DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)
Current Human Exposures Under Control

Facility Name: **Invensys Metering System**
Facility Address: **805 Liberty Blvd, DuBois, PA 15801**
Facility EPA ID #: PAD004335469

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?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

The Former Rockwell Plant No. 1 is located at 805 Liberty Blvd. in DuBois, Clearfield County, PA. Plant No. 1 occupies approximate 18 acres, is currently owned by M&FC Holding, LLC. The Site was used as an industrial and manufacturing facility during the late 19th century and throughout the 20th century. The plant began manufacturing natural gas meters and gas regulation equipment in 1937. Activities conducted by Rockwell

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).

during its ownership of Plant No. 1 include gas meter assembly, testing, painting, and diaphragm fabrication; plastic molding; white metal die casting; wet scrubbing of air emissions from the diaphragm vulcanization process; machining; and degreasing. Materials used by Rockwell included trichloroethene (TCE), chromium-containing alodine solutions, plastics for molding, white metals, tin and lead solder, chromium-containing paint, flammable paint solvents (i.e., xylene, toluene), epoxy, chromium and nickel-plating solutions, and tryacol polysulfide rubber. Reportedly, benzene and methylene chloride were also used as solvents at the site, and plating processes included the use of cadmium. Rockwell sold Plant No. 1 to British Tire and Rubber Corporation Gas Measurement, Inc. (BTR) in 1989.

Plant No. 1 was acquired by M&FC Holding, LLC in December 2003, and the facility currently operates under the name Sensus Metering Systems North America (Sensus). Current site activities include the manufacture of natural gas meters and gas regulation equipment. Manufacturing processes include gas meter assembly, testing, painting, and diaphragm fabrication; plastic molding; white metal die casting; wet scrubbing of air emissions from diaphragm vulcanization process; machining; degreasing; and tin plating. The site is presently used for commercial/industrial purposes and is expected to continue to be used for commercial/ industrial purposes in the future. During the ownership of Plant No. 1, Rockwell conducted activities associated with gas meter assembly and testing. On June 4, 1996, an NIR was submitted to PADEP for the Site.

Eleven areas of concern identified at the facility included: former TCE storage tank area; former scrap metal storage area; historical drum storage area near the southwest corner of the parking lot in the vicinity of MW-8; area near the western edge of the parking lot, in the vicinity of MW-25; former hazardous waste storage building; former petroleum underground storage tanks (USTs); former soil pile in the eastern portion of the site; soils beneath the former plating solution slop tanks in the plant; paint room; NPDES outfall channel and surrounding wetland; Juniata Run and Beaver Run surface water and sediment. Environmental investigations and/or remedial activities performed at Plant No. 1 between 1984 and 2001:

- **Soil:** Soil investigations and remediations were performed at the areas of concern. Analytical results of soil samples demonstrated that soils at the facility meet the EPA's non-residential standards and/or exposures to contaminated soil are under control.
- **Sediment:** Sediments in the NPDES outfall channel, Juniata Run and Beaver Run were investigated and remediations were also performed. Analytical results of sediment samples demonstrated that sediments are not impacted by the facility.
- **Surface Water:** Surface water investigations were performed in 1992. Analytical results of surface water demonstrated that surface water is not impacted by the facility. In addition, if groundwater from the facility discharged to Beaver Run, the current groundwater discharge to Beaver Run would be considered insignificant/acceptable, since the concentration at discharge would be less than 10 times the appropriate level. (April 27, 2021 ISCO report)
- **Groundwater:** Groundwater investigation has been performed at the facility since 1984. VOCs including TCE and associated compounds were found in GW. GW found to be contaminated with volatile organic compounds (VOCs), primarily TCE and vinyl chloride. TCE was detected at concentrations as high as 30 mg/l. TCE in soils in the vicinity of TCE storage tanks is a source of TCE in groundwater.

Three streams are present on or adjacent to the site:
• Beaver Run, located along the southern boundary of the site.
• Juniata Run, a tributary of Beaver Run, located along the western boundary of the site; and
• drainage channel from the National Pollutant Discharge Elimination System- (NPDES-) permitted outfall to Juniata Run.

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GW extraction/treatment system was conducted in the former TCE storage tank area from 1984 to 2001. Two In Situ Chemical Oxidation (ISCO) injection events were performed at the facility in 2018 and 2020. The objectives of the ISCO injections are to reduce mass and concentrations of CVOCs in groundwater and reduce the potential for vapor intrusion into indoor air. The April 27, 2021 ISCO report shows that the vertical and horizontal extent of groundwater contamination have been delineated and the migration of contaminated groundwater stabilized.

Off-site Indoor air investigations have been performed. Indoor air samples were collected from properties located on the eastern of the Liberty Boulevard (Advanced Auto Parts Building (3/19/2013), S&T Bank (12/11/2013), and Goodwill Store (1/22/2014). Indoor air sample from inside Hoss' Steak and Sea House restaurant was collected on March 19, 2013. TCE, vinyl chloride and 1,2-DCE were found ND or below the respective residential screening levels (RSLs) and concentrations of vinyl chloride in MW-34 is decreasing. Off-site indoor air is currently not impacted by the facility. The latest round of indoor sampling (Feb. 2017) as well as indoor air sampling in 2014 demonstrate onsite indoor air meets EPA's non-residential indoor air screening level of 8.8 ug/m^3.

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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			Ground water is contaminated with VOCs at concentrations above MCLs, primarily TCE and vinyl chloride
Air (indoors)[2]		X		TCE detected in onsite indoor air samples at concentration below non-residential screening level TCE, vinyl chloride and DCE found NDs in offsite indoor air samples
Surface Soil (e.g., <2 ft)		X		Surface soil was investigated and remediated
Surface Water		X		NA
Sediment		X		NA
Subsurf. Soil (e.g., >2 ft)	X			Soils in the Former TCE Storage Tank area, Former Scrap Metal Storage Area, Eastern Former Soil Pile Area are contaminated with TCE, antimony, arsenic and lead
Air (outdoors)		x		NA

☐ 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.

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

Rationale and Reference(s):

VOCs, primarily TCE and vinyl chloride, are found in GW at concentrations above the MCLs. Concentrations of TCE in Subsurface soils in the Former TCE Storage tank area exceed the EPA non-residential direct contact screening level (SL).

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	No	No	No	Yes			No
Air (indoors)	No	Yes	No				
~~Soil (surface, e.g., <2 ft)~~							
~~Surface Water~~							
~~Sediment~~							
Soil (subsurface e.g., >2 ft)	No	No		Yes			No
~~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) do not have check spaces ("___"). 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 and Reference(s):

The latest round of indoor sampling (Feb. 2017) as well as indoor air sampling in 2014 detected TCE. Construction workers are potential groundwater and subsurface soil receptors.

[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 and Reference(s):

The latest round of indoor sampling (Feb. 2017) as well as indoor air sampling in 2014 demonstrated that indoor air at the facility currently meets EPA's non-residential indoor air screening level of 8.8 ug/m^3 for TCE and the facility is currently used for non-residential purpose. Construction worker's exposure to contaminated groundwater and soil is protected by PPE.

[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 Invensys Metering System facility, EPA ID # PAD004335469, located at 805 Liberty Blvd, DuBois, PA 15801 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."

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

Completed by (signature) _____ Date 9/23/2021
Tran Tran
Project Manager

Supervisor (signature) ALIZABETH OLHASSO Digitally signed by ALIZABETH OLHASSO Date: 2021.09.23 13:49:54 -04'00' Date _____
Alizabeth Olhasso
Acting Branch Chief
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Locations where References may be found:

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