DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action Environmental Indicator (EI) RCRIS code (CA725) Current Human Exposures Under Control

| Fac | cility Name: | Capital Lubricants Company, Inc. | |
|-----|-----------------|--|--------------------|
| Fac | cility Address: | 569 Industrial Drive, Lewisberry, PA 17339 | |
| Fac | cility EPA ID#: | PAD980537609 | |
| 1. | groundwater, su | le relevant/significant information on known and reasonably suspected releases urface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Inits (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been cons | Solid Waste |
| 100 | | 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 ne | eded) 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 "Current Human Exposures Under Control" 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 "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

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. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "contaminated" 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 (from SWMUs, RUs or AOCs)?

| | Yes No ? | Rationale/Key Contaminants |
|-----------------------------|--------------------------------|---|
| Groundwater | X | No known releases to groundwater at the facility. Groundwater not used at facility. Perched groundwater encountered at 12 feet bgs. Extent of contaminated soil (5 feet bgs) was above groundwater. |
| Air (indoors) ² | <u> </u> | Capital Lubricants facility is closed. No indoor air contamination sources present at current facility. |
| Surface Soil (e.g., <2 ft) | <u>x</u> | Known contaminated surface soil (hydrocarbon- impacted) was excavated. |
| Surface Water | <u>x</u> | No surface water media are relevant on site. |
| Sediment | | No sediment media are relevant on site. |
| Subsurf. Soil (e.g., >2 ft) | X | Known contaminated subsurface soil (hydrocarbon- impacted) was excavated (depth of 5 feet). |
| Air (outdoors) | <u>x</u> | Capital Lubricants facility is closed. No air emissions sources present at current facility. |
| | | YE," status code after providing or citing appropriate ag documentation demonstrating that these "levels" are |
| citing appropr | | Tying key contaminants in each "contaminated" medium, planation for the determination that the medium could supporting documentation. |
| If unknown (f | for any media)- skip to #6 and | enter "IN" status code. |

Rationale and Reference(s):

<u>Groundwater</u>: According to the New Cumberland, Pennsylvania topographic map (1998), the elevation of the facility is approximately 540 feet above mean sea level. Groundwater flow direction at the facility is not known, but normally reflects

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 appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

the topography of the area. Based on the topographic map and observations during the URS site visit, groundwater at the property flows to the east, south, southeast, and southwest. According to the PA, the facility and surrounding area are underlain by the Triassic Gettysburg Formation that consists of interbedded red shale and siltstone, gray sandstone, brown and red quartz conglomerate, and limestone conglomerate (NUS, 1990). Groundwater occurs largely in the jointed and fractured unweathered bedrock. As noted in the PA, two dominant fracture traces (one trending N 30° E and the other trending N 30° W) have been mapped near the facility. The fractures may not be hydraulically connected; therefore, water levels in adjacent wells may not be at the same elevation. Depth to groundwater ranges from 0 to approximately 80 feet bgs in the vicinity of the facility (NUS, 1990). Groundwater was not encountered in the overburden materials during Dunn's subsurface environmental evaluation in 1989 (believed to be at 570 Industrial Drive property), but was encountered at approximately 12 feet bgs during the removal of the USTs in 1993 (569 Industrial Drive property). The dominant direction of groundwater flow was expected to be to the southeast toward an intermittent streamlocated approximately 1,300 feet southeast of the facility (NUS, 1990).

According to the PaGWIS database, a 125-foot-deep open-hole well owned by Capital Lubricants was installed on October 17, 1978; however, it is believed that this well is located at the 570 Industrial Drive facility although it could also be the one documented on the 569 Industrial Drive Site layout maps. The Site Layout map included in the 569 Industrial Drive facility's 1995 NPDES Permit application identified a water supply well between the main building and the outdoor AST farm. The PAGWIS database indicates that a water bearing zone yielding 10 gpm was encountered at 109 feet bgs. Depth to bedrock was 62 feet bgs. The PaGWIS database places this well (PA Well ID 156370) approximately 0.5 mile east of facility along Industrial Drive (assumed to be an incorrect location). According to the Dunn report (1989), the well was located on the northeastern portion of the property. Dunn sampled this well for VOCs during their investigation conducted in 1989. Only PCE was detected at a concentration of 2.2 ug/L (2.1 ug/L in the duplicate sample), which is below the current PADEP Land Recycling Program's nonresidential used-aquifer medium-specific concentration (MSC) of 5 ug/L.

Recent reports from 2005 (URS) and 2010 (BL Companies) did not observe a water supply well at the 569 Industrial Drive property, and a well was not observed onsite during the 2013 site visit. (Note: If the northeastern portion of the property is appropriate, the water supply well located at the 569 Industrial Drive facility is located in the northeast quadrant of the fenced-in area and the well located at the 570 Industrial Drive facility is located in the northwest quadrant of the site. However, if the north arrow was incorrect on the missing 1989 map, as noted on other facility maps (1993/1995), the sampled well may have been the one at 570 Industrial Drive)

According to the PA (NUS, 1990), residents within a three mile radius of the facility obtained their drinking waterfrom private wells and two water companies: the Pennsylvania American Water Company (PAWC) and the Dauphin Consolidated Water Company (DCWC, now United Water). PAWC obtained their water from two surface water intakes and two wells. One surface water intake was located 15 miles northwest of the facility on the Conodoguinet Creek near Sample Bridge Road north of Route 11. The other surface water intake was located four miles north-northwest of the facility on the Yellow Breeches Creek, 2,000 feet west of the confluence with the Susquehanna River, upstream of the facility. Neither intake received drainage from the facility. The two PAWC wells were reportedly located near the water tank in Fairview Park, 1.5 miles north-northwest of the facility (NUS, 1990). (Note: PAWC's 2010 Annual Water Quality Report states that its source water is obtained from the Yellow Breeches and Conodoguinet Creeks.) DCWC obtained water from two wells located 0.75 miles and 1.5 miles southeast of the facility (NUS, 1990). According to the PADEP eMapPA database, however, none of United Water's supply wells are located within a 1-mile radius of the facility.

Residential wells have been identified and previously sampled northeast and southwest to southeast of the facility. Although other unidentified residential wells may also exist; PADEP has tasked a neighboring/unrelated facility with identification and subsequent monitoring (if needed) of these wells. In addition, the neighboring/unrelated facility monitors the shallow monitoring wells on their property (located in the assumed downgradient direction from the subject facility). It has been reported, there are no known concerns at these nearby residential well locations at this time.

Groundwater is not used at the facility. Shallow groundwater was encountered in May 4, 1993, when ESC removed three

USTs from the southern parking lot of the facility. The native soil consisted of dark red-brown clayey silt and gravel (saprolite) to an approximate depth of 12 feet bgs, the depth at which bedrock was encountered. Groundwater was encountered at the soil/bedrock interface (approximately 12 feet bgs) (reported to be perched groundwater). One groundwater sample was collected from beneath each UST (T1GW and T2GW) from approximately 12 feet bgs. The groundwater samples were analyzed for BTEX, TPH, and ethylene glycol. None of the constituents analyzed were above the laboratory detection limits in the groundwater samples.

On January 24, 1989, Dunn collected a groundwater sample from the potable well identified as being located on the northeastern corner of the property (assumed to be 570 Industrial Drive). The sample was collected from an outside faucet and analyzed for VOCs via USEPA Method 601/602. PCE was detected at 2.2 ug/L (2.1 ug/L in a duplicate sample), which is below the current PADEP nonresidential used-aquifer MSC of 5 ug/L. Mineral spirits were detected at the reporting limit of 20 ug/L. No other VOCs were detected in the groundwater sample. VOCs have not been detected in the nearby residential wells monitored by the reighboring/unrelated facility.

Although there is known groundwater contamination in the vicinity of the facility, there have been no known releasesto groundwater at this facility, groundwater is not used at this facility, several potential downgradient receptors (residential wells to the northeast and southwest to southeast) have been or are currently being monitored by the neighboring/unrelated facility, and these wells appear not to have been impacted at this time. Therefore, it is concluded that the groundwater exposure pathway is not relevant and no controls are deemed necessary at this time.

Soil: The soils underlying the facility consist of Penn Silt Loam, 3 to 8 percent slopes (PeB), Penn Silt Loam, 8 to 15 percent slopes (PeC), and Readington Silt Loam, 3 to 8 percent slopes (ReB) (BL Companies, 2010). Penn Silt Loams are described as dark reddish-brown and dusky brown silt loam generally found on undulating uplands (PeB) or broad ridge tops and side slopes (PeC). ReB soils are generally found on nearly level to gently sloping uplands. The site is located in the Gettysburg-Newark Lowland Section of the Piedmont Province which is characterized by rolling lowlands, shallow valleys, and isolated hills of low to moderate relief. The bedrock underlying the facility consists of the Gettysburg Conglomerate Formation, which is described as a coarse quartz conglomerate containing rounded pebbles and cobbles in a matrix of red sand. This formation is well bedded with moderately abundant fractures that are open and steeply dipping, is moderately resistant to weathering, and has good surface drainage. The property and surrounding area generally slopes to the south.

The soils encountered during ESC's subsurface investigation were described as 1 to 2 feet of gravel overlying brown silty clay (saprolitic material) in the vicinity of AOCs 2, 3, and 4. Soils in the vicinity of AOCs 1, 5, and 6 were described as silty clay with some sand (saprolitic material). At deeper depths, the soils contained pieces of weathered bedrock.

There have been several Phase I and Phase II ESIs conducted at the facility; one of which resulted in remedial activities being conducted at the facility. A Phase I ESA was conducted by ESC at the Dryden Oil Company facility in June of 1992 that identified seven AOCs throughout the property. ESC subsequently conducted a Phase II ESI on May 7, 1993, that included collection of one shallow soil sample (depth from 0 to 4 feet) from each of the seven AOCs that were analyzed for BTEX, RCRA metals, and TPH as diesel fuel, gasoline, heavy oil, jet fuel, kerosene, mineral oil, naphtha, paint thinner, and Stoddard solvent. The results of the Phase II ESI indicated petroleum-impacted soils were present at three of the AOCs (AOCs 1, 2, and 3). Approximately 272 tons of impacted soil was excavated by ESC in November 1994, at the three AOCs. Post-excavation soil samples were collected by ESC in two of the three excavation areas and were analyzed for BTEX and TPH (no confirmation sample was collected in AOC 3 – Truck Parking and Storage Area). The Phase II ESI soil samples and the post-excavation samples collected from AOC 1 – Burn Area were not analyzed for solvent compounds; however, two composite samples taken from the excavated soil were analyzed for disposal purposes and extractable organic halide concentrations were below levels considered characteristic of a hazardous waste. Based on the post-excavation soil sample results, some petroleum-impacted soils may have been left in place at AOC 2 – Bulk Loading Area on the west sidewall of the excavation (TPH, 337.0 mg/kg, above the regulatory limit of 100 mg/kg at that time). It was also noted that some released materials may have migrated beneath the warehouse building foundation that could not be removed.

Hydrocarbon-impacted soil was removed to a depth of 3.5 to 5 feet.

A letter dated May 21, 1981, issued by PADEP described illegal dumping of 1,1,1-TCA in an open pit identified during an inspection conducted at the World Equipment Company (570 Industrial Drive). Information provided by the PADEP representative that conducted the inspection indicated that this was actually at the 569 Industrial Drive property. The representative stated that the pit, utilized for burning pallets, was located in the back of the facility (northwest corner of the 569 Industrial Drive property). It was approximately 20 feet in diameter and was shallow. He recalled collecting one surface soil sample (12 inches below surface) and the results showed only minor concentrations of VOCs. This may be the same area as AOC 1 identified, sampled, and excavated by ESC in 1993/1994.

Soil collected during the investigation activities in the bulk loading area was analyzed only for BTEX and TPH (kerosene as TPH was identified) during the Phase II ESA and only TPH (heavy oil was identified) post-remediation; and contaminated soil remained present. However, much of this residual contamination has likely been mitigated via natural attenuation processes, and under normal operating conditions, direct contact exposure to any remaining contaminated soil is not expected; therefore, no controls are deemed necessary at this time.

Air: There have been no air emissions sources present at the facility during its operation. Capital Lubricants has been closed since 1996 and the current use of the facility is not related to the previous operations. Therefore, it is concluded that the outdoor air exposure pathway is not relevant and no exposure pathway or release controls for outdoor air are deemed necessary at this time. Although some petroleum-impacted soils were left in place in AOC 2 after the 1994 remediation of the facility, it is not expected that vapor intrusion of remaining contamination into indoor air is a significant pathway given the length of time for natural attenuation to reduce levels of any contamination remaining in this localized area.

<u>Surface Water/Sediment</u>: The facility is graded to allow the flow of stormwater from northern and eastern portions of the property to flow into the retention pond. Stormwater from the remaining portions of the property leaves via natural percolation or flow to the south to Industrial Drive. No stormwater drains are located on the property; however, two stormwater catch basins are located along Industrial Drive. The facility is situated near a drainage divide between Fishing Creek located approximately 1,000 feet to the southwest and an unnamed tributary to Fishing Creek located approximately 1,700 feet to the southeast. Little, if any, drainage from the facility is expected to read either stream as sheet flow.

According to information obtained from the PADEP eMapPA (accessed April 5, 2011), Fishing Creek is a tributary to the Susquehanna River and is within the Chesapeake Bay Watershed. Fishing Creek is listed as a trout stocking fishery, and is listed on the streams integrated list as an attaining segment supporting aquatic life. The unnamed tributary to Fishing Creek is listed on the streams integrated list as an attaining segment supporting aquatic life, but as a non-attaining segment impaired due to construction siltation; habitat modification, or other habitat alterations in the vicinity of the facility. There were no wetlands identified down-slope of the facility on the National Wetlands Inventory as of March 18, 2013.

CRS Reprocessing maintains the NPDES Permit (No. PAR703516) for stormwater discharges. The permit was renewed on January 3, 2011, and is effective February 1, 2011 to January 31, 2016. The application identified one outfall (Outfall 001) for the discharge of stormwater only from the building roof and parking areas. The outfall is located on the south corner of the facility. The ultimate receiving water was identified as Fishing Creek. The application indicated that all ASTs were surrounded by secondary containment structures that would reduce pollutants in the stormwater runoff. NPDES permit No. PAR703516 was initially issued to Dryden Oil Company on August 28, 1995.

Currently, the outdoor AST farm contains 12 ASTs situated in a concrete dike with a drain and valve to Outfall 001. Stormwater from the diked area surrounding the exterior AST farm is controlled by a manually operated and lockable valve. Reportedly, stormwater in the diked area is inspected for evidence of an oily sheen prior to draining, via swale, into the retention pond. If an oily sheen is observed, absorbent material would be used to remove the oil from the water prior to discharging to the retention pond (URS, 2005). The retention pond drainage valve, when opened, discharges the contents of the retention pond to the municipal storm sewer system located along Industrial Drive.

Although there is known groundwater contamination in the vicinity of the facility, there have been no documented releases to groundwater at the facility. Groundwater discharges to surface water are not anticipated. Therefore, it is concluded that the surface water/sediment exposure pathway is not relevant and no controls are deemed necessary at this time.

Reference: Environmental Indicator Inspection Report - Capital Lubricants Company, Baker, June 2014.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

| | | | | Potential Hui | man Receptors (| Under Current C | onditions) |
|---|---|---|-----------------------------------|--|--|--------------------|-------------------|
| Contaminated Media | Residents | Workers | Day-Care | Construction | Trespassers | Recreation | Food ³ |
| Groundwater Air (indoors) Soil (surface, e.g., <2 ft. Surface Water Sediment Soil (subsurface e.g., >2 Air (outdoors) | ft. | e e | | | | | e |
| Instructions for Su | mmary Exposu | re Pathway E | valuation Tabl | <u>e</u> | | | |
| | 'contaminated'' 2. enter "yes" o | as identified or "no" for po | in #2 above. | | | | an |
| Media - Hu | man Receptor ons may not be p | combinations | s (Pathways) de | o not have check | spaces (""). | While these | |
| ent ent | er "YE" status n-made, preven | code, after ex ting a compl | kplaining and/o ete exposure p | or referencing con athway from eacl | dition(s) in-place n contaminated m | , whether natural | lor |
| | | | | | Human Receptor | r combination) - | |
| | nknown (for and | ıy "Contamiı | nated" Media- | Human Receptor | combination) - s | kip to #6 and ento | er |
| Rationale and Refe | erence(s): | e Pathway Evaluation Table crific Media including Human Receptors' spaces for Media which are not as identified in #2 above. "no" for potential "completeness" under each "Contaminated" Media Human lation (Pathway). evaluation to the most probable combinations some potential "Contaminated" combinations (Pathways) do not have check spaces (""). While these probable in most situations they may be possible in some settings and should be contaminated mediareceptor combination) - skip to #6, and code, after explaining and/or referencing condition(s) in-place, whether natural or ing a complete exposure pathway from each contaminated medium (e.g., use evaluation Work Sheet to analyze major pathways). The complete for any "Contaminated" Media - Human Receptor combination) - iding supporting explanation. The pathway Evaluation Table "On the most probable in which are not as in the most potential "Contaminated" mediareceptor combination) - skip to #6 and enter | | | | | |
| | | | 23 | | | | |
| 938 | | | | | | | |

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.

| 4. | Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be " significant " (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which maybe substantially above the acceptable "levels") could result in greater than acceptable risks)? |
|--------|---|
| | If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant." |
| | If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway)- continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant." |
| | If unknown (for any complete pathway)- skip to #6 and enter "IN" status code |
| 5. | Can the "significant" exposures (identified in #4) be shown to be within acceptable limits? |
| 941 | If yes (all "significant" exposures have been shown to be within acceptable limits)- continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment). |
| | If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure. |
| | If unknown (for any potentially "unacceptable" exposure)- continue and enter "IN" status code |
| Ration | nale and Reference(s): |
| | |
| | |

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

| (CA | k the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (25), 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, "Current Human Exposures Under Control" has been verified. Based on a review of the Information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Capital Lubricants Company, Inc. facility, EPA ID # PAD980537609, located at under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility. |
| | NO - "Current Human Exposures" are NOT "Under Control." |
| 29 | IN - More information is needed to make a determination. |
| Com | oleted by (signature) (print) Griff Miller Date 9-16-14 |
| Supe | (title) Remedial Project Manager Poisor (signature) Paul Gotthold Paul Gotthold |
| | (title) Associate Director |
| | (EPA Region or State) EPA Region 3 |
| Loca | ions where References may be found: |
| Land 1650 | PA Region III and Chemicals Management Division Arch Street delphia, PA 19103 PADEP South Central Regional Office 909 Elmerton Ave. Harrisburg, PA 17110 |
| Conta (nam (phor | e) 215-814-3407 |

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.