2, T-3, and T-4 per the annual tightness testing requirements under hazardous waste permit conditions. The USTs passed.

Closure
On January 27, 1997, UEG removed one 2,000-gallon steel, gas/water mixture (recovered oil) UST and associated equipment. The UST was to be replaced by two larger tanks (a combined tank, T-5). Subsurface soil samples were collected after the tank was removed, and delivered to an accredited laboratory for documentation purposes of the closure assessment.

A total of three confirmatory samples were collected from beneath the UST. Groundwater was not encountered during excavation of the UST, nor was any determination of groundwater depth or quality made. No obvious contamination was observed during the removal activities. Confirmatory soil samples were analyzed for VOCs, TPH-GRO, total solids, total lead and TOX. Low levels of benzene, toluene, total xylenes, MTBE, and naphthalene were detected. All of the confirmatory samples were withinthe Cleanup Standards for Contaminated Soils (PADEP August 1996), and the Land Recycling Program, Act 2 regulatory limits.

Prior to closing the facility, in May 2013, the tanks were cleaned and sludges removed. As rainwater still runs through the process system, the facility is still discharging to the ALCOSAN.

Groundwater: The facility lies within the Allegheny Plateau portion of the Appalachian Highlands (UEG, 2013). It is an area of maturely dissected terrain having an overall relief of about 600 feet. The higher hilltops rise to elevations between 1,200 and 1,300 feet; the deeper valleys lie at elevations between 700 and 800 feet. Local relief is on the order of 300 to 400 feet. The area is virtually all in slope, except for certain floodplains a few hundred feet wide along the more prominent valleys and a few flat hilltop areas. Streams form a dendritic to subparallel drainage pattern. They drain to the Ohio River, the principal stream of the region. A soil cover of three to five feet is common, but bedrock outcrops do occur rather abundantly along the larger stream valleys. More than 50 percent of the area is forested. The populated portions of the area are largely confined to valley bottoms and ridge tops, the valley slopes being generally too steep for easy access.

Very few specific data were available on groundwater levels in the area (UEG, 2013). It is probable; however, that the general groundwater level fluctuates through a range of a few feet between the wetter winter and spring seasons and the drier summer and fall seasons. There is ample evidence of contact-type hillside streams and seeps resulting from perched water tables and groundwater moving horizontally along bedding planes. These develop where overlying permeable beds such as sandstones or shaly sandstones are in contact with fairly impermeable beds such as claystone (Pittsburgh Red Beds) or tight limestones (Ames).

The Pittsburgh Red Beds occupy the interval between the Ames limestone member and the underlying Saltsburg sandstone (UEG, 2013). The Red Beds are composed of greenish-gray, red, and variegated shales. In the facility area, the red strata become of sufficient thickness to be regarded as an individual unit, generally known as the "Pittsburgh Reds." The top of this division is marked by persistent brilliant red clayey shale, which lies 10 to 25 feet below the Ames limestone and ranges from 5 to 25 feet in thickness. This characteristic upper stratum is succeeded by interlaminated and inter-fingered red and gray shales, which make up a group up to 75 feet in thickness. The strata of the "Pittsburgh Red" horizon are usually not permeable to groundwater beneath cover.

The Pittsburgh Red Bed unit in the vicinity of the facility consistently failed percolation tests; and efforts to perform pump and slug tests at the facility were useless due to a lack of sufficient water in boreholes. This same unit encloses the facility's tank field. UEG reported the tank-field walls are virtually impermeable; and with the continual monitoring of observation wells with dedicated vapor sensors, groundwater monitoring, and periodic cathodic testing, the unit itself was to act as secondary containment for a number of the USTs. There are no vertical fractures visible in road cuts or hill side excavations.

Information was obtained from two residents whose drinking wells were sampled by UEG on a quarterly basis that the unit their wells are set in is approximately 784 feet bgs at their homes. The average elevation of their property is approximately 984 feet mean sea level (msl); the facility's average elevation of the top of the tank excavation is 954 feet msl; the base of the tank cavity is 940 feet msl; approximately 160 feet above the top of the confined aquifer beneath the facility. UEG reported there is no vertical pathway between the tank excavation and the confined aquifer beneath the facility; and there is no aquifer, confined or unconfined, directly beneath the facility, and therefore no hydraulic gradient.

Per a June 16, 2000 proposed process flow diagram, the facility maintains a private well for sanitary use and washing tank residues during tank decommissioning activities.

Information obtained from the Pennsylvania Department of Conservation and Natural Resources (DCNR) Groundwater Information System (PaGWIS) accessed on March 26, 2013 indicated there are no groundwater wells located within a 0.5 mile radius surrounding the property. PIM has a well located southeast of their building used for sanitary (non-potable) uses. The well was installed in 1983. Drinking water is provided by a potable water vendor.

Residential Sampling for Permit PAD987283140
West View Water provides public water service to Ohio Township residents. However, some residents utilize private water wells for their potable water source. In accordance with Pennsylvania Act 108, the facility has contacted and/or sampled at least eight residential wells for BTEX, cumene, MTBE, and naphthalene since the 4th quarter 2003. All results were nondetect at the reporting limits. In 2005, UEG asked to have the sampling reduced to an annual event. PADEP advised that Act 108 of the Hazardous Sites Cleanup Act, Section 304(c)(l) requires quarterly private water supply sampling and analysis by commercial hazardous waste TSD facilities at the request of persons owning property within 2,500 feet of the facility. Therefore, unless the private water supply owners notify UEG in writing that they no longer wish to have their private water supply sampled, UEG was required to continue with quarterly private water sampling as required by Act 108. During the 1st quarter 2013 (last sampling in the files reviewed), five residential wells were sampled and analyzed; three residents had not requested sampling of their wells.

Available analytical data for groundwater samples collected from the tank area observation wells since the 3rd quarter of 2004 indicate that typically TPH-GRO was not detected at a reporting limit of 0.10 mg/L (or less) in most of the observation well samples. Observation well OW-1 exhibited detections ranging from 0.391 to 11.10 mg/L. Observation well OW-2 exhibited detections ranging from 0.49 to 8.20 mg/L. Observation well OW-5 exhibited detections ranging from 0.14 to 14.60 mg/L. For these three wells, the highest concentrations were detected in 2004 and 2005. The last

sampling data dated March 22, 2013, did not detect TPH in any of the observation wells (all <0.1 mg/L). No TPH-GRO has been detected outside the tank excavation at wells OW-6 and OW-7.

The observation wells were occasionally sampled for BTEX, MTBE, cumene, naphthalene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. Except for September 25, 2005, March 28, 2007 and June 22, 2007, the samples were nondetect at the reporting limit. Benzene was detected above the PADEP Statewide Health Standard MSC of 5 ug/L in OW-1, OW-2, and OW-5 on September 25, 2005, and only in OW-5 on March 28, 2007 and June 22, 2007. None of these constituents were detected outside the tank excavation at wells OW-6 and OW-7.

UEG closed the facility in June 2013. Prior to closing the facility, in May 2013, the tanks were cleaned and sludges removed. As rainwater still runs through the process system, the facility is still discharging to ALCOSAN.

PIM has a well located southeast of their building used for sanitary (non-potable) use. The well was installed in 1983, but, according to the facility representative, is used for sanitary purposes and washing tank residues during tank decommissioning activities. Potable water is provided by the municipal water supply. The facility uses bottled water for drinking water . As there have been low levels of VOCs detected (and more recently, no detections) in the shallow groundwater, it is not expected that the facility's water well has been impacted by site-related contaminants. Therefore, it is concluded that groundwater is not impacted by site operations and no exposure pathway/release controls are necessary at this time.

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]).

_____ 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):

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):

[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.

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):

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[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 ofgroundwater 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 GroundwaterUnder 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 **United Environmental Group, Inc.** facility, EPA ID # **PAD987283140**, located at **241 McAleer Road, Sewickley, Pennsylvania 15143**. 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 reevaluated 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 _____

(print) Grant Dufficy

(title) RCRA Project Manager

Supervisor (signature) _____ Date 6-30-15

(print) Paul Gotthold

(title) Assoc. Dir., PA Remediation, LCD

(EPA Region or State) EPA Region III

Locations where References may be found:

USEPA Region III
Land & Chemicals Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
South West Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

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