DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

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

Facility Name: Spray Products
Facility Address: 1323 Conshohocken Road, Plymouth Meeting , PA 19462
Facility EPA ID #: PAD042716084

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, 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

Spray Products Corporation (Spray Products or Facility) is located at 1323 Conshohocken Road, Plymouth Meeting, Montgomery County, Pennsylvania. The Facility is approximately 7.25 acres, contains two masonry and steel buildings (the north and south buildings), an outdoor AST farm, and product storage areas. A rail spur separates the north and south buildings. The Facility is within an industrial area and the future use of the property is anticipated to remain non-residential.

Historically, the Facility was used as the Penn Central Railroad rail yard. In December 1973 Spray Products purchased the property and began operations which included storing and packaging aerosol products (paints, brake fluid, carburetor cleaners, staring fluid, and penetrants). In 2001, the current owner ORB Acquisition Group, Inc (ORB), purchased the Facility and continues similar operations under the name of Spray Products Corporation. In conjunction with their acquisition, ORB entered into a Consent Order and Agreement (COA) with the PADEP that required the Facility be remediated in accordance with Pennsylvania's Land Recycling Program (Act 2).

Environmental evaluations of the Facility were initiated in 1989. Since that time characterization activities have identified several releases of hazardous substances and reported chlorinated volatile organic compounds (CVOCs), heptane, and petroleum hydrocarbons in soil and groundwater beneath the property. Remedial work to address contaminant source areas has included characterizing the extent of contaminants in groundwater and source removal by soil excavation beneath the underground storage tank (UST) tank farm and in areas where recent heptane releases were identified. The most recent soil and groundwater analytical data available for review is presented in the *Remedial Investigation Report & Cleanup Plan* (RIR/CP), dated September 5, 2018, prepared by Stantec Consulting Services Inc. The RIR/CP included proposed remedial activities to remove contaminant exposure pathways which are anticipated to include engineering (vapor mitigation, capping, as necessary) and institutional (non-residential use, groundwater use restrictions, etc.) controls. The engineering and institutional controls will be documented in an environmental covenant at the completion of Act 2 remedial work. The most recent Act 2 submittal included a revised Notice of Intent to Remediate (NIR), provided notification of a new heptane release and indicated that contaminants in soil and groundwater would be remediated to a combination of the Act 2 Statewide Health Standards and Site-Specific Standards. The Facility also opted to remediate the site through One Cleanup Program.

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).

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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] 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			CVOCs, heptane, and petroleum hydrocarbons have been detected in groundwater in excess of Act 2 Statewide Health Standards. Recent groundwater investigations have verified the presence of both petroleum and chlorinated hydrocarbons exceeding non-residential MSCs in groundwater, both in the overburden and the bedrock aquifers. Continued groundwater investigation needed to further delineate the off-site groundwater plume. Off-site plume migration, and the presence of Non-Aqueous Phase Liquid (NAPL) has been confirmed. While there is no restriction of the use of groundwater by the local municipality (Plymouth Township), the Facility and the surrounding area is serviced by public water supplies (Aqua PA). The groundwater exposure pathway is considered incomplete.
Air (indoors) [2]			X	VOC concentrations resulting from Vapor Intrusion (VI) and/or on-site manufacturing related sources have been confirmed. Vinyl Chloride and 1,1-Dichloroethane were detected at elevated concentration in sub-slab soil vapor, 1,600,000 μ/m^3 and 110,000 μ/m^3 respectively but were either not detected or detected well below VI screening levels in indoor air samples. For other site related contaminants of concern (detected in soil or groundwater), it was not possible to distinguish chemicals in indoor air resulting from vapor intrusion from those related to the industrial production processes at the facility. The Facility's adherence to OSHA Program requirements serves as an interim control to mitigate risk to workers. Further evaluation of potential for off-site VI may be required.
Surface Soil (e.g., <2 ft)		X		Soil investigations associated with various areas of concern indicated that there were no exceedances of Non-Residential Statewide Health Standards. Releases associated with heptane spill(s) resulted in surface soil concentrations exceeding both the EPA Residential and Industrial soil RSLs (22 mg/kg and 290 mg/kg, respectively). Cleanup associated with the most recent heptane spill/ release consisted of the excavation of a 5'x5' area to a depth of 2', adjacent to the building where the spill occurred, and a surface scrape (removing stones down to a concrete surface) of the impacted area along the railroad spur. Completion of these actions eliminated direct contact risk to workers.

Surface Water		X	Modeling of impacted groundwater plumes suggests that shallow bedrock plume has the potential to migrate toward the Schuylkill River but based on the simulation time to "steady state" conditions (30-year simulation), the plume will not reach the river. Installation of additional downgradient well(s) may be necessary to verify groundwater modeling.
Sediment		X	
Subsurf. Soil (e.g., >2 ft)	X		Impacts to sub-surface soils resulting from the September 2018 heptane spill were addressed by the excavation and backfilling of the upper 2' of surface soil in the area adjacent to the building where the spill occurred, and a surface scrape of impacted stone along the railroad spur. Excavation and backfilling of these areas, in combination with implementation of institutional controls requiring a soil management plan to properly address areas of residual contamination in the subsurface, will eliminate direct contact risk to workers. Soil investigations associated with other areas of concern indicated that there were no exceedances of Non-Residential Statewide Health Standards.
Air (outdoors)	X		The facility maintains an air permit for its emissions sources that include the two-propellant gasser/product filler lines and fugitive emissions from the ASTs. VOCs, CVOCs, and petroleum hydrocarbons have been identified as contaminants of concern in air emissions. There have been no documented violations of the facility's air permit.

☐ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

☐ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

X If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale:

Based on review of available documentation, apart from the potential for off-site vapor intrusion, no other exposure pathways appear to be complete from site related impacted media. Further evaluation of potential for off-site VI may be required. Further evaluation of downgradient, off-site groundwater is recommended to confirm groundwater modeling, and to determine if there are potential impacts to surface water or sediment associated with Diamond Run or the Schuylkill River.

Groundwater: Site characterization and sampling data have identified the following contaminants exceeding the Act 2 Statewide Health Standards in groundwater beneath the Facility:

- Light non-aqueous phase liquid (LNAPL)
- Petroleum hydrocarbons (benzene, chlorobenzene, etc.)
- Chlorinated ethanes (1,1,1-trichloroethane, 1,1-dichloroethane, chloroethane [1,1,1-TCA, 1,1-DCA, CA])

- Chlorinated ethenes (Tetrachloroethene, trichloroethene, 1,1-dichloroethene, cis-1,2-dichloroethene, and vinyl chloride [PCE, TCE, 1,1-DCE, cis1,2-DCE, VC)
- Heptane:
  In October 2014, heptane was detected at a maximum concentration of 170 µg/L. EPA understands a newer heptane release has been reported but it is currently unclear if the release impacted groundwater.

In addition to the above, EPA has previously requested that 1,4-dioxane be incorporated into future laboratory analysis of groundwater samples because of its association with 1,1,1-TCA.

Soil: Numerous soil samples have been collected throughout the facility from various depths ranging from 1 to 16 feet bgs. Results for the soil samples were compared to the PADEP non-residential direct contact MSCs. None of the detected VOCs exceeded these criteria. However, there was one exceedance of the residential direct contact MSC for 1,1-DCE.

Air (indoors): Six indoor air samples were collected adjacent to sub-slab soil vapor sampling points across process areas inside the main site building (building 1) and a file room in secondary site building (building 2), as well as from an office area and the site's cafeteria. Samples collected from buildings 1 and 2 detected ethylbenzene, PCE, TCE, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and xylenes above their respective EPA industrial VISLs for indoor air. However, all the detected compounds were noted as being stored and used in industrial process at the facility and are subject to OSHA Permissible Exposure Limits (PELs) rather than EPA's VISLs. None of the compounds were identified at concentrations which exceed their respective PELs. The remaining samples collected from the office area and cafeteria did not identify any compounds above either the EPA indoor air VISLs or OSHA PELs.
Samples from one offsite monitoring well located on the Chem Alloy property south of the facility (MW-19) detected 1,1-DCE, cis-1,2-DCE, and TCE above the EPA's target industrial groundwater VISLs. Several structures on the Chem Alloy property are within 100 feet of MW-19, which is defined by EPA's OSWER Technical Guidance for Vapor Intrusion as the default inclusion zone for vapor intrusion assessment. No characterization of the shallow groundwater to indoor air exposure pathway was completed as part of remedial investigations for the facility. Further evaluation is needed to confirm the shallow groundwater to indoor air exposure pathway is incomplete for buildings on the Chem Alloy property.

Air (outdoors): VOCs and SVOCs, lighter-phase petroleum hydrocarbons (gasoline), and heavier-phase hydrocarbons (oil) were identified on-site. No source areas for gasoline or oil range petroleum hydrocarbon compounds were known to exist onsite, however toluene was observed at significant concentrations in on-site groundwater, but reported soil vapor fluxes for BTEX did not correlate with background monitoring well analytical data. The highest vapor flux areas for PCE, chlorobenzene/dichlorobenzene, DCA, and Freon 12 were situated between the north and south buildings directly north of the AST farm/former UST excavation area. Additional areas of high vapor flux for DCA and Freon 12 were located directly north of the north building near MW-8S, centrally located between the buildings, and south of the southwest end of the south building (Freon 12). High vapor flux areas for TCE were observed directly west of MW-4S/4D and directly northeast of MW-2S/2D.
The results for Petrex tube samples only provide a relative vapor flux. The results are not a measure of the concentration of specific compounds; therefore, no direct comparison to regulatory criteria can be made. VOCs have been detected in soils and groundwater beneath the property.

Surface Water/Sediment: VOC-impacted groundwater in the shallow aquifer flows to the northwest, toward Diamond Run and the Schuylkill River. Groundwater in the fractured bedrock aquifer flows to the southwest toward a quarry (that is no longer dewatering its pit) and the Schuylkill River. The facility conducted fate and transport modeling of TCE and VC-impacted groundwater toward the Schuylkill River using the models *Quick Domenico*, *SWLOAD* and *PENTOXSD*. These models indicated that the concentrations of TCE and VC discharging into the Schuylkill River would not result in exceedances of the surface water criteria. Further

downgradient offsite groundwater evaluation is needed to confirm accuracy of groundwater modeling. There was no known modeling of impacted groundwater discharges to Diamond Run.
The facility and their consultant, Gilmore & Associates, Inc., met with PADEP in 2005 to discuss their impending submittal that included additional groundwater contaminant fate and transport modeling. It is unknown whether the VOC-impacted groundwater from the facility is discharging to Diamond Run, the quarry pit, and/or the Schuylkill River that would warrant exposure controls.

Reference:

- Remedial Investigation Report & Cleanup Plan, Spray Product Corporation – Plymouth Meeting, Pennsylvania, Stantec Consulting Services, Inc., dated September 5, 2018
- Amended Notice of Intent to Remediate (NIR), August 2022
- Spray Products – Heptane Resin Spill Cleanup Memo, February 10, 2022
- Environmental Indicator Inspection Report for Spray Products Corporation, Baker, dated April 2013

Re: Spray Products Corporation, EPA ID # PAD072416084, RCRA Site Inspection, letter from Stantec Consulting Services, Inc. to Ms. Tina Entenman, dated July 20, 2012

Footnotes:

[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.

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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 **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater					■	■	
Air (indoors)							■
Soil (surface, e.g., <2Ft)							
Surface Water			■	■			
Sediment			■	■			
Soil (subsurface e.g., >2 ft)	■	■	■		■	■	
Air (outdoors)							

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) have filled check boxes ("■"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

☐ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

☐ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

☐ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code.

Rationale:

Reference:

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

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4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (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 may be 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

Rationale:

Reference:

[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.

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5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

☐ 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.

Rationale and Reference(s):

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI (event code CA725), 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).

☐ 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 (insert facility and EPA ID #), located at (insert address) 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."

X IN - More information is needed to make a determination.

Completed by _____ Date: 8/11/2025
Quinton Ulrich
Remedial Project Manager

Supervisor KRISTIN KORONCAI Digitally signed by KRISTIN KORONCAI Date: 2025.08.11 14:11:25 -04'00' Date _____
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