Final Decision and Response to Comments

REGION III
ID #
MDD043375757

Electro Therm Inc.
Denton, Maryland

Facility/Unit Type:	**Appliance Industry**
Contaminants:	**Tetrachloroethene, 1,1,1-Trichloroethene, and 1,1-Dichloroethene**
Media:	**Soil, Groundwater and Vapor Intrusion**
Final Remedy:	**Monitored Natural Attenuation and compliance with and maintenance of groundwater use restrictions.**

I. INTRODUCTION

The United States Environmental Protection Agency (EPA) is issuing this Final Decision and Response to Comments (FDRTC or Final Decision) selecting the Final Remedy for the Electro Therm Inc. Facility located at Denton, Md (hereinafter referred to as the Facility). The Final Decision is issued pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. Sections 6901, et seq.

On May 23, 2014, EPA issued a Statement of Basis (SB) in which EPA proposed a remedy for the Facility. EPA held a thirty (30)-day public comment period which began on May 23, 2014 and ended on June 22, 2014. The only comments EPA received during the public comment period were submitted by the owner of the Facility.

EPA has determined that it is not necessary to make significant modifications to the proposed remedy as set in the SB. Based on comments received during the public comment period EPA is, however, making minor modifications to the proposed remedy as described in more detail in Attachment A, EPA Response to Comments. This Final Decision and the remedy selected herein incorporates those minor modifications and clarifications.

II. FACILITY BACKGROUND

The subject Site is a 13.7-acre industrial property situated between Route 404 and Meetinghouse Road in Denton, Maryland. Historical land use prior to 1988 included the manufacture of heating elements by Electro-Therm Inc., which had, at one time, been owned by Canadian Corporate Management Company, Ltd. (CCMC). The Site was transferred to FIL (US) Inc. on September 14, 1990.

The Facility houses one building which has been historically used to manufacture heating elements.

CCMC and the Maryland Department of the Environment (MDE) entered into Consent Order No. CO-88-094 (CO) under which CCMC was required to implement the Corrective Action Program (CAP) described in the August 19, 1987 "Corrective Action Program Electro-Therm Facility, Caroline County, Maryland." The amended (1993) MDE consent order (CO-88-094) was entered into by MDE and FIL (US) Inc., as owner of the property.

Areas of Investigation

Facility Building	Chlorinated solvents were used by Electro-Therm in parts cleaning operations in the southwestern portion of the building and are the likely source of subsurface contamination beneath the Site. Vapor Intrusion (VI) was investigated in the building.
Groundwater	Historic investigations of ground water conducted in October 1986 at the Site indicate that the ground water in the uppermost aquifer on the western part of the Facility was contaminated with volatile organic compounds (VOCs), mainly chlorinated hydrocarbons. The principal priority pollutants in general order of concentration are 1,1, l-trichloroethane (TCA), 1,1- dichloroethane (DCA), 1, l-dichloroethylene (DCE), tetrachloroethylene (PCE), toluene, 1, 2-trans-dichloroethylene (1,2 DCE), methylene chloride (MC), chloroethane (CA), trichloroethylene (TCE), benzene, ethylbenzene, and 1,2- dichloroethane (1, 2 DCA). Chlorinated solvents used in parts cleaning operations in the southwestern portion of the building are the likely source of groundwater contamination beneath the Site. Pursuant to the CO, the Facility has been remediating groundwater contamination in the shallow water-bearing zone at the Site with a pump and treat system. The pump and treat system has been in operation since March 1988 as part of the CAP.

III. SUMMARY OF ENVIRONMENTAL INVESTIGATIONS

Area	Description
Facility Building	**Indoor Air Sampling 2007** The air above the concrete building slab that is situated over the zone of contaminated groundwater beneath the southwest corner of the building was sampled for the presence of VOCs on October 25 and 26, 2007. Benzene, tetrachloroethene, and trichloroethene were detected at concentrations above human health risk based screening levels (EPA Region 3 Risk-Based Concentrations [RBCs] for Ambient Air). MDE determined that the low levels of benzene detected in indoor air were not the result of vapor intrusion, given that benzene, at the time of sampling, had not been detected in groundwater beneath the Site for over 14 years. **Membrane Interface Probe (MIP) Investigation May 2010** In 2010, the Facility performed a MIP investigation to address remaining data gaps with respect to subsurface contamination at the Site. Until 2010, subsurface conditions beneath the building had not been characterized. The MIP investigation identified a compact "hot spot" of contamination in the unsaturated zone and the surficial aquifer beneath the east-central part of the building, and defined its lateral and vertical extent. The "hot spot" is approximately 100 feet long by 60 feet wide and 34 feet thick, extending to the top of the uppermost aquiclude. The soil sample with the highest concentration of VOCs contained 5.6 mg/kg of PCE (EPA SL for PCE in soil is 110 mg/kg industrial, 22 mg/kg for residential). The MIP investigation did not identify any sources of contamination outside the building nor beneath the former solvent processing area under the southwest corner of the building. The MIP investigation presented strong evidence that a shallow low-permeability zone composed of clay, believed to be part of the Chesapeake Group,

	underlies the entire Site at a depth of no greater than 34 feet below ground surface (bgs) at the Site (11 feet above mean sea level [msl]). Furthermore, historical groundwater sampling data indicate that the deep zone aquifer used for water supply at the Site has not been affected by shallow zone VOC contamination. Also the clay beneath the Site would prevent further downward migration of contaminants. The results of the MIP investigation used in conjunction with the confirmatory sample results show that a suspect source area is centered under the building. Thus, groundwater contamination is being pulled from the suspect source area beneath the building westward toward the pumping wells of the groundwater remediation system located west of the building. The results of the indoor air investigation indicate the following: Tetrachloroethene was detected in each of the four indoor air samples at concentrations ranging from 6.0 to 8.3 ug/m^3 at levels below the industrial Risk Based Concentration (RBC) of 9.4 ug/m3. The possibility exists that the VOCs detected are the result or partially the result of off-gassing beneath or from the concrete floor slab. General use of solvents over many years in manufacturing areas may have led to surficial permeation of the concrete by solvents. However, vapor intrusion from the subsurface is more likely to be the mode of vapor transport. **Indoor Air Sampling Report January 6, 2014** The air sampling conducted during November 2013 in the building did not detect any contaminants over EPA industrial risk based levels.
Facility Groundwater	**Corrective Action Plan (CAP)** Following installation and testing, a pump and treat system that included 30 wells equipped with eductor pumps, a treatment system that consisted of an air stripper tower (90 gallon-per-minute capacity), collection tanks, and a discharge line was placed in operation on March 18, 1988. Under the CAP, the pump and treat system was to be operated continuously except for automatic shutdowns caused by equipment malfunctions and scheduled shutdowns for equipment maintenance and repair. In late July 1988, a new, larger capacity (200 gallon-per-minute) air stripper tower was installed in an effort to accelerate the cleanup. As part of the CAP, monitoring wells were installed to periodically assess system performance in treating the groundwater contamination and controlling the groundwater contaminant plume. Currently, the pump and treat system has reached asymptotic levels. **Groundwater Sampling 2007** In June 2007, shallow zone groundwater sampling was performed. The Facility collected groundwater samples from the eight shallow water-bearing zone monitoring wells and three shallow zone eductor wells. The groundwater samples were tested for the presence of VOCs. Historical groundwater sampling data from June 1986 through this most recent groundwater sampling event (June 2007) were summarized in the June 2007 *Monitoring Well Sampling, Former Electro-Therm Facility, Denton, Maryland.* The June 2007 report concluded the following:

The data showed that the remediation effort had significantly reduced the size and concentration of the plume of VOC-contaminated groundwater. The area of significant persistent VOC contamination in groundwater appeared to be limited to beneath the southwestern corner of the building and in the adjoining area.

Further, the sample results from the June 2007 round of sampling as well as historical data indicated that the deep zone aquifer used for water supply at the Site had not been affected by shallow zone VOC contamination.

Four monitoring wells had groundwater sampling results above the Maximum Contaminant Limits (MCLs) promulgated at 40 C.F.R. Part 141 pursuant to Section 1412 of the Safe Drinking Water Act, 42 U.S.C. Section 300g-1 (MW-2, MW-4, EW-6, and EW-10). The levels of 1,1 -dichloroethene, tetrachloroethene, and 1,1,1 -trichloroethane detected in MW-2 during the sampling event were 24 ug/L, 21 ug/L, and 97 ug/L, respectively. MW-4 contained only three VOCs at levels above the MCL, namely tetrachloroethene at 190 ug/L, trichloroethene at 8 ug/L, and 1,1- dichloroethene at 15 ug/L. Tetrachloroethene and 1,1 -dichloroethene concentrations were, respectively, 39 ug/L and 32 ug/L in groundwater sampled from EW-6 and 24 ug/L and 21 ug/L in the groundwater sampled from EW-l0.

Groundwater Sampling 2011

Results from a March 2011 groundwater sampling event of the shallow water bearing zone identified limited areas of VOC contamination of the shallow water-bearing zone. The principal contaminants were 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, 1,1-dichloroethene, and 1,1- dichloroethane. In some instances, these contaminant concentrations exceed existing MCLs, and Maryland Department of the Environment Cleanup Standards for Groundwater for Type I and II Aquifers (MDE Cleanup Standards). During the March 2011 sampling event, the Facility collected samples from eight monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8) and three eductor (extraction) wells (EW-2, EW-6, and EW-10) for analysis of VOC concentrations.

The groundwater sampling data from the March 2011 sampling event, in conjunction with historical groundwater sampling data, demonstrate the following:

1) Groundwater at the perimeter of the Site in the isolated remediation area northeast of the building is remediated. VOCs have not been detected in groundwater sampled from the two perimeter wells in this area since 1996, and VOCs have not been detected at concentrations above their respective MCLs since 1993.

2) Groundwater in the isolated remediation area at the northwest end of the Site no longer contains concentrations of VOCs above applicable MCLs.

3) Groundwater from upgradient wells remains uncontaminated.

4) The deep zone water supply aquifer for the Site has not been impacted by shallow zone VOC contamination.

The results of the March 2011 sampling event indicate that groundwater from seven of the 11 wells (MW-3, MW-5, MW-6, MW-7, MW-8, EW-2, and EW-6) contain levels of VOCs below applicable MCLs.

The March 2011 data indicate that groundwater from three of the 11 wells (MW-1, MW-2, and MW-4) contained tetrachloroethene, 1,1,1-trichloroethene, and 1,1-dichloroethene above respective MCLs as follows:

Increased concentrations of tetrachloroethene (at 38 µg/L, MCL 5 ug/l) were detected in groundwater from monitoring well MW-1 during the March 2011 sampling event.

The levels of 1,1-dichloroethene and tetrachloroethene detected in MW-2 during the March 2011 sampling event were 23 µg/L (MCL 7 ug/l) and 32 µg/L (MCL 5 ug/l), respectively.

The March 2011 groundwater sample from MW-4 contained only three VOCs at levels above the applicable MCLs: tetrachloroethene at 66 µg/L (MCL 5 ug/l), 1,1,1-trichloroethane at 220 µg/L (MCL 200 ug/l), and 1,1-dichloroethene at 20 µg/L (MCL 7 ug/l).

MW-1, 2, and 4 are all adjacent to the building.

Groundwater Sampling 2013

During the most recent sampling event in October 2013, the Facility performed groundwater sampling of the shallow water-bearing zone at the Site. Results from this sampling event and previous investigations identified limited areas of VOC contamination of the shallow water-bearing zone.

The groundwater sampling data resulting from the October 2013 sampling event, in conjunction with historical groundwater sampling data, demonstrate the following:

1) Groundwater at the downgradient perimeter of the Site, along its north and northwest border, has not contained concentrations of regulated VOCs above either the MCLs or the MDE Cleanup Standards for the past two sampling rounds (March 2011 and October 2013).

2) The area and volume of VOC-contaminated groundwater adjacent to the southwestern corner of the building remains significantly reduced and contained.

3) Groundwater from upgradient wells remains uncontaminated.

4) The deep zone water supply aquifer for the Site historically has not been impacted by shallow zone VOC contamination.

In the March 1987, samples from MW-2, before remediation began, contained the following levels of VOCs above their respective MCLs: 1,1-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, and 1,1-dichloroethane were at 78 µg/L, 180 µg/L, 890 µg/L, and 110 µg/L, respectively. The levels of 1,1-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, and 1,1-dichloroethane detected in MW-2 during the 2013 sampling event were 11 µg/L, 31 µg/L, 61 µg/L, and 0.62 µg/L, respectively.

VOC concentrations in groundwater from MW-2 have been greatly reduced compared with previous levels beginning with the June 2007 sampling event. The most recent sampling data show that only 1,1-dichloroethene and tetrachloroethene remain at concentrations above their MCLs. The most recent VOC contaminant concentrations in

	MW-2 have been between nearly one and over two orders of magnitude lower than those of the September 2005 sampling event and earlier, back to the time of remediation system start-up in 1988. The March through September 1993 sampling events were historically the time of highest VOC contaminant concentrations, when levels of 1,1-dichloroethene, tetrachloroethene, and 1,1,1-trichloroethane, 1,1-dichloroethane were as high as 1,000 µg/L, 1,400 µg/L, 36,000 µg/L, and 130 µg/L, respectively. Data indicate that groundwater contaminants in the vicinity of MW-4 have been significantly reduced from preremediation system start-up levels (prior to March 1988). In March of 1987, the sample from MW-4 contained levels of 1,1-dichloroethene at 95 µg/L, trans-1,2-dichloroethene at 250 µg/L, tetrachloroethene at 1,000 µg/L, 1,1,1-trichloroethane at 310 µg/L, 1,2-dichloroethane at 6 µg/L, and trichloroethene at 70 µg/L. The latest groundwater sample from MW-4 contained only three VOCs at concentrations above the MCL, namely tetrachloroethene at 42 µg/L (MCL 5 µg/L), 1,1,1-trichloroethene at 220 µg/L (MCL 200 µg/L), and 1,1-dichloroethene at 18 µg/L (MCL 7 µg/L) . Sampling data from MW-8 indicates that pre-remediation levels of the contaminants benzene (5 µg/L), toluene (70 µg/L), 1,1,1-trichloroethane (3,400 µg/L), 1,1-dichloroethene (430 µg/L), 1,1-dichloroethane (470 µg/L), and tetrachloroethene (1,000 µg/L) have all been reduced significantly. The latest groundwater sample from MW-8 contained concentrations of only tetrachloroethene at 13 µg/L (MCL 5 µg/L) and 1,1-dichloroethene at 17 µg/L (MCL 7 µg/L).
Facility Soil	Soil concentrations were screened against EPA RBCs for residential and industrial soil screening levels (SLs). No constituents were detected in soil above their respective residential SLs.

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control which the Facility met on May 22, 2002 and, (2) Migration of Contaminated Groundwater Under Control which the Facility met on February 5, 2003. The environmental indicator determinations are available at http://www.epa.gov/reg3wcmd/ca/md.htm.

IV. CORRECTIVE ACTION OBJECTIVES

EPA's Corrective Action Objectives for the Facility are the following:

A. Soils

EPA's Corrective Action Objective for Facility soil is to meet EPA's residential RBCs for direct contact with soils and allow for unrestricted use. Facility soils do not contain concentrations of contaminants above EPA's RBCs for residential soils. Therefore, EPA's corrective action objective for soils has been met.

B. Groundwater

EPA's Corrective Action Objective for groundwater at the Facility is to meet drinking water standards established by the MCLs. Until such time that MCLs are met, EPA proposes to control exposure to the hazardous constituents remaining in the groundwater by requiring the compliance with and maintenance of groundwater use restrictions at the Facility.

V. FINAL REMEDY

The Facility has been operating a pump and treat system since 1988. During its operation, contaminant concentrations in groundwater have declined significantly, but levels of tetrachloroethene, 1,1,1-trichloroethene, and 1,1-dichloroethene are still slightly above drinking water standards in some onsite wells. EPA anticipates that these contaminant concentrations are now low enough that natural attenuation processes may be sufficient to ultimately achieve drinking water standards without further active treatment. Therefore, the final remedy for groundwater is to pump and treat the groundwater if the perimeter wells exceed the drinking water standards, in conjunction with monitored natural

attenuation until drinking water standards are met throughout the plume.

Because some contaminants currently remain in the groundwater at the Facility at levels which exceed drinking water standards, EPA's final remedy also requires the compliance with and maintenance of groundwater use restrictions that are enforceable against future land owners to prevent exposure to contaminants while levels remain above drinking water standards. The groundwater use restrictions shall include, but not be limited to, the following:

1. Groundwater at the Facility in the contaminated aquifer shall not be used for any purpose other than the operation, maintenance, and monitoring activities required by MDE and/or EPA, unless it is demonstrated to EPA, in consultation with MDE, that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and EPA, in consultation with MDE, provides prior written approval for such use;

2. No new wells shall be installed in the contaminated aquifer on Facility property unless EPA, in consultation with MDE approve and EPA provides prior written approval to install such wells and EPA and MDE will be notified of any planned new well installation on Facility property;

3. A vapor intrusion control system, the design of which shall be approved in advance by EPA, shall be installed in each new structure constructed above the contaminated groundwater plume or within 100-foot around the perimeter of the contaminated groundwater plume, unless it is demonstrated to EPA that vapor intrusion does not pose a threat to human health and EPA provides prior written approval that no vapor intrusion control system is needed. The groundwater plume will be defined as the area of groundwater where the concentrations of contaminants are at the MCL level or greater;

4. The existing building will be used for industrial use only unless a vapor intrusion control system is installed, with the specific engineering plans for the vapor intrusion control system to first be submitted to and approved by EPA and MDE prior to construction;

5. The Property shall not be used in a way that will adversely affect or interfere with the integrity and protectiveness of the final remedy including, but not limited to the groundwater wells; and

6. Owner shall allow the EPA, MDE, and/or their authorized agents and representatives, access to the Facility property to inspect and evaluate the continued effectiveness of the final remedy.

These restrictions will be implemented through an enforceable mechanism which shall consist of an order, environmental covenant and/or regulations and local ordinances, such as the State of Maryland Well Construction Regulations, Article Title 9, Subtitle 13, Annotated Code of Maryland; Code of Maryland Regulation (COMAR), Title 26, Subtitle 4, Chapter 4, COMAR 26.04.04. If an environmental covenant is implemented as part of the final remedy, it will be recorded in the chain of title for the Facility property and, once recorded, will be enforceable against future land owners.

C. Additional Requirements

In addition, the Facility shall provide EPA with a coordinate survey as well as a metes and bounds survey, of the Facility boundary. Mapping the extent of the land use restrictions will allow for presentation in a publicly accessible mapping program such as Google Earth or Google Maps.

VI. EVALUATION OF FINAL REMEDY

Threshold Criteria	Evaluation

1) Protect human health and the environment	The final remedy requires groundwater use restrictions to minimize the potential for human exposure to contamination and vapor intrusion controls for new construction, as necessary. In addition, the existing State of Maryland well construction regulations will aid in minimizing exposure to contaminated groundwater by restricting the installation of wells in contaminated water sources.
2) Achieve media cleanup objectives	The Facility has achieved the EPA's industrial and residential SLs for soils. Vapor intrusion does not pose a threat to human health in the exiting building as long as its use remains industrial. In addition, EPA's final remedy requires vapor intrusion control systems be installed in each new structure constructed above the contaminated groundwater plume or within 100-foot around the perimeter of the contaminated groundwater plume, unless it is demonstrated to EPA that vapor intrusion does not pose a threat to human health. The groundwater plume appears to be stable (not migrating) or declining over time. In addition, EPA's final remedy requires the implementation and maintenance of groundwater use restrictions to ensure that contaminated groundwater beneath Facility property is not used for any purpose except to conduct the operation, maintenance, and monitoring activities required by MDE and EPA.
3) Remediating the Source of Releases	There are no remaining large, discrete sources of waste from which constituents would be released to the environment. Contaminated groundwater is not used for potable purposes at the Facility.
Balancing/Evaluation Criteria	
5) Long-Term Effectiveness	EPA's final remedy requires the compliance with and maintenance of groundwater use restrictions at the Facility. The restrictions which EPA anticipates will be implemented through an order and/or an environmental covenant to be recorded in the chain of title for the Facility property. This will maintain protection of human health and the environment over time by controlling exposure to the hazardous constituents remaining in groundwater and protecting the integrity of the remedy. In addition, a groundwater monitoring program already in place will continue until drinking water standards are met.
6) Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents	The reduction of toxicity, mobility and volume of hazardous constituents at the Facility has already been achieved, as demonstrated by the data of the groundwater monitoring showing that the plume appears to be stable (not migrating), and concentrations of constituents of potential concern (COPCs) are either stable or declining over time. In addition, a groundwater monitoring program already in place will continue until groundwater clean-up standards are met.

7) Short-Term Effectiveness	The final remedy does not involve any activity such as construction or excavation that poses any short-term risks to residents, workers or the environment. EPA anticipates that the land use and groundwater use restrictions will be fully implemented shortly after the issuance of the Final Decision and Response to Comments.
8) Implementability	EPA's final remedy is readily implementable. EPA proposes to implement the institutional controls through an enforceable mechanism such as an order and/or an environmental covenant.
9) Cost	EPA's final remedy is cost effective. The costs associated with this final remedy are minimal. The costs for the continuation of groundwater monitoring are approximately $17,000 per year. Costs for the pump and treat system are approximately $70,000 per year. Recording an environmental covenant and /or issuing an order will be approximately $5,000.
10) Community Acceptance	The only comments EPA received on its proposed remedy for the Facility were from Russel Metals. Based on those comments, EPA has made minor modifications and clarified certain aspects of the proposed remedy as described in Attachment A, EPA Response to Comments.
11) State/Support Agency Acceptance	MDE has reviewed and concurred with the final remedy for the Facility. Furthermore, EPA has solicited MDE input and involvement throughout the investigation process at the Facility.

VII. FINANCIAL ASSURANCE

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's final remedy at the Facility. The costs to obtain orders or environmental covenants are minimal. Given that EPA's final remedy does not require any further engineering actions to remediate soil, groundwater or indoor air contamination at this time and given that the costs of implementing institutional controls and the continuation of groundwater monitoring at the Facility will be minimal, EPA is proposing that no financial assurance be required.

VIII. DECLARATION

Based on the Administrative Record, EPA has determined that the Remedy as set forth in this Final Decision is appropriate and will be protective of human health and the environment.

Attachments

Figure 1: Site Location Map

Attachment A: EPA Response to Comments

Date: 8-20-14

Catherine A. Libby for

John A. Armstead, Director
Land and Chemicals Division
US EPA, Region III

IX. INDEX TO ADMINISTRATIVE RECORD

MDE Consent Order No. CO-88-094 (CO) April 1993

Corrective Action Program Electro-Therm Facility, Caroline County, Maryland, August 19, 1987

Final RCRA Corrective Action Plan May 1994

Monitoring Well Sampling Former Electro Therm Facility Denton, MD, June 2007

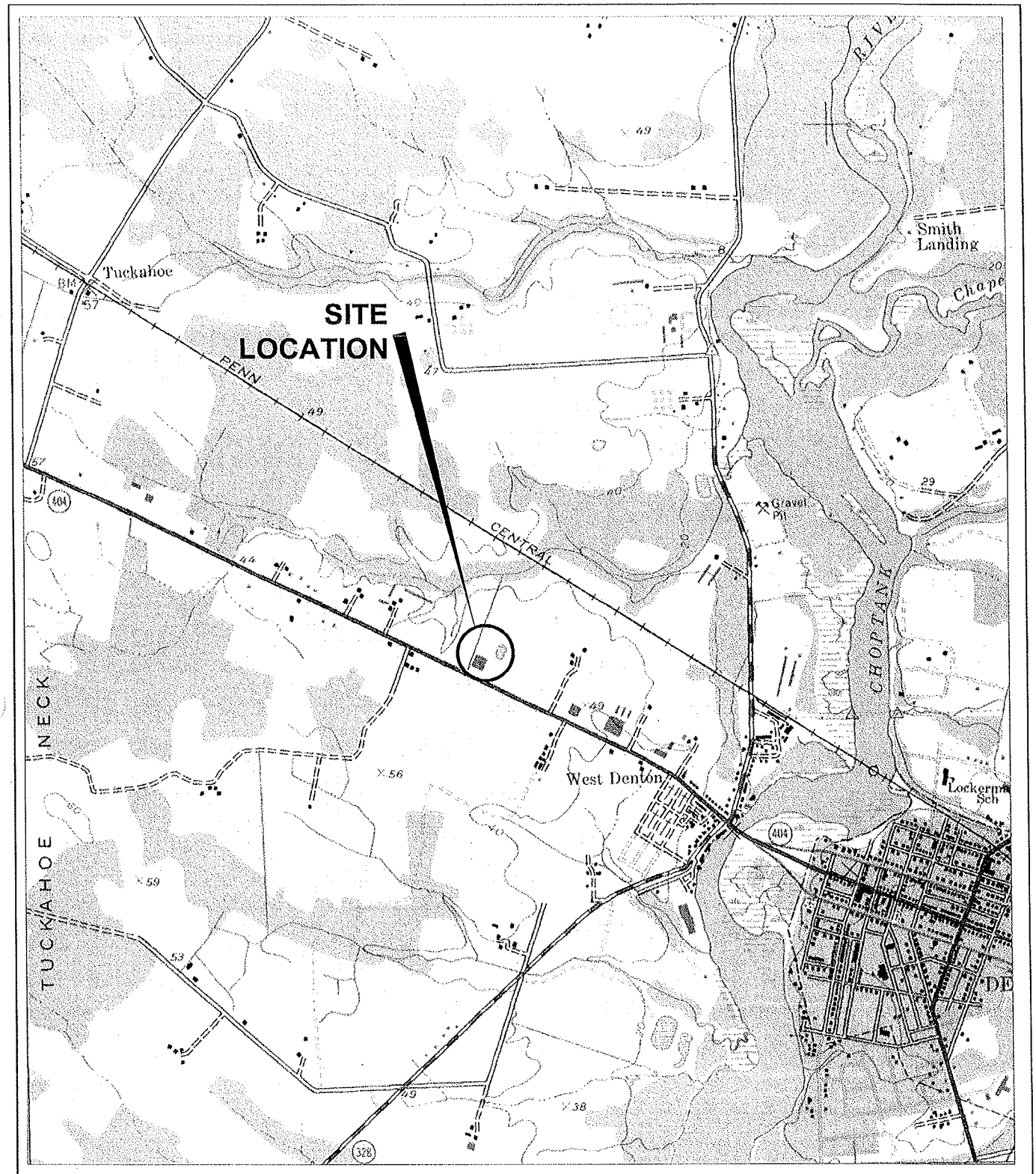
Membrane Interface Probe Investigation, Former Electro Therm Facility Denton, MD May 2010

March 2011 Monitoring Well Sampling, Former Electro-Therm Facility Denton, Maryland

October 2013 Monitoring Well Sampling, Former Electro-Therm Facility Denton, Maryland

Indoor Air Sampling Report, November 2013

Corrective Measures Study For The Former Electro-Therm Facility In Denton, Maryland, March 2014



MARYLAND
Quadrangle Location Map

0 2000 4000 Feet

SOURCE: U.S.G.S. TOPOGRAPHIC MAP (7.5 Minute)
DENTON, MD

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United States Environmental Protection Agency

FORMER ELECTRO-THERM, INC.
Denton, Maryland

FIGURE 1
SITE LOCATION MAP

TETRA TECH EC, INC.

Attachment A

EPA Response to Comments

Attachment A to
Electro Therm Denton, Md FDRTC

EPA Response to Comments

During the comment period, EPA received comments from Russel Metals on the Statement of Basis. Russel Metals comments and EPA's responses to those comments are set forth below.

Ken Chorel of Russel Metals provided 10 comments in 3 categories:

I. Party Names

1. Electro-Therm was owned by various parties during the time that it occupied the Denton property. One of those owners, for a time, was Canadian Corporate Management Company Limited (CCMC). Electro-Therm was owned by Emerson Electric Company during its final period of operation at the Site, during its decommissioning of RCRA hazardous waste facilities, and at the time that Electro-Therm closed its doors and vacated the property.

2. FIL (US) Inc. is the current owner of the property that Electro-Therm once occupied.

3. While it is factually true that Federal Industries Ltd. acquired CCMC in June 1986 and that Federal Industries Ltd. changed its name in 1995 to Russel Metals, these facts are superfluous and have no bearing on the matter at hand. These references should be deleted.

4. CCMC no longer exists. Therefore, all references to CCMC having investigated this or sampled that, after about 1990, are incorrect. The property is owned by FIL (US) Inc., and all post-1990 (approx) activity has been conducted by FIL (US) Inc., as the owner of the property.

5. The original (1988) MDE consent order (CO-88-094) was entered into by MDE and CCMC, as indemnitor to Emerson Electric, the owner of Electro-Therm.

EPA's Response

The purpose of the Statement of Basis is to support the selected remedy for the Facility. The Background Section includes a summary of the site activities and the ownership history; it is not intended to be a comprehensive history of the Facility. EPA will amend the Facility Background Section to clarify ownership. The sentences shall be written as follows:

"Historical land use prior to 1988 included the manufacture of heating elements by Electro-Therm Inc., which had, at one time, been owned by Canadian Corporate Management Company, Ltd. (CCMC). The Site was transferred to FIL (US) Inc. on September 14, 1990."

6. The amended (1993) MDE consent order (CO-88-094) was entered into by MDE and FIL (US) Inc., as owner of the property.

EPA's Response

EPA will amend the Facility Background Section to include a reference to the amended order with FIL(US).

II. Groundwater Use Restrictions

1. This is overly restrictive. The property obtains its water supply from on-site water wells, and we do not agree to any such restrictions for this source of groundwater. These wells are completed in a deeper confined aquifer and have never, in the 28 years this property has been under investigation, displayed any evidence of contamination.

EPA's Response

EPA will amend the sentence to clarify that groundwater use will be restricted to the contaminated aquifer. The sentence shall be written as follows:

"Groundwater at the Facility in the contaminated aquifer shall not be used for any purpose other than the operation, maintenance, and monitoring activities required by MDE and/or EPA, unless it is demonstrated to EPA, in consultation with MDE, that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and EPA, in consultation with MDE, provides prior written approval for such use; "

2. This is again overly restrictive. Groundwater contamination is limited to the shallow unconfined aquifer, and even in this zone there are large areas of the property that have never been impacted by contamination. We don't object to the prohibition of new wells in the shallow zone, but FIL (US) Inc., and any subsequent owner, shall be free to install new water supply wells into deeper aquifers as they see fit, with no special permissions required of EPA or MDE (other than the ordinary day-to-day permits and/or approvals required of all new water supply wells).

EPA's Response

EPA will change the restriction to the contaminated aquifer only and ask to be notified of any new well installations. A restriction is still needed to make sure no new wells are installed in the contaminated aquifier. When the air stripper and pumping system is turned off as planned, the

location of the contamination in the aquifier might change. The sentence shall be written as follows:

"No new wells shall be installed in the contaminated aquifer on Facility property unless EPA, in consultation with MDE approve and EPA provides prior written approval to install such wells and EPA and MDE will be notified of any planned new well installation on Facility property;"

3. Agree in principle ... but need to better define what is meant by *"the contaminated groundwater plume"*

EPA's Response

EPA will add that the plume shall be defined as having contaminant concentrations at the MCL or greater for that contaminant. The sentence shall be written:

"A vapor intrusion control system, the design of which shall be approved in advance by EPA, shall be installed in each new structure constructed above the contaminated groundwater plume or within 100-foot around the perimeter of the contaminated groundwater plume, unless it is demonstrated to EPA that vapor intrusion does not pose a threat to human health and EPA provides prior written approval that no vapor intrusion control system is needed. The groundwater plume will be defined as the area of groundwater where the concentrations of contaminants are at the MCL level or greater;"

4. Agree in principle ... but expand to *"industrial or commercial uses only"*.

EPA's Response

EPA has limits for contaminants in soil and groundwater for residential use and industrial use. EPA's definition of industrial use includes commercial use. EPA believes that the current sentence is correct and will stay the same.

III. Miscellaneous

7. The title block of the document should refer to the *"Former Electro-Therm Facility"*, rather than *"Electro-Therm Inc."*. FIL (US) Inc. is the owner of the property that Electro-Therm once occupied, but is not Electro-Therm. We have no knowledge as to what became of Electro-Therm, after they vacated the property.

EPA's Response

EPA believes that the current title is correct and will stay the same.

8. The Groundwater Sampling 2011 section refers to *"the most recent sampling event"*, and *"the latest groundwater sample"*. 2011 was not the most recent sampling event, nor the latest sample.

EPA's Response

EPA agrees and will make the change. The section will now be written as follows:

"The results of the March 2011 sampling event indicate that groundwater from seven of the 11 wells (MW-3, MW-5, MW-6, MW-7, MW-8, EW-2, and EW-6) contain levels of VOCs below applicable MCLs.

The March 2011 data indicate that groundwater from three of the 11 wells (MW-1, MW-2, and MW-4) contained tetrachloroethene, 1,1,1-trichloroethene, and 1,1-dichloroethene above respective MCLs as follows:

Increased concentrations of tetrachloroethene (at 38 µg/L, MCL 5 ug/l) were detected in groundwater from monitoring well MW-1 during the March 2011 sampling event.

The levels of 1,1-dichloroethene and tetrachloroethene detected in MW-2 during the March 2011 sampling event were 23 µg/L (MCL 7 ug/l) and 32 µg/L (MCL 5 ug/l), respectively.

The March 2011 groundwater sample from MW-4 contained only three VOCs at levels above the applicable MCLs: tetrachloroethene at 66 µg/L (MCL 5 ug/l), 1,1,1-trichloroethane at 220 µg/L (MCL 200 ug/l), and 1,1-dichloroethene at 20 µg/L (MCL 7 ug/l). "

9. The last line of Section III provides a link to EPA's environmental indicator documents. Both documents erroneously refer to incorrect sites.

EPA's Response

This comment does not pertain to the Statement of Basis. However, EPA did modify the Environmental Indicators site references.

10. Section VI, Evaluation of Proposed Remedy, under (3) Remediating the Source of Releases, states that *"Groundwater is not used for potable purposes at the Facility."* The Facility is presently unoccupied, but if it were to become occupied, groundwater could be used for potable purposes.

EPA's Response

EPA agrees and will make a change stating the contaminated aquifer is not used for drinking water. The sentence shall be written:

"Contaminated groundwater is not used for potable purposes at the Facility."

From hand written comment on a copy of the SB: "which was owned by" should be changed to "which had at one time been owned by".

EPA's Response

EPA will make the change.

From hand written comment on a copy of the SB: Electro Therm used chlorinated solvents.

EPA's Response

EPA agrees will make the change. The sentence shall now be written as follows:

"Chlorinated solvents were used by Electro-Therm in parts cleaning operations in the southwestern portion of the building and are the likely source of subsurface contamination beneath the Site."

From hand written comment on a copy of the SB: "Phase 1 is to pump and treat groundwater only when the perimeter wells are above the drinking water standards." The "when" should be changed to "if".

EPA's Response

EPA will make the change. The sentence will be written as follows:

"Therefore, the proposed remedy for groundwater is to pump and treat the groundwater if the perimeter wells exceed the drinking water standards, in conjunction with monitored natural attenuation until drinking water standards are met throughout the plume."