

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: Former SGS Thomson – Microelectronics
Facility Address: 140 Commerce Drive, Montgomeryville, Pennsylvania 18936
Facility EPA ID #: PAD021047584

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?

- If yes - check here and continue with #2 below.
- If no - re-evaluate existing data, or
- If data are not available, skip to #8 and enter “IN” (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (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).

Facility Background

The Former SGS Thomson – Microelectronics facility (SGS or the Facility) occupies approximately two acres in a commercial/industrial park complex in southeastern Montgomeryville, Montgomery County, Pennsylvania. Figure 1 provides a site location map. The Facility property is developed with an approximately 20,000 square foot one-story building believed to have been constructed in 1967, a large parking lot south of the building and smaller landscaped areas along Commerce Drive and the north face of the building. The Facility and surrounding properties were used as farmland prior to 1967.

From the late 1960s through 2007, the Facility was a manufacturer of silicon-based semiconductors for transistors, primarily used in radio frequency applications by electronic equipment manufacturers. The Facility has changed ownership several times since Solid State Scientific began production of radio frequency wafers shortly after the building was constructed. SGS Thomson occupied the property from the 1970s through 1993. It was SGS Thomson that applied for and received a RCRA Part B Permit to store mixed solvent wastes on-site in 1984. Microsemi RF owned and operated the Facility from 1993 through 2003. Advanced Power Technology RF owned and operated the Facility from 2003 through 2005. Microsemi RF repurchased the Facility in 2005 and operated there until their operations ceased in 2007.

After receiving its RCRA Part B Permit in 1984 the Facility installed solvent waste storage and dilute hydrofluoric acid storage tanks located along the western face of the building. In 1990, closure of the storage tanks was initiated because less waste was being generated by SGS Thomson than initially anticipated. During closure activities volatile organic compounds (VOCs) were discovered in the soils and groundwater in the general vicinity of the tanks and the Pennsylvania Department of Environmental Protection (PADEP) recommended further investigation and remediation of the area.

Hazardous wastes have not been generated and the property has not housed a RCRA treatment, storage or disposal (TSD) type facility since prior to Microsemi RF vacating the property in 2007. The Facility was purchased by K & B Wireless Communications, Inc. in 2007 and was used as a mobile phone showroom and warehouse through March 2020. K & B Wireless sold the Facility in March 2020 to its current owner, 140 Commerce Drive LLC, which leases out portions of the building to tenants. The Tustin Group, a provider of HVAC, Energy, Water, Fire & Life Safety and Security Services for business owners and property managers, currently leases space in the building.

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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 facility?

- If yes - continue after identifying key contaminants, citing appropriate “levels,” and referencing supporting documentation.
- If no - skip to #8 and enter “YE” status code, after citing appropriate “levels,” and referencing supporting documentation to demonstrate that groundwater is not “contaminated.”
- If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

Groundwater beneath the Facility occurs in two relatively isolated and distinct water-bearing zones; a shallow, seasonal system, within the thin, unconsolidated, more permeable overburden above the bedrock surface and a deep, regional system within the bedrock of the Lockatong Formation. The shallow bedrock water-bearing zone ranges from 17 to 22 feet below the ground surface (bgs) and the deeper bedrock water-bearing zone ranges from 50 to 60 feet bgs. Recorded water level measurements obtained from both shallow and deep monitoring wells at the Facility have been as shallow as five feet below grade. The degree of interconnection between the two aquifers depends on the degree of fracturing within the bedrock. The Lockatong Formation is a relatively poor water bearing aquifer due to its lack of fracture permeability.

As many as sixteen wells [MW-A, MW-B, and MW-1 through MW-8 shallow and deep (no MW-4D or MW-7D)] were installed at the Facility between 1990 and 1996. Figure 2 presents the locations of those wells. The wells (with the exception of MW-8S and D, MW-A, and MW-B) were sampled and analyzed at least annually for VOCs since either 1995 or installation through 2006.

Generally, the shallow wells at the Facility were found to contain much higher concentrations of contaminants, primarily chlorinated VOCs, than the wells screened into the deeper water-bearing unit. Wells north and east of the building (MW-5S, MW-5D, MW-6S and MW-6D) had no contaminants above PADEP’s Medium Specific Concentrations (MSCs) for used aquifers since 1995. The groundwater contamination at the facility appears to originate west of the building in the vicinity of MW-1, which corresponds to the former solvent waste storage tank location. The contaminant plume has migrated to the south/southeast toward monitoring wells MW-2, MW-3, MW-4 and MW-7.

The well exhibiting the greatest amount of contamination historically was shallow well MW-1S, located near the northwest corner of the property. MW-1S contained concentrations of trichloroethylene (TCE) as high as 24,000 µg/l at that location in samples collected in the late 1990s. TCE has a water solubility limit of 1,000 mg/l so a detection of 24,000 µg/l didn’t necessarily indicate the presence of a dense non-aqueous phase liquid (DNAPL) in the subsurface. Concentrations of TCE in MW-1S appear to have significantly decreased at that location over the ensuing years ranging between 12.9 µg/l to 242 µg/l between 2004-2006. Similarly, 1,1,1-trichloroethane (1,1,1-TCA), 1,2-dichloroethene (1,2-DCE), and methylene chloride all appear to exhibit significant decreases in concentration over the same time period indicating that natural attenuation had been occurring. This is further evidenced by the appearance of contaminants such as vinyl chloride and 1,1-dichloroethane (1,1-DCA) in 1998 and later. By the last round of groundwater sampling in 2006, only TCE and vinyl chloride were observed in MW-1S at concentrations above PADEP’s MSC or EPA’s Maximum Contaminant Level (MCL).

Other shallow monitoring wells found to historically contain contaminants above screening levels included MW-2S, MW-3S, MW-4S and MW-7S. MW-2S, located between MW-1 and the former loading dock on the west side

of the building initially contained TCE as high as 64 µg/l in 1995 but that contaminant was detected below the MCL of 5 µg/l from 1998 through 2006. Natural attenuation at this location was again apparent as vinyl chloride which had been undetected in 1995 began to be detected in late 1997, was observed as high as 15.2 µg/l in 1998 and was below the MCL of 2 µg/l in both 2005 and 2006. MW-4S contained TCE as high as 92 µg/l in 1995 but was below its MCL from 2001 through 2005. TCE was however detected in MW-4S at 15 µg/l in the final sample collected from that location in 2006. MW-7S was observed to contain tetrachloroethylene (PCE), TCE and 1,2-DCE at concentrations above screening levels in the mid-1990s but by the end of the monitoring program in 2006, only TCE continued to be seen at concentrations above the MCL of 5 µg/l. The only shallow well that did not exhibit decreasing TCE concentrations over time was MW-3. TCE at this location was observed at 45 µg/l in 1995 but was seen at 106 µg/l in the final sample collected in 2006. Vinyl chloride at this location was not detected until 1998, indicating that some natural attenuation was also occurring there, but the increase in TCE concentrations during the same time period is curious.

For the deep monitoring wells, the highest concentrations of contaminants were once again seen in the vicinity of the former waste storage tank at monitoring well MW-1D. TCE was observed as high as 130 µg/l in 1994 and although there appeared to be a decrease in concentration over the years, TCE remained above the MCL when MW-1D was last sampled in 2006 (20 µg/l). The TCE concentrations in MW-3D slightly increased from around 7 µg/l in 1995 to as high as 24 µg/l in 1998 and but was not detected in 2006. Monitoring wells MW-2D, MW-5D and MW-6D have been clean historically.

Because concentrations of chlorinated organics remained in groundwater above screening levels, EPA planned to conduct additional groundwater monitoring from the existing monitoring system in 2019 to verify that the natural attenuation that had been occurring as described above was continuing. However, during a site visit in April 2019, EPA learned that the monitoring network utilized at the facility had been abandoned. In July 2019, EPA, through a PADEP contractor, installed and developed three nested groundwater monitoring wells at the Facility. The locations of the wells, identified as MW-9, MW-10, and MW-11 can be seen on Figure 3. MW-9 was intended to replace former monitoring well MW-1, MW-10 replaced former MW-3 and MW-11 replaced monitoring wells MW-4 and MW-7. Each location was installed as a multiple well borehole containing two screened intervals: a shallow interval of 5 to 25 feet bgs and a deep interval to depths ranging from 40 to 65 feet bgs.

Groundwater samples from each monitoring well were collected via low-flow sampling methods on September 4, 2019 and analyzed for VOCs. No contaminants were detected above PADEP's MSCs for used aquifers in the wells screened into the deep flow interval. However, MW-9S was found to contain TCE (590 µg/l), PCE (7 µg/l), 1,1-dichloroethene (1,1-DCE) (47 µg/l) and vinyl chloride (100 µg/l), MW-10S contained PCE (8 µg/l) and TCE (290 µg/l) and MW-11S contained TCE at 11 µg/l, all above their respective MSCs. The contaminant concentrations observed at MW-9S and MW-10S were higher than anticipated based on the historic natural attenuation thought to be occurring beneath the Facility.

Under EPA direction, the U.S. Army Corps of Engineers (ACE) conducted a second round of groundwater sampling at the Facility on March 12, 2020. Because no contaminants were detected above screening levels in the deeper water interval, only the shallow wells were sampled. Monitoring well MW-9S presented anomalous results. TCE, which had been detected at 590 µg/l in September 2019 was undetected in March 2020 (<0.4 µg/l). The only MSC exceedance in MW-9S in March 2020 was vinyl chloride (36.7 µg/l) which was detected at 100 µg/l at that location in September 2019. The other two shallow well samples presented similar results to the previous sample event. MW-10S exhibited exceedances of the MSCs for TCE (157 µg/l) and vinyl chloride (5.39 µg/l) and MW-11S contained TCE at 7.53 µg/l. Based on the above, groundwater beneath the Facility remains "contaminated" above appropriately protective risk-based "levels."

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 appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

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3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater”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):

As described in the answer to question no. 1 above, shallow groundwater at the Facility continues to contain concentrations of chlorinated VOCs above both PADEP’s MSCs and EPA’s MCLs. The primary contaminant of concern continues to be TCE, which was observed at a concentration as high as 590 µg/l in monitoring well MW-9S when sampled in September 2019 compared to its MCL of 5 µg/l. Vinyl chloride, present as an attenuation product of TCE, was observed at a concentration as high as 100 µg/l in MW-9S when sampled in September 2019 compared to its MCL of 2 µg/l. The highest concentrations of contaminants continue to occur in the vicinity of the former location of solvent waste storage and dilute hydrofluoric acid storage tanks along the western face of the building. The contamination is slowly migrating to the south/southeast from the former source area (all soils above PADEP’s residential soil MSCs were removed in 1994).

A groundwater flow and transport model produced by ERM in February 1997 was used to evaluate the potential for off-site migration of compounds in the groundwater beneath SGS. The analysis included the constituents historically detected at MW-1S, the most contaminated monitoring well. The results of the model indicated that the farthest predicted distance a contaminant would migrate from the former source is 525 feet (1,1-DCE). Off-site wells within that distance on the neighboring Solid State Scientific, Inc. RCRA Corrective Action facility have not been impacted by the Facility’s chlorinated VOC contamination. Solid State wells, identified as MW-1 and MW-2 in the May 2014 Revised Remedial Investigation Report for the Former Solid State Scientific, Inc. Building No. 2 Area, were screened into the shallow water-bearing zone and are located within 100 feet downgradient of SGS Thomson monitoring well MW-10. No VOCs were detected in MW-1 and MW-2 when last sampled in April 2013. Solid State monitoring well MW-1D, screened into the deeper water bearing zone, is located approximately 170 feet downgradient of SGS Thomson, monitoring well MW-10. A deed notice indicating the existing contamination exists for the Facility property.

Based on the available groundwater data and ERM’s modelling of groundwater flow and transport, the only building with potential vapor intrusion impacts is the building on the Facility property. EPA, through a PADEP contractor, conducted two rounds of indoor air-related sampling in the Facility building on September 4, 2019 and March 12, 2020, concurrent with the groundwater sampling events. Each indoor air sampling event consisted of the collection of 3 sets of paired indoor air/sub-slab soil gas samples. An ambient outdoor air sample was also collected for during each of the two sampling events. Analytical results of the sub-slab soil gas samples were observed above the PADEP Non-Residential Sub-Slab Soil Gas Statewide Health Standard (SHS) VI Screening Value (SVSS) for TCE (1,100

micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at two of the three sample locations in both events. The maximum TCE concentration seen in sub-slab soil gas was $15,000 \mu\text{g}/\text{m}^3$ in sample no. SV-01 collected in September 2019. Despite the elevated sub-slab soil gas concentrations, no exceedances of PADEP's or EPA's non-residential indoor air human health risk based screening levels were detected in any indoor air sample during either event. TCE was not detected in indoor air during the first sampling event, but it was observed at very low concentrations ($0.48\text{-}0.59 \mu\text{g}/\text{m}^3$) in all three samples collected within the building in March 2020. The ambient air sample collected outside the building during the March 2020 event exhibited a TCE concentration of $0.16 \mu\text{g}/\text{m}^3$.

The results of the two rounds of indoor air-related sampling indicate that the concrete slab in conjunction with the design and dimensions of the building are protective of the indoor air within the building. While a complete pathway exists, as demonstrated by the presence of PCE and TCE in indoor air, the concentrations of these contaminants are more than an order of magnitude below EPA and PADEP's risk based concentrations for those substances.

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.

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4. Does “contaminated” groundwater **discharge** into **surface water** bodies?

- If yes - continue after identifying potentially affected surface water bodies.
- If no - skip to #7 (and enter a “YE” status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater “contamination” does not enter surface water bodies.
- If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

The Facility is not suspected to have any significant impacts on the sediments or water quality of the unnamed tributary to Park Creek, the nearest surface water body, located approximately 800 feet southwest of the Facility property. Groundwater modelling has indicated that the contamination beneath the facility could not migrate with the strength needed to negatively impact the unnamed tributary to Park Creek. This is backed up by the absence of any Facility-related contaminants in downgradient monitoring wells on the neighboring Solid State Scientific, Inc. RCRA Corrective Action facility.

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5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration³ 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 concentrations³ of key contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and
 - 2) provide a statement of professional judgment/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.
- If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting:
- 1) the maximum known or reasonably suspected concentrations³ 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 concentrations³ 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.

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6. Can the **discharge** of “contaminated” groundwater into surface water be shown to be “**currently acceptable**” (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?
- 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-assessment⁵, 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):

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.

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7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the “existing area of contaminated groundwater?”

If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations, which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the “existing area of groundwater contamination.”

If no - enter “NO” status code in #8.

If unknown - enter “IN” status code in #8.

Rationale and Reference(s):

Additional groundwater monitoring and/or remediation will be required in the future to ensure that the RCRA Corrective Action objective of returning aquifers to their maximum beneficial reuse is realized. Maximum beneficial reuse for the shallow and deeper water bearing units at the Facility would be for potable purposes, which means that the goal is for groundwater beneath the Facility is to meet EPA’s MCLs. While Facility ownership has changed several times since manufacturing operations began in the late 1960s, EPA will conduct a Potentially Responsible Parties (PRPs) search shortly and will subsequently compel the PRP(s) to address the remaining groundwater contamination at the Facility. Future monitoring efforts are expected to include the 3 nested wells that EPA installed on the Facility property in 2019 and may include the installation of additional wells.

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8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under 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).

- 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 (insert facility and EPA ID #, located at (insert address)). 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 re-evaluated 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 09/27/23 _____
(print) Andrew Clibanoff _____
(title) RCRA Corrective Action Project Manger _____

Supervisor (signature) _____ Date _____
(print) Alizabeth Olhasso, Manager _____
(title) RCRA Corrective Action South Section _____
(EPA Region or State) EPA Region 3 _____

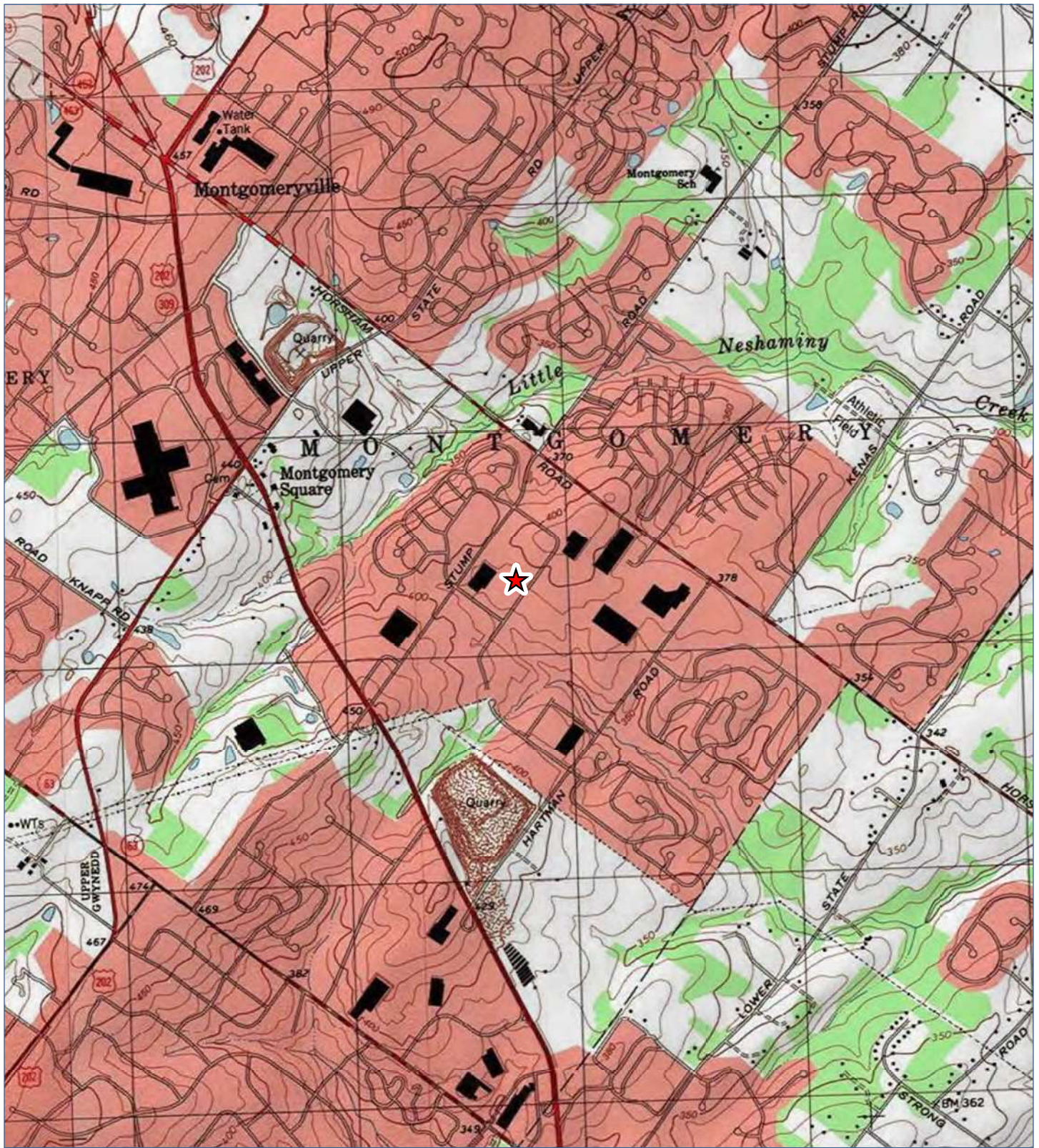
Locations where References may be found:

US EPA Region III
Land, Chemicals and Redevelopment Division
Four Penn Center
1600 John F. Kennedy Blvd. (3LD12)
Philadelphia, PA 19103

Contact telephone numbers and e-mail

(name) Andrew Clibanoff _____
(phone #) 215-814-3391 _____
(e-mail) clibanoff.andrew@epa.gov _____

Figures



Legend

★ SITE LOCATION

NOTES:
 1. TOPOGRAPHIC IMAGE WAS TAKEN FROM ESRI DATABASE;
 NATIONAL GEOGRAPHIC SOCIETY 2013
 2. 7.5' USGS QUADRANGLE, AMBLER, PA (1999)

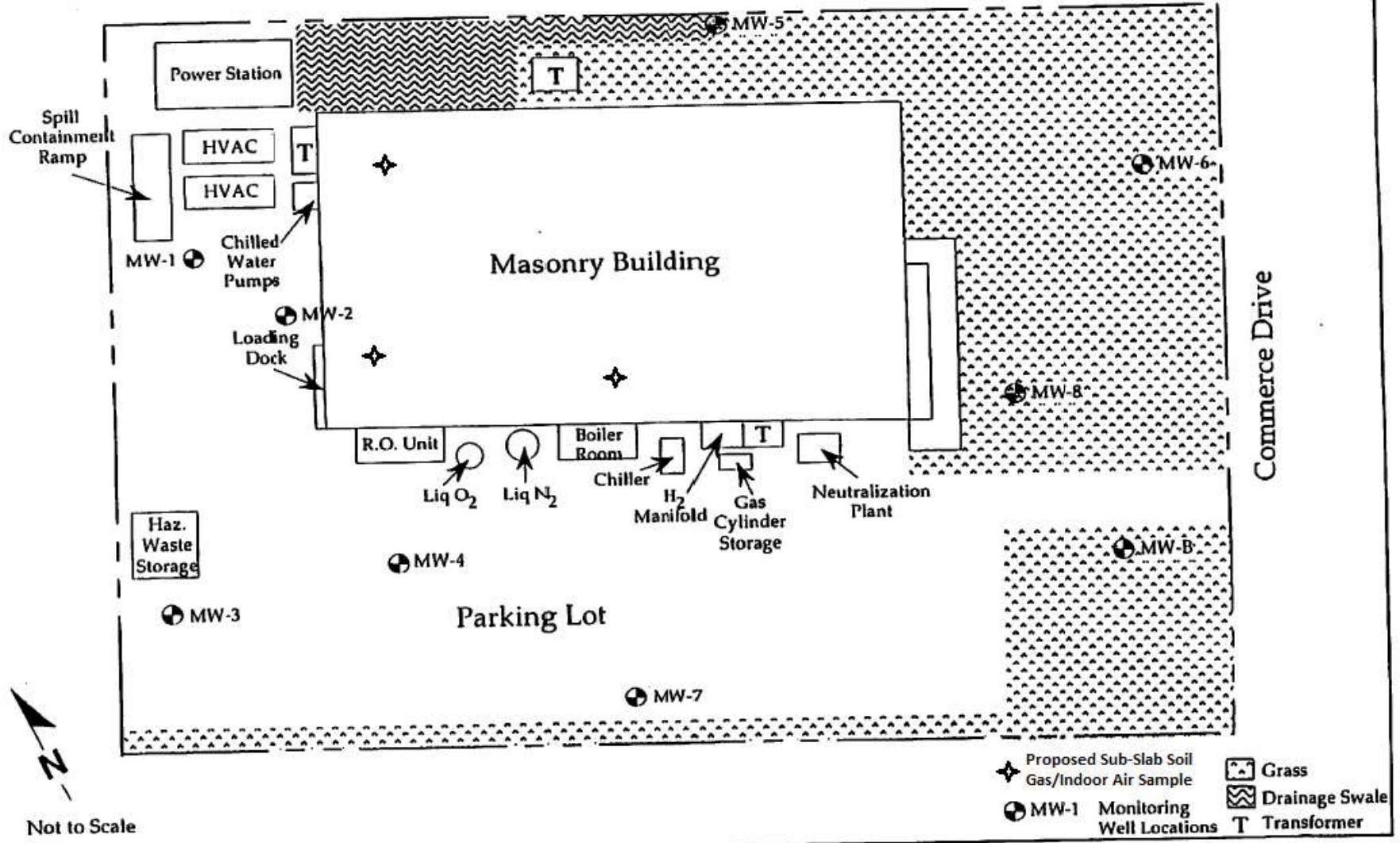
Adopted from EnviroTrac's
 10/14/2019 Letter Report

SITE LOCATION MAP	DRAFTED BY: MED		
	CHECKED BY:		
	REVIEWED BY:		
RCRA/SGS THOMSON FACILITY 140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936 40.230368, -75.225942			
			DATE 2/7/2019
			FIGURE 1



176 THORN HILL ROAD, WARRENDALE, PA 15086

Figure 2
Well Location Map
 SGS-THOMSON Microelectronics
 140 Commerce Drive
 Montgomeryville, Pennsylvania



Note: These are historic well locations. Each of these wells has been properly abandoned.

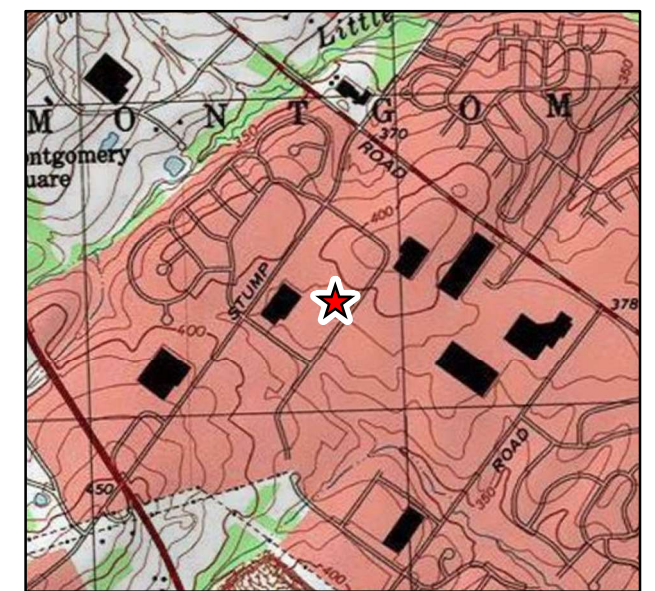


Adopted from EnviroTrac
10/14/2019 Letter Report

Legend

- ◆ Monitoring Well Location
- Sub-Slab Soil Gas/Indoor/Outdoor Air Sample
- ◆ Abandoned Monitoring Well Location
- Utility Pole
- Overhead Electric Line
- - - Property Boundary
- X Proposed Sub-Slab Soil Gas/Indoor Air Sample

Site Location



DRAFTED BY: MED	SITE MAP features are approximate locations.		
CHECKED BY:	RCRA/SGS THOMSON FACILITY 140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936 40.230368, -75.225942		
REVIEWED BY:			
	<small>176 THORN HILL ROAD, WARRENDALE, PA 15086</small>		
	<small>SCALE</small> 0 12.5 25 50 Feet	<small>DATE</small> 10/14/2019	<small>FIGURE</small> 3