

OHIO E.P.A.

JUN 23 2015

BEFORE THE

OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:

Technicolor USA, Inc.
101 West 103rd Street
Indianapolis, Indiana 46290

General Electric Company
Corporate Environmental Programs
319 Great Oaks Blvd.
Albany, New York 12203

Respondents

For the Site known as:

RCA / Thomson Consumer Electronics
24200 U.S. Route 23 South
Circleville
Pickaway County, Ohio

Director's Final
Findings and Orders
For Remedial Design and
Remedial Action

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

By: Joseph Lassiter Date: 6-23-15

PREAMBLE

It is hereby agreed to by the Parties as follows:

I. JURISDICTION

1. These Director's Final Findings and Orders ("Orders") are issued to Technicolor USA, Inc. and the General Electric Company, pursuant to the authority vested in the Director of Ohio EPA under Ohio Revised Code ("ORC") §§ 3734.13, 3734.20, 6111.03, and 3745.01 and section 107(a)(4)(A) of CERCLA, Title 42, United States Code ("U.S.C.") § 9607(a)(4)(A).

II. PARTIES BOUND

2. These Orders shall apply to and be binding upon Respondents and their successors in interest liable under Ohio law.

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3. No change in ownership or corporate status of the Respondents, including but not limited to any transfer of assets or real or personal property, shall in any way alter Respondents' obligations under these Orders.
4. Respondents shall provide a copy of these Orders to all contractors, subcontractors, laboratories and consultants retained to conduct any portion of the Work performed pursuant to these Orders. Respondents shall ensure that all contractors, subcontractors, laboratories and consultants retained to perform the Work pursuant to these Orders also comply with the applicable provisions of these Orders.

III. DEFINITIONS

5. Unless otherwise expressly provided herein, all terms used in these Orders or in any appendices shall have the same meaning as defined in ORC Chapters 3734 and 6111, and the rules promulgated thereunder. Whenever the terms listed below are used in these Orders or in any appendices, attached hereto and incorporated herein, the following definitions shall apply:

- A. "CERCLA" means the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §9601 *et seq.*
- B. "Day" means a calendar day unless expressly stated to be a business day. "Business day" shall mean a day other than a Saturday, Sunday, or state holiday. In computing any period of time under these Orders, where the last day would fall on a Saturday, Sunday, or state holiday, the period shall run until the close of the next business day.
- C. "Decision Document" means the remedial action selected by the Director of Ohio EPA for the Site as set forth in the document attached to these Orders as Appendix A, Decision Document.
- D. "Facility" means the former RCA / Thomson Consumer Electronics facility located at 24200 U.S. Route 23 South in Circleville, Pickaway County, Ohio.
- E. "NCP" means the National Oil and Hazardous Substances Pollution Contingency Plan, codified at Title 40, Code of Federal Regulations ("CFR") Part 300 (1990), as amended.
- F. "Ohio EPA" means the Ohio Environmental Protection Agency and its designated representatives.

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- G. "Paragraph" means a portion of these Orders identified by an arabic numeral or an uppercase or lowercase letter.

- H. "Parties" means Respondents and the Ohio EPA.

- I. "Remedial Action" ("RA") means those activities to be undertaken by Respondents to implement and maintain the effectiveness of the remedy, as detailed in the final plans and specifications submitted by Respondents pursuant to the Remedial Design and Remedial Action Work Plan and approved by Ohio EPA.

- J. "Remedial Design" ("RD") means those activities to be undertaken by Respondents to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design and Remedial Action Work Plan and approved by Ohio EPA.

- K. "Remedial Design Work Plan" ("RD Work Plan") means the document submitted by Respondents and approved by Ohio EPA and attached as Appendix D to these Orders.

- L. "Remedial Action Work Plan ("RA Work Plan") means the document submitted by Respondents in accordance with the schedule in the approved RD Work Plan.

- M. "Respondents" mean Technicolor USA, Inc. and the General Electric Company, their successors and assigns.

- N. "Response Costs" means all costs, not inconsistent with the NCP, including, but not limited to, payroll costs, contractor costs, travel costs, direct costs, overhead costs, legal and enforcement related costs, oversight costs, laboratory costs, and the costs of reviewing or developing plans, reports, and other items pursuant to these Orders, verifying the Work, or otherwise implementing or enforcing these Orders.

- O. "Section" means a portion of these Orders identified by a roman numeral.

- P. "Site" means the former RCA / Thomson Consumer Electronics facility located at 24200 U.S. Route 23 South in Circleville, Pickaway County, Ohio where the historical releases or disposal of hazardous waste, and/or the discharge to waters of the state of industrial waste or other wastes have occurred, including any other area where such hazardous wastes, industrial wastes, and/or other wastes historically had migrated or threaten to migrate,

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as amended by the Amended Director's Final Findings and Orders issued on January 24, 2012 to exclude two tracts (totaling approximately 45 acres) of the former facility property, based on an evaluation of historic uses and the results of previous investigation indicating that contamination was not present on the two tracts above unrestricted use levels.

- Q. "Statement of Work" ("SOW") means the statement of work for the implementation of the Remedial Design and Remedial Action at the Site, as set forth in Appendix B to these Orders. The SOW is not specific to this Site, and shall be used as an outline in developing site-specific work plans.
- R. "Transferee" means any future owner of any interest in the Site, including but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and lessees.
- S. "Waste Material" means (1) any "hazardous waste" under ORC §3734.01(J); (2) any "solid waste" under ORC §3734.01(E); (3) any "industrial waste" under ORC §6111.01(C); and (4) any "other waste" under ORC §6111.01(D).
- T. "Work" means all activities Respondents are required to perform under the Performance of Work and Additional Work Sections of these Orders.

IV. FINDINGS

- 6. All of the findings necessary for the issuance of these Orders pursuant to ORC §§ 3734.13, 3734.20, 6111.03, and 3745.01 have been made and are outlined below. The Director of Ohio EPA has made the following findings:
 - A. The former RCA / Thomson Consumer Electronics manufacturing facility ("Facility") is located on approximately 227 acres at 24200 U.S. Route 23 South in Circleville, Pickaway County, Ohio ("Site") adjacent to residential, commercial and agricultural areas.
 - B. The Facility contains the East Fenced Area, the East Swale, the South Ditch and the Raw Materials Handling Area. To facilitate remedial decision-making for areas potentially affected by off-site transport of lead-bearing particulates from the South Ditch, an additional area of concern, the Off-Site Creek Area, was included in the evaluation. The Off-Site Creek Area was evaluated in three sub-sections; the Upper Creek Area, the Deltaic Area and the Non-Deltaic Area. The East Fenced Area, the East Swale, the South Ditch, the Raw Materials Handling Area, and the Off-Site Creek Area are each an Area of Concern ("AOC," collectively the "AOCs").

- C. The Facility was owned and operated by the Radio Corporation of America from 1970 to 1986, the General Electric Company from 1986 to 1987, and Thomson Consumer Electronics from 1987 to 2008. The Facility is now owned by IRG Circleville, LLC and US 23 Circleville, LLC.
- D. The Facility was built in 1969 and operated from 1970 to 2004. At the Facility the face plate or panel (3% lead) and funnel (24% lead) components of television picture tubes were manufactured from 1970 until 2004. During this time, the Facility consisted primarily of interconnected administration, production, laboratory, batch house, and warehouse buildings. Batch house silos were used to contain raw and intermediate materials such as sand, litharge (lead oxide), and cullet (recycled glass). Excess cullet was also stored on covered and uncovered concrete storage pads in the Raw Materials Handling Area, adjacent to the East Swale.
- E. Operations at the Facility, related to the manufacturing of leaded glass components for television picture tubes, presumably resulted in the release of contaminants including glass polishing and grinding materials ("fines") at the site. Prior to 1980, the fines were carried by cold-end process rinse wastewaters for settling in Lagoons #1 and #2. The solids were pumped out of the lagoons about four times per year, to three sludge pits (the East Fenced Area). Sludge accumulated between 1980 and 1982 in Lagoons #1 and #2, and in Lagoons #3 and #4 (temporary impoundments used during the construction of the wastewater treatment plant ("WWTP")), was disposed of in off-site landfills. After 1982, cold rinse wastewaters with the fines were routed through the WWTP, which discharged to the City of Circleville's publicly owned treatment works ("POTW").
- F. From 1970 to 1990, the hot-end process wastewaters were sent to the Oil Skimmer Pond, prior to discharge through the National Pollutant Discharge Elimination System ("NPDES") permit-regulated Outfall 001 into the South Ditch. After 1990, the hot process wastewaters were conveyed to the WWTP for further treatment before discharge to the sanitary sewer.
- G. Prior to 1990, potentially contaminated storm water (from contact with various process materials – cullet, cold and hot process wastewaters and raw materials), entered the South Ditch through four outlets. These outlets were from the East Swale, Storm Sewer Outlet B, NPDES Outfall 001, and an unnamed storm sewer outlet.
- H. On February 14, 1994, Ohio EPA issued an administrative consent order to Respondents, requiring the preparation of a Remedial Investigation and

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Feasibility Study ("RI/FS") for the Site, to determine the nature and extent of contamination, and to develop and evaluate remedial alternatives. As agreed to by the parties, the work performed under the 1994 order was intended to be equivalent to and fulfill the purposes of a Resource Conservation and Recovery Act ("RCRA") facility investigation and corrective measures study.

- I. After manufacturing operations ceased in March 2004, a large portion of the glass manufacturing equipment was sold and removed from the Facility. Former manufacturing buildings and structures, specifically those located within the former glass melting and forming operation areas, were demolished between 2005 and 2006. Currently, only the warehouse, administrative offices, and associated paved parking areas remain at the former facility.
- J. The Facility property is currently owned by IRG Circleville, LLC and US 23 Circleville, LLC. The property is used for small commercial and warehouse operations. A large portion is still under development for future commercial use.
- K. Pursuant to the 1994 RI/FS administrative consent order, RI and FS reports were submitted to Ohio EPA by Respondents, and subsequently approved by Ohio EPA in March 2010 and August 2013, respectively. The RI/FS activities identified the nature and extent of contamination at the Site and developed remedial alternatives to address the contamination. The areas investigated during the RI include the East Fenced Area (the former sludge pits), the adjacent fields, the on-site soils, the East Swale, the former Oil Skimmer Pond, the South Ditch, the Off-Site Creek Area, and later the Raw Materials Handling Area. The primary contaminants of concern (COCs) at the site include antimony, arsenic and lead.
- L. RI activities included sampling soil, sediment, sludge, ground water and surface water for laboratory analyses for the following potential COCs: antimony, arsenic, barium, chromium, fluoride, lead, nickel, polycyclic aromatic hydrocarbons ("PAHs") and total petroleum hydrocarbons ("TPH"). Agricultural fields are located immediately east and south of the Site, and various commercial properties are west of the Site adjacent to U.S. Route 23. A commercial property is located north of, and a residential area (Logan Elm Village) is located approximately 1,000 feet south of, the Site. The Earnhart Hill Water District's Treatment Plant and water supply wellfield are located approximately 4,000 feet southwest of the Site.
- M. The final RI report, completed and approved by Ohio EPA in March 2010 by E^xponent Engineering and Scientific Consulting on behalf of Respondents, provided the following information:

- i. The East Fenced Area ("EFA") is an approximately 5-acre area located east of the former Facility manufacturing area, and is enclosed by security fencing. Glass polishing and grinding fines were pumped from former facility lagoons to three 8- to 10-foot deep "sludge pits" during Facility operations in the 1970s. In October 1980, the three sludge pits were covered with approximately 2 feet of soil and enclosed by a security fence. However, based on test pit excavations, the limits of sludge deposits extend to the south and the east (but not to the South Ditch), slightly beyond the existing EFA fence. With the exception of arsenic and lead, metals were generally detected at concentrations consistent with regional background levels. A maximum arsenic concentration of 358 parts per million ("ppm") and a lead concentration of 13,800 ppm were detected in EFA sludge samples.

With regard to ground water, the August 1995 RI/FS Work Plan discussed the nine years of sampling data previously collected from 13 monitoring wells at the Site. While the work plan indicated that ground water in the vicinity of the plant was not significantly impacted by contaminants, it also noted that further information was needed in and around the EFA. Ground water was repeatedly sampled at the EFA during the RI. Antimony was not detected during any of the monitoring events and arsenic and lead were only occasionally detected at low concentrations in total (*i.e.*, not filtered) water samples. All reported concentrations of metals were below federal maximum contaminant levels ("MCLs") at all wells during all sampling events. Based on these data and other factors, ground water was not considered a medium that required further evaluation or remedial action.

- ii. The East Swale is a drainage ditch located east of the former Facility manufacturing area that was typically dry, but received some storm water runoff from fields northeast of the former manufacturing area and from the east end of the former manufacturing area where cullet was formerly stored, during significant rain events. During the 1970s, batch plant and furnace waste materials were stored in piles on the east side of the former manufacturing area in the vicinity of the East Swale, prior to disposal. During heavy rain events, some portion of the runoff from the East Swale discharged to the South Ditch prior to 1990. From 1990 to 2006, water that drained to the East Swale was captured at the southern end of the ditch and was conveyed to the former onsite WWTP. However, most of the structures associated with the former Facility, including the WWTP, were dismantled or demolished in 2006.

Sampling conducted from 1988 to 1995 in the East Swale detected arsenic and lead at elevated concentrations in the surface soils and sediments. Analytical results for samples collected at the southern end of the East Swale from the 0- to 6 inch depth interval revealed the greatest concentrations of COCs. Surface sample analytical results detected maximum concentrations of lead at 23,500 ppm, arsenic at 530 ppm and antimony at 604 ppm. Refer to Appendix C and Figure C-15 in the FS report for the soil/sediment sampling locations and data summary.

- iii. The South Ditch is the on-site portion of an unnamed tributary to the Scioto River. The South Ditch is located south of the former Facility manufacturing area and is a perennial, grass-lined ditch, which is fed by a marsh located east of the Site. Multiple current and historical outfalls are located within the South Ditch, including the East Swale (during heavy precipitation events) and the former Oil Skimmer Pond discharging to the South Ditch prior to 1990, at which point those flows were diverted to the former WWTP. From 1990 until 2006, the flow within the ditch was continuous as a result of the discharge from the former WWTP. Upon demolition of the former WWTP in 2006, the flow within the South Ditch was greatly reduced.

Soil/sediment samples collected from the South Ditch contained elevated concentrations of lead and other inorganics. The highest concentrations of lead were generally observed in samples collected from the top 12 inches of soil/sediment in the vicinity of current/former outfalls and samples collected from localized sediment accumulation areas downstream of the former outfall from the East Swale.

Lead was detected in the South Ditch at the following levels and locations:

- 8,770 ppm (0 to 2 inch interval) and 12,100 ppm (6 to 12 inch interval) at Storm Sewer Outfall B, located approximately 470 feet downstream of the former East Swale Outfall.
- 10,500 ppm (0 to 2 inch interval) at the bend in the South Ditch located approximately 830 feet downstream of the former East Swale Outfall.
- 4,680 ppm (0 to 2 inch interval) at Outfall 001 (former Oil Skimmer Pond outfall) located approximately 1,170 feet downstream of the former East Swale Outfall.

- 16,200 ppm (0 to 2 inch interval) and 4,350 ppm (6 to 12 inch interval) at the west end of the South Ditch.

The maximum arsenic concentration (239 ppm) was detected in a soil/sediment sample collected at Storm Sewer Outfall B. Elevated TPH concentrations (*i.e.*, to 250,000 ppm) and PAHs were detected in soil/sediment samples. TPH concentrations observed during the supplemental sampling conducted in December 2005 ranged from non-detect to 250 ppm. PAHs were not detected in the oily material collected from the former Oil Skimmer Pond. Therefore, the RI report concluded that the TPH and PAH concentrations detected in the South Ditch were likely the result of the surface water discharge from Storm Sewer Outfall B.

- iv. The Off-Site Creek Area ("OCA") is broken into three sub-sections: the Upper Creek Area, the Deltaic Area and the Non-Deltaic Area. The OCA is approximately 12 acres and receives drainage from two main sources, the off-site creek (a continuation of the South Ditch) and the farm drainage ditch. The OCA also receives runoff from nearby residential/commercial areas, agricultural areas, and effluent from the Earnhart Hill Water District water treatment plant.

The Upper Creek Area is the narrow riparian corridor between U.S. Route 23 and the CSX Transportation railroad tracks. This drains into a triangular-shaped depositional area called the Deltaic Area located between the railroad tracks and the farm drainage ditch. The Non-Deltaic Area consists of two portions, one small area located north of the Deltaic Area and a larger area located to the south of the Deltaic Area. The Non-Deltaic Area ends at the stream confluence to the Scioto River.

In the Upper Creek Area, analyses of soil and sediment samples detected maximum concentrations of lead and arsenic at 7,820 ppm and 44 ppm, respectively. In the Deltaic Area, analyses of soil and sediment samples detected maximum concentrations of lead and arsenic at 15,800 ppm and 222 ppm, respectively. In the Non-Deltaic Area, analyses of soil and sediment samples detected maximum concentrations of lead and arsenic at 2,760 ppm and 195 ppm, respectively. Finally, soil/sediment samples collected west of the railroad tracks contained TPH ranging from 25 to 52 ppm.

- v. The Raw Materials Handling Area ("RMHA") is a portion of the former Facility manufacturing area that is located immediately west of the East Swale. During facility operations, this area consisted of open and covered concrete pads and a batch house used for the storage and handling of raw materials and a building for the temporary accumulation/storage of hazardous waste prior to transportation to an off-site disposal facility. The hazardous waste storage building was clean closed under RCRA in 1985 and U.S. EPA approved clean closure of the building in June 1992. The structures present at the RMHA were subsequently removed as part of demolition activities in 2005 and 2006.

Ohio EPA's October 17, 2011 letter noted that the June 1992 *Clean Closure Equivalency Demonstration Hazardous Waste Storage Building Unit* report by PTI Environmental Services and the August 2005 *Limited Phase II Environmental Site Assessment* by CTL Engineering reported elevated soil concentrations of lead and arsenic in front of the former hazardous waste storage building. As a result, supplemental investigations of the RMHA were completed in March 2012, including 33 soil borings in the vicinity of the RMHA, and the analyses of 66 samples for arsenic and lead.

The May 2012 *Supplemental Site Investigation - Former RMHA Hazardous Waste Storage Building and Surrounding Area* report indicated that lead and arsenic were detected in soil samples at maximum concentrations of 180,000 ppm and 1,700 ppm, respectively.

- N. Interim remedial activities associated with the Site include the clean closure of the former settling lagoons; clean closure of the former hazardous waste storage building; placement of soil cover and security fencing at the EFA; upgrade of the WWTP; upgrade of the storm water collection and treatment system; removal of the Oil Skimmer Pond; response to a diesel spill; and limited soil removal and storm water culvert installation at the OCA.

- i. Clean Closure of Former Settling Lagoons.

The glass polishing fines generated in the television picture tube manufacturing process were carried in rinse water to two unlined lagoons for settling. The water and particulates contained arsenic, chromium, fluoride and lead. The settled solids (sludge) were pumped out of the lagoons four times per year to three unlined earthen sludge pits, covering two acres east of the former facility manufacturing area.

Four former settling lagoons were clean-closed under RCRA Interim Status (40 CFR Part 265) in 1982 and 1984, respectively. Subsequent to an Ohio EPA site screening inspection, soils in the vicinity of the former settling lagoons were removed in 1988 and disposed of offsite at an approved disposal facility. These lagoons subsequently received clean-closure approval by U.S. EPA under the more stringent 40 CFR Part 264 requirements in July 1990.

Confirmation soil sampling demonstrated that remaining soil did not contain applicable Appendix VIII constituents at significant levels. The clean closure mitigated any potential release of potential COCs from the vicinity of the lagoons, and likely contributed to the decreasing trend in fluoride concentrations observed in shallow ground water at the site.

ii. Clean Closure of Hazardous Waste Storage Building Unit.

The former hazardous waste storage building was used as a 90-day accumulation area for hazardous wastes generated from the glass manufacturing operation. The unit was clean closed under RCRA Interim Status (40 CFR Part 265) in 1985. Subsequent to an Ohio EPA site screening inspection, soils in the vicinity of the hazardous waste storage building unit were removed in 1988 and disposed of offsite at an approved disposal facility. The unit subsequently received clean-closure approval by U.S. EPA under the more stringent 40 CFR Part 264 requirements in 1992. The building was routinely inspected and managed in accordance with applicable regulations for the accumulation of hazardous waste.

iii. Soil Cover and Fencing at the EFA.

Placement of glass polishing fines ("sludge") at the EFA was discontinued in 1980. In 1980, the sludge was covered with approximately 2 feet of clean fill. The EFA was also enclosed with a perimeter security fence in 1989. These measures help control any access and possible exposure to the sludge deposits. The soil cover also provides protection from potential dispersal by wind action.

iv. Upgrade of the Wastewater Treatment System.

The capabilities for on-site wastewater treatment were expanded over the period of facility operation through multiple upgrades and

modifications. Construction of the WWTP in 1982 eliminated discharge of the cold-end effluent to the unlined lagoons. Significant WWTP upgrades in 1990 allowed for on-site treatment of hot-end effluent generated at the facility and treatment of storm water from process areas of the plant. These efforts eliminated discharge of process water to the POTW, the need for the Oil Skimmer Pond, and the discharge of untreated storm water from the east end of the facility and the East Swale to the South Ditch.

v. Storm Water Collection and Treatment System.

Prior to 1990, storm water collected through the facility storm sewers discharged into the South Ditch at three outfalls. These three outfalls and corresponding drainage areas were:

- The East Swale Outlet: agricultural and indeterminate surface areas to the east of the plant buildings.
- A storm drain outlet approximately 400 feet downstream of the East Swale (the 19+30 Outfall, Storm Sewer Outlet B): cullet storage, north-side employee parking lots, cafeteria and maintenance shop roofs, railroad spur loading/unloading areas, and a portion of "A/B" manufacturing roof.
- A former storm water drain outlet approximately 30 feet downstream of former NPDES Outfall 001 from the Oil Skimmer Pond: main office roof, warehouse roof, southwest employee and visitor parking lots, and the area around the WWTP.

From 1990 until 2006, storm water runoff that came into contact with process materials at the east end of the "A/B" manufacturing plant, the north side of the "A/B" maintenance shop, "C" batch house material handling area, and other runoff that collected in the East Swale was diverted into a "lift station" and pumped to a 200,000 gallon storm water collection tank. The storm water collection tank was tied into the WWTP (for treatment), prior to discharge through an NPDES-permitted outfall.

vi. Removal of Oil Skimmer Pond.

The Oil Skimmer Pond was removed from service in 1990. In 1992, soils and sludge were excavated from the bottom and sides of the pond to approximately 10 feet below ground surface and disposed of

off-site. Excavation of the soil around the pond removed a potential source of contaminants to media in the immediate area.

vii. Diesel Spill Response.

Approximately 300 to 800 gallons of diesel fuel were spilled on the ground at the "C" manufacturing building on November 30, 1991. Corrective actions resulted in the recovery of approximately 70 gallons of fuel and 310 gallons of fuel/water mixture from shallow soil adjacent to the building. Phase I and II investigations were subsequently implemented and coordinated with Ohio EPA; four shallow groundwater wells were installed, and soil and groundwater samples were collected and analyzed for fuel constituents. Analytical results indicated negligible environmental impact. Ohio EPA required no further investigation or remediation.

viii. Offsite Creek Area Interim Action.

In September 2002, an interim action by the current off-site property owner, Richards Land Company, was implemented to remove lead-bearing soil/sediment at the OCA to accommodate construction of a local access roadway. Soil and sediment within the roadway footprint with lead concentrations exceeding 400 ppm were removed and disposed off-site in accordance with applicable regulations. The 400 ppm lead concentration value was specified in the Ohio EPA-approved *Interim Action Work Plan for Select Soil/Sediment Removal from the Offsite Creek Area*. The basis (in the work plan) for the value was the U.S. EPA Regional Screening Level – Residential Land Use Standard of 400 ppm. The interim action included construction of a culvert extension (approximately 75 feet in length), and removal of 1,559 tons (approximately 1,039 cubic yards) of soil/sediment immediately west of the railroad tracks. A work plan detailing the interim action approach was submitted to Ohio EPA on September 5, 2002, and revised on September 27, 2002, in response to Ohio EPA comments. The final work plan was approved by Ohio EPA in October 2002. A final report documenting the completion of the interim action was submitted to Ohio EPA on February 11, 2003.

- O. On December 28, 2011, an environmental covenant was recorded with the Pickaway County Recorder's Office, establishing several activity and use limitations (e.g., general prohibitions against residential or agricultural land use, ground water extraction and usage, and more specific restrictions for each of the areas of concern) on the former Facility property.

- P. On January 24, 2012, Ohio EPA issued Amended Director's Final Findings and Orders that amended the definition of "Site" in the 1994 Orders to exclude two tracts (totaling approximately 45 acres) of the former facility property. This was based on an evaluation of historic uses and the results of previous investigation indicating that contamination was not present on the two tracts above unrestricted use levels.
- Q. On August 16, 2012, another environmental covenant was recorded with the Pickaway County Recorder's Office, establishing activity and use limitations (e.g., prohibitions against residential, commercial and industrial land use, and against ground water extraction and usage) on the Deltaic and Non-Deltaic Areas of the OCA.
- R. Ohio EPA approved the Site Feasibility Study ("FS"), which identified potential remedial alternatives, on August 21, 2013. As part of the FS, remedial action objectives ("RAOs") were developed to ensure protectiveness of human health and the environment.
- S. On February 25, 2014, Ohio EPA issued a Preferred Plan, based on the FS, which outlined Ohio EPA's preferred alternative to remediate contamination at the Site and ensure protectiveness of human health and the environment. Ohio EPA held a public meeting on April 9, 2014 at the Circleville Fire Department located at 586 North Court Street, Circleville, Ohio to explain the Preferred Plan. Oral and written comments were accepted at this meeting and during the comment period, which ran from March 4 to April 18, 2014. Ohio EPA did not receive any comments at the public meeting/hearing nor during the public comment period.
- T. Based on the Preferred Plan, Ohio EPA issued the Site Decision Document on June 4, 2014. The Decision Document identifies the selected remedial alternative for the cleanup of the contaminated soils and sediments at the Site, and provides the rationale for that selection.
- U. The selected remedial alternative in the Decision Document for the Site consists of soil/sediment removal in the East Swale, South Ditch, former RMHA, and OCA until the calculated 95% upper confidence limit lead concentrations do not exceed the applicable remediation levels in each AOC; rehabilitation and maintenance of the EFA by installing a one-foot thick soil cover and expanding the existing fenced area to fully secure the material in the EFA; and adhering to the institutional controls (i.e., activity and use limitations) included in the Site environmental covenants.

- V. Respondents are each a "person" as defined in ORC §§3734.01(G) and 6111.01(I) and have been an "owner" or "operator" of a "facility" as that term is defined in ORC §3734.01(N). The Site is a location where hazardous waste was released or disposed.
- W. Respondents have generated Waste Material at the Site. The arsenic, lead and other contaminants became Waste Material when they were released to the soil, ground water and surface water at the Site.
- X. Historically, because of their quantity, concentration, physical or chemical characteristics, the arsenic, lead and other contaminants released at the Site constituted "hazardous wastes" as defined in ORC § 3734.01(J). The arsenic, lead and other contaminants released at the Site constituted "industrial waste" or "other wastes" as defined in ORC §§ 6111.01(C) and (D).
- Y. Conditions at the Site constitute a substantial threat to public health or safety as provided in ORC §3734.20(B).
- Z. The ground and surface waters at the Site are "waters of the state" as defined in ORC §6111.01 (H). The unpermitted discharge of Waste Material into waters of the state is prohibited under ORC §6111.04. The migration and threatened migration of Waste Material into the ground water and/or surface water at or from the Site, constitutes pollution of waters of the state.
- AA. The Work required by these Orders will contribute to the prohibition or abatement of the discharge of Waste Material to waters of the state.
- BB. Ohio EPA has incurred Response Costs and continues to incur Response Costs associated with the Site.
- CC. The actions to be taken pursuant to these Orders are reasonable and necessary to protect the public health or safety or the environment.
- DD. The Director has given consideration to and based his determination on evidence relating to the technical feasibility and economic reasonableness of complying with these Orders and to evidence relating to conditions calculated to result from compliance with these Orders, and their relation to the benefits to the people of the state of Ohio to be derived from such compliance.

V. GENERAL PROVISIONS

7. Objectives of the Parties

The objectives of the Parties in entering into these Orders are to protect public health and safety and the environment from the disposal, discharge, or release of Waste Material at the Site through the design, construction, operation and maintenance of the remedy as set forth in the Decision Document.

8. Commitment of Respondents

Without admission of fact, violation or liability, Respondents agree to perform the Work in accordance with these Orders including but not limited to the RD Work Plan, the RA Work Plan, the SOW, all relevant guidance documents, and all standards, specifications, and schedules set forth in or developed pursuant to these Orders. Respondents also agree to reimburse Ohio EPA for all Response Costs and perform all other obligations of these Orders.

9. Compliance With Law

- A. All activities undertaken by Respondents pursuant to these Orders shall be performed in accordance with the requirements of all applicable federal, state and local laws and regulations, and in a manner consistent with the NCP.
- B. Ohio EPA expects that activities conducted pursuant to these Orders, if approved by Ohio EPA, would be considered necessary and consistent with the NCP.
- C. Where any portion of the Work requires a permit, license or other authorization, Respondents shall submit applications in a timely manner and take all other actions necessary to obtain such permit, license or other authorization. These Orders are not, and shall not be construed to be, a permit, license or other authorization issued pursuant to any statute or regulation.

VI. PERFORMANCE OF THE WORK BY RESPONDENTS

10. Supervising Contractor

All Work performed pursuant to these Orders shall be under the direction and supervision of an employee or contractor with expertise in hazardous waste site investigation and remediation. Prior to the initiation of the Work, Respondents shall notify Ohio EPA in writing of the name of the supervising employee or contractor and any subcontractor to be used in performing the Work under these Orders.

11. Remedial Design and Remedial Action

- A. Within thirty (30) days of the effective date of these orders, Respondents shall commence implementation of the approved RD Work Plan (Appendix D). Respondents shall submit all plans, reports, or other deliverables required under the approved RD Work Plan, in accordance with the schedule set forth therein, for review and approval pursuant to the Review of Submissions section of these Orders.
- B. In accordance with the schedule in the approved RD Work Plan, Respondents shall submit to Ohio EPA for review and approval the RA Work Plan. The RA Work Plan shall provide for the construction, operation and maintenance of the remedy as set forth in the Decision Document.
- C. The RA Work Plan shall be developed consistent with the SOW, Appendix B of these Orders, and the guidance documents listed in Appendix C of these Orders, attached hereto and incorporated herein. If Ohio EPA determines that any additional or revised guidance documents affect the Work to be performed in implementing the RA, Ohio EPA will notify Respondents, and the RA Work Plan and other affected documents shall be modified accordingly.
- D. Should Respondents identify any inconsistency between any of the laws and regulations and guidance documents that Respondents are required to follow by these Orders; Respondents shall notify Ohio EPA in writing of each inconsistency and the effect of the inconsistencies upon the Work to be performed. Respondents shall also recommend, along with a supportable rationale justifying each recommendation, the requirement Respondents believe should be followed. Respondents shall implement the affected Work as directed by Ohio EPA.
- E. Ohio EPA will review the RA Work Plan pursuant to the procedures set forth in the Review of Submittals Section of these Orders. Upon approval of the RA Work Plan by Ohio EPA, Respondents shall implement the RA Work Plan. Respondents shall submit all plans, reports, or other deliverables required under the approved RA Work Plan, in accordance with the approved RA schedule set forth therein, for review and approval pursuant to the Review of Submittals Section.

12. Health and Safety Plan

Within forty-five (45) days of the effective date of these Orders, Respondents shall submit to Ohio EPA for review and comment a health and safety plan developed in

13. Operation and Maintenance Plan

The Operation and Maintenance Plan ("O&M Plan"), including a schedule for implementation, shall be submitted in accordance with the approved RA Work Plan. Ohio EPA will review the O&M Plan pursuant to the procedures set forth in the Review of Submittals Section of these Orders. Upon approval of the O&M Plan by Ohio EPA, Respondents shall implement the O&M Plan. Respondents shall submit all plans, reports, or other deliverables required under the approved O&M Plan, in accordance with the approved O&M schedule set forth therein, for review and approval pursuant to the Review of Submittals Section of these Orders.

VII. ASSURANCE OF ABILITY TO COMPLETE WORK

14. Within ninety (90) days of the effective date of these Orders, unless otherwise specified in writing by Ohio EPA, Respondents shall establish and maintain financial security in the amount of five hundred thousand dollars (\$500,000) in order to ensure performance and completion of the Work under these Orders. The financial security shall be one of the financial assurance mechanism options set forth in OAC rules 3745-55-43, 3745-55-45 and 3745-55-51 (i.e., trust fund, surety bond guaranteeing payment into a trust fund, surety bond guaranteeing performance, letter of credit, certificate of insurance, or financial test and corporate guarantee) and approved by Ohio EPA.
15. Verification of the existence and adequacy of the approved financial assurance mechanism shall be submitted to the Ohio EPA annually by the Respondents on the anniversary of the effective date of these Orders, or upon the request of Ohio EPA.
16. In the event that the Ohio EPA determines at any time that the financial assurance mechanism provided pursuant to this Section is inadequate, Respondents shall, within thirty (30) days of receipt of notice of Ohio EPA's determination, obtain and present to Ohio EPA another financial assurance mechanism to be approved by Ohio EPA. The Respondents may change the form of the financial assurance mechanism provided under this Section at any time, upon notice to and approval by Ohio EPA. Respondents' inability to demonstrate financial ability to complete the Work shall not excuse performance of any activities required under these Orders.
17. If Respondents can show that the estimated cost to complete the remaining Work has diminished below the financial security amount set forth in this Section, the Respondents may request that the amount of the financial security be reduced to the estimated cost of the remaining Work to be performed. This request for a reduction

is available no more frequently than biannually. Information relied upon in calculating the revised estimate of costs must be provided with the request for reduction. A reduction in the amount of the financial security can only be made with the approval of the Ohio EPA.

VIII. LAND USE

18. Environmental Covenant

Respondents have recorded, in the Pickaway County Recorder's Office, the executed Environmental Covenants attached to these Orders as Appendix E and Appendix F. The terms and conditions of the Environmental Covenants are incorporated into these Orders and are binding upon Respondents. If the Environmental Covenant is violated or breached by Respondents, the Respondents shall be in violation of these Orders.

19. Land Use Self-Reporting Requirement

Respondents shall ensure that, during the performance of the Work under these Orders, no portion of the Facility property or Site property will be used in any manner that would adversely affect the integrity of any security, monitoring, treatment or containment systems at the Facility property or Site property, or violate any activity and use limitations applicable to the Facility property or Site property under these Orders. Respondents shall submit on an annual basis, written documentation verifying that required elements of the preferred alternative in the Decision Document (Appendix A) are implemented and operational.

IX. ADDITIONAL WORK

20. Ohio EPA may determine that in addition to the tasks defined in the approved RD Work Plan and RA Work Plan, additional Work may be necessary to accomplish the objectives of protecting public health and safety and the environment from the disposal, discharge, or release of waste material at the site through the design, construction, and the operation and maintenance of the remedy, as set forth in the Decision Document, the SOW, and guidance documents identified as Appendices B and C. Any additional Work proposed under this section shall not exceed the scope of the remedy selected in the Decision Document.
21. Within thirty (30) days of receipt of written notice from Ohio EPA that additional Work is necessary, unless otherwise specified in writing by Ohio EPA, Respondents shall submit a work plan and a schedule for the performance of the additional Work ("Additional Work Plan"). In addition, Respondents shall submit revisions for any

other schedules impacted by the additional Work. To the extent the Respondents dispute that additional Work is necessary, Respondents shall initiate the procedures for dispute resolution set forth in the Dispute Resolution Section of these Orders within fourteen (14) days after receipt of Ohio EPA's notification of the need for additional Work. The Additional Work Plan shall be consistent with the documents attached to these Orders as Appendices B and C. Upon approval of the Additional Work Plan and schedule by Ohio EPA pursuant to the Review of Submittals Section of these Orders, Respondents shall implement the approved Additional Work Plan in accordance with the revised schedules contained therein.

22. In the event that Respondents determine that additional Work is necessary, Respondents shall submit an initial letter to Ohio EPA to explain why the additional Work is necessary, what the additional Work is, and what impact, if any, the additional Work will have on the overall Work schedule. If Ohio EPA concurs with the request for additional Work, Respondents shall submit an Additional Work Plan and schedule for the performance of additional Work. The Additional Work Plan shall be consistent with the documents attached to these Orders as Appendices B and C. Upon approval of the Additional Work Plan and schedule by Ohio EPA pursuant to the Review of Submittals Section of these Orders, Respondents shall implement the approved Additional Work Plan in accordance with the schedules contained therein.

X. SAMPLING AND DATA AVAILABILITY

23. Unless otherwise agreed to by the Site Coordinators, Respondents shall notify Ohio EPA not less than seven (7) business days in advance of all sample collection activity. Upon request, Respondents shall allow split and/or duplicate samples to be taken by Ohio EPA or its designated contractor. Ohio EPA shall also have the right to take any additional samples it deems necessary. Upon request, Ohio EPA shall allow Respondents to take split and/or duplicate samples of any samples Ohio EPA takes as part of its oversight of Respondents' implementation of the Work.
24. Within seven (7) business days of a request by Ohio EPA, Respondents shall submit to Ohio EPA electronic copies of the results of all sampling and/or tests or other data, including raw data and laboratory reports, generated by or on behalf of Respondents with respect to the Site and/or the implementation of these Orders. An electronic copy shall be provided in a format approved by Ohio EPA. Respondents may submit to Ohio EPA any interpretive reports and written explanations concerning the raw data and laboratory reports. Such interpretive reports and written explanations shall not be submitted in lieu of laboratory reports and raw data. Should Respondents subsequently discover an error in any report or raw data, Respondents shall promptly notify Ohio EPA of such discovery and provide the correct information. Upon request, Ohio EPA agrees to provide Respondents electronic copies of the

results of all sampling and/or tests or other data, including raw data and laboratory reports, generated by or on behalf of Ohio EPA with respect to the Site and/or implementation of these Orders.

XI. ACCESS

25. Ohio EPA and its contractors shall have access at all reasonable times to the Site and any other property to which access is required for the implementation of these Orders, to the extent access to the property is controlled by Respondents. Access under these Orders shall be for the purposes of conducting any activity related to these Orders including but not limited to the following:
- A. Monitoring the Work.
 - B. Conducting sampling.
 - C. Inspecting and copying records, operating logs, contracts, and/or other documents related to the implementation of these Orders.
 - D. Monitoring compliance with use restrictions.
 - E. Conducting investigations and tests related to the implementation of these Orders.
 - F. Verifying any data and/or other information submitted to Ohio EPA.
26. To the extent that the Site or any other property to which access is required for the implementation of these Orders is owned or controlled by persons other than Respondents, Respondents shall use their best efforts to secure from such persons access for Respondents and Ohio EPA and its contractors as necessary to implement these Orders. Copies of all access agreements obtained by Respondents shall be provided to Ohio EPA upon request. If any access required to implement these Orders is not obtained within thirty (30) days of the effective date of these Orders, or within thirty (30) days of the date Ohio EPA notifies Respondents in writing that additional access beyond that previously secured is necessary, Respondents shall promptly notify Ohio EPA in writing of the steps Respondents have taken to attempt to obtain access. Ohio EPA may, as it deems appropriate, assist Respondents in obtaining access.
27. Notwithstanding any provision of these Orders, the State of Ohio retains all of its access rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation including but not limited to ORC §§ 3734.20 and 6111.05.

XII. DESIGNATED SITE COORDINATORS

28. Within seven (7) days of the effective date of these Orders, the Respondents shall notify Ohio EPA, in writing, of the name, address and telephone number of their designated Site Coordinator and Alternate Site Coordinator. If a designated Site Coordinator or Alternate Site Coordinator is changed, the identity of the successor will be given to the other Party at least seven (7) days before the changes occur, unless impracticable, but in no event later than the actual day the change is made.
29. To the maximum extent practicable, except as specifically provided in these Orders, communications between Respondents and Ohio EPA concerning the implementation of these Orders shall be made between the Site Coordinators. Respondents' Site Coordinator shall be available for communication with Ohio EPA regarding the implementation of these Orders for the duration of these Orders. Each Site Coordinator shall be responsible for ensuring that all communications from the other Party are appropriately disseminated and processed. Respondents' Site Coordinator or Alternate Site Coordinator shall be present on the Site or reasonably available by telephone during all hours of Work at the Site.
30. Without limitation of any authority conferred on Ohio EPA by statute or regulation, the Ohio EPA Site Coordinator's authority includes but is not limited to the following:
 - A. Directing the type, quantity and location of samples to be collected by Respondent pursuant to an approved Work Plan.
 - B. Collecting samples.
 - C. Observing, taking photographs, or otherwise copying information related to the implementation of these Orders, including the use of any mechanical or photographic device.
 - D. Directing that the Work stop whenever the Site Coordinator for Ohio EPA determines that the activities at the Site may create or exacerbate a threat to public health or safety, or threaten to cause or contribute to air or water pollution or soil contamination.
 - E. Conducting investigations and tests related to the implementation of these Orders.
 - F. Inspecting and copying records, operating logs, contracts and/or other documents related to the implementation of these Orders.

- G. Assessing Respondents' compliance with these Orders.

XIII. PROGRESS REPORTS AND NOTICE

31. Unless otherwise directed by Ohio EPA, Respondents shall submit a written progress report on the implementation of the Work to the Ohio EPA on a monthly basis beginning the month following the issuance of these Orders. At a minimum, the progress reports shall include:
- A. A description of the Work performed during the reporting period including an estimate of the percentage of the RD/RA completed.
 - B. A list of all target and actual completion dates for each element of activity including project completion.
 - C. An explanation for any deviation from any applicable schedule.
 - D. Summaries of all findings and sampling during the reporting period.
 - E. Summaries of all changes made in the RD/RA during the reporting period, indicating consultation with Ohio EPA and date of approval by Ohio EPA of those changes, when necessary.
 - F. Summaries of all contacts with representatives of the local community, public interest groups or government agencies during the reporting period.
 - G. Summaries of all problems or potential problems encountered during the reporting period, including those that delay or threaten to delay completion of project milestones with respect to the approved work plan schedule or Remedial Action Implementation Plan schedule.
 - H. Summaries of actions taken and/or planned to rectify or prevent problems.
 - I. Summaries of actions taken to achieve and maintain cleanup standards and performance standards.
 - J. Changes in personnel during the reporting period.
 - K. Projected Work for the next reporting period.
 - L. Copies of daily reports, inspection reports, sampling data, and laboratory/monitoring data, etc.

- M. The quantity and disposition of the following media treated, removed, or contained as part of remedial activities under these Orders:
- i. Soil treated or removed – Soil treated or removed shall be reported by volume and soil contained shall be reported by area.
 - ii. Surface water load reduction - Load reduction shall address all contaminants of concern.
 - iii. Sediments treated, removed, or contained - Sediments treated or removed shall be reported by volume and sediments contained shall be reported by area.
 - iv. Waste and debris treated, removed, or contained - Waste and debris shall be defined as regulated materials not otherwise covered in roman number i. through iii. above. Waste debris treated or contained shall be reported by either volume or area as appropriate.
- N. The disposition of contaminated soil, sediments, and waste material that was treated on or off Site, or the disposal location for any quantity of contaminated ground water and/or surface water that was pumped and treated or disposed.
32. Progress reports (one copy only) and all other documents (two copies) required to be submitted pursuant to these Orders to Ohio EPA shall be sent to the following agency address:

Doug Crandall
Ohio EPA, Central District Office
50 W. Town Street
P.O. Box 1049
Columbus, Ohio 43216-1049
Or e-mailed to Douglas.Crandall@epa.ohio.gov

All written correspondence to Respondents shall be directed to:

Meggan Ehret
Technicolor USA, Inc.
101 West 103rd Street
Indianapolis, Indiana 46290

and

John Uruskyj
Global Operations, Environment, Health & Safety

Director's Findings and Orders
RCA / Thomson Consumer Electronics
General Electric Company
319 Great Oaks Blvd.
Albany, New York 12203

A Party may designate an alternative contact name or address upon written notification to the other Party and in accordance with the Designated Site Coordinator Section of these Orders, if applicable.

XIV. REVIEW OF SUBMISSIONS

33. Ohio EPA shall review any work plan, report, or other item required to be submitted pursuant to these Orders. Upon review, Ohio EPA may, in its sole discretion, (a) approve the submission in whole or in part; (b) approve the submission upon specified conditions; (c) disapprove the submission in whole or in part, notifying Respondents of deficiencies; or (d) any combination of the above. The results of Ohio EPA's review shall be in writing and provided to the Respondents. Approval or disapproval of submissions shall not be inconsistent with the NCP or with applicable federal or state statutes or regulations.
34. In the event of approval, or approval upon condition, Respondents shall proceed to take any action required by the submission as approved, or conditionally approved by Ohio EPA.
35. In the event that Ohio EPA initially disapproves a submission, in whole or in part, and notifies Respondents in writing of the deficiencies, Respondents shall within thirty (30) days, or such longer period of time as specified by Ohio EPA in writing, correct the deficiencies and submit the revised submission to Ohio EPA for approval. The revised submission shall incorporate all of the undisputed changes, additions, and/or deletions specified by Ohio EPA in its notice of disapproval. Revised submissions shall be accompanied by a letter indicating how and where each of Ohio EPA's comments was incorporated into the submission. Any other changes made to the submission by Respondents shall also be identified in the letter. To the extent that Respondents dispute any changes, additions, and/or deletions specified by the Ohio EPA, Respondents shall initiate the procedures for dispute resolution set forth in the Dispute Resolution Section of these Orders, within fourteen (14) days after receipt of Ohio EPA's disapproval of a submission. Notwithstanding the disapproval, Respondents shall proceed to take any action required by a non-deficient portion of the submission.
36. In the event that Ohio EPA disapproves a revised submission, in whole or in part, and notifies Respondents in writing of the deficiencies, Respondents shall within thirty (30) days, or such longer period of time as specified by Ohio EPA in writing,

correct the deficiencies and incorporate all changes, additions, and/or deletions, and submit the revised submission to Ohio EPA for approval. If Respondents fail to submit a revised submission incorporating all changes, additions, and/or deletions within thirty (30) days, or such period of time as specified by Ohio EPA in writing, Respondents shall be considered in breach and/or violation of these Orders. If Respondents are in breach and/or violation of these Orders, Ohio EPA retains the right to terminate these Orders, perform any additional remediation, conduct a complete or partial Remedial Design or Remedial Action and/or enforce the terms of these Orders as provided in the Reservation of Rights Section of these Orders. Respondents reserve all defenses they may have to any of the actions that may be taken by Ohio EPA as provided in the Reservation of Rights Section of these Orders.

37. All work plans, reports, or other items required to be submitted to Ohio EPA under these Orders shall, upon approval by Ohio EPA, be deemed to be incorporated in and made an enforceable part of these Orders. In the event that Ohio EPA approves a portion of a work plan, report, or other item, the approved portion shall be deemed to be incorporated in and made an enforceable part of these Orders.

XV. DISPUTE RESOLUTION

38. The Site Coordinators shall, whenever possible, operate by consensus. In the event that there is a dispute about the adequacy of any work plan, report, or other item required to be submitted or Work or activity to be performed pursuant to the Additional Work, Review of Submittals or Periodic Review Sections of these Orders, the Respondents shall have thirty (30) days from the date the dispute arises to invoke the dispute resolution procedures of this Section by notifying Ohio EPA in writing of the dispute. After Ohio EPA's receipt of such written notice of dispute, the Site Coordinators may, for the remainder of the thirty (30) day period, negotiate in good faith in an attempt to resolve the dispute. This thirty (30) day period may be extended by mutual agreement of the Parties; however, any such extension shall be confirmed in writing by Ohio EPA and any such negotiation period shall not exceed forty-five (45) days from the date of Ohio EPA's receipt of the written notice of dispute.
39. The dispute shall be considered to have arisen when Respondents' Site Coordinator become aware of the disputed issue(s). If written notice is not provided within thirty (30) days from the date the dispute arises, the dispute resolution procedures may not be invoked for the disputed issue(s). Within thirty (30) days of Ohio EPA's receipt of the written notice of dispute, Respondents shall provide Ohio EPA with the rationale supporting the Respondents' position. If Ohio EPA concurs with the position of Respondents, then the Work plan, report or other item required to be submitted or Work or activity to be performed pursuant to these Orders shall be modified accordingly.

40. If Ohio EPA does not concur with Respondents; Ohio EPA's Site Coordinator shall notify the Respondents in writing that Ohio EPA does not concur. Upon receipt of such written notice, the Respondents shall have fourteen (14) days from receipt of the non-concurrence notification from Ohio EPA to provide a written statement of the dispute to the DERR Manager and request a formal resolution of the dispute. The Respondents' written statement instituting the formal dispute resolution procedure shall include the rationale supporting the position of the Respondents. If the Respondents do not provide such a statement, rationale and request within fourteen (14) days from receipt of Ohio EPA's non-concurrence notification, Ohio EPA will adopt the position of its Site Coordinator and the Work plan, report, other item required to be submitted pursuant to these Orders, or any other item subject to the dispute resolution procedures of this Section, shall be modified accordingly. If the Respondents provide such a statement, rationale and request within fourteen (14) days from receipt of Ohio EPA's non-concurrence notification, the DERR [District or Central Office] Manager shall review the written positions of the Parties and shall resolve the dispute based upon and consistent with these Orders including the SOW and any applicable approved Work plan, and other appropriate federal and state laws and regulations. In the event that Respondents disagree with the DERR Manager's resolution of the dispute, and the matter is referred by Ohio EPA to the Ohio Attorney General for enforcement of compliance with these Orders, the Parties agree that these Orders shall not be construed to preclude Respondents from raising any legal or equitable defense including, but not limited to, those based on Respondents' position regarding the dispute, in any such action to enforce compliance with these Orders.
41. The pendency of a dispute under this Section shall extend only the time period for completion of the tasks related to the matters in dispute, except that upon mutual agreement of the Parties, any time period may be extended as is deemed appropriate under the circumstances. Such agreement shall not be unreasonably withheld by Ohio EPA. Elements of the Work not affected by the dispute shall be completed in accordance with applicable schedules and time frames. The opportunity to invoke dispute resolution under the Dispute Resolution Section shall not be available to Respondents unless otherwise expressly provided in these Orders.

XVI. UNAVOIDABLE DELAYS

42. Respondents shall cause all Work to be performed in accordance with applicable schedules and time frames unless any such performance is prevented or delayed by an event that constitutes an unavoidable delay. For purposes of these Orders, an "unavoidable delay" shall mean an event beyond the control of Respondents that prevents or delays performance of any obligation required by these Orders and that

could not be overcome by due diligence on the part of Respondents. Increased cost of compliance shall not be considered an event beyond the control of Respondents.

43. Respondents shall notify Ohio EPA in writing within ten (10) days after the occurrence of an event that Respondents contend is an unavoidable delay. Such written notification shall describe the anticipated length of the delay, the cause or causes of the delay, the measures taken and to be taken by Respondents to minimize the delay, and the timetable under which these measures will be implemented. Respondents shall have the burden of demonstrating that the event constitutes an unavoidable delay. A delay in performing Work attributed by Respondents to lack of access to property not owned by Respondents shall be considered by Ohio EPA in its determination whether such delay constitutes an unavoidable delay, provided that Respondents exercised their reasonable best efforts to obtain such access.
44. If Ohio EPA does not agree that the delay has been caused by an unavoidable delay; Ohio EPA will notify the Respondents in writing. To the extent that Respondents dispute Ohio EPA's conclusion that the delay was not unavoidable, Respondents shall initiate the procedures for dispute resolution set forth in the Dispute Resolution Section of these Orders, within fourteen (14) days after receipt of Ohio EPA's determination. Subject to the Dispute Resolution Section of these Orders, Ohio EPA reserves the right to terminate these Orders, perform any additional remediation, conduct a partial or complete Remedial Design and Remedial Action, and/or enforce the terms of these Orders in the event that Ohio EPA determines that the delay has not been caused by an unavoidable delay. If Ohio EPA agrees that the delay is attributable to an unavoidable delay, Ohio EPA will notify Respondents in writing of the length of the extension for the performance of the obligations affected by the unavoidable delay.

XVII. REIMBURSEMENT OF COSTS

45. Ohio EPA has incurred and continues to incur Response Costs in connection with the Site. Respondents shall reimburse Ohio EPA for all Response Costs incurred both prior to and after the effective date of these Orders.
46. Ohio EPA has incurred unreimbursed Response Costs prior to July 15, 2014 and has submitted an itemized invoice documenting those costs to the Respondents. Within thirty (30) days after the effective date of these Orders, Respondents shall remit a check to the Ohio EPA for \$32,837.51 for all Response Costs incurred prior to July 15, 2014.
47. For Response Costs incurred after July 15, 2014, Ohio EPA will submit to Respondents on an annual basis an itemized invoice of its Response Costs for the

previous year. Within thirty (30) days of receipt of such itemized invoice, Respondents shall remit payment for all of Ohio EPA's Response Costs for applicable time period.

48. Respondents shall remit payments to Ohio EPA pursuant to this Section as follows:
- A. Payment shall be made by check payable to "Treasurer, State of Ohio" and shall be forwarded to the Office of Fiscal Administration, Ohio EPA, P.O. Box 1049, Columbus, Ohio 43216-1049.
 - B. A copy of the transmittal letter and check shall be sent to the Fiscal Officer, DERR, Ohio EPA, P. O. Box 1049, Columbus, Ohio 43216-1049, and to the Site Coordinator.
 - C. Each payment shall identify the name and address of the party making payment, the site name, and Ohio EPA's revenue number identified on the associated invoice.
49. To the extent the Respondents dispute the accuracy of the state of Ohio's request for reimbursement or whether costs are inconsistent with the NCP, Respondents shall initiate the formal dispute provisions of the Dispute Resolution Section, within thirty (30) days after receipt of Ohio EPA's request for reimbursement of costs. Should the Respondents dispute a portion of the response costs set forth in an itemized statement, but not all of the costs, Respondents shall timely pay the uncontested portion pursuant to the provisions of the Reimbursement of Costs Section.

XVIII. ACCESS TO INFORMATION

50. Upon request, Respondents shall provide to Ohio EPA within fourteen (14) days, copies of all documents and information within their possession or control or that of their contractors or agents relating to events or conditions at the Site including, but not limited to manifests, reports, correspondence, or other documents or information related to the Work.
51. Respondents may assert a claim that documents or other information submitted to Ohio EPA pursuant to these Orders are confidential under the provisions of OAC 3745-49-03 or ORC §6111.05(A). If no such claim of confidentiality accompanies the documents or other information when it is submitted to Ohio EPA, it may be made available to the public without notice to Respondents.
52. Respondents may assert that certain documents or other information are privileged

under the attorney-client privilege or any other privilege recognized by state law. If Respondents make such an assertion, they shall provide Ohio EPA with the following: (1) the title of the document or information; (2) the date of the document or information; (3) the name and title of the author of the document or information; (4) the name and title of each addressee and recipient; (5) a general description of the contents of the document or information; and (6) the privilege being asserted by Respondents.

53. No claim of confidentiality shall be made with respect to any data or reports, including but not limited to laboratory or interpretive reports, and all sampling, analytical, and monitoring data, to the extent they are required to be submitted to Ohio EPA under these Orders.
54. Respondents shall preserve for the duration of these Orders and for a minimum of ten (10) years after termination of these Orders, all documents and other information within their possession or control, or within the possession or control of their contractors or agents, which in any way relate to the Work notwithstanding any document retention policy to the contrary. Respondents may preserve such documents by microfiche, or other electronic or photographic device. At the conclusion of this document retention period, Respondents shall notify Ohio EPA at least sixty (60) days prior to the destruction of these documents or other information; and upon request, shall deliver such documents and other information to Ohio EPA.

XIX. PERIODIC REVIEW

55. Respondents shall conduct studies and investigations as reasonably requested by Ohio EPA in order to permit Ohio EPA to conduct reviews required by law as to the effectiveness of the Remedial Action and whether the Remedial Action remains protective of public health, safety and the environment at least every five (5) years as described in section 121(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, USEPA's guidance titled *Comprehensive Five-Year Review Guidance* (OERR) 2001. Ohio EPA guidance titled *Procedures for Conducting Periodic Compliance Inspections*, and any applicable regulations.
56. Respondents may invoke the procedures in the Dispute Resolution Section to dispute the lawfulness and reasonableness of: (a) Ohio EPA's requests for studies and investigations under Paragraph 55; or (b) Ohio EPA's determination that the Remedial Action is not protective of public health and safety and the environment; or (c) Ohio EPA's selection of further response actions based on Ohio EPA's determination under Paragraph 56(b).

XX. MODIFICATIONS

57. These Orders may be modified by agreement of the Parties. Modifications shall be in writing, signed by the authorized representative of the Respondents and by the Director, and shall be effective on the date entered in the Journal of the Director of Ohio EPA.

XXI. INDEMNITY

58. Respondents agree to indemnify, save, and hold harmless Ohio EPA from any and all claims or causes of action arising from, or related to, the implementation of these Orders or to events or conditions at the Site, including any acts or omissions of Respondents, their officers, employees, receivers, trustees, agents, or assigns. Said indemnification shall not apply to acts or omissions of the state of Ohio, its employees, agents or assigns at, on, upon, or related to the Site if said acts are negligent, performed outside the scope of employment or official responsibilities, or performed with malicious purpose, in bad faith, or in a wanton or reckless manner.

Ohio EPA shall not be considered a party to and shall not be held liable under any contract entered into by Respondents in carrying out the activities pursuant to these Orders. Ohio EPA agrees to provide notice to Respondents within thirty (30) days after receipt of any claim that may be the subject of indemnity as provided in this Section, and to cooperate with Respondents in the defense of any such claim or action against Ohio EPA.

XXII. OTHER CLAIMS

59. Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action, or demand in law or equity against any person, firm, partnership, or corporation not a Party to these Orders, for any liability arising from, or related to, events or conditions at the Site.

XXIII. RESERVATION OF RIGHTS

60. Ohio EPA reserves the right to seek legal and/or equitable relief to enforce the terms and conditions of these Orders, including penalties against Respondents for noncompliance with these Orders. Except as provided herein, Respondents reserve any rights they may have to raise any legal or equitable defense in any action brought by or on behalf of Ohio EPA to enforce the terms and conditions of these Orders.

61. Ohio EPA reserves the right to terminate these Orders and/or perform all or any portion of the Work or any other measures in the event that the requirements of these Orders are not wholly complied with within the time frames required by these Orders.
62. Ohio EPA reserves the right to take any action against Respondents if conditions at the Site, previously unknown to the State, are discovered after the effective date of these Orders, or information is received, after the effective date of these Orders and these previously unknown conditions or this information shows that the remedy for the Site as set forth in the Decision Document is not protective of public health or safety or the environment. Respondents reserve all defenses they may have to any such actions that may be taken by Ohio EPA.
63. Subject to the Agreement Not To Refer Section of these Orders, Ohio EPA reserves the right to take any action, including but not limited to any enforcement action, action to recover costs, or action to recover damages to natural resources, pursuant to ORC Chapters 3734, 3745, or 6111, or any available legal authority as a result of past, present, or future violations of state or federal laws or regulations or the common law, and/or as a result of events or conditions arising from, or related to, the Site. Respondents reserve all defenses they may have to any of the actions that may be taken by Ohio EPA.

XXIV. AGREEMENT NOT TO REFER

64. During the implementation of these Orders, and provided Respondents are considered by Ohio EPA to be in compliance with these Orders, Ohio EPA agrees not to refer Respondents to the Ohio Attorney General's Office, or take administrative enforcement action against Respondents, for Work required by these Orders. Upon termination of these Orders pursuant to the Termination Section, Ohio EPA agrees to not refer Respondents to the Ohio Attorney General's Office, or take administrative enforcement action against Respondents for Work required under these Orders.

XXV. TERMINATION

65. Respondents' obligations under these Orders shall terminate upon approval in writing of Respondents' written certification to Ohio EPA that all Work required to be performed under these Orders including payment of Response Costs has been completed. The Respondents' certification shall contain the following attestation, "I certify that the information contained in or accompanying this certification is true, accurate, and complete." This certification shall be submitted by Respondents to Ohio EPA and shall be signed by a responsible official of Respondents. The termination of Respondents' obligations under these Orders shall not terminate the

Respondents' obligations under the Reservation of Rights, Access to Information, Indemnity, Other Claims and Land Use Sections of these Orders. Upon termination of these Orders in accordance with this section, and subject to the Reservation of Rights section of these Orders, Ohio EPA will release Respondents and their agents, assigns and successors from (1) any and all liability for Work required under these Orders and (2) any requirements to perform additional work at the Site pursuant to these Orders.

XXVI. WAIVER AND AGREEMENT

66. In order to resolve disputed claims, without admission of fact, violation, or liability, Respondents consent to the issuance of these Orders, and agree to comply with these Orders.
67. Respondents hereby waive the right to appeal the issuance, terms and conditions, and service of these Orders and Respondents hereby waive any and all rights that they may have to seek administrative or judicial review of these Orders either in law or equity.
68. Notwithstanding the limitations herein on Respondents' right to appeal or seek administrative or judicial review, Ohio EPA and Respondents agree if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondents retain the right to intervene and participate in such appeal. In such event, Respondents shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

XXVII. EFFECTIVE DATE

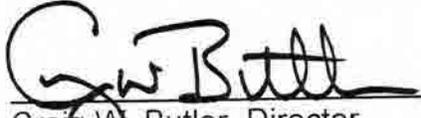
69. The effective date of these Orders shall be the date these Orders are entered in the Journal of the Director of Ohio EPA.

XXVIII. SIGNATORY AUTHORITY

70. Each undersigned representative of a Party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such Party to these Orders.

IT IS SO ORDERED AND AGREED:

OHIO ENVIRONMENTAL PROTECTION AGENCY



Craig W. Butler, Director
Ohio Environmental Protection Agency

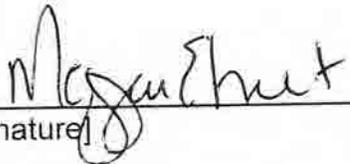
JUN 23 2015

Date

IT IS SO AGREED:

TECHNICOLOR USA, INC.

BY:



[signature]

Megan Ehret, President

7 June 2015

Date

GENERAL ELECTRIC COMPANY

BY:

[signature]

[printed name, title]

Date

IT IS SO ORDERED AND AGREED:

OHIO ENVIRONMENTAL PROTECTION AGENCY

Craig W. Butler, Director
Ohio Environmental Protection Agency

Date

IT IS SO AGREED:

TECHNICOLOR USA, INC.

BY:

[signature]

Date

[printed name, title]

GENERAL ELECTRIC COMPANY

BY:

Ann R. Klee

[signature]

6/5/15

Date

Ann R. Klee

[printed name, title]

Vice President, Environmental
Health and Safety

APPENDIX A

Decision Document

APPENDIX B

RD/RA SOW

APPENDIX C

List of Relevant Guidance Documents

APPENDIX D

RD Work Plan

APPENDIX E

Site Environmental Covenant

APPENDIX F

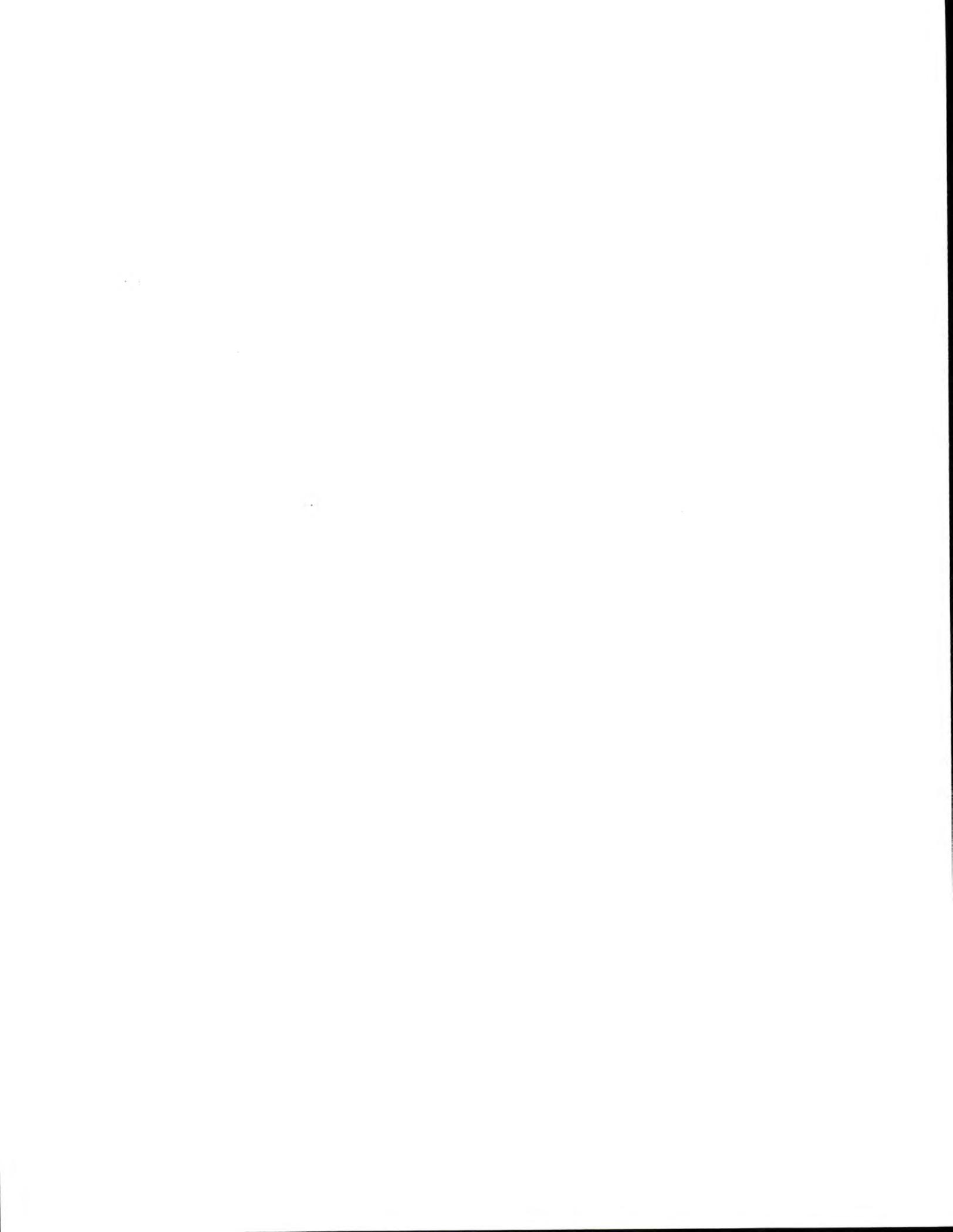
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APPENDIX G

Site Map

APPENDIX A

Decision Document



I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.



By: Jessica Lassiter Date: 6-4-14

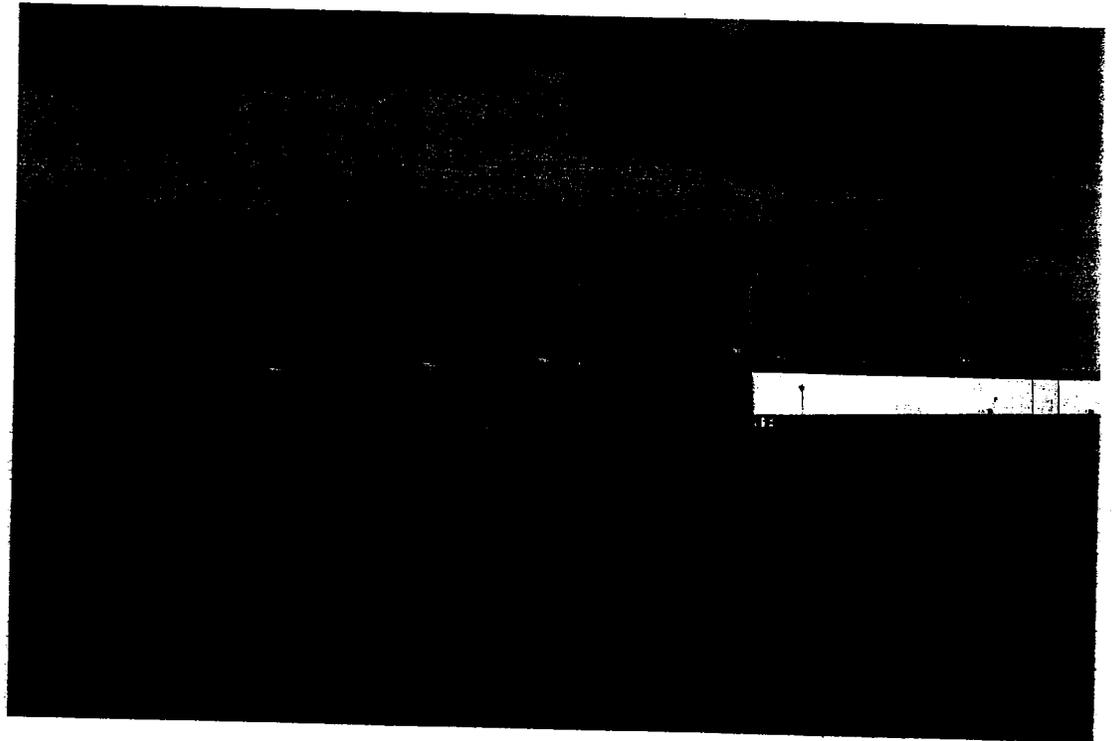
OHIO ENVIRONMENTAL PROTECTION AGENCY

JUN 4 2014

OHIO E.P.A.

DECISION DOCUMENT

FOR THE REMEDIATION OF THE
FORMER RCA/THOMSON CONSUMER ELECTRONICS SITE
CIRCLEVILLE, PICKAWAY COUNTY, OHIO



Ohio Environmental Protection Agency
Division of Environmental Response and Revitalization
Central District Office
May 2014

Ohio EPA's Division of Environmental Response and Revitalization (DERR) - Assessment, Cleanup & Reuse Section Remedial Response Program			Decision Document For Remediation of the RCA/Thomson Site Circleville, Pickaway County, Ohio		
THE REMEDIAL RESPONSE PROCESS					
(1) Preliminary Assessment & Site Inspection [Completed]	(2) Remedial Investigation & Feasibility Study [Completed]	(3) Remedy Selection (Preferred Plan & Decision Document)	(4) Remedial Design	(5) Remedial Action	(6) Remedy Operation, Maintenance & Monitoring

Ohio EPA Announces Decision Document

On February 25, 2014, Ohio EPA issued a Preferred Plan that outlined Ohio EPA's preferred alternative to remediate contamination at the former RCA/Thomson Consumer Electronics site. Ohio EPA held a public meeting on April 9, 2014 in Circleville Fire Department at 586 North Court Street, Circleville, Ohio to explain the Preferred Plan. Oral and written comments were accepted at this meeting and during the comment period, which ran from March 4 to April 18, 2014. Ohio EPA did not receive any comments at the public meeting/hearing nor during the public comment period.

Based on the Preferred Plan and the consideration of comments received during the comment period, Ohio EPA is issuing this Decision Document identifying the selected remedial alternative for the cleanup of the contaminated soils and sediments at the site, and providing the rationale for the selection. It also includes summaries of other remedial alternatives evaluated for use at this site.

Ohio EPA is issuing this Decision Document in a manner consistent with 40 CFR Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). It summarizes information found in detail in the remedial investigation and feasibility study reports and other documents contained in the administrative record file for this site. Ohio EPA encourages the public to review these documents to gain a better understanding of the site and the activities that have been conducted at the site.

ERAC Appeal Period: As a final action of the Director of Ohio EPA, the Decision Document may be appealed to the Environmental Review Appeals Commission (ERAC) pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with ERAC (77 South High Street, 17th Floor, Columbus, OH 43215) within 30 days after notice of the Director's action.

Additional Information: Available from Ohio EPA's Central District Office, located at 50 West Town Street, Suite 700, Columbus, OH, 43215 or on the Ohio EPA DERR CDO webpage at <http://www.epa.ohio.gov/cdo/rca.aspx>. Contact David O'Toole, Site Coordinator, by mail at Ohio EPA, Central District Office, P.O. Box 1049, Columbus, Ohio 43216-1049, by telephone at (614) 728-5040 or by e-mail at David.O'Toole@epa.ohio.gov

DECLARATION

SITE NAME AND LOCATION

Former RCA/Thomson Consumer Electronics
24200 U.S. Route 23 South
Circleville, Pickaway County, Ohio

STATEMENT OF BASIS AND PURPOSE

This Decision Document presents the selected remedial action for the former RCA/Thomson Consumer Electronics site in Circleville, Pickaway County, Ohio, chosen in accordance with the policies of the Ohio Environmental Protection Agency, statutes and regulations of the State of Ohio, and the NCP, 40 Code of Federal Regulations (CFR) Part 300.

ASSESSMENT OF THE SITE

Actual and threatened releases of industrial wastes at the site, if not addressed by implementing the remedial action selected in the Decision Document, constitute a substantial threat to public health or safety and are causing or contributing to air or water pollution or soil contamination.

The former facility operated from 1970 to 2004, and manufactured television picture tube components. The manufacturing process generated wastes. These wastes included process wastewaters that were discharged into the South Ditch and then into the Off-site Creek Area; storm water runoff from the manufacturing areas that flowed through the East Swale into the South Ditch and then into the Off-site Creek Area; and glass grinding/polishing materials (fines) from the manufacture of the leaded glass components for television picture tubes that were ultimately placed into the East Fenced Area. As a result, soils and sediments are contaminated with antimony, arsenic and lead, with lead being used as the cleanup driver to guide future soil and sediment removal.

DESCRIPTION OF THE SELECTED REMEDY

The major components of the selected remedial alternative include soil/sediment removal in the East Swale, South Ditch, former Raw Materials Handling Area and Off-site Creek Area; rehabilitation and maintenance of East Fenced Area; and institutional controls.

Soils and sediments will be removed through excavation of soil/sediment, as necessary until the calculated 95% upper confidence limit lead concentrations do not exceed the applicable remediation levels in each area of concern (*i.e.*, East Swale, South Ditch, former Raw Material Handling Area, and Off-site Creek Area, which consists of the Upper Creek Area, Deltaic Area, and Non-Deltaic Area).

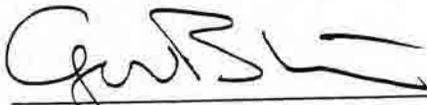
The existing soil and vegetative cover on the East Fenced Area will be cleared and grubbed, and rehabilitated through the installation of a one-foot thick soil cover. The soil cover will be graded and vegetated to minimize erosion and ensure a protective barrier is established to

prevent contact with the material. In addition, the existing fenced area will be expanded as necessary to fully secure the material within the East Fenced Area, and new fencing will be added as appropriate.

Institutional controls (*i.e.*, activity and use limitations) were established on the former facility manufacturing areas through an environmental covenant recorded on December 28, 2011 with the Pickaway County Recorder's Office. Another environmental covenant was recorded on August 16, 2012, which placed activity and use limitations on the Deltaic and Non-Deltaic Areas of the On-site Creek Area. Current and future owners of these site parcels will need to adhere to and comply with all activity and use limitations included in the environmental covenants.

STATUTORY DETERMINATIONS

The selected remedial action is protective of human health and the environment, complies with legally applicable state and federal requirements, is responsive to public participation and input and is cost-effective. The remedy uses permanent solutions to the maximum extent practicable to reduce toxicity, mobility and volume of hazardous substances at the site. The effectiveness of the remedy will be reviewed regularly.



Craig W. Butler, Director

JUN 04 2014

Date

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TABLE OF ACRONYMS

AOC	Area of Concern
ARARs	Applicable or Relevant and Appropriate Requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMS	Corrective Measures Study
COC	Contaminant of Concern
DERR	Division of Environmental Response and Revitalization
ERA	Ecological Risk Assessment
FS	Feasibility Study
HASP	Health and Safety Plan
HI	Hazard Index
HQ	Hazard Quotient
MCL	Maximum Contaminant Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OAC	Ohio Administrative Code
ORC	Ohio Revised Code
O&M	Operation and Maintenance
PAHs	Polycyclic Aromatic Hydrocarbons; class of semi-volatile organic chemicals
PPM	Parts Per Million
PRG	Preliminary Remediation Goal
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act of 1976
RD	Remedial Design
RFI	RCRA Facility Investigation
RG	Remediation Goal
RI	Remedial Investigation
RLs	Remediation Levels
SVOCs	Semi-Volatile Organic Compounds
TDC	Technical Decision Compendium
TPH	Total Petroleum Hydrocarbons
UCL	Upper Confidence Limit
U.S. EPA	United States Environmental Protection Agency
VAP	Voluntary Action Program
VOCs	Volatile Organic Compounds

1.0 EXECUTIVE SUMMARY

On February 14, 1994, Thomson Consumer Electronics (now known as Technicolor) and General Electronic Company (GE) signed Director's Final Findings and Orders (1994 Orders) with the Ohio Environmental Protection Agency (EPA). The 1994 Orders included remedial investigation and feasibility study (RI/FS) activities to determine the nature and extent of contamination, and to develop and evaluate remedial alternatives for the RCA/Thomson Consumer Electronics facility located at 24200 U.S. Route 23 South, Circleville, Pickaway County, and anywhere contamination may have migrated from the facility (*i.e.*, the site) (see **Figure 1 Site Location Map**, **Figure 2 Site Areas of Concern Map**, and **Figure 3 Former Facility Plan**). As agreed to by the parties, the work performed under the 1994 Orders was intended to be equivalent to and fulfill the purposes of a Resource Conservation and Recovery Act (RCRA) facility investigation and corrective measures study.

GE developed the RI/FS work plan to determine where contamination existed at the site and at what concentrations. Ohio EPA approved the RI/FS work plan on August 23, 1995 to investigate the nature and extent of target chemicals at the site, to assess the potential risks to human health and the environment, and to develop and evaluate cost-effective remedial alternatives to minimize or eliminate those risks.

Ohio EPA approved the final RI report on March 23, 2010. The RI report documented contamination at the East Fenced Area (EFA), the East Swale, the Former Raw Materials Handling Area (RMHA), the South Ditch, and the Off-site Creek Area (OCA), which consists of the Upper Creek, Deltaic and Non-Deltaic Areas. Each of these areas requires remediation (see **Figure 2 Site Areas of Concern Map**, **Figure 3 Former Facility Plan**, and **Figure 4 Off-Site Creek Area Plan**). The primary contaminants of concern (COCs) at the site are listed in **Table 4 Contaminants of Concern / Remediation Levels in Soil and Sediment** of this Decision Document, and include antimony, arsenic and lead. Additional details concerning the health risks associated with each primary COC are located in **Appendix B Primary Contaminants of Concern**.

A human health risk assessment, approved on March 23, 2010, defined the contaminant concentrations at the site that could adversely affect human health. An ecological risk assessment, which evaluated potential harm to the environment, was also approved on March 23, 2010. The current and future risks of this site result from direct contact with contaminated soil, sediment and sludge.

Based on an evaluation of historic usage and the results of previous investigations indicating that contamination was not present above unrestricted use levels, Ohio EPA issued Director's Final Findings and Orders on January 24, 2012 (2012 Orders) that amended the definition of "Site" in the 1994 Orders to exclude two tracts (totaling approximately 45 acres) of the former facility property.

The RI report indicated that remedial alternatives needed to be developed to address human health risks posed by the site. Ohio EPA approved the FS report, which identified potential remedial alternatives, on August 21, 2013. As part of the FS, remedial action objectives (RAOs) were developed to ensure protectiveness of human health and the environment.

Additional information is available in the RI and FS reports and other site-related materials, located at the Ohio EPA Central District Office (Division of Environmental Response and Revitalization) and online at <http://www.epa.ohio.gov/cdo/rca.aspx>.

Prior to completion of the FS and preparation of the Preferred Plan, a number of activity and use limitations were established on the former facility manufacturing areas through an environmental covenant, recorded on December 28, 2011 at the Pickaway County Recorder's Office. Another environmental covenant was recorded on August 22, 2012, placing activity and use limitations on the Deltaic and Non-Deltaic Areas of the OCA.

This Decision Document summarizes information on the evaluated remedial alternatives, identifies Ohio EPA's selected remedial alternative, and explains the reasons for selecting the selected remedial alternative. The Decision Document is based on the Ohio EPA-approved RI and FS reports completed by GE and Technicolor.

Ohio EPA's selected remedial alternative should yield a permanent solution for risks associated with the contaminated media at the site. The expectations for the selected alternative include:

- Reduction of human health risks to within acceptable limits and protection of human health and the environment from exposure to contaminants of concern that exceed acceptable concentrations in soil and sediment (see **Table 4 Contaminants of Concern / Remediation Levels in Soil**).
- Short-term and long-term protection of public health and the environment.
- Compliance with applicable or relevant and appropriate requirements (ARARs).
- Cost-effectiveness and limitation of expenses to what is necessary to achieve the selected alternative expectations.
- Ongoing operation and maintenance (O&M) and monitoring of the completed remedial action and established institutional controls.

The major components of the selected remedial alternative include:

- Removal of contaminated soil and sediment from the East Swale, South Ditch, RMHA, and OCA to acceptable concentrations, including transportation of excavated material to off-site disposal facilities, restoration of removal areas to pre-construction grades, and vegetating of disturbed areas as necessary.
- Rehabilitation of the EFA, including clearing/grubbing of existing vegetation, placement of a one-foot thick soil cover, repair/replacement/expansion of the existing security fencing, and ongoing maintenance of the EFA soil cover, vegetation and fence.
- Adherence to institutional controls (*i.e.*, activity and use limitations) included in environmental covenants established for the former facility and OCA property (parcels).

Ohio EPA finds these measures will protect public health and the environment by reducing risk to acceptable levels after the RAOs have been achieved. The performance of the remedial alternative described in this Decision Document will satisfactorily address any RCRA corrective actions (i.e., corrective measures implementation) required for the Site.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The former RCA/Thomson manufacturing facility is located on approximately 227 acres at 24200 U.S. Route 23 South, Circleville, Pickaway County, Ohio adjacent to residential, commercial and agricultural areas as shown on **Figure 1 Site Location Map**. The RCA/Thomson facility (see **Figure 3 Former Facility Plan**) contains the EFA, East Swale, South Ditch and RMHA, which were part of the site under the 1994 Orders. To facilitate remedial decision-making for areas potentially affected by off-site transport of lead-bearing particulates from the South Ditch, an additional area of concern, the OCA, was included in the evaluation. The OCA was evaluated in three sub-sections; the Upper Creek Area, the Deltaic Area and the Non-Deltaic Area.

A list of owners, operators and/or disposers that may have contributed to the contamination at the site property is shown in **Table 1 Owners, Operators and/or Disposers**.

TABLE 1 - OWNERS, OPERATORS AND/OR DISPOSERS		
Owners, Operators and/or Disposers	Property Usage	Period
Radio Corporation of America (RCA)	Glass TV Picture Tubes	1970 - 1986
General Electric Company (GE)	Glass TV Picture Tubes	1986 - 1987
Thomson Consumer Electronics (now known as Technicolor)	Glass TV Picture Tubes	1987 - 2008
IRG Circleville, LLC and Circleville Pickaway, LLC	Commercial operation and future development	2008 - Present

The former facility was built in 1969 and operated from 1970 to 2004. The facility manufactured the face plate or panel (3% lead) and funnel (24% lead) components of television picture tubes from 1970 until 2004. During this time, the facility consisted primarily of interconnected administration, production, laboratory, batch house, and warehouse buildings. Batch house silos were used to contain raw and intermediate materials such as sand, litharge (lead oxide), and cullet (recycled glass). Excess cullet was also stored on covered and uncovered concrete storage pads in the RMHA, which were adjacent to the East Swale.

Operations at the facility, related to the manufacturing of leaded glass components for television picture tubes, resulted in the release of contaminants including glass polishing and grinding materials (fines) at the site. Prior to 1980, the fines were carried by cold-end process rinse wastewaters for settling in Lagoons #1 and #2. The solids were pumped out of

the lagoons about four times per year, to three sludge pits (the EFA). Sludge accumulated between 1980 and 1982 in Lagoons #1 and #2, and in Lagoons #3 and #4 (temporary impoundments used during the construction of the wastewater treatment plant (WWTP)), was disposed of in off-site landfills. After 1982, cold rinse wastewaters with the fines were routed through the WWTP, which discharged to the city of Circleville's publicly owned treatment works (POTW).

From 1970 to 1990, the hot-end process wastewaters were sent to the Oil Skimmer Pond, prior to discharge through the National Pollutant Discharge Elimination System (NPDES) permit-regulated Outfall 001 into the South Ditch. After 1990, the hot process wastewaters were conveyed to the WWTP for further treatment before discharge to the sanitary sewer.

Prior to 1990, potentially contaminated storm water (from contact with various process materials – cullet, cold and hot process wastewaters and raw materials), entered the South Ditch through four outlets. These outlets were from the East Swale, Storm Sewer Outlet B, NPDES Outfall 001, and an unnamed storm sewer outlet.

After manufacturing operations ceased in March 2004, a large portion of the glass manufacturing equipment was sold and removed from the facility. Former manufacturing buildings and structures, specifically those located within the former glass melting and forming operation areas, were demolished between 2005 and 2006. Currently, only the warehouse, administrative offices, and associated paved parking areas remain at the former facility.

The former RCA facility property is currently owned by IRG Circleville, LLC and Circleville Pickaway, LLC. The property is used for small commercial and warehouse operations. A large portion is still under development for future commercial use.

2.2 Site Characteristics and Investigation

Pursuant to the 1994 Orders, RI and FS reports were submitted to and subsequently approved by Ohio EPA in March 2010 and August 2013, respectively. The RI/FS activities identified the nature and extent of contamination at the site and developed remedial alternatives to address the contamination. The areas investigated during the RI include the EFA (the former sludge pits), the adjacent fields, the on-site soils, the East Swale, the former Oil Skimmer Pond, the South Ditch, the OCA, and later the RMHA. The investigation provided a description of site geology, topography, hydrogeology and other characteristics. See **Figure 2 Site Areas of Concern Map** and **Figure 3 Former Facility Plan**.

The surface water drainage system of the former facility's manufacturing area consists of the East Swale and an unnamed spur ditch, which flow to the main drainage ditch (known as the South Ditch). The South Ditch flows from east to west on the south side of the former facility manufacturing area. The unnamed spur ditch entered the South Ditch near the former potable water treatment plant and carried primarily agricultural runoff from fields immediately to the south. The East Swale is normally dry, but it may have previously received runoff from the east end of the former manufacturing area and from the open fields to the east-northeast during significant precipitation events. To capture this intermittent and potentially contaminated surface water, the East Swale was blocked in 1990. After that, surface water in

the East Swale was collected and routed to the WWTP as part of the facility's surface water management program. The South Ditch flows from east to west along the southern portion of the former facility before entering the OCA, and eventually the Scioto River.

RI activities included sampling soil, sediment, sludge, ground water and surface water for laboratory analyses for the following potential COCs: antimony, arsenic, barium, chromium, fluoride, lead, nickel, polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH). Agricultural fields are located immediately east and south of the site, and various commercial properties are west of the site adjacent to U.S. Route 23. A commercial property is located north of, and a residential area (Logan Elm Village) is located approximately 1,000 feet south of, the site. The Earnhart Hill Water District's treatment plant and water supply well field are located approximately 4,000 feet southwest of the site.

The final RI report, completed in March 2010 by Exponent on behalf of GE and Technicolor, provided the following information:

- The EFA is an approximately 5-acre area located east of the former facility manufacturing area (see **Figure 3 Former Facility Plan**), and is enclosed by security fencing. Glass polishing and grinding fines were pumped from former facility lagoons to three 8- to 10-foot deep "sludge pits" during facility operations in the 1970s. In October 1980, the three sludge pits were covered with approximately 2 feet of soil and enclosed by a security fence. However, based on test pit excavations, the limits of sludge deposits extend to the south and the east (but not to the South Ditch), slightly beyond the existing EFA fence. With the exception of arsenic and lead, metals were generally detected at concentrations consistent with regional background levels. A maximum arsenic concentration of 358 parts per million (ppm) and a lead concentration of 13,800 ppm were detected in EFA sludge samples.

With regard to ground water, the August 1995 RI/FS Work Plan discussed the nine years of sampling data previously collected from 13 monitoring wells at the site. While the work plan indicated that ground water in the vicinity of the plant was not significantly impacted by contaminants, it also noted that further information was needed in and around the EFA. Ground water was repeatedly sampled at the EFA during the RI. Antimony was not detected during any of the monitoring events and arsenic and lead were only occasionally detected at low concentrations in total (*i.e.*, not filtered) water samples. All reported concentrations of metals were below federal maximum contaminant levels (MCLs) at all wells during all sampling events. Based on these data and other factors (*e.g.*, the ground water beneath the EFA was the most likely to be contaminated by activities at the facility), ground water was not considered a medium that required further evaluation or remedial action. Specific information on ground water and sample results are provided in the RI report.

- The East Swale is a drainage ditch located east of the former facility manufacturing area (see **Figure 3 Former Facility Plan**) that is typically dry, but received some storm water runoff from fields northeast of the former manufacturing area and from the east end of the former manufacturing area where cullet was formerly stored, during significant rain events. During the 1970s, batch plant and furnace waste materials were stored in piles on the east side of the former manufacturing area in the vicinity of

the East Swale, prior to disposal. During heavy rain events, some portion of the runoff from the East Swale discharged to the South Ditch prior to 1990. From 1990 to 2006, water that drained to the East Swale was captured at the southern end of the ditch and was conveyed to the former onsite WWTP. However, most of the structures associated with the former facility, including the WWTP were dismantled or demolished in 2006.

Sampling conducted from 1988 to 1995 in the East Swale detected arsenic and lead at elevated concentrations in the surface soils and sediments. Analytical results for samples collected at the southern end of the East Swale from the 0- to 6 inch depth interval revealed the greatest concentrations of COCs. Surface sample analytical results detected maximum concentrations of antimony at 604 ppm, arsenic at 530 ppm, and lead at 23,500 ppm. Refer to Appendix C and Figure C-15 in the FS report for the soil/sediment sampling locations and data summary.

- The South Ditch is the on-site portion of an unnamed tributary to the Scioto River (see **Figure 3 Former Facility Plan**). The South Ditch is located south of the former facility manufacturing area and is a perennial, grass-lined ditch, which is fed by a marsh located east of the site. Multiple current and historical outfalls are located within the South Ditch, including the East Swale (during heavy precipitation events) and the former Oil Skimmer Pond, which discharged to the South Ditch prior to 1990, at which point those flows were diverted to the former WWTP. From 1990 until 2006, the flow within the ditch was continuous as a result of the discharge from the former WWTP. Upon demolition of the former WWTP in 2006, the flow within the South Ditch was greatly reduced.

Soil/sediment samples collected from the South Ditch contained elevated concentrations of lead and other inorganics. The highest concentrations of lead were generally observed in samples collected from the top 12 inches of soil/sediment in the vicinity of current/former outfalls and samples collected from localized sediment accumulation areas downstream of the former outfall from the East Swale.

Lead was detected in the South Ditch at the following levels and locations:

- 8,770 ppm (0 to 2 inch interval) and 12,100 ppm (6 to 12 inch interval) at Storm Sewer Outfall B, located approximately 470 feet downstream of the former East Swale Outfall.
- 10,500 ppm (0 to 2 inch interval) at the bend in the South Ditch located approximately 830 feet downstream of the former East Swale Outfall.
- 4,680 ppm (0 to 2 inch interval) at Outfall 001 (former Oil Skimmer Pond Outfall) located approximately 1,170 feet downstream of the former East Swale Outfall.
- 16,200 ppm (0 to 2 inch interval) and 4,350 ppm (6 to 12 inch interval) at the west end of the South Ditch.

The maximum arsenic concentration (239 ppm) was detected in a soil/sediment sample collected at Storm Sewer Outfall B. Elevated TPH concentrations (*i.e.*, to 250,000 ppm) and PAHs were detected in soil/sediment samples. TPH concentrations observed during the supplemental sampling conducted in December 2005 ranged from non-detect to 250 ppm. PAHs were not detected in the oily material collected from the former Oil Skimmer Pond. Therefore, the RI report concluded that the TPH and PAH concentrations detected in the South Ditch were likely the result of the surface water discharge from Storm Sewer Outfall B. Refer to Appendix C and Figures C-12, C-13 and C-14 in the FS report for the sample locations and analytical results.

- The OCA is broken into three sub-sections: the Upper Creek Area, the Deltaic Area and the Non-Deltaic Area (see **Figure 4 Off-Site Creek Area Plan**). The OCA is approximately 12 acres and receives drainage from two main sources, the off-site creek (a continuation of the South Ditch) and the farm drainage ditch. The OCA also receives runoff from nearby residential/commercial areas, agricultural areas, and effluent from the Earnhart Hill Water District water treatment plant.

The Upper Creek Area is the narrow riparian corridor between U.S. Route 23 and the CSX Transportation railroad tracks. This drains into a triangular-shaped depositional area called the Deltaic Area located between the railroad tracks and the farm drainage ditch. The Non-Deltaic Area consists of two portions, one small area located north of the Deltaic Area and a larger area located to the south of the Deltaic Area. The Non-Deltaic Area ends at the stream confluence to the Scioto River.

In the Upper Creek Area, analyses of soil and sediment samples detected maximum concentrations of arsenic and lead at 44 ppm and 7,820 ppm, respectively. In the Deltaic Area, analyses of soil and sediment samples detected maximum concentrations of arsenic and lead at 222 ppm and 15,800 ppm, respectively. In the Non-Deltaic Area, analyses of soil and sediment samples detected maximum concentrations of arsenic and lead at 195 ppm and 2,760 ppm, respectively. Finally, soil/sediment samples collected west of the railroad tracks contained TPH ranging from 25 to 52 ppm. Refer to Appendix C and Figures C2 through C-15 in the FS report for the sample locations and analytical results.

- The RMHA is a portion of the former facility manufacturing area that is located immediately west of the East Swale. During facility operations, this area consisted of open and covered concrete pads and a batch house used for the storage and handling of raw materials and a building for the temporary accumulation/storage of hazardous waste prior to transportation to an off-site disposal facility (see **Figure 3 Former Facility Plan**). The hazardous waste storage building was clean-closed under RCRA in 1985 and U.S. EPA approved the clean closure of the building in June 1992. The structures present at the RMHA were subsequently removed as part of demolition activities in 2005 and 2006.

Ohio EPA's October 17, 2011 letter noted that the June 1992 *Clean Closure Equivalency Demonstration Hazardous Waste Storage Building Unit* report by PTI Environmental Services and the August 2005 *Limited Phase II Environmental Site Assessment* report by CTL Engineering reported elevated soil concentrations of

arsenic and lead in front of the former hazardous waste storage building. As a result, supplemental investigations of the RMHA were completed in March 2012, including 33 soil borings in the vicinity of the RMHA, and the analyses of 66 samples for arsenic and lead.

The May 2012 *Supplemental Site Investigation - Former RMHA Hazardous Waste Storage Building and Surrounding Area* report indicated that arsenic and lead were detected in soil samples at maximum concentrations of 1,700 ppm and 180,000 ppm, respectively. Refer to Appendix C and Figure C-16 in the FS report for soil sample locations and analytical results.

The reasonably anticipated future land use for the former facility property is commercial and industrial. The reasonably anticipated future land use for the OCA is expected to continue as primarily commercial (Upper Creek Area) and agricultural (Deltaic and Non-Deltaic Areas). **Figure 2 Site Areas of Concern Map** shows the various areas investigated during the RI to determine the extent and concentration of contamination at the site.

Prior to completion of the FS and preparation of the Preferred Plan, a number of activity and use limitations (e.g., general prohibitions against residential or agricultural land use, ground water extraction and usage, and more specific restrictions for each of the areas of concern) were established on the former facility manufacturing areas through an environmental covenant, recorded on December 28, 2011 with the Pickaway County Recorder's Office. Another environmental covenant was recorded on August 16, 2012, placing activity and use limitations (e.g., prohibitions against residential, commercial and industrial land use, and against ground water extraction and usage) on the Deltaic and Non-Deltaic Areas of the OCA. See **Appendix D** for copies of environmental covenants.

Ohio EPA issued Amended Director's Final Findings and Orders on January 24, 2012 (2012 Orders) that amended the definition of "Site" in the 1994 Orders to exclude two tracts (totaling approximately 45 acres) of the former facility property. This was based on an evaluation of historic uses and the results of previous investigation indicating that contamination was not present on the two tracts above unrestricted use levels.

2.3 Interim or Removal Actions Taken to Date

Prior interim remedial activities associated with the site include the clean closure of the former settling lagoons; clean closure of the former hazardous waste storage building; placement of soil cover and security fencing at the EFA; upgrade of the WWTP; upgrade of the storm water collection and treatment system; removal of the Oil Skimmer Pond; response to a diesel spill; and limited soil removal and storm water culvert installation at the OCA.

2.3.1 Clean Closure of Former Settling Lagoons

The glass polishing fines generated in the television picture tube manufacturing process were carried in rinse water to two unlined lagoons for settling. The water and particulates contained arsenic, chromium, fluoride and lead. The settled solids (sludge) were pumped out of the lagoons four times per year to three unlined earthen sludge pits, covering two acres east of the former facility manufacturing area.

Four former settling lagoons were clean-closed under RCRA Interim Status (40 Code of Federal Regulations (CFR) Part 265) in 1982 and 1984, respectively. Subsequent to an Ohio EPA site screening inspection, soils in the vicinity of the former settling lagoons were removed in 1988 and disposed of offsite at an approved disposal facility. These lagoons subsequently received clean-closure approval by U.S. EPA under the more stringent 40 CFR Part 264 requirements in July 1990.

Confirmation soil sampling demonstrated that remaining soil did not contain applicable Appendix VIII constituents at significant levels. The clean closure mitigated any potential release of potential COCs from the vicinity of the lagoons, and likely contributed to the decreasing trend in fluoride concentrations observed in shallow ground water at the site.

2.3.2 Clean Closure of Hazardous Waste Storage Building Unit

The former hazardous waste storage building was used as a 90-day accumulation area for hazardous wastes generated from the glass manufacturing operation. The unit was clean-closed under RCRA Interim Status (40 CFR Part 265) in 1985. Subsequent to an Ohio EPA site screening inspection, soils in the vicinity of the hazardous waste storage building unit were removed in 1988 and disposed of offsite at an approved disposal facility. The unit subsequently received clean-closure approval by U.S. EPA under the more stringent 40 CFR Part 264 requirements in 1992. The building was routinely inspected and managed in accordance with applicable regulations for the accumulation of hazardous waste.

2.3.3 Soil Cover and Fencing at the EFA

Placement of glass polishing fines (sludge) at the EFA was discontinued in 1980. In 1980, the sludge was covered with approximately 2 feet of clean fill. The EFA was also enclosed with a perimeter security fence in 1989. These measures help control any access and possible exposure to the sludge deposits. The soil cover also provides protection from potential dispersal by wind action.

2.3.4 Upgrade of the Wastewater Treatment System

The capabilities for on-site wastewater treatment were expanded over the period of facility operation through multiple upgrades and modifications. Construction of the WWTP in 1982 eliminated discharge of the cold-end effluent to the unlined lagoons. Significant WWTP upgrades in 1990 allowed for on-site treatment of hot-end effluent generated at the facility and treatment of storm water from process areas of the plant. These efforts eliminated discharge of process water to the POTW, the need for the Oil Skimmer Pond, and the discharge of untreated storm water from the east end of the facility and the East Swale to the South Ditch.

2.3.5 Storm Water Collection and Treatment System

Prior to 1990, storm water collected through the facility storm sewers discharged into the South Ditch at three outfalls. These three outfalls and corresponding drainage areas were:

- The East Swale Outlet: agricultural and indeterminate surface areas to the east of the plant buildings.
- A storm drain outlet approximately 400 feet downstream of the East Swale (the 19+30 Outfall, Storm Sewer Outlet B): cullet storage, north-side employee parking lots, cafeteria and maintenance shop roofs, railroad spur loading/unloading areas, and a portion of "A/B" manufacturing roof.
- A former storm water drain outlet approximately 30 feet downstream of former NPDES Outfall 001 from the Oil Skimmer Pond: main office roof, warehouse roof, southwest employee and visitor parking lots, and the area around the WWTP.

From 1990 until 2006, storm water runoff that came into contact with process materials at the east end of the "A/B" manufacturing plant, the north side of the "A/B" maintenance shop, "C" batch house material handling area, and other runoff that collected in the East Swale was diverted into a "lift station" and pumped to a 200,000 gallon storm water collection tank. The storm water collection tank was tied into the WWTP (for treatment), prior to discharge through an NPDES-permitted outfall.

2.3.6 Removal of Oil Skimmer Pond

The Oil Skimmer Pond was removed from service in 1990. In 1992, soils and sludge were excavated from the bottom and sides of the pond to approximately 10 feet below ground surface and disposed of off-site. Excavation of the soil around the pond removed a potential source of contaminants to media in the immediate area.

2.3.7 Diesel Spill Response

Approximately 300 to 800 gallons of diesel fuel were spilled on the ground at the "C" manufacturing building on November 30, 1991. Corrective actions resulted in the recovery of approximately 70 gallons of fuel and 310 gallons of fuel/water mixture from shallow soil adjacent to the building. Phase I and II investigations were subsequently implemented and coordinated with Ohio EPA; four shallow groundwater wells were installed, and soil and ground water samples were collected and analyzed for fuel constituents. Analytical results indicated negligible environmental impact. Ohio EPA required no further investigation or remediation.

2.3.8 Offsite Creek Area Interim Action

In September 2002, an interim action by the current off-site property owner, Richards Land Company (Richards), was implemented to remove lead-bearing soil/sediment at the OCA to accommodate construction of a local access roadway. Soil and sediment within the roadway footprint with lead concentrations exceeding 400 ppm were removed and disposed off-site in accordance with applicable regulations. The 400 ppm lead concentration value was specified in the Ohio EPA-approved *Interim Action Work Plan for Select Soil/Sediment Removal from the Offsite Creek Area*. The basis (in the work plan) for the value was the U.S. EPA Regional Screening Level – Residential Land Use Standard of 400 ppm. The interim action included construction of a culvert extension (approximately 75 feet in length), and removal of 1,559

tons (approximately 1,039 cubic yards) of soil/sediment immediately west of the railroad tracks. A work plan detailing the interim action approach was submitted to Ohio EPA on September 5, 2002, and revised on September 27, 2002, in response to Ohio EPA comments. The final work plan was approved by Ohio EPA in October 2002. A final report documenting the completion of the interim action was submitted to Ohio EPA on February 11, 2003.

2.4 Summary of Site Risks

As part of the RI/FS, a baseline risk assessment was conducted to evaluate current and potential future risks to human and ecological receptors as the result of exposure to site contaminants. The RI report was approved by Ohio EPA in March 2010, but additional RI work (at the RMHA) was required in October 2011. This work was completed and the RMHA was designated an area of concern (AOC) in August 2012. The FS report was approved in August 2013. The results of the RI/FS demonstrated that the existing contaminants in environmental media pose or potentially pose unacceptable risks and/or hazards to human health sufficient to trigger the need for remedial actions. Additional primary COC information can be found in **Appendix B**.

2.4.1 Risks to Human Health

The risk assessment for human health is an estimate of the likelihood of potential health problems occurring if no remedial actions were taken at the site. To estimate baseline risk, a four-step process is undertaken.

Step 1. Data Collection and Evaluation of Contamination: The concentrations of contaminants at the site as well as scientific studies on the effects these contaminants have had on people are reviewed. Comparisons of site-specific concentrations of potential COCs and concentrations reported in past studies help determine which contaminants are most likely to pose the greatest threat to human health.

Step 2. Exposure Assessment: The different ways that people might be exposed to the potential COCs, the concentrations they might be exposed to, and the likely frequency and duration of exposure are evaluated as part of the exposure assessment. A reasonable maximum exposure scenario is calculated, which portrays the highest level of human exposure that could reasonably be expected to occur. Exposure scenarios that were evaluated include residential, commercial/industrial, construction workers and trespassers. In the FS, and in Tables 4 and 5 in this Preferred Plan, the selected exposure scenarios are labeled as follows: hypothetical residential land user, current/future recreational user, trespasser, future site worker, and future construction/excavation worker.

Step 3. Toxicity Assessment: The ability of the potential site COCs to cause adverse effects and the estimate of the relationship between the extent of exposure and the increased likelihood and/or severity of the adverse effects are evaluated. Two types of adverse effects are considered: cancer risk and non-cancer risk.

Step 4. Risk Characterization: A determination is made whether site risks are substantial enough to cause potential health problems for people at or near the site. The information from Steps 2 and 3 are combined for each COC to assess potential health risks. The likelihood of cancer resulting from exposure at a site is expressed as a probability of 1 in 100,000 or 1×10^{-5} . In other words, for every 100,000 people that could be exposed, one extra case of cancer may occur as a result of exposure to site COCs. For non-cancer health effects, a hazard quotient (HQ) or hazard index (HI) is calculated (quotient refers to the effects of an individual COC, whereas index refers to the combined effects of COCs). The key concept is that a "threshold level" (measured as an HQ or HI of 1) exists below which non-cancer health effects are not expected to occur to exposed populations or individuals. The potential risks from the individual pathways (e.g., inhalation, direct contact, ingestion) and individual chemicals, as appropriate, are added together to determine the total cumulative risk to human health.

The human health risk assessment evaluated potential adverse effects to human health posed by COCs in soil and sediment for the following exposure pathways: direct contact which includes ingestion, inhalation of particles and dermal absorption.

Soil and Sediment

Soil and sediment sampling data indicates that probable exposure concentrations (based upon a 95% upper confidence limit (UCL) of the mean average) of lead, arsenic and antimony in soil exceed the site-specific remediation goals and therefore pose an unacceptable risk/hazard to receptor populations. Maximum concentrations of lead, arsenic and antimony detected in each AOC are identified in **Table 2 Maximum COC Concentrations in each Area of Concern.**

TABLE 2 – MAXIMUM COC CONCENTRATIONS IN EACH AREA OF CONCERN			
Area of Concern	Antimony (max. conc. in ppm)	Arsenic (max. conc. in ppm)	Lead (max. conc. in ppm)
East Fenced Area	68	358	13,800
RMHA	Not Sampled	1,700	180,000
East Swale	604	530	23,500
South Ditch	52	239	16,200
Upper Creek Area	Not sampled	43	7,820
Deltaic Area	113	222	15,800
Non-Deltaic Area	19	37	2,760

The concentrations shown by the bold font are associated with likely adverse health effects and/or unacceptable excess lifetime cancer risk, which trigger the need for remedial actions.

2.4.2 Risks to Ecological Receptors

An ecological risk assessment (ERA) was conducted as part of the RI. The ERA was conducted to assess potential adverse effects of COCs on site ecological receptors. The aquatic environments, including the unnamed tributary of the OCA, the Scioto River and terrestrial habitats associated with the OCA, were evaluated in the ERA, which was completed pursuant to Ohio EPA and U.S. EPA guidance. A Level I scoping ERA determined that based on the history of activities and surrounding land use, the site has the potential to pose a risk to the environment. Therefore, a Level II screening ERA was conducted.

The Level II ERA included a comparison of site-specific data to screening benchmark values and the identification of relevant and complete exposure pathways between each source medium of concern and ecologically significant receptors for the potential ecological COCs. Evaluations of sediment, surface water and soil were included as part of the ecological assessment process. Lead was identified as the only potential COC.

A Level III baseline ERA was conducted following the Level II ERA as some areas exceeded screening levels for lead in soil and sediment. The Level III baseline ERA approach consisted of sediment bioassays and calculation of HQs using site-specific exposure factors, chemical-specific and species-specific toxicity values and representative endpoint species.

Upon completion of the baseline ERA, which included a weight of evidence evaluation of all ERA levels, it was determined that unacceptable risks to ecological receptors were unlikely. Therefore, site remediation goals were based only on potential human health concerns.

3.0 REMEDIAL ACTION OBJECTIVES

An FS report, to define and analyze appropriate remedial alternatives, was completed with Ohio EPA oversight and was approved on August 21, 2013. As part of the RI/FS process, RAOs were developed in accordance with 40 CFR Section 300.430 of the NCP, pursuant to the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §9601 et seq., as amended, and U.S. EPA guidance (*i.e.*, RI/FS Guidance (EPA/540/G-89/004)). The RAOs are goals that a remedy should achieve in order to ensure protection of human health and the environment. The RAOs for the site include those listed in **Table 3 and work in conjunction with Table 4 and Table 5**. Site specific and holistic RAOs were developed for the site and are included in Section 3.2.2 (pages 23 – 24) of the FS report.

TABLE 3—REMEDIAL ACTION OBJECTIVES

Soil	
Human Health Risk	Prevent ingestion/direct contact with soil having the carcinogen arsenic that would result in an excess lifetime cancer risk greater than 1×10^{-5} .
Human Health Risk	Prevent ingestion/direct contact with soil having the non-carcinogen antimony in that would result in a HQ greater than 1.
Human Health Risk	Prevent ingestion/direct contact with soil containing lead at a concentration that would result in a blood lead level greater than 10 $\mu\text{g/dL}$.
Sediment	
Human Health Risk	Prevent ingestion/direct contact with sediment having the carcinogen arsenic that would result in an excess lifetime cancer risk greater than 1×10^{-5} .
Human Health Risk	Prevent ingestion/direct contact with sediment having the non-carcinogen antimony in that would result in a HQ greater than 1.
Human Health Risk	Prevent ingestion/direct contact with sediment containing lead at a concentration that would result in a blood lead level greater than 10 $\mu\text{g/dL}$.

In the process of scoping and conducting the RI, generic preliminary remediation goals (PRGs) were established. These PRGs were converted to site-specific remediation goals (RGs) following completion of the RI and FS phase of the project. The FS report includes a list of RGs for protection of human health, established using the acceptable excess lifetime cancer risk and non-cancer hazard goals identified in the DERR Technical Decision Compendium document *Human Health Cumulative Carcinogenic Risk and Non-carcinogenic Hazard Goals for DERR Remedial Response and Federal Facility Oversight* dated August 21, 2009 (<http://www.epa.ohio.gov/portals/30/rules/riskgoal.pdf>).

These goals are 1×10^{-5} (i.e., 1 in 100,000) excess lifetime cancer risk and an HQ or HI of 1, and were established using the default exposure parameters provided by U.S. EPA or site-specific information. In addition, because of lead's unique toxicity, it was assessed, and PRGs were derived, using U.S. EPA guidance on lead exposures and developing remediation goals, found at: <http://www.epa.gov/superfund/lead/guidance.htm#interimsoillead>. The COCs and the PRGs, now considered final remediation levels (RLs) for the site are shown in **Table 4 Contaminants of Concern / Remediation Levels in Soil and Sediment**:

Table 4 - Contaminants of Concern / Remediation Levels in Soil and Sediment					
Exposure Scenario	Constituent	Risk-Based PRG¹ (in ppm)	USEPA RSL PRG² (in ppm)	VAP PRG³ (in ppm)	Selected Remediation Level (RL) (in ppm)
Future Site Worker (Commercial / Industrial)	Antimony	454	410	1,200	410
	Arsenic	1.77	24	82	33 ⁵
	Lead	2,240	800	1,800	800 ⁶
Current/Future Recreational User/Trespasser	Antimony	146	---	---	146
	Arsenic	1.82	---	---	33 ⁵
	Lead (GE) Lead (Ohio EPA)	4,905 1,505	---	---	1,505
Hypothetical Residential Land Use	Antimony	---	31	30	30
	Arsenic	---	6.1	6.7	33 ⁵
	Lead	---	400	400	400
Future Construction/ Excavation Worker	Antimony	1,550	---	390	390
	Arsenic	166	---	420	420
	Lead	---	---	750	750

Notes:

1. Risk-based PRGs developed by GE in Interim RAO Report or Ohio EPA (see Sections 3.3 and 3.4 of that document).
2. EPA RSLs for constituents other than lead are based on either a 10⁻⁵ risk level or a hazard quotient of 1.
3. Generic chemical-specific GDCS contained in Ohio EPA's VAP.
4. --- Indicates that PRG is not available or has not been developed for the given scenario.
5. Per Ohio EPA's June 14, 2011 letter on the Revised Interim RAO Report, the site-specific background concentration of 33 ppm for arsenic is to be used as the PRG when the scenario-specific risk-based values are below this concentration.
6. Ohio EPA specified the use of EPA's lead RSL of 800 ppm for the future site worker exposure scenario.

Table 5 Areas of Concern and Selected Exposure Scenarios provides a list of the site AOCs (also see **Figure 2 Site Areas of Concern Map**) and the associated exposure scenario (area / pathway).

Table 5 - Areas of Concern and Selected Exposure Scenarios	
Area of Concern	Selected Exposure Scenario
East Fenced Area (EFA)	Current/Future Recreational User / Trespasser
East Swale	Future Site Worker, and Future Construction/Excavation Worker
Former Raw Materials Handling Area (RMHA)	Future Site Worker, and Future Construction/Excavation Worker
South Ditch	Future Site Worker, and Future Construction/Excavation Worker
Upper Creek Area *	Hypothetical Residential Land User
Deltaic Area *	Current/Future Recreational User / Trespasser
Non-Deltaic Area *	Current/Future Recreational User / Trespasser

* These 3 areas are part of the Offsite Creek Area (OCA) (see **Figure 4 Off-Site Creek Area Plan**).

4.0 SUMMARY OF REMEDIAL ALTERNATIVES

A total of three remedial alternatives were considered in the FS, as shown in **Table 6 Summary of Site Remedial Alternatives**. A brief description of the major features of each remedial alternative follows. More detailed information can be found in the FS report.

TABLE 6 - SUMMARY OF SITE REMEDIAL ALTERNATIVES	
Remedial Alternatives	Description of Remedial Alternative
Remedial Alternative 1	No Action
Remedial Alternative 2	95% UCL Removal Scenario: Soil removal to 95% UCL in all areas except EFA; soil cover and fencing rehabilitation and maintenance in EFA; site institutional controls (activity and use limitations)
Remedial Alternative 3	Discrete Removal Scenario: Soil removal in discrete locations in all areas except EFA; soil cover and fencing rehabilitation and maintenance in EFA; site institutional controls (activity and use limitations)

4.1 No Action Alternative (Alternative 1)

The NCP requires evaluation of a no action alternative to establish a baseline for the comparison of other remedial alternatives. Under this alternative, no remedial activities or monitoring are conducted at the site to prevent exposure to contaminated media.

4.2 Soil/Sediment Alternatives (Alternatives 2 and 3)

Based on the results of the RI, only soils and sediments were identified as media requiring remediation. Remedial Alternatives 2 and 3 are similar in that they both involve rehabilitation of the soil cover and fencing for the EFA, adherence to institutional controls (*i.e.*, activity and use limitations) established on site property, and removal of contaminated soil in all AOCs (*i.e.*, East Swale, RMHA, South Ditch and OCA) except the EFA.

However, Alternative 2 involves the removal of contaminated soil/sediment until the 95% UCL of the mean residual lead concentrations for each AOC or subsections are equal to or less than applicable remediation levels. In comparison, Alternative 3 involves the removal of contaminated soil/sediment until the maximum lead concentration of each AOC or subsection is equal to or less than the applicable remediation levels.

For purposes of developing remedial alternatives and performing the comparative analyses of those alternatives, the 95% UCL removal scenario focused solely on achievement of the final remediation levels for lead, because:

- Elevated concentrations of arsenic and antimony are generally collocated with the elevated concentrations of lead.
- The release and transport mechanisms are similar for the contaminants that would typically result in these materials being found in the same locations.
- The sample data set for lead is significantly larger than the data sets for either arsenic or antimony.

Alternative 2: 95% UCL Removal Scenario

Under Alternative 2, soils/sediments containing lead at concentrations greater than the final remediation levels would be removed from each exposure unit from all AOCs until the concentrations remaining in soil/sediment result in 95% UCL concentrations less than the applicable lead remediation level.

General Explanation of 95% Upper Confidence Limit (UCL)

The technical definition of a 95% UCL is "a number that one can be 95% confident that the true mean (average) concentration of the population is below that value." A slightly simpler definition is that it is a level that Ohio EPA is confident is health protective when used to calculate risks and hazards.

All excavated materials would be subject to disposal at appropriately permitted off-site facilities. A total of approximately 4,260 cubic yards of material would be removed to achieve the lead remediation level applicable to each AOC. Alternative 2 includes excavation of contaminated soil from beneath the paved portion of the RMHA, and restoration of removal areas as appropriate. In addition, pre-removal remedial design sampling and analyses, pursuant to an Ohio EPA-approved remedial design work plan, would be conducted as necessary to further refine the cut lines for soil removal and to ensure that soil/sediment removal activities result in the achievement of the appropriate 95% UCL lead remediation levels.

The FS screening evaluation included an EFA sludge removal scenario, and estimated that between approximately 25,800 and 32,300 cubic yards of sludge materials would need to be removed. Excavation and off-site disposal costs for the EFA sludge were estimated at approximately \$10 million dollars not including the cost of the clean backfill and placement of the backfill. In addition, the environmental covenant recorded in December 2011 explicitly prohibits the disturbance of existing or future soil cover over the EFA. Given this information, the EFA sludge removal scenario was not considered in the Preferred Plan and the remedial component for the EFA in both Alternatives 2 and 3 is limited to rehabilitation of the existing soil cover and security fence.

Rehabilitation of the EFA includes clearing and grubbing and repair of the existing soil cover, followed by installation of a one-foot thick soil cover, and repair and/or replacement of the existing fence (and installation of new fencing as necessary) around the EFA. Annual site inspection and maintenance (e.g., minor fence repairs, mowing/clearing of vegetation, and minor soil cover repairs) of the EFA cover are also included.

Alternative 2 includes adherence to institutional controls established for site property. Site environmental covenants require development of and compliance with an Ohio EPA-approved soil management plan (SMP) establishing procedures for waste characterization and proper soil management and disposal methods for potential future intrusive construction/excavation activities that may be conducted at the site. With regard to future redevelopment, the environmental covenant established in 2011 for the former facility property may be amended to more specifically define the appropriate activity and use limitations.

In support of this alternative, an operation and maintenance plan (O&M plan) would be prepared to document protocols for inspections, maintenance, and annual verification of institutional controls. The O&M plan shall also document known locations of soil/sediment containing lead greater than the applicable lead remediation levels after the completion of the soil/sediment removal activities. Estimated Costs of Alternative 2 include:

Estimated Capital Cost	\$ 3,890,000
Estimated O&M Cost	\$ 500,000
Estimated Present Worth Cost	\$ 4,390,000
Estimated Construction Time	4 months

Alternative 3: Discrete Removal Scenario

Under Alternative 3, soils/sediments containing lead at each discrete sample location with concentrations greater than the applicable lead remediation levels would be removed from each AOC. The limits of soil removal for Alternative 3 were developed using the same procedures utilized in Alternative 2. A total of approximately 11,460 cubic yards of material would be removed to achieve the lead remediation levels applicable to each AOC. Alternative 3 includes the excavation of contaminated soil from beneath the paved portion of the RMHA, and restoration of removal areas as appropriate. An appropriate level of post-removal confirmatory sampling and analyses would be conducted as necessary to determine whether soil/sediment removal activities result in the achievement of the appropriate lead remediation levels.

The FS screening evaluation included an EFA sludge removal scenario, and estimated that between approximately 25,800 and 32,300 cubic yards of sludge materials would need to be removed. Excavation and off-site disposal costs for the EFA sludge were estimated at approximately \$10 million dollars not including the cost of the clean backfill and placement. In addition, the environmental covenant recorded in December 2011 explicitly prohibits the disturbance of existing or future soil cover over the EFA. Given this information, the EFA sludge removal scenario was not considered in the Preferred Plan and the remedial component for the EFA in both Alternatives 2 and 3 is limited to rehabilitation of the existing soil cover and security fence.

Rehabilitation of the EFA includes clearing and grubbing and repair of the existing soil cover, followed by installation of a one-foot thick soil cover, and repair and/or replacement of the existing fence (and installation of new fencing as necessary) around the EFA. Annual site inspection and maintenance (e.g., minor fence repairs, mowing/clearing of vegetation, and minor soil cover repairs) of the EFA cover are also included.

Alternative 3 includes adherence to institutional controls established for site property. Site environmental covenants require the development of and compliance with an Ohio EPA-approved SMP establishing procedures for waste characterization and proper soil management and disposal methods for potential future intrusive construction/excavation activities that may be conducted at the site. With regard to future redevelopment, the environmental covenant established in 2011 for the former facility property may be amended to more specifically define the appropriate activity and use limitations.

In support of this alternative, an operation and maintenance plan (O&M plan) would be prepared to document protocols for inspections, maintenance, and annual verification of institutional controls. Estimated Costs of Alternative 3 include:

Estimated Capital Cost	\$ 7,800,000
Estimated O&M Cost	\$ 500,000
Estimated Present Worth Cost	\$ 8,300,000
Estimated Construction Time	10 months

5.0 COMPARISON AND EVALUATION OF REMEDIAL ALTERNATIVES

5.1 Evaluation Criteria

Ohio EPA considers eight criteria, as outlined in the NCP, to evaluate the various remedial alternatives individually and compare them with each other in order to select a remedy. A more detailed analysis of the remedial alternatives can be found in the FS report. The eight evaluation criteria, including the threshold, balancing and modifying criteria are shown in **Table 7 Remedial Alternative Evaluation Criteria**.

TABLE 7 - REMEDIAL ALTERNATIVE EVALUATION CRITERIA
Threshold Criteria (2)
Overall Protection of Public Health and the Environment - determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, treatment, etc.
Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) - evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site, or whether a waiver is justified.
Balancing Criteria (5)
Long-Term Effectiveness and Permanence – evaluates the ability of an alternative to maintain protection of human health and the environment over time.
Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment – evaluates the amount of contamination present, the ability of the contamination to move in the environment, and the use of treatment to reduce harmful effects of the principal contaminants.
Short-Term Effectiveness – evaluates the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.
Implementability – evaluates the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.
Cost – includes estimated capital and annual operation and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent.
Modifying Criterion (1)
Community Acceptance – considers whether the local community agrees with Ohio EPA's analyses and preferred alternative. Comments received on the Preferred Plan are an important indicator of community acceptance.

Evaluation Criteria 1 and 2 are threshold criteria required for acceptance of an alternative. Any acceptable remedy must comply with both of these criteria. Evaluation Criteria 3 through 7 are the balancing criteria used to select the best remedial alternative(s) identified in the Preferred Plan. Evaluation Criterion 8, community acceptance, is evaluated through public comment on the alternatives received during the comment period.

5.2 Analysis of Evaluation Criteria

This section examines how each of the evaluation criteria is applied to each of the remedial alternatives listed in Section 4.0 and compares how the alternatives achieve the evaluation criteria.

Overall Protection of Human Health and the Environment

Evaluation of the overall protectiveness of the alternatives focused on whether each alternative achieves the threshold of adequate protection of human health and the environment, and identifies how site risks posed through each pathway being addressed are eliminated, reduced or controlled by the alternative. This evaluation includes consideration of whether the alternative poses any unacceptable short-term or cross-media impacts.

Alternative 1:

The "No Further Action" in Alternative 1 does not include active remedial measures to address contaminated media on- and off-site.

Alternatives 2 and 3:

Alternatives 2 and 3 both involve institutional controls, which include O&M plan components, but also include soil and sediment removal and EFA rehabilitation. Alternative 2 includes the removal of soil/sediment from select locations until the calculated 95% UCL of lead concentrations for the remaining data set do not exceed the applicable remediation levels. Under Alternative 2, the requirement for soil management plans in environmental covenants (which will be satisfied through the preparation of O&M plans) will manage safety practices and future construction/excavation worker exposure, and disposal methods for contaminated materials in the East Swale, South Ditch, and the Deltaic and Non-Deltaic Areas of the OCA. Portions of the RMHA not discussed in the former facility environmental covenant will also require characterization of wastes to determine the disposal method.

Alternative 3 includes the removal of all soil/sediment containing lead concentrations that exceed the lead remediation levels for the East Swale, RMHA, South Ditch, Upper Creek Area, and the Deltaic and Non-Deltaic Areas of the OCA. A soil management plan to manage safety practices during future construction/excavation would only be required in the Deltaic and Non-Deltaic Areas of the OCA because the remaining lead concentrations will be less than the applicable lead remediation level.

Alternatives 2 and 3 both result in post-remediation conditions that achieve the same level of risk reduction and make each area of concern safe for its intended future use.

Compliance with ARARs

This threshold criterion is evaluated based on whether the alternative meets federal and state environmental statutes and rules that strictly apply to remedial activities at the site, or those

statutes and rules whose requirements would help achieve the remedial goals for the site, or whether a waiver is justified. See **Appendix C ARARs Table** for additional detail.

Alternatives 2 and 3:

- *Chemical-Specific ARARs* – The list of chemical-specific ARARs for this site is included in the FS report. Potentially applicable chemical-specific ARARs include the Ohio EPA Voluntary Action Program (VAP), and generic numerical standards presented in Ohio Administrative Code (OAC) 3745-300-08. Additionally, OAC 3745-300-09 allows for the calculation of site-specific standards. The PRGs presented in the FS report were developed based on the Ohio VAP standard and site-specific risk calculations. Alternatives 2 and 3 include the removal of soils/sediments containing elevated lead concentrations. Both Alternative 2 and Alternative 3 would achieve the chemical-specific ARARs.
- *Action-Specific ARARs* – The list of action-specific ARARs for this site is included in the FS report. Potentially applicable action-specific ARARs include health and safety requirements and regulations associated with handling impacted media. Work activities would be conducted in accordance with Occupational Safety and Health Administration (OSHA) requirements that specify general industry standards, safety equipment and procedures, and record keeping and reporting regulations (*i.e.*, 40 CFR 264, 29 CFR 1910, 1926, and 1904). Compliance with these action-specific ARARs would be accomplished by following a site-specific health and safety plan (HASP).

Excavated material would be subject to U.S. Department of Transportation and any additional state of Ohio requirements for packaging, labeling, manifesting, and transporting hazardous or regulated materials (*i.e.*, 49 CFR Parts 107 and 171.1 through 172.558, and OAC 3745-52-11, 12, 14, 20, 22, 23, 30-34, 40, and 41). Compliance with these requirements, as well as ARARs related to air and water quality management, would be achieved by following an Ohio EPA-approved remedial design and using licensed waste transporters and permitted disposal facilities. All excavated material would be disposed of in accordance with applicable state and federal land disposal regulations (*e.g.*, OAC 3745-270 and -57).

- *Location-Specific ARARs* – The list of potentially applicable location-specific ARARs are included in the FS report and generally include regulations on conducting construction/remedial activities on flood plains/wetlands. Compliance with these ARARs would be achieved by obtaining any necessary permits prior to conducting remediation activities. Both Alternatives 2 and 3 would be equally effective at achieving the location-specific ARARs. Additionally, remedial activities would be conducted in accordance with the city of Circleville building/construction codes and ordinances, as applicable.

Alternative 1 (No Action) does not meet the threshold criteria (overall protection of human health and the environment; compliance with ARARs) so is eliminated from further consideration and is not carried forward in the evaluation of the remedial alternatives.

Long-Term Effectiveness and Permanence

Alternatives 2 and 3:

Both Alternatives 2 and 3 include the same institutional control components listed in Alternative 1. Alternatives 2 and 3 are protective of human health and the environment and achieve the established RAOs through the removal of soils/sediments with the elevated lead concentrations.

Alternatives 2 and 3 also include annual verification of institutional controls, preparation of an O&M plan and rehabilitation of the EFA, including repair/ replacement/installation of new fencing.

Under Alternative 2, potential exposures to remaining/residual site contamination in the EFA, East Swale, South Ditch, RMHA and the Deltaic and Non-Deltaic Areas of the OCA would be mitigated by following the procedures established in the O&M plan.

Under Alternative 3, potential exposures to remaining/residual site contamination in the EFA, and the Deltaic and Non-Deltaic Areas of the OCA would be mitigated by following the procedures established in the O&M plan. However, the East Swale, RMHA, Upper Creek Area and the South Ditch would not be included in the O&M plan.

Alternatives 2 and 3 are not anticipated to have negative long-term impacts to the environment as a result of remedial construction activities. Following removal of the contaminated soil/sediment, disturbed areas would be restored to pre-construction levels and grades and vegetated, as appropriate.

Reduction of Toxicity, Mobility or Volume by Treatment

Alternatives 2 and 3:

Both remedial alternatives do not reduce the toxicity, mobility or volume through a treatment process. However, both Alternatives 2 and 3 would reduce the volume of contaminated soils/sediments through excavation and removal from the site.

Alternative 2 would include excavation of approximately 4,260 cubic yards of contaminated soils/sediments, as required until the calculated 95% UCL lead concentrations for the remaining data set do not exceed the applicable lead remediation levels. Alternative 3 would include the excavation of approximately 11,460 cubic yards of soil/sediment containing discrete lead concentrations that exceed the applicable lead remediation levels. Under both alternatives, excavated material would be transported offsite for disposal at either a non-hazardous solid waste landfill or hazardous waste landfill (*i.e.*, depending on the results of waste characterization sampling).

Short-Term Effectiveness

Alternatives 2 and 3:

Alternatives 2 and 3 both involve soil excavation to address soil/sediment contamination.

Both Alternatives 2 and 3 pose potential short-term risks to remedial workers, the environment and the public from potential exposure to contaminated soil/sediment during excavation, transportation of excavated material, and backfilling. Additionally, the activities conducted under these alternatives would pose short-term risks from the operation of construction equipment and generation of noise and dust.

Alternative 3 would cause greater disruption to the natural environment and surrounding community than Alternative 2.

Specifically, Alternative 3 would require excavation and/or restoration activities within an area measuring approximately 6.5 acres, while Alternative 2 would require excavation and/or restoration activities within an area measuring approximately 2.5 acres. Therefore, Alternative 2 would require less than 40% of the excavation and/or restoration footprint required to implement Alternative 3, while achieving the same level of risk reduction.

In addition, nuisances to the surrounding community would include noise from the operation of construction equipment and an increase in local truck traffic due to transportation of excavated materials and importation of fill materials. Estimated duration of remedial construction activities for each of the alternatives and number of truck trips required for each alternative are:

- Alternative 2 – 4 months and 420 truck trips
- Alternative 3 – 10 months and 1,110 truck trips

Potential exposures during implementation of these alternatives would be mitigated, to the extent practicable, by using appropriate personal protective equipment, conducting community air and work space monitoring, implementing dust control (e.g., water sprays) and noise mitigation measures (as appropriate, and if necessary based on monitoring results), and proper planning and training of remedial workers. Additionally, erosion and sediment controls would be used to minimize impacts to the environment. Health and safety practices and protective measures would be developed/included as part of the remedial design and HASP.

The potential for short-term harm to the public, the environment and remedial workers inherently increases as the volume of excavated material and number of truck trips increases. Alternative 2 would be the least disruptive to the natural environment and the surrounding community, would provide a smaller potential for exposures to remedial workers and the public, and would require the shortest time to implement.

Therefore, Alternative 2 has the greater short-term effectiveness, while achieving the same level of risk reduction as Alternative 3.

Implementability

Alternatives 2 and 3:

Alternatives 2 and 3 would include excavation of contaminated soil/sediments, rehabilitation of the EFA, and preparation of an O&M plan. From a technical implementation standpoint, these activities do not require highly specialized equipment (beyond the potential use of low ground pressure equipment, tundra mats, and/or other equipment designed for use in wetland environments) or personnel, and could be easily implemented. Remedial contractors capable of conducting these activities are readily available.

Alternatives 2 and 3 have similar implementation challenges associated with access to the soil/sediment removal areas. Temporary construction roads would be constructed to facilitate access to the South Ditch, Upper Creek Area, and OCA. In addition, support areas would likely be constructed in the vicinity of the Upper Creek Area and OCA during the excavation of material due to the relative lack of working space in those areas.

Alternatives 2 and 3 will require compliance with the substantive requirements of a Section 404 Permit from the U.S. Army Corps of Engineers and a Section 401 Permit from Ohio EPA's Division of Surface Water, before performing the soil/sediment removal operation activities. Water management in the streams/drainage ditches will present a challenge for both Alternatives 2 and 3. As a result, bypass pumping will likely be required to divert surface water flow around soil/sediment removal areas and material dewatering/solidification may be required to condition the excavated materials prior to transportation to the applicable offsite disposal facilities.

Institutional controls in the form of environmental covenants have been established for the former facility and the portion of the OCA owned by the Richard entities. With regard to future redevelopment, the Environmental Covenant established in 2011 for the former facility property may be amended to more specifically define the appropriate activity and use limitations.

Cost

Alternatives 2 and 3:

Alternative 3 corresponds to the greatest removal volume (approximately 2.7 times the amount removed under Alternative 2), and is approximately 1.9 times as expensive as Alternative 2.

Alternatives 2 and 3 would include the same EFA rehabilitation and O&M plan components. Alternative 2 would include verification of institutional controls and site inspection/maintenance components to limit potential future exposures to remaining/residual impacts in the EFA, East Swale, South Ditch, RMHA and appropriate OCA portions.

The estimated present worth cost of Alternative 2 is \$4,390,000. The estimated present worth cost of Alternative 3 is \$8,300,000. The FS report provided a separate breakdown of the estimated costs for the East Swale, RMHA, South Ditch, Upper Creek Area and OCA.

Community Acceptance

Ohio EPA did not receive any comments at the public hearing held on April 9, 2014 nor during the public comment period which ran between March 4, 2014 and April 18, 2014.

5.3 Summary of Evaluation Criteria

A summary of the evaluation of the site remedial alternatives is included in **Table 8 Evaluation of Site Remedial Alternatives**.

TABLE 8 EVALUATION OF SITE REMEDIAL ALTERNATIVES								
Remedial Alternatives	Threshold Criteria		Balancing Criteria					Modifying Criteria
	1. Protects Human Health & Environment	2. Compliance With ARARs	3. Long-term Effectiveness	4. Reduces In-Mand/or-V by Treatment	5. Short-term Effectiveness	6. Implementable	7. Cost	
1	<input type="checkbox"/>	<input type="checkbox"/>						
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

= Fully Meets Criteria
 = Partially Meets Criteria
 = Does Not Meet Criteria

6.0 OHIO EPA'S SELECTED REMEDIAL ALTERNATIVE

Ohio EPA's selected remedial alternative for the former RCA/Thomson Site is Alternative 2 (95% UCL Removal Scenario), which includes removal of contaminated soil from the East Swale, South Ditch, RMHA and OCA, rehabilitation and maintenance of the EFA soil cover and fence, and adherence to institutional controls established in environmental covenants on the former facility property and on portions of the OCA. With regard to future redevelopment, the environmental covenant established in 2011 for the former facility property may be amended to more specifically define the appropriate activity and use limitations.

Alternative 2 is protective of human health and the environment, complies with ARARs established for the site, and achieves the site-specific RAOs. The estimated total cost of the Ohio EPA-selected remedial alternative is \$4,390,000. Alternative 2 is nearly 50% less expensive than Alternative 3 yet has similar results with regard to the remaining evaluation criteria. Based on information presently available, it is Ohio EPA's current judgment that the

selected remedial alternative best satisfies the evaluation criteria in **Table 8 Evaluation of Site Remedial Alternatives**. The elements of the selected remedial alternative are as follows:

6.1 Selected Remedial Alternative Components and Performance Standards

The major remedial components of Alternative 2 and their associated performance standards are soil and sediment removal based on a 95% UCL approach, rehabilitation and maintenance of the EFA and institutional controls. Details on the remedial components and associated performance standards are provided in Sections 6.1.1 through 6.1.3 below:

6.1.1 Soil and Sediment Removal

Alternative 2 includes the removal through excavation of soil/sediment, as necessary until the calculated 95% UCL lead concentrations do not exceed the applicable remediation levels in each AOC (*i.e.*, East Swale, South Ditch, RMHA, and OCA (Upper Creek Area, Deltaic Area, and Non-Deltaic Area)), as follows:

- The East Swale, RMHA and South Ditch will have soil/sediment removed to meet the construction worker lead value of 750 ppm in the calculated 95% UCL concentration.
- The Upper Creek Area in the OCA will have soil/sediment removed to meet the unrestricted (*e.g.*, residential) land use lead value of 400 ppm in the calculated 95% UCL concentration.
- The Deltaic and Non-Deltaic Areas of the OCA will have soil/sediment removed to meet the trespasser lead value of 1,505 ppm in the calculated 95% UCL concentration.

As noted previously, lead was selected as the “driver” contaminant to guide future soil and sediment removal. With regard to soil/sediment excavation limit planning, the limits were preliminarily established by extending the horizontal and vertical limits of removal from locations where lead concentrations exceeded remediation levels to the nearest adjacent sampling location with a lead concentration that did not require removal to meet the appropriate remediation level. If such a sample analytical data point/location was not available, the planned limits of soil removal were extended to a topographic boundary feature (*e.g.*, steep ditch embankment, culvert). An estimated total of 4,260 cubic yards of material will be removed under Alternative 2 to achieve the lead PRG applicable to each area of concern. This total includes the excavation of the contaminated soil (via 95% UCL) beneath a paved portion (*i.e.*, concrete pad) of the RMHA, which Ohio EPA will require as part of Alternative 2.

Pre-removal remedial design sampling and analyses, pursuant to an Ohio EPA-approved remedial design work plan, will be conducted as necessary to further refine the “cut lines” for soil removal and to ensure that soil/sediment removal activities result in the achievement of the appropriate 95% UCL lead remediation levels.

Excavated soil/sediment material will be transported to appropriate off-site disposal facilities and removal areas will be restored to match pre-construction levels, grades and vegetation. The concrete removed during excavation from the RMHA will be disposed of in an appropriate manner. Post-removal restoration activities (vegetating and landscaping) are to begin immediately after the completion of backfilling and grading such that stream erosion is minimized in compliance with the substantive requirements of any necessary pre-removal permits (e.g., Section 404 and 401 permits).

The long-term O&M plan to be prepared (and approved by Ohio EPA), primarily in association with the EFA cover and fencing (detailed in 6.1.2 below), will include details on the components of and the process for submittal and approval of any soil management plans. It will also include a site map of any known location of soil containing lead greater than the applicable lead concentrations, after completion of the soil and sediment removal activities using the 95% UCL approach. This information will be provided (and available to future land owners and developers) to establish protocols (including health and safety requirements) for conducting construction/excavation activities, and managing and disposing (as necessary) of potentially contaminated material encountered during such activities, post removal.

Performance Standard:

- The performance standard is met when contaminated soils/sediments have been removed in accordance with the cut lines for soil removal established based on the 95% UCL cleanup levels for lead, as further refined in pre-removal sampling and analyses conducted pursuant to an Ohio EPA-approved remedial design work plan.

6.1.2 Rehabilitation and Maintenance of the EFA

The existing soil and vegetative cover on the EFA will be cleared and grubbed, and rehabilitated through the installation of a one-foot thick soil cover. The soil cover will be graded and vegetated to minimize erosion and ensure a protective barrier is established to prevent contact with the material. In addition, the existing fenced area will be expanded as necessary to fully secure the material within the EFA, and new fencing will be added as appropriate. An Ohio EPA-approved O&M plan, to include long-term maintenance of the soil cover and fence, will also be necessary.

Performance Standards:

- The performance standard is met when the one-foot thick soil cover is placed, graded, and vegetated, and the EFA area of contamination is surrounded by a security fence, per the Ohio EPA-approved work plan.
- The performance standard is met when Ohio EPA approves the site O&M plan.

6.1.3 Institutional Controls

Institutional controls (*i.e.*, activity and use limitations) were established on the former facility manufacturing areas through an environmental covenant recorded on December 28, 2011

with the Pickaway County Recorder's Office. With regard to future redevelopment, this environmental covenant may be amended to more specifically define the appropriate activity and use limitations. Another environmental covenant was recorded on August 16, 2012, placing activity and use limitations on the Deltaic and Non-Deltaic Areas of the OCA. See **Appendix D** for copies of the environmental covenants.

Current and future owners of these site parcels will need to adhere to and comply with all activity and use limitations included in the environmental covenants. Ohio EPA will conduct periodic inspections to monitor compliance with the environmental covenants.

Performance Standard:

- The performance standard is met through adherence to and compliance with the institutional controls included in environmental covenants established for the site property, as reviewed by Ohio EPA during periodic inspections, including property and record reviews, until such institutional controls are no longer necessary.

7.0 DOCUMENTATION OF SIGNIFICANT CHANGES

Ohio EPA did not receive any public comments on the Preferred Plan, and no significant changes have been made to the selected remedial alternative.

8.0 RESPONSIVENESS SUMMARY

A public meeting/hearing was held on April 9, 2014 to present the Ohio EPA's Preferred Plan for the former RCA/Thomson site and to solicit public comment. Additionally, oral and written comments were accepted at this meeting and during the comment period that ran from March 4, 2014 to April 18, 2014.

Ohio EPA did not receive any comments at the public meeting/hearing nor during the public comment period.

Appendix A - Glossary of Terms

<p>Administrative Record: All documents that Ohio EPA considered or relied on in selecting a remedial action for a site.</p>
<p>Aquifer: An underground geological formation capable of holding and yielding water.</p>
<p>Applicable or Relevant and Appropriate Requirements (ARARs): Those statutes and rules that strictly apply to remedial activities at the site or those statutes and rules whose requirements would help achieve the remedial goals for the site.</p>
<p>Baseline Risk Assessment: An evaluation of the risks to humans and the environment posed by a site in the absence of any remedial action, which also determines the extent of cleanup needed to reduce potential risk levels to within acceptable ranges.</p>
<p>Carcinogen: A chemical that causes cancer.</p>
<p>CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq. A federal law that regulates cleanup of hazardous substances sites under the U.S. EPA Superfund Program.</p>
<p>Contaminants of Concern (COCs): Chemicals identified at the site that are present in concentrations that may be harmful to human health or the environment.</p>
<p>Decision Document: A statement issued by the Ohio EPA giving the director's selected remedy for a site and the reasons for its selection.</p>
<p>Ecological Receptor: Animals or plant life exposed or potentially exposed to chemicals released from a site.</p>
<p>Environmental Covenant: A servitude arising under an environmental response project that imposes activity and use limitations and that meets the requirements established in section 5301.82 of the Ohio Revised Code.</p>
<p>Exposure Pathway: Route by which a chemical is transported from the site to a human or ecological receptor.</p>
<p>Feasibility Study: A study conducted to ensure that appropriate remedial alternatives are developed and evaluated such that relevant information concerning the remedial action options can be presented to a decision-maker and an appropriate remedy can be selected.</p>
<p>Final Cleanup Levels: Final cleanup levels identified in the Decision Document along with the RAOs and performance standards.</p>
<p>Hazardous Substance: A chemical that may cause harm to humans or the environment.</p>
<p>Hazardous Waste: A waste product listed or defined by RCRA that may cause harm to humans or the environment.</p>
<p>Human Receptor: A person/population exposed to chemicals released at a site.</p>
<p>Leachate: Water that collects contaminants as it migrates through wastes, pesticides or fertilizers. Leaching may occur in farming areas and landfills, and may result in hazardous substances entering surface water, ground water, soil or sediment.</p>

<p>Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in a public drinking water supply. The level is established by U.S. EPA and incorporated into sections 3745-81-11 and 3745-81-12 of the Ohio Administrative Code.</p>
<p>Monitoring Well: A well installed to collect ground water samples for the purpose of physical, chemical, or biological analyses to determine the amounts, types, and distribution of contaminants in ground water beneath a site.</p>
<p>NCP: National Oil and Hazardous Substances Pollution Contingency Plan, codified at 40 C.F.R. Part 300 (1990), as amended. A framework for remediation of hazardous substance sites specified in CERCLA.</p>
<p>Operation and maintenance (O&M): Long-term measures taken at a site, after the initial remedial actions, to assure that a remedy remains protective of human health and the environment.</p>
<p>Performance Standard: Measures by which Ohio EPA determines if RAOs are being met.</p>
<p>Preferred Plan: The plan that evaluates the preferred remedial alternative chosen by Ohio EPA to remediate the site in a manner that best satisfies the evaluation criteria.</p>
<p>Preliminary Remediation Goal (PRG): Initial clean-up goals that (1) are protective of human health and the environment and (2) comply with ARARs. They are developed early in the process (scoping) based on readily available information and are modified to reflect the results of the baseline risk assessment (termed RGs at this point in time). They are also used during the analysis of remedial alternatives in the RI/FS.</p>
<p>RCRA: Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. 6901 et seq. A federal law that regulates the handling of hazardous wastes.</p>
<p>Remedial Action Objectives: Specific remedial goals for reducing risks posed by the site.</p>
<p>Remedial Investigation: A study conducted to collect information necessary to adequately characterize the site for the purpose of developing and evaluating effective remedial alternatives.</p>
<p>Responsiveness Summary: A summary of all comments received concerning the Preferred Plan and Ohio EPA's response to the comments.</p>
<p>Sediment: Topsoil, sand and minerals washed from the land into water, usually after rain or snow melt.</p>
<p>Water Quality Criteria: Chemical, physical and biological standards that define whether a body of surface water is unacceptably contaminated. These standards are intended to ensure that a body of water is safe for fishing, swimming and as a drinking water source. These standards can be found in Chapter 3745-1 of the Ohio Administrative Code.</p>

Appendix B Primary Contaminants of Concern

A total of three (3) primary contaminants of concern (COCs) have been identified that pose the greatest potential risk to human health and the environment at this site. Additional details on each primary COC (from the Agency for Toxic Substances and Disease Registry ([ATSDR Toxicological Profiles](#))) are provided below.

Antimony is a silvery-white metal that is found in the earth's crust. Antimony isn't used alone because it breaks easily, but when mixed into alloys, it is used in lead storage batteries, solder, sheet and pipe metal, bearings, castings, and pewter. Antimony oxide is added to textiles and plastics to prevent them from catching fire. It is also used in paints, ceramics, and fireworks, and as enamels for plastics, metal, and glass. Breathing high levels for a long time can irritate your eyes and lungs and can cause heart and lung problems, stomach pain, diarrhea, vomiting, and stomach ulcers. Ingesting large doses of antimony can cause vomiting. Long-term animal studies have reported liver damage and blood changes when animals ingested antimony. Antimony can irritate the skin following long term exposure.

Arsenic is a naturally occurring element widely distributed in the earth's crust. In the environment, arsenic can combine with oxygen, chlorine and sulfur to form inorganic arsenic compounds. The main use of inorganic arsenic compounds is to preserve wood. Organic arsenic compounds are used primarily as pesticides. Breathing high levels of inorganic arsenic can cause throat and lung irritation. Ingesting high levels of arsenic can result in death, while at lower levels it can result in nausea, decreased red and white blood cell production, and damage to blood vessels. Skin contact can cause redness and swelling. Arsenic is a known human carcinogen.

Lead is a naturally occurring bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of the environment, but much of it comes from human activities including the burning of fossil fuels, mining and manufacturing. Lead is used in the production of batteries, ammunition, metal products (solder and pipes), and devices to shield X-rays, and was a common additive to gasoline in the U.S. until it was banned in 1996. The effects of lead are the same whether exposure is through ingestion or inhalation. It affects almost every organ in the body, though the main target is the nervous system. Long term exposure can result in decreased nervous system functionality, and it may cause weakness in fingers, wrists and ankles. Exposure to high levels can severely damage the brain and kidneys, and ultimately cause death. U.S. EPA has determined that lead is a probable human carcinogen.

APPENDIX B

RD/RA SOW



APPENDIX B

GENERIC STATEMENT OF WORK FOR CONDUCTING REMEDIAL DESIGNS AND REMEDIAL ACTIONS (RD/RA SOW)

OHIO ENVIRONMENTAL PROTECTION AGENCY DIVISION OF ENVIRONMENTAL RESPONSE AND REVITALIZATION REMEDIAL RESPONSE PROGRAM

1.0 PURPOSE

The purpose of this Remedial Design/Remedial Action Statement of Work (RD/RA SOW) is to define the procedures the Respondent(s) shall follow in designing and implementing the selected remedy for the Site as described in this SOW and the Director's Final Findings and Orders (Orders) to which it is attached. The Division of Environmental Response and Revitalization (DERR) documented the selection of a remedy for the Site in the Decision Document, which is attached to the Orders. The intent of the remedy is to protect the public health and/or the environment from the actual or potential adverse effects of the contaminants discovered at and related to the site. Further guidance for performing the RD/RA work tasks may be found in the U.S. EPA Superfund Remedial Design and Remedial Action Guidance document (OSWER Directive 9355.0-4A). All applicable regulatory requirements pertaining to the selected remedy and RD/RA activities shall be followed.

The Ohio EPA shall provide oversight of the Respondent's activities throughout the RD/RA. The Respondent's shall support the Ohio EPA's initiatives and conduct of activities related to the implementation of oversight activities.

2.0 DESCRIPTION OF THE REMEDIAL ACTION/ PERFORMANCE STANDARDS

Performance standards and specifications of the major components of the remedial action to be designed and implemented by the Respondent(s) are described below. Performance standards shall include cleanup standards, standards of control, quality criteria, and other requirements, criteria or limitations as established in the Decision Document, this SOW and the Orders to which it is attached.

See Appendix A, Decision Document, for description of the Remedial Action

RD/RA SOW

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components and associated performance standards.

3.0 SCOPE OF THE REMEDIAL DESIGN AND REMEDIAL ACTION

The Remedial Design/Remedial Action (RD/RA) shall consist of seven principal tasks described below. Each task shall be completed and required documentation shall be submitted in accordance with the schedules established in the Orders and in the RD/RA Work Plan approved by Ohio EPA. All work related to this SOW shall be performed by the Respondent(s) in a manner consistent with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended, 42 USC 9601, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300 (1990), and other applicable federal and state rules and regulations.

Task Summary

- 3.1 Task I: RD/RA Work Plan
 - 3.1.1 Site Access
 - 3.1.2 Pre-Design Studies Plan
 - 3.1.3 Regulatory Compliance Plan
 - 3.1.4 Natural Resource Damage Assessment
- 3.2 Task II: Pre-Design Studies
- 3.3 Task III: Remedial Design
 - 3.3.1 General Requirements for Plans and Specifications
 - 3.3.2 Design Phases
 - 3.3.3 Estimated Cost for Remedial Action
 - 3.3.4 Remedial Action Implementation Plan
 - 3.3.5 Community Relations Support
- 3.4 Task IV: Remedial Action Construction
 - 3.4.1 Preconstruction Inspection and Conference
 - 3.4.2 Design Changes During Construction
 - 3.4.3 Remedial Action Construction Completion and Acceptance
 - 3.4.4 Community Relations Support
- 3.5 Task V: Five-Year Reviews
- 3.6 Task VI: Operation and Maintenance/Performance Monitoring
 - 3.6.1 Reporting During Operation and Maintenance
 - 3.6.2 Completion of Remedial Action Report

- 3.7 Task VII: Reporting Requirements
 - 3.7.1 Monthly Progress Reports during RD and RA Construction
 - 3.7.2 Summary of Reports and Submittals

3.1 TASK I: RD/RA WORK PLAN

The Respondent(s) shall submit a work plan for the Remedial Design and Remedial Action (RD/RA) to the Ohio EPA for review and approval, which presents the overall strategy for performing the design, construction, operation, maintenance and monitoring of the Remedial Action (RA). The work plan shall provide a detailed discussion of the specific tasks necessary to implement the selected remedy, including a description of the technical approach, personnel requirements, plans, specifications, permit requirements and other reports described in this SOW.

The work plan shall document the responsibilities and authority of all organizations and key personnel involved with the development and implementation of the RD/RA. The qualifications of key personnel directing the RD/RA tasks, including contractor personnel, shall be described.

The work plan shall include schedules fixed in real time for the development of the (RD) and implementation of the RA, including milestones for the submittal of the document packages for Ohio EPA review and meetings for discussion of the submittals. The RD/RA Work Plan must be reviewed and approved by the Ohio EPA prior to initiation of field activities or proceeding with the RD.

Specific requirements to be addressed by the RD/RA Work Plan are described in the following sections.

3.1.1 Site Access

All site access agreements necessary to implement the RD and RA shall be obtained by the Respondent(s) prior to the initiation of any activities to be conducted under the Work Plan. Site access agreements shall extend for the duration of all remedial activities and shall include allowances for all operation and maintenance considerations and State oversight activities. The work plan shall describe the activities necessary to satisfy these requirements.

3.1.2 Pre-Design Studies Plan

The Respondent(s) shall develop a plan to complete the following pre-design studies, which are required to design and fully implement the remedial action.

[Describe any pre-design studies required to support the RD/RA.]

The Pre-Design Studies Plan (PDSP), as a component of the RD/RA Work Plan, will identify and describe, in detail, activities necessary to conduct the pre-design studies identified above. The plan shall include sufficient sampling, testing, and analyses to develop quantitative performance, cost and design data for the selected remedy.

At the discretion of the Site Coordinator for the Ohio EPA, the PDSP may be submitted for review and comment under separate cover from the work plan in accordance with the schedule established in the Orders. The PDSP must be approved by the Ohio EPA prior to initiation of associated field activities or treatability studies.

The Pre-Design Studies Plan shall include, as necessary, a Field Sampling Plan (FSP), a Quality Assurance Project Plan (QAPP) and a Health and Safety Plan (HSP). Section 4.0 of this SOW describes the required content of supporting plans such as the Field Sampling Plans, Quality Assurance Project Plans and Health and Safety Plans.

Prior to development of the Pre-Design Studies Plan, there shall be a meeting of the Site Coordinator for the Ohio EPA and the Project Manager representing the Respondent(s) to discuss scope, objectives, quality assurance and quality control issues, resources, reporting, communication channels, schedule, and roles of personnel involved. Other personnel representing the Respondent(s) and Ohio EPA, who may be needed to fully discuss the issues involved, should also participate in this meeting. Guidance documents to be consulted in developing the Pre-Design Studies Plan include U.S. EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies (EPA/540/G-89/004, October 1988) and Guide for Conducting Treatability Studies Under CERCLA (EPA/540/2-89/058, December 1989), as well as others listed in Appendix A, attached to this SOW.

The pre-design studies will be conducted as described under Task II.

3.1.3 Regulatory Compliance Plan

It shall be the responsibility of the Respondent(s) to ensure compliance with all applicable regulatory state and federal requirements for the RD/RA activities to be conducted at the site. The Respondent(s) shall develop a plan to identify and to satisfy all applicable state and federal laws and regulations for the RD/RA. The plan will include the following information:

- 1) Permitting authorities
- 2) Permits required to conduct RD/RA activities

- 3) Time required by the permitting agency(s) to process permit applications
- 4) Identification of all necessary forms
- 5) Schedule for submittal of applications
- 6) All monitoring and/or compliance testing requirements

The Respondent(s) shall identify in the plan any inconsistencies between any regulatory requirements or permits that may affect any of the work required. The plan shall also include an analysis of the possible effects such inconsistencies may have on the remedial action, recommendations, and supporting rationale for the recommendations. The Regulatory Compliance Plan shall be submitted to the Ohio EPA as part of the RD/RA Work Plan.

3.1.4 Natural Resource Damage Assessment

If natural resources are or may be injured as a result of a release, the Respondent(s) shall ensure that the trustees of the effected natural resources are notified. The trustees will initiate appropriate actions and provide input into the RD/RA in order to minimize or mitigate natural resource damages in accordance with the NCP and 43 CFR part 11. Trustees define "injury" as "a measurable adverse change, either long- or short-term, in the chemical or physical quality of a natural resource resulting either directly or indirectly from exposure to a discharge of oil or release of a hazardous substance. The Respondent(s) shall make available to the trustees all necessary information and documentation needed to assess actual or potential natural resource injuries.

3.2 TASK II: PRE-DESIGN STUDIES

The Respondent(s) shall schedule and detail the work necessary to accomplish the pre-design studies described in the Pre-Design Studies Plan submitted with the RD/RA Work Plan. The requirements of this section shall apply to studies undertaken to refine the understanding of the nature and extent of contamination at the site, as well as to bench and pilot scale treatability studies.

For any such studies required, the Respondent(s) shall furnish all services, including necessary field work, materials, supplies, labor, equipment, supervision, and data interpretation. Sufficient sampling, testing, and analyses shall be performed to provide the technical data necessary to support the remedial design effort with the goal of optimizing the required treatment and/or disposal operations and systems.

The Respondent(s) shall submit a draft Pre-Design Studies report for Ohio EPA's review and comment when the investigation and/or testing required by the Pre-Design Studies Plan is complete. The draft report shall present investigation/testing data and results along with an analysis of the implications those results have on the RD/RA, including a cost analysis, when appropriate. The draft report shall be submitted prior to the preliminary design submittal in accordance with the schedule specified in the Orders

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and approved RD/RA Work Plan. After making any required corrections or modifications based on Ohio EPA comments, the Respondent(s) shall submit the final report with the Preliminary Design Report, unless otherwise specified in the approved RD/RA Work Plan.

3.2.1. Reporting Requirements for Groundwater data.

The Respondent(s) shall submit all groundwater data and monitoring well construction data. The Respondent(s) shall implement a groundwater monitoring program as identified in the RD workplan or as required by Ohio EPA. Respondent(s) shall submit all groundwater data and monitoring well construction data on a 3.5 inch diskette using the most current version of the U.S. EPA developed Ground Water Information Tracking System (GRITS) database software. GRITS is free software, and can be obtained by calling EPA office of Research and Development (ORD), at 513-569-7562, ask for Document # EPA/625/11-91/002. Respondent(s) shall submit one copy of each round of sampling data on printed paper in addition to the diskette format. The printed copy will be the official copy of the data.

3.3 TASK III: REMEDIAL DESIGN

The Respondent(s) shall prepare and submit to the Ohio EPA, in accordance with the schedule set forth in the compliance schedule of the Orders, construction plans, specifications and supporting plans to implement the remedial action at the Site as defined in the Purpose and Description of the Remedial Action sections of this SOW, the Decision Document, and/or the Orders.

3.3.1 General Requirements for Plans and Specifications

The construction plans and specifications shall comply with the standards and requirements outlined below. All design documents shall be clear, comprehensive and organized. Supporting data and documentation sufficient to define the functional aspects of the remedial action shall be provided. Taken as a whole, the design documents shall demonstrate that the remedial action will be capable of meeting all objectives of the Decision Document, including any performance standards.

The plans and specifications shall include the following:

- 1) Discussion of the design strategy and design basis including:
 - a. Compliance with requirements of the Decision Document and the Orders and all applicable regulatory requirements;
 - b. Minimization of environmental and public health impacts;

- 2) Discussion of the technical factors of importance including:
 - a. Use of currently accepted environmental control measures and technologies;
 - b. The constructability of the design;
 - c. Use of currently accepted construction practices and techniques;
- 3) Description of the assumptions made and detailed justification for those assumptions;
- 4) Discussion of possible sources of error and possible operation and maintenance problems;
- 5) Detailed drawings of the proposed design including, as appropriate:
 - a. Qualitative flow sheets;
 - b. Quantitative flow sheets;
- 6) Tables listing equipment and specifications;
- 7) Tables giving material and energy balances;
- 8) Appendices including:
 - a. Sample calculations (one example presented and clearly explained for significant or unique calculations);
 - b. Derivation of equations essential to understanding the report;
 - c. Results of laboratory tests, field tests and any additional studies.

3.3.2 Design Phases

The Respondent(s) shall meet when necessary with Ohio EPA representatives to discuss design issues. The design shall be developed and submitted in the phases outlined below to facilitate progression toward an acceptable and functional design.

Submittals shall be made in accordance with the compliance schedule in the Orders, and the schedule in the approved RD/RA Work Plan.

3.3.2.1 Preliminary Design

A Preliminary Design, which reflects the design effort at approximately 30% completion, shall be submitted to the Ohio EPA for review and comment. At this stage of the design process, the Respondent(s) shall have verified existing conditions at the site that may influence the design and implementation of the selected RA. The Preliminary Design shall demonstrate that the basic technical requirements of the remedial action

and any permits required have been addressed. The Preliminary Design shall be reviewed to determine if the final design will provide an operable and usable RA that will be in compliance with all permitting requirements and response objectives. The Preliminary Design submittal shall include the following elements, at a minimum:

- ! Preliminary plans, drawings and sketches, including design calculations;
- ! Results of treatability studies and additional field sampling;
- ! Design assumptions and parameters, including design restrictions, process performance criteria, appropriate unit processes for treatment systems, and expected removal or treatment efficiencies for both the process and waste (concentration and volume);
- ! Proposed cleanup verification methods, including compliance with applicable laws and regulations;
- ! Outline of design specifications;
- ! Proposed sitting/locations of processes/construction activity;
- ! Expected long-term operation and monitoring requirements;
- ! Real estate and easement requirements;
- ! Preliminary construction schedule, including contracting strategy.

The supporting data and documentation necessary to define the functional aspects of the RA shall be submitted with the Preliminary Design. The technical specifications shall be outlined in a manner that anticipates the scope of the final specifications. The Respondent(s) shall include design calculations with the Preliminary Design completed to the same degree as the design they support.

If the Pre-Design Studies Report required under Task II have not been submitted prior to submission of the Preliminary Design, it shall be submitted with the Preliminary Design. Any revisions or amendments to the Preliminary Design required by the Ohio EPA shall be incorporated into the subsequent design phase.

3.3.2.2 Intermediate Design

Complex project designs necessitate preparation and Ohio EPA review of design documents between the preliminary and pre-final design phases. The Respondent(s) shall submit intermediate design plans and specifications to the Ohio EPA for review and comment when the design is approximately 60% complete in accordance with the schedule in the approved RD/RA Work Plan. All plans, specifications, design analyses and design calculations submitted to the Ohio EPA shall reflect the same

degree of completion. The Respondent(s) shall ensure that any required revisions or amendments resulting from the Ohio EPA's review of the Preliminary Design are incorporated into the Intermediate Design.

The Intermediate Design submittal shall include the following components:

- ! Design Plans and Specifications;
- ! Draft Construction Quality Assurance Plan;
- ! Draft Performance Standard Verification Plan;
- ! Draft Operation and Maintenance Plan;
- ! Health and Safety Plan.

The design shall include a Construction Quality Assurance Plan, a Performance Standard Verification Plan, an Operation and Maintenance Plan, and a Health and Safety Plan. The Performance Verification Plan shall include a Field Sampling Plan and a Quality Assurance Project Plan, as necessary. Section 4.0 of this SOW describes the required content of the supporting plans. The final Pre-Design Studies Report shall also be included, if it has not already been submitted. Revisions or amendments to the Intermediate Design required by Ohio EPA shall be incorporated into the Pre-final Design.

3.3.2.3 Pre-final Design

The Respondent(s) shall submit a Pre-final Design for Ohio EPA review in accordance with the schedule in the approved RD/RA Work Plan when the design effort is at least 90% complete. The Respondent(s) shall ensure that any modifications required by the Ohio EPA's prior review of related Pre-design Studies Reports, technical memoranda, the Preliminary and Intermediate Designs, and the QAPP and HSP are incorporated into the Pre-final Design submittal. The Pre-final Design submittal shall consist of the following components, at a minimum:

- ! Design Plans and Specifications;
- ! Construction Quality Assurance Plan;
- ! Performance Standard Verification Plan;
- ! Operation and Maintenance Plan;
- ! Remedial Action Implementation Plan;
- ! Cost Estimate;
- ! Health and Safety Plan.

General correlation between drawings and technical specifications is a basic requirement of any set of working construction plans and

specifications. Before submitting the remedial design specifications with the Pre-final Design, the Respondent(s) shall: (1) Coordinate and cross-check the specifications and drawings; (2) Complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

The Respondent(s) shall prepare and include in the technical specifications governing any treatment systems; contractor requirements for providing appropriate service visits by qualified personnel to supervise the installation, adjustment, startup and operation of the treatment systems; and appropriate training on operational procedures once startup has been successfully accomplished.

The Ohio EPA will provide written comments to the Respondent(s) indicating any required revisions to the Pre-final Design. Comments may be provided as a narrative report and/or markings on design plan sheets. Revisions to the plans and specifications required by Ohio EPA shall be incorporated into the Final Design. At the discretion of the Site Coordinator, the Respondent(s) shall also return to Ohio EPA all marked-up prints as evidence that the plans have been completely checked. The Pre-final Design submittal may serve as the Final Design, if Ohio EPA has no further comments and notifies the Respondent(s) that the Pre-final Design has been approved as the Final Design.

3.3.2.4 Final Design

Following incorporation of any required modifications resulting from the Ohio EPA's review of the Pre-final Design submittal, the Respondent(s) shall submit to the Ohio EPA the Final Design which is 100% complete in accordance with the approved schedule described in the RD/RA Workplan.

The Final Design submittal shall include all the components of the Pre-final Design and each of those components shall be complete. At the discretion of the Site Coordinator, any marked-up prints or drawings, which the Ohio EPA may have provided by way of comments on previous design submittals shall be returned to the Ohio EPA, if they have not already been returned.

The Respondent(s) shall make corrections or changes based on Ohio EPA comments on the Final Design submittals. The revised Final Design shall then be submitted in their entirety to the Ohio EPA for approval as the completed Final Design. Upon approval of the Site Coordinator, final corrections may be made by submitting corrected pages to the Final

Design documents. The quality of the Final Design submittal should be such that the Respondent(s) would be able to include them in a bid package and invite contractors to submit bids for the construction project.

3.3.3 Estimated Cost of the Remedial Action

The Respondent(s) shall refine the cost estimate developed in the Feasibility Study to reflect the detailed plans and specifications being developed for the RA. The cost estimate shall include both capital and operation and maintenance costs for the entire project. To the degree possible, cost estimates for operation and maintenance of any treatment system shall be based on the entire anticipated duration of the system's operation. The final estimate shall be based on the final approved plans and specifications. It shall include any changes required by the Ohio EPA during Final Design review, and reflect current prices for labor, material and equipment.

The refined cost estimate shall be submitted by the Respondent(s) with the Pre-final Design and the final cost estimate shall be included with the Final Design submittal.

3.3.4 Remedial Action Implementation Plan

The Respondent(s) shall develop a Remedial Action Implementation Plan (RAIP) to help coordinate implementation of the various components of the RA. It shall include a schedule for the RA that identifies timing for initiation and completion of all critical path tasks. The Respondent(s) shall specifically identify dates for completion of the project and major interim milestones in conformance with the approved RD/RA Workplan schedule. The Remedial Action Implementation Plan is a management tool which should address the following topics:

- 1) Activities necessary to fully implement each of the components of the RA;
- 2) How these activities will be coordinated to facilitate construction/implementation in accordance with the approved schedule;
- 3) Potential major scheduling problems or delays, which may impact overall schedule;
- 4) Lines of communication for discussing and resolving problems, should they arise;
- 5) Common and/or anticipated remedies to overcome potential problems and delays.

The Remedial Action Implementation Plan shall be submitted with the Pre-final Design for review and comment by the Ohio EPA. The final plan and RA project schedule shall be submitted with the Final Design for review and approval.

3.3.5 Community Relations Support

A community relations program will be implemented by the Ohio EPA. The Respondent(s) shall cooperate with the Ohio EPA in community relations efforts. Cooperation may include participation in preparation of all appropriate information disseminated to the public, and in public meetings that may be held or sponsored by the Ohio EPA concerning the Site.

3.4 TASK IV: REMEDIAL ACTION CONSTRUCTION

Following approval of the Final Design submittal by the Ohio EPA, the Respondent(s) shall implement the designed remedial action(s) at the Site in accordance with the plans, specifications, Construction Quality Assurance Plan, Performance Standard Verification Plan, Health and Safety Plan, Remedial Action Implementation Plan, Quality Assurance Project Plan, and Field Sampling Plan approved with the final design. Implementation shall include the activities described in the following sections.

3.4.1 Preconstruction Inspection and Conference

The Respondent(s) shall participate in a preconstruction inspection and conference with the Ohio EPA to accomplish the following:

- ! Review methods for documenting and reporting inspection data;
- ! Review methods for distributing and storing documents and reports;
- ! Review work area security and safety protocol;
- ! Discuss any appropriate modifications to the Construction Quality Assurance Plan to ensure that site specific considerations are addressed. The final CQAP shall be submitted to the Ohio EPA at this time, if it has not already been submitted;
- ! Introduce key construction contractor, engineering and project management personnel and review roles during construction activities;
- ! Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The Respondent(s) shall schedule the preconstruction inspection and conference to be held within 10 days of the award of the construction contract. The preconstruction inspection and conference shall be documented by a designated person and minutes shall be transmitted to all parties by the Respondent(s) to all parties in attendance.

3.4.2 Design Changes During Construction

During construction, unforeseen site conditions, changes in estimated quantities of required construction materials and other problems associated with the project

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are likely to develop. Such changing conditions may require either major or minor changes to the approved final design. Certain design changes will require approval of the Ohio EPA prior to implementation to ensure that the intent and scope of the remedial action is maintained. Changes, which could alter the intent or scope of the RA, may require a revision to the Decision Document and a public comment period. Changes to the remedial design which require Ohio EPA written approval prior to implementation include:

- ! Those that involve the deletion or addition of a major component of the approved remedy (e.g. changing one treatment system for another; deleting any designed layer of a multi-layer cap);
- ! Those that result in a less effective treatment for wastes associated with the site;
- ! Any changes that may result in an increase of the exposure to chemicals of concern and/or risk to human health or the environment as compared to the goals for the completed remedial action as stated in the Orders and this SOW;
- ! Those that result in a significant delay in the completion of the RA;
- ! Other changes that alter or are outside the scope/intent of the approved remedial design.

Ohio EPA shall be notified of other changes made during construction through daily inspection reports and monthly progress reports.

3.4.3 Remedial Action Construction Completion and Acceptance

As the construction of the remedial action nears completion, the following activities and reporting shall be completed by the Respondent(s) to ensure proper project completion, approval, closeout and transition to the operation and maintenance/ monitoring phase.

3.4.3.1 Pre-final Construction Conference

Within seven days of making a preliminary determination that construction is complete, the Respondent(s) shall provide written notification to the Ohio EPA and a pre-final construction conference shall be held with the construction contractor(s) to discuss procedures and requirements for project completion and close-out. The Respondent(s) shall have responsibility for making arrangements for the conference. Participants should include the Project Manager for the Respondent(s), the Site

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Coordinator for the Ohio EPA, all contractors involved with construction of the remedial action(s) and the remedial design agent (person(s) designed the remedy), if requested.

A list of suggested items to be covered at the conference includes, but is not limited to the following:

- ! Final Operation and Maintenance (O&M) Plan submission, if it has not been submitted already;
- ! Cleanup responsibilities;
- ! Demobilization activities;
- ! Security requirements for project transfer;
- ! Pre-final inspection schedule;
- ! Operator training.

The pre-final conference shall be documented by a designated person and conference minutes shall be transmitted to all parties in attendance by the Respondent(s).

3.4.3.2 Pre-final Inspection

Following the pre-final construction conference, a pre-final inspection of the project will be conducted. The pre-final inspection will be led by the Ohio EPA with assistance from the party with primary responsibility for construction inspection, if requested.

The pre-final inspection will consist of a walk-through inspection of the entire site. The completed site work will be inspected to determine whether the project is complete and consistent with the contract documents and the approved RD/RA Work Plan. Any outstanding deficient or incomplete construction items should be identified and noted during the inspection.

When the RA includes construction of a treatment system, the facility start-up and "shakedown" shall have been completed as part of the RA. "Shakedown" is considered to be the initial operational period following start-up during which adjustments are made to ensure that the performance standards for the system are reliably being achieved. The contractor shall have certified that the equipment has performed to meet the purpose and intent of the contract specifications. Retesting shall have been successfully completed where deficiencies were revealed. Such shakedown may take several months. Determination of remedy effectiveness for other types of remedial actions will be based on the Performance Standard Verification Plan (PSVP).

If construction of major components of a remedial action is performed in distinct phases or under separate contracts due to the complex scope of the site remedy, it may be appropriate to conduct the pre-final inspections of those components separately. The approved RAIP should identify those projects and components, which should be handled in that manner.

Upon completion of the pre-final inspection, an inspection report shall be prepared by the Respondent(s) and submitted to Ohio EPA with the minutes from the pre-final conference. A copy of the report will be provided to all parties in attendance at the inspection. The report will outline the outstanding construction items, actions required to resolve those items, completion date for those items and a date for the final inspection. Ohio EPA will review the inspection report and notify the Respondent(s) of any disagreements with it.

3.4.3.3 Final Inspection

Within seven days following completion of any outstanding construction items, the Respondent(s) shall provide written notification to the Ohio EPA and schedule a final inspection. A final inspection will be conducted by the Ohio EPA with assistance from the party having primary responsibility for construction inspection, if requested.

The final inspection will consist of a walk-through inspection of the project site focusing on the outstanding construction items identified during the pre-final inspection. The Pre-final Inspection Report shall be used as a checklist. The contractor's demobilization activities shall have been completed, except for equipment and materials required to complete the outstanding construction items. If any items remain deficient or incomplete, the inspection shall be considered a pre-final inspection requiring another pre-final inspection report and final inspection.

As with the pre-final inspection, it may be appropriate to conduct final inspections of major components of a remedial action separately. Such projects and components should be identified in the approved Remedial Action Implementation Plan.

3.4.3.4 Construction Completion Report and Certification

Upon satisfactory completion of the final inspection, a Construction Completion Report shall be prepared by the Respondent(s) and submitted to the Ohio EPA within 30 days after the final inspection. The report shall include the following elements:

- 1) A brief description of the outstanding construction items from the pre-final inspection and an indication that the items were satisfactorily resolved;
- 2) A synopsis of the work defined in the approved RD/RA Work Plan and the Final Design and certification that this work was performed;
- 3) An explanation of any changes to the work defined in the approved RD/RA Work Plan and Final Design, including as-built drawings of the constructed RA facilities, and why the changes were necessary or beneficial for the project;
- 4) Certification that the constructed RA or component of the RA is operational and functional.

The construction completion report will be reviewed by the Ohio EPA. If the review indicates that corrections or amendments are necessary, then comments will be provided to the Respondent(s). The Respondent(s) shall submit a revised construction completion report based on Ohio EPA comments to the Ohio EPA within 30 days of receipt of those comments. Upon determination by the Ohio EPA that the report is acceptable, written notice of Ohio EPA's approval of the construction completion report will be provided to the Respondent(s).

3.4.4 Community Relations Support

The Respondent(s) shall provide support for Ohio EPA's community relations program during remedial action implementation as described in Section 3.3.5.

3.5 TASK V: FIVE-YEAR REVIEWS

At sites where contaminants will remain at levels that will not permit unrestricted use of the site, a review will be conducted no less frequently than once every five years to ensure that the remedy continues to be protective of human health and the environment. This is known as the "five-year review". The Respondent(s) shall complete Five-Year Review Reports no less often than every five years after the initiation of the remedial action or until contaminant levels allow for unrestricted use of the site. Further guidance for performing five-year review work tasks may be found in the U.S. EPA OSWER Directive 9355.7-02, Structure and Components of Five-Year Reviews.

The more specific purpose of the reviews is two-fold: (1) to confirm that the remedial action as specified in the Decision Document and as implemented continues to be

effective in protecting human health and the environment (e.g., the remedy is operating and functioning as designed, institutional controls are in place and are protective); and (2) to evaluate whether original cleanup levels remain protective of human health and the environment. A further objective is to evaluate the scope of operation and maintenance, the frequency of repairs, changes in monitoring indicators, costs at the site, and how each of these relates to protectiveness.

Fifteen months prior to the due date for completion of a five-year review, the Respondent(s) shall meet with Ohio EPA to discuss the requirements of the five-year review. The review must be completed within five years following the initiation of the remedial action. The scope and level of review will depend on conditions at the site. The scoping effort should include a determination by the Site Coordinator and Respondent(s) as to whether available monitoring data and other documentation will be sufficient to perform the five-year review or whether a field sampling effort will be a necessary component of the review. Within three months of the meeting, the Respondent(s) shall develop and submit a workplan to Ohio EPA that shall describe, at a minimum, the following activities and documentation:

1. Document Review
 - a. Background Information
 1. Decision Document
 2. Decision Document Summary
 3. Administrative or Judicial Order for RD/RA
 4. Completion of Remedial Action Report
 - b. Design Review
 - c. Maintenance and Monitoring
 1. O&M Manual
 2. O&M Reports
 3. Groundwater Monitoring Plan
 4. Monitoring Data and Information
2. Standards Review
 - a. Specific performance standards required by Decision Document
 - b. Changing Standards
 1. Laws and Regulations applicable to conditions and activities at the site
 - c. Risk Assessment
 1. As summarized in the Decision Document
 2. Review for changes in exposure pathways not previously evaluated
3. Interviews
 - a. Background Information
 1. Previous Staff Management
 2. Nearest Neighbors, Respondent(s)

- b. Local Considerations
 - 1. State Contacts
 - 2. Local Government Contacts
- c. Operational Problems
 - 1. Plant Superintendent
 - 2. O&M Contractors

- 4. Site Inspection/Technology Review
 - a. Performance and Compliance
 - 1. Visual Inspection
 - b. Offsite Considerations
 - c. Recommendations

- 5. Report
 - a. Background
 - 1. Introduction
 - 2. Remedial Objectives
 - 3. Review of Applicable Laws and Regulations
 - b. Site Conditions
 - 1. Summary of Site Visit
 - 2. Areas of Noncompliance
 - c. Risk Assessment
 - d. Recommendations
 - 1. Technology Recommendations
 - 2. Statement on Protectiveness
 - 3. Timing and Scope of Next Review
 - 4. Implementation Requirements

If sampling and analysis of environmental samples is required under the five-year review, the Respondent(s) are required to prepare and submit with the workplan other supporting plans. Supporting plans may include a Quality Assurance Project Plan, Field Sampling Plan and Health and Safety Plan. The purpose and content of these supporting plans are discussed in Section 4 of this SOW. The Five-Year Review Workplan must be reviewed and approved by the Ohio EPA prior to initiation of field activities or proceeding with the five-year review.

The Five-Year Review Report will be reviewed by the Ohio EPA. If the Ohio EPA review indicates that corrections or amendments are necessary, then comments will be provided to the Respondent(s). The Respondent(s) shall submit a revised Five-Year Review Report based on Ohio EPA comments to the Ohio EPA within 30 days of receipt of those comments.

3.6 TASK VI: OPERATION AND MAINTENANCE/PERFORMANCE MONITORING

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The Respondent(s) shall implement performance monitoring and operation and maintenance procedures as required by the approved Performance Standard Verification Plan and approved Operation and Monitoring (O&M) Plan for the RA once it is demonstrated that the RA components are operational and functional.

3.6.1 Reporting During Operation and Maintenance

3.6.1.1 Operation and Maintenance Sampling and Analysis Data

Unless otherwise specified in the approved O&M Plan, sampling, analysis, and system performance data for any treatment system or other engineering systems required to be monitored during the O&M Phase shall be submitted by the Respondent(s) to the Ohio EPA on a monthly basis. These monthly submittals will form the basis for the annual progress report described below in Section 3.6.1.2

3.6.1.2 Progress Reports During Operation and Maintenance

The Respondent(s) shall prepare and submit annual progress reports during the operation and maintenance/performance monitoring phase of the RA. When appropriate, the RD/RA Work Plan shall specify progress reports during O&M to be submitted more frequently.

The O&M progress reports shall contain the same information as required for the monthly progress reports for the RD and RA construction phases, as specified in Section 3.6.1 of this SOW. It shall also include an evaluation of the effectiveness of any treatment and engineering systems in meeting the cleanup standards, performance standards and other goals of the RA as defined in the Orders, this SOW, the RD/RA Work Plan and the approved Final Design.

3.6.2 Completion of Remedial Action Report

At the completion of the remedial action, the Respondent(s) shall submit a Completion of Remedial Action Report to the Ohio EPA. The RA shall be considered complete when the all of the goals, performance standards and cleanup standards for the RA as stated in the Decision Document, this SOW, and the approved Final Design (including changes approved during construction) have been met. The report shall document that the project is consistent with the design specifications, and that the RA was performed to meet or exceed all required goals, cleanup standards and performance standards. The report shall include, but not be limited to the following elements:

- 1) Synopsis of the remedial action and certification of the design and

- construction;
- 2) Listing of the cleanup and performance standards as established in the Decision Document and the Orders, any amendments to those standards with an explanation for adopting the amendments;
 - 3) Summary and explanation of any changes to the approved plans and specifications. An explanation of why the changes were necessary should be included and, where necessary, Ohio EPA approval of the changes should be documented;
 - 4) Summary of operation of treatment systems including monitoring data, indicating that the remedial action met or exceeded the performance standards or cleanup criteria;
 - 5) Explanation of any monitoring and maintenance activities to be undertaken at the site in the future as outlined in Section 3.0 of this RD/RA SOW.

3.7 TASK VII: REPORTING REQUIREMENTS

The Respondent(s) shall prepare and submit work plans, design plans, specifications, and reports as set forth in Tasks I through V of this SOW to document the design, construction, operation, maintenance, and performance monitoring of the remedial action. Monthly progress reports shall be prepared, as described below, to enable the Ohio EPA to track project progress.

3.7.1 Monthly Progress Reports during RD and RA Construction

The Respondent(s) shall at a minimum provide the Ohio EPA with monthly progress reports during the design and construction phases of the remedial action containing the information listed below. When appropriate, the RD/RA Work Plan shall specify progress reports to be submitted more frequently.

- 1) A description of the work performed during the reporting period and estimate of the percentage of the RD/RA completed
- 2) Summaries of all findings and sampling during the reporting period
- 3) Summaries of all changes made in the RD/RA during the reporting period, indicating consultation with Ohio EPA and approval by the Ohio EPA of those changes, when necessary
- 4) Summaries of all contacts with representatives of the local community, public interest groups or government agencies during the reporting period
- 5) Summaries of all problems or potential problems encountered during the reporting period, including those which delay or threaten to delay completion of project milestones with respect to the approved work plan schedule or RAIP schedule
- 6) Summaries of actions taken and being taken to rectify problems
- 7) Summaries of actions taken to achieve and maintain cleanup standards and performance standards

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- 8) Changes in personnel during the reporting period
- 9) Projected work for the next reporting period
- 10) Copies of daily reports, inspection reports, sampling data, laboratory/ monitoring data, etc.

3.7.2 Summary of Reports and Submittals

A summary of the information reporting requirements contained in this RD/RA SOW is presented below:

- ! **Draft RD/RA Work Plan**
- Health and Safety Plan (HSP)
- Regulatory Compliance Plan
- ! **Final RD/RA Work Plan**
- HSP
- Regulatory Compliance Plan
- ! **Draft Pre-Design Studies Plan**
- Quality Assurance Project Plan (QAPP)
- Field Sampling Plan (FSP)
- ! **Final Pre-Design Studies Plan**
- QAPP
- FSP
- ! **Pre-Design Studies Reports - Draft**
- ! **Preliminary Design Documents**
- ! **Pre-Design Studies Reports - Final**
- ! **Intermediate Design Documents**
- Draft Construction Quality Assurance Plan (CQAP)
- Draft Performance Standard Verification Plan (PSVP)
- Draft O & M Plan
- Health and Safety Plan
- ! **Pre-final Design Documents**
- CQAP
- PSVP
- O & M Plan
- Draft Remedial Action Implementation Plan (RAIP)
- Health and Safety Plan
- ! **Final Design Documents**
- CQAP
- PSVP
- O & M Plan
- Draft RAIP
- Health and Safety Plan
- ! **Preconstruction Inspection and Conference Report**

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- ! Monthly Progress Reports During RD/RA
- ! Notification of Preliminary Completion of Construction
- ! Final O & M Plan
- ! Pre-final Inspection Report
- ! Notification for Final Inspection
- ! Construction Completion Report
- ! O & M Sampling Data
- ! Progress Reports during O&M/Performance Monitoring period
- ! Completion of Remedial Action Report
- ! Five-Year Review Workplan
- ! Five-Year Review Report

4.0 CONTENT OF SUPPORTING PLANS

The documents listed in this section shall be prepared and submitted as outlined in Section 3.0 of this SOW to support the activities necessary to design and fully implement the RA. These supporting documents include a Quality Assurance Project Plan (QAPP), a Field Sampling Plan (FSP), a Health and Safety Plan (HSP), a Construction Quality Assurance Plan (CQAP) and a Performance Standard Verification Plan (PSVP). The following sections describe the required contents of each of these supporting documents.

4.1 QUALITY ASSURANCE PROJECT PLAN

The Respondent(s) shall prepare a site-specific Quality Assurance Project Plan (QAPP) to cover sample analysis and data handling based on guidance provided by the Ohio EPA. Refer to the list of Ohio EPA and U.S. EPA guidance documents in Appendix B attached to the Orders.

A QAPP shall be developed for any sampling and analysis activities to be conducted as pre-design studies and submitted with the Pre-Design Studies Plan for Ohio EPA review and approval.

During the remedial design phase the Respondent(s) shall review all remedial design information and modify or amend the QAPP developed for the Pre-Design Studies Plan, as necessary, to address the sampling and analysis activities to be conducted during implementation of the Remedial Action, including activities covered by the PSVP and O&M Plan. An amended QAPP shall be submitted with the Intermediate Design documents for review and comment by Ohio EPA. A final Quality Assurance Project Plan, which incorporates comments made by the Ohio EPA, shall be submitted for approval with the Final Design documents. Upon agreement of the Site Coordinator, the Respondent(s) may submit only the amended portions of the QAPP developed for the PDSP with the Intermediate, Pre-Final and Final Design documents.

The Respondent(s) shall schedule and attend a pre-QAPP meeting with representatives of Ohio EPA to discuss the scope and format of the QAPP. For sites where the Site Coordinator and Project Manager agree that a pre-QAPP meeting is not needed, this meeting may be omitted. The QAPP shall, at a minimum, include:

1. Data Collection Strategy - The strategy section of the QAPP shall include but not be limited to the following:
 - a. Description of the types and intended uses for the data, relevance to remediation or restoration goals, and the necessary level of precision, accuracy, and statistical validity for these intended uses;
 - b. Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
 - c. Description of the rationale used to assure that the data accurately and precisely represent a characteristic of a population, variation of physical or chemical parameters throughout the Site, a process condition or an environmental condition. Factors which shall be considered and discussed include, but are not limited to:
 - i) Environmental conditions at the time of sampling;
 - ii) Sampling design (including number, location and distribution);
 - iii) Representativeness of selected media, exposure pathways, or receptors; and
 - iv) Representativeness of selected analytical parameters.
 - v) Representativeness of testing procedures and conditions; and
 - vi) Independence of background or baseline from site influences.
 - d. Description of the measures to be taken to assure that the following data sets can be compared quantitatively or qualitatively to each other:
 - i) RD/RA data collected by the Respondent over some time period;
 - ii) RD/RA data generated by an outside laboratory or consultant employed by the Respondent versus data collected by the Respondent, and;
 - iii) Data generated by separate consultants or laboratories over some time period not necessarily related to the RD/RA effort.
 - iv) Data generated by Ohio EPA or by an outside laboratory or consultant employed by Ohio EPA;
 - e. Details relating to the schedule and information to be provided in quality assurance reports. These reports should include but not be limited to:
 - i) Periodic assessment of measurement data accuracy,

- precision and completeness;
- ii) Results of performance audits;
- iii) Results of system audits;
- iv) Significant quality assurance problems and recommended solutions; and
- v) Resolutions of previously stated problems.

2. Sample Analysis - The Sample Analysis section of the Quality Assurance Project Plan shall specify the following:

- a. Chain-of-custody procedures, including:
 - i) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment and verify the data entered onto the sample custody records;
 - ii) Provision for a laboratory sample custody log consisting of serially numbered lab-tracking report sheets; and
 - iii) Specification of laboratory sample custody procedures for sample handling, storage and disbursement for analysis.
- b. Sample storage procedures and storage times;
- c. Sample preparation methods;
- d. Analytical procedures, including:
 - i) Scope and application of the procedure;
 - ii) Sample matrix;
 - iii) Potential interferences;
 - iv) Precision and accuracy of the methodology;
 - v) Method detection limits;
 - vi) Special analytical services required to ensure contract required detection limits do not exceed known toxicity criteria; and
 - vii) Verification and reporting of tentatively identified compounds.
- e. Calibration procedures and frequency;
- f. Data reduction, validation and reporting;
- g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
 - i) Method blank(s);
 - ii) Laboratory control sample(s);
 - iii) Calibration check sample(s);
 - iv) Replicate sample(s);
 - v) Matrix-spiked sample(s);
 - vi) "Blind" quality control sample(s);
 - vii) Control charts;
 - viii) Surrogate samples;
 - ix) Zero and span gases; and

- x) Reagent quality control checks.
 - h. Preventative maintenance procedures and schedules;
 - i. Corrective action (for laboratory problems); and
 - j. Turnaround time.
- 3. Modeling - The Modeling section of the Quality Assurance Project Plan shall apply to all models used to predict or describe fate, transport or transformation of contaminants in the environment and shall discuss:
 - a. Model assumptions and operating conditions;
 - b. Input parameters; and
 - c. Verification and calibration procedures.
- 4. In Situ or Laboratory Toxicity Tests - The Toxicity Test section of the Quality Assurance Project Plan shall apply to all tests or bioassays used to predict or describe impacts of contaminants on a population, community, or ecosystem level.
- 5. Data Record - The QAPP shall also provide the format to be used to present the raw data and the conclusions of the investigation, as described in a, b, and c below:
 - a. The data record shall include the following:
 - i) Unique sample or field measurement code;
 - ii) Sampling or field measurement location and sample or measurement type;
 - iii) Sampling or field measurement raw data;
 - iv) Laboratory analysis ID number;
 - v) Property or component measured; and
 - vi) Result of analysis (e.g., concentration).
 - b. Tabular Displays - The following data shall be presented in tabular displays:
 - i) Unsorted (raw) data;
 - ii) Results for each medium, organism, or for each constituent measured;
 - iii) Data reduction for statistical analysis;
 - iv) Sorting of data by potential stratification factors (e.g., location, soil layer, topography, vegetation form);
 - v) Summary data (i.e., mean, standard deviation, min/max values, and sample number); and
 - vi) Comparisons with background or reference data.
 - c. Graphical Displays - The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):
 - i) Display sampling locations and sampling grid;

- ii) Indicate boundaries of sampling area, and areas where more data are required;
- iii) Display levels of contamination at each sampling location or location from which organism was taken;
- iv) Display geographical extent of contamination;
- v) Display contamination levels, averages and maxima;
- vi) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters;
- vii) Indicate features affecting intramedia transport and show potential receptors;
- viii) Compare nature and extent of contamination with results of ecological or biological sampling or measurements; and
- ix) Display comparisons with background or reference analyses or measurements.

4.2 FIELD SAMPLING PLAN

1. Sampling - The Sampling section of the Field Sampling Plan shall discuss:
 - a. Sufficient preliminary sampling to ensure the proper planning of items b. through o. below;
 - b. Selecting appropriate sampling locations, depths, vegetation strata, organism age, etc. and documenting relevance of sample for intended biological toxicity tests or analyses;
 - c. Providing a sufficient number of samples to meet statistical or other data useability objectives;
 - d. Measuring all necessary ancillary data such as ambient conditions, baseline monitoring, etc.;
 - e. Determining environmental conditions under which sampling should be conducted;
 - f. Determining which media, pathways, or receptors are to be sampled (e.g., ground water, air, soil, sediment, biota, etc.);
 - g. Determining which parameters are to be measured and where;
 - h. Selecting the frequency and length of sampling period;
 - i. Selecting the sample design (e.g., composites, grabs, random, repeated, etc.);
 - j. Selecting the number, location, media or organisms for determining background conditions or reference conditions (refer to Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part A), Interim Final, EPA/540/1-89/002, December 1989);
 - k. Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points;
 - l. Documenting field sampling operations and procedures, including:
 - i) Documentation of procedures for preparation of reagents or

- supplies which become an integral part of the sample (e.g., filters and adsorbing reagents);
- ii) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
- iii) Documentation of specific sample preservation method;
- iv) Calibration of field devices;
- v) Collection of replicate and field duplicate samples;
- vi) Submission of field-biased and equipment blanks, where appropriate;
- vii) Potential interferences present at the site or facility;
- viii) Construction materials and techniques associated with monitoring wells and piezometers;
- ix) Field equipment listing and sample containers;
- x) Sampling order; and
- xi) Decontamination procedures.
- m. Selecting appropriate sample containers;
- n. Sample preservation; and
- o. Chain-of-custody, including:
 - i) Standardized field tracking reporting forms to establish sample custody in the field prior to and during shipment;
 - ii) Sample sealing, storing and shipping procedures to protect the integrity of the sample; and,
 - iii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

2. Field Measurements - The Field Measurements section of the Field Sampling Plan shall discuss:

- a. Selecting appropriate field measurement locations, depths, organism age etc.;
- b. Providing a sufficient number of field measurements that meet statistical or data useability objectives;
- c. Measuring all necessary ancillary data such as ambient or baseline environmental conditions;
- d. Determining conditions under which field measurement should be conducted;
- e. Determining which media, pathways, or receptors are to be addressed by appropriate field measurements (e.g., ground water, air, soil, sediment, biota, etc.);
- f. Determining which physical, chemical, or biological parameters are to be measured and where;
- g. Selecting the frequency and duration of field measurement; and
- h. Documenting field measurement operations and procedures, including:
 - i) Procedures and forms for recording raw data and the exact

- location, time and Site specific considerations associated with the data acquisition;
- ii) Calibration of field devices;
- iii) Collection of replicate measurements;
- iv) Submission of field-biased blanks, where appropriate;
- v) Potential interferences present at the Site;
- vi) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
- vii) Field equipment listing;
- viii) Order in which field measurements were made; and
- ix) Decontamination procedures; and
- i) Selecting the number, location, media, and organisms for determining background or reference conditions.

4.3 SITE HEALTH AND SAFETY PLAN

The Respondent(s) shall submit a Health and Safety Plan (HSP) to the Ohio EPA with the RD/RA Work Plan for any on-site activities taking place during the design phase. The Respondent(s) shall review the remedial design information and modify the HSP developed for the RD/RA Work Plan, as necessary, to address the activities to be conducted on the site during implementation of the Remedial Action. It shall be designed to protect on-site personnel and area residents from physical, chemical and other hazards posed by the construction, operation and maintenance activities of the Remedial Action.

The Respondent(s) shall prepare a site HSP which is designed to protect on-site personnel and area residents from physical, chemical and all other hazards posed by RD/RA activities. The HSP shall address the following topics:

1. Major elements of the Health and Safety Plan shall include:
 - a. Facility or site description including availability of resources such as roads, water supply, electricity and telephone service;
 - b. Description of the known hazards and an evaluation of the risks associated with the incident and with each activity conducted;
 - c. Listing of key personnel (including the site safety and health officer) and alternates responsible for site safety, response operations, and for protection of public health;
 - d. Delineation of work area, including a map;
 - e. Description of levels of protection to be worn by personnel in the work area;
 - f. Description of the medical monitoring program for on-site responders;
 - g. Description of standard operating procedures established to assure the proper use and maintenance of personal protective equipment;

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- h. The establishment of procedures to control site access;
 - i. Description of decontamination procedures for personnel and equipment;
 - j. Establishment of site emergency procedures;
 - k. Availability of emergency medical care for injuries and toxicological problems;
 - l. Description of requirements for an environmental monitoring program. (This should include a description of the frequency and type of air and personnel monitoring, environmental sampling techniques and a description of the calibration and maintenance of the instrumentation used.);
 - m. Specification of any routine and special training required for responders; and
 - n. Establishment of procedures for protecting workers from weather related problems.
2. The Health and Safety Plan shall be consistent with:
- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
 - b. CERCLA Sections 104(f) and 111(c)(6)
 - c. EPA Order 1440.3 -- Respiratory Protection;
 - d. EPA Order 1440.2 -- Health and Safety Requirements for Employees Engaged in Field Activities;
 - e. EPA Occupational Health and Safety Manual;
 - f. EPA Interim Standard Operating Safety Procedures and other EPA guidance as developed by EPA;
 - g. OSHA regulations particularly in 29 CFR 1910 and 1926;
 - h. State and local regulations; and
 - i. Site or facility conditions.

4.4 CONSTRUCTION QUALITY ASSURANCE PLAN

The Respondent(s) shall develop a Construction Quality Assurance Plan (CQAP) based on the plans and specifications and performance standards for the RA. The CQAP is a site specific document that shall specify procedures to ensure that the completed remedial action work meets or exceeds all design criteria and specifications. A draft CQAP shall be submitted with the Intermediate Design submittal for review and comment by the Ohio EPA. Subsequent drafts shall be submitted with the Pre-final and Final Design submittals that incorporate comments made by the Ohio EPA. Certain aspects of the CQAP, for example personnel names and qualifications, may not be known at the time of design approval. A complete and final CQAP shall be submitted to Ohio EPA for approval prior to the start of construction. At a minimum, the CQAP shall address the elements listed below.

4.4.1 Responsibility and Authority

The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the construction of the remedial action(s) shall be described fully in the CQAP. The Respondent(s) shall provide a copy of the approved CQAP to each organization with responsibility and authority for implementing the CQAP. The Respondent(s) shall also identify a CQA officer and the necessary supporting inspection staff.

4.4.2 Construction Quality Assurance Personnel Qualifications

The qualifications of the Construction Quality Assurance officer and supporting inspection personnel shall be presented in the CQAP to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

4.4.3 Inspection Activities

The observations and tests that will be used to monitor the construction and/or installation of the components of the remedial action shall be described in the CQAP. The plan shall include scope and frequency of each type of inspection. Inspections shall verify compliance with the design, applicable requirements of state and federal law and performance standards. Inspections shall also ensure compliance with all health and safety standards and procedures. The CQAP shall include provisions for conducting the preconstruction, pre-final and final inspections and associated meetings as described in Section 5.4 of this SOW.

4.4.4 Sampling Requirements

The sampling activities necessary to ensure that the design specifications and performance standards are achieved shall be presented in the CQAP. The description of these activities shall include sample sizes, sample locations, frequency of sampling, testing to be performed, acceptance and rejection criteria, and plans for correcting problems as addressed in the design specifications.

4.4.5 Documentation

Reporting requirements for CQA activities shall be described in detail in the CQAP. This shall include such items as daily summary reports, meeting reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports and final documentation. Provisions for the storage of all records shall be presented in the CQAP.

4.5 PERFORMANCE STANDARD VERIFICATION PLAN

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A Performance Standard Verification Plan (PSVP) shall be prepared to consolidate information for required testing, sampling and analyses to ensure that both short-term and longterm performance standards for the RA are met. Performance standards may include clean-up standards for contaminated environmental media as well as the measurement of the effectiveness of engineering controls or other controls used to control migration of or exposure to contaminants. For example, the containment of a plume of contaminated ground water by pumping wells would be a performance standard requiring verification. The PSVP should describe the measurements to be taken, such as water levels in monitoring wells and piezometers, along with any analyses to be conducted on the data obtained, such as ground water modeling, to verify that the plume is contained. The PSVP shall include a FSP and a QAPP for any sampling and analyses to be conducted.

The Draft PSVP shall be submitted with the Intermediate Design for review and comment by the Ohio EPA. The final PSVP, which fully addresses comments made by the Ohio EPA must be submitted with and approved as part of the Final Design.

4.6 OPERATION AND MAINTENANCE PLAN

The Respondent(s) shall prepare an Operation and Maintenance Plan (O&M Plan) to cover long term operation and maintenance of the RA. Operation and maintenance for all components of the Remedial Action, shall begin after it is demonstrated that those components are operational and functional. The plan, at a minimum, shall be composed of the elements listed below.

1. Normal Operation and Maintenance
 - a. Description of tasks for operation
 - b. Description of tasks for maintenance
 - c. Description of prescribed treatment or operating conditions
 - d. Schedules showing the frequency of each O&M task

2. Potential Operating Problems
 - a. Description and analysis of potential operating problems
 - b. Sources of information regarding potential operating problems
 - c. Description of means of detecting problems in the operating systems
 - d. Common remedies for operating problems

3. Routine Monitoring and Laboratory Testing
 - a. Description of monitoring tasks
 - b. Description of required laboratory tests and interpretation of test results
 - c. Required QA/QC procedures to be followed

- d. Schedule of monitoring frequency and provisions to discontinue, if appropriate

Note: Information on monitoring and testing that is presented in the PSVP should be referenced, as appropriate, but should not be duplicated in the O&M Plan.

4. Alternative O&M
 - a. Description of alternate procedures to prevent undue hazard, should systems fail
 - b. Analysis of the vulnerability and additional resources requirements should a failure occur
5. Safety Plan
 - a. Description of safety procedures, necessary equipment, etc. for site personnel
 - b. Description of safety tasks required in the event of systems failure (may be linked to the Site Safety Plan developed for the RD/RA)
6. Equipment
 - a. Description of equipment necessary to the O&M Plan
 - b. Description of installation of monitoring components
 - c. Description of maintenance of site equipment
 - d. Replacement schedule for equipment and installed components
7. Annual O&M Budget
 - a. Costs for personnel
 - b. Costs for preventative and corrective maintenance
 - c. Costs of equipment and supplies, etc.
 - d. Costs of any contractual obligations (e.g., lab expenses)
 - e. Costs of operation (e.g., energy, other utilities, etc.)
8. Records and Reporting Mechanisms Required
 - a. Daily operating logs
 - b. Laboratory records
 - c. Records for operating costs
 - d. Mechanism for reporting emergencies
 - e. Personnel and maintenance records
 - f. Monthly/semi-annual reports to Ohio EPA

The Respondent(s) shall submit a draft O&M Plan to the Ohio EPA for review and comment with the Intermediate Design submittal. Subsequent drafts of the O&M Plan shall be submitted with the Pre-final and Final Design submittals, which reflect the refined plans and specifications of those submittals and any comments made by the

Ohio EPA. The final O&M Plan shall be submitted by the Respondent(s) prior to or at the completion of construction of the remedial action and shall incorporate any modifications or corrections required by the Ohio EPA.



Table 2
Summary of Action-Specific ARARs

Feasibility Study Report
General Electric Company - Former Thomson/RCA Facility - Circleville, Ohio

Media	ARAR	Applicability	Applicable Regulations	ARAR Description	Implementation
Soil	Land Disposal Facility Notice in Deed 40 CFR Parts 264 and 265 Sections 116-119(b)(1)	To be considered		Establishes provisions for a deed notation for closed hazardous waste disposal units, to prevent land disturbance by future owners.	These provisions would be attained by Alternative 1, 2, or 3 via source control (i.e., soil removal) and annual verification of the executed Institutional Controls (environmental covenant).
Soil	40 CFR 122.26(C)(1)(VIC); 40 CFR 122.44(f); NPDES General Permit for Construction Stormwater Management	Applicable		Discharges of stormwater associated with construction activities must implement best management practices and other measures, to control pollutants in stormwater discharges during and after construction activities.	Erosion and sedimentation controls will be installed and maintained around the perimeter of the exclusion zones during the implementation of Alternative 2 or 3. Additionally, waters from impacted equipment/material staging/handling areas will be contained and routed to a temporary water treatment facility for treatment prior to discharge, or disposed of at an appropriate/approved off-site disposal facility in accordance with applicable regulations.
Soil	RCRA - 40 CFR 261.24	Applicable		Testing procedure (TCLP) to assess materials for potential hazardous characteristics including toxicity.	Waste characterization samples will be collected prior to/during implementation of Alternative 2 or 3 to determine whether any material to be excavated is a hazardous waste.
Surface Water	Clean Water Act (CWA), Section 402, National Pollutant Discharge Elimination System (NPDES), 33 USC 1342; 40 CFR 122-125, 129, 131	Applicable		Standards for the discharge of pollutants into surface waters. Remediation General Permit imposes effluent limitations, standards, prohibitions and best management practices for discharges from construction dewatering of contaminated sites.	Discharges associated with dewatering of soil/sediment will meet requirements through onsite treatment, or treatment at an appropriate/approved off-site plant. Discharge activities shall meet the substantive requirements of these regulations.
Surface Water	CWA, Section 404, Permits to Discharge Dredged or Fill Material	To be considered		Requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities).	Discharge activities shall meet the substantive requirements of these regulations. However, remediation activities would not discharge silt/clay to waterways.
Site Worker	Occupational Safety and Health Act (OSHA) - General Industry Standards 29 CFR Part 1910	Applicable		These regulations specify the 8-hour time-weighted average concentration for worker exposure to various compounds. Training requirements for workers at hazardous waste operations are specified in 29 CFR 1910.120.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific health and safety plan.
Site Worker	OSHA - Safety and Health Standards 29 CFR Part 1926	Applicable		These regulations specify the type of safety equipment and procedures to be followed during site remediation.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific health and safety plan.
Site Worker	OSHA - Record-keeping, Reporting and Related Regulations 29 CFR Part 1904	Applicable		These regulations outline record-keeping and reporting requirements for an employer under OSHA.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific health and safety plan.
Site Worker	RCRA - Preparedness and Prevention 40 CFR Part 264.30 - 264.31	Applicable		These regulations outline requirements for safety equipment and spill control when treating, handling and/or storing hazardous wastes.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific health and safety plan and/or a contingency plan.
Site Worker	RCRA - Contingency Plan and Emergency Procedures 40 CFR Part 264.50 - 264.55	Applicable		Provides requirements for outlining emergency procedures to be used following explosions, fires, etc. when storing hazardous wastes.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific health and safety plan and/or a contingency plan.
Air	Clean Air Act-National Ambient Air Quality Standards 40 CFR Part 60	Applicable		Establishes ambient air quality standards for protection of public health.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific health and safety plan.
Air	RCRA (40 CFR 264, Subpart AA)	Applicable		Air emission standards for process vents and closed-vent systems and control devices associated with air or steam shipping operations that manage hazardous wastes with organic concentrations of at least 10 ppmw.	Should air shipping operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the air shipper system will comply with Sections 1032 through 1038 of this Subpart.
Air	RCRA (40 CFR 264, Subpart BB)	Applicable		Air emission standards for equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight.	Should equipment come into contact with hazardous wastes containing organic concentrations of at least 10 percent by weight, the equipment will be equipped and monitored for leaks as specified in Sections 1052 through 1055 of this Subpart.
Waste Material	90 Day Accumulation Rule for Hazardous Waste 40 CFR Part 262.34	Applicable		Allows generators of hazardous waste to store and treat hazardous waste at the generation site for up to 90 days in tanks, containers and containment buildings without having to obtain a RCRA hazardous waste permit.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific waste management plan (WMP).
Waste Material	RCRA - General Standards 40 CFR Part 264.111	Applicable		General performance standards requiring minimization of need for further maintenance and repair; minimization or elimination of post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products. Also requires decontamination or disposal of contaminated equipment, structures and soils.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific waste management plan (WMP).
Waste Material	Standards Applicable to Transporters of Applicable Hazardous Waste - RCRA Section 3003 40 CFR Parts 170-179, 262, and 263	Applicable		Establishes the responsibility of off-site transporter of hazardous waste in the handling, transportation and management of the waste. Requires manifesting, record-keeping and immediate action in the event of a discharge.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific waste management plan (WMP).

Table 3
Summary of Location-Specific ARARs

General Electric Company - Former Thomson/RCA Facility - Circleville, Ohio

ARAR	Applicable	ARAR	ARAR
Surface Water	Applicable	Clean Water Act (CWA) Section 404(b) and Rivers and Harbors Act Section 10 (33 U.S.C. 403)	No discharge of dredged or fill material shall be permitted if there is a practicable alternative that has less adverse impact on aquatic ecosystem provided the alternative does not have other significant adverse environmental consequences.
Wetlands	Applicable	Protection of Wetlands (Executive Order No. 11980) 40 CFR 6. Appendix A (Policy on Implementing E.O. 11980) CWA Section 404(b) (40 CFR 230.33 CFR 323) and Rivers and Harbors Act Section 10 (33 U.S.C. 403)	Requires that Federal agencies' activities avoid, to the extent possible, adverse impacts on wetlands if there is a practicable alternative, and minimize adverse impacts on wetlands if no practicable alternative exists. See preceding item for CWA provisions.
Floodplains	Applicable	Floodplain Management (Executive Order No. 11988) 40 CFR 6.302(b) and 40 CFR 6, Appendix A (Policy on Implementing E.O. 11988)	Requires that Federal agencies evaluate the effects of their actions (including actions undertaken by other entities pursuant to Federal permit or license) on floodplain to avoid or minimize adverse effects on floodplain.
Surface Water	Applicable	Rivers and Harbors Act (Section 10 [33 U.S.C. 401]) and CWA (Section 404 [33 U.S.C. 1344]), 33 CFR 323	Regulates the discharge of dredged or fill material into waters of the United States. No discharge shall be permitted if there is a practicable alternative that has less adverse impact on resource area. See prior synopsis regarding wetlands medium.
Surface Water	Applicable	Fish and Wildlife Coordination Act (16 USC 661-666)	Federal agencies, or public or private entities under Federal permit or license, proposing to undertake an action that will control or modify a water body must consult U.S. Fish and Wildlife Service regarding measures to prevent loss of or damage to fish and wildlife resources and to provide for the development and improvement of such resources.
Habitat	Applicable	Endangered Species Act - 16 USC 1531(g)-(i); 40 CFR 6.302(h); 50 CFR Part 402, Subparts A & B	Requires Federal agencies to take into account the effects of their actions (including actions undertaken by other entities pursuant to Federal permit or license) on Federally-listed (threatened and endangered species and their habitats. Involves issuance of a biological assessment and a biological opinion if a listed species or critical habitat may be present in the action area. If determined likely to adversely affect a listed species or critical habitat, requires identification of reasonable and prudent alternatives and measures to avoid such effects.
Historic Places	Applicable	National Historic Preservation Act, Protection of Historic Properties (16 USC 470(f); 36 CFR 800)	Requires Federal agencies to take into account the effects of their actions on properties (site, building, structure, or objects) included or eligible for inclusion in the National Register of Historic Places. If, in consultation with the State and/or Tribal Historic Preservation Office, it is determined that the project would have an adverse impact on a listed or eligible historic property within an area of potential effects, then it requires (a) evaluation of alternatives to avoid, minimize or mitigate the adverse impacts, and (b) agreement on such measures or a joint agreement, implementation of such measures identified by the authorizing agency.
			Soil erosion/sedimentation control measures will be installed and maintained during remediation to minimize impacts. There is no practical alternative to conducting work in the wetlands. Alternative 2 or 3 will be implemented with control of wetlands excavation to the greatest extent possible. Excavation in wetlands will meet the requirements of this Executive Order and applicable regulatory requirements. Restoration and, if required, mitigation will follow any such excavations. There is no practical alternative to conducting work in the wetlands. Alternative 2 or 3 will be designed to restore current grades. As such, Alternative 2 or 3 will be implemented in such a manner as to minimize the impacts to the risk of flood loss to the greatest extent possible. Because portions of the site that are subject to remediation are located in the floodplain, there is no practical alternative to conducting work within the floodplain. Erosion and sedimentation controls will be installed and maintained during the implementation of Alternative 2 or 3 to mitigate potential discharges of dredged or fill materials. The U.S. Fish and Wildlife Service will be consulted, as required, during the implementation of Alternative 2 or 3 to comply with the regulation. The appropriate Federal agencies will be consulted prior to implementation of Alternative 2 or 3. If endangered/threatened species/habitat exists, the applicable requirements will be met. The appropriate Federal agencies will be consulted prior to implementation of Alternative 2 or 3. If properties included or eligible for inclusion in the National Register of Historic Places exist within or adjacent to areas subject to remediation, the applicable requirements will be met.

APPENDIX C

List of Relevant Guidance Documents



APPENDIX C

LIST OF GUIDANCE DOCUMENTS AND REFERENCES FOR USE WITH OHIO EPA DERR REMEDIAL RESPONSE PROGRAM REMEDIAL DESIGN/REMEDIAL ACTION STATEMENT OF WORK AND ORDERS

Statement of Purpose and Use of This Guidance Document List:

The purpose of this list of Ohio EPA and U.S. EPA policies, directives and guidance documents is to provide a reference of the primary documents which provide direction and guidance for designing and implementing selected remedial actions at Remedial Response sites. The listed documents incorporate by reference any documents listed therein. Certain sites may have contaminants or conditions which are not fully addressed by the documents in this list. There is an evolving body of policy directives, guidance and research documentation which should be used, as needed, to address circumstances not encompassed by the documents in this list. For sites where activities are conducted in response to an administrative or judicial order, this list will be an attachment to the order and will govern the work conducted. When entering into or issuing an order for any site, Ohio EPA reserves the right to modify this list to fully address the site conditions.

Analytical Methods

Compendium of Methods for Determination of Toxic Organic Compounds in Ambient Air second edition, Compendium Method TO-14A, EPA/625/R-96/010b, U.S. EPA, January 1999. See also: Air Toxics – Monitoring Methods.

SW 846, Test Methods for Evaluating Solid Waste, 3rd Edition and updates (online), originally dated November 1986.

Standard Methods for the Examination of Water and Waste Water, American Public Health Association, 18th Edition 1992, and recent editions (online).

U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, U.S. EPA, EPA-540-R-04-004, OSWER 9240.1-45, October 2004.

U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, U.S. EPA, EPA-540-R-08-01, June 2008.

ARARs

Applicable or Relevant and Appropriate Requirements (ARARS), U.S. EPA (online).

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CERCLA Compliance with Other Laws Manual - Part 1 and Part 2, OSWER Directive 9234.1-01, EPA/540/G-89/006, August 1988, and OSWER Directive 9234.1-02, EPA/540/G-89/009, August 1989.

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Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media, U.S. EPA, EPA 230/02-89-042, February 1989.

Methods for Evaluating the Attainment of Cleanup Standards, Volume 2: Ground Water, U.S. EPA, EPA 230-R-92-014, July 1992.

Methods for Evaluating the Attainment of Cleanup Standards, Volume 3: Reference-Based Standards for Soils and Solid Media, U.S. EPA, EPA 230-R-94-004, December 1992.

Background Guidance

Use of Background for Remedial Response Sites, Technical Decision Compendium, Ohio EPA DERR, August 2009.

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Data Quality Objectives Process Summary, DERR-00-DI-32 Ohio EPA DERR Remedial Response Program, January 2002.

Guidance for Data Quality Assessment: Practical Methods for Data Analysis, U.S. EPA, EPA/600/R-96/084 (EPA QA/G-9), QAOO Update, July 2000.

Guidance on Systematic Planning Using the Data Quality Objectives Process, U.S. EPA, EPA QA/G-4, EPA/240/B-06/001, February 2006.

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American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices, ISBN: 1-882417-46-1, 2002.

NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, DHHS (NIOSH) Publication No. 85-115, October 1985.

NIOSH Pocket Guide to Chemical Hazards, National Institute for Occupational Safety and Health (online, last updated November 2010).

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OSHA Regulation 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response; U.S. Department of Labor (OSHA).

OSHA Regulation 29 CFR 1910.134, Respiratory Protection Standard;

U.S. EPA Standard Operating Safety Guides (Publication 9285.1-03, PB92-963414, June 1992 (chapters 1-3, 4-7, 8-11))

Section 111(c)(6) of CERCLA

Landfills

Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites, OSWER Directive 9355.3-11, EPA/540/P-91/001, February 1991.

Presumptive Remedy for CERCLA Municipal Landfill Sites, U.S. EPA, EPA 540-F-93-035, September 1993.

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Presumptive Response Strategy and Ex-Situ Treatment Technologies for Contaminated Ground Water at CERCLA Sites, U.S. EPA, EPA 540/R-96/023, OSWER 9283.1-12, October, 1996, final guidance.

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Guide for Conducting Treatability Studies Under CERCLA, U.S. EPA OSWER/ORD, EPA/540/R-92/071a, Final, October 1992.

Guide for Conducting Treatability Studies Under CERCLA: Soil Vapor Extraction, U.S. EPA – Office of Emergency and Remedial Response, EPA/540/2-91/019A, (#540291019A), Interim, September 1991.

Guide for Conducting Treatability Studies Under CERCLA: Aerobic Biodegradation Remedy Screening, U.S. EPA Office of Research and Development, EPA/540/2-91/013A, Interim, July 1991.

Guidance on Specific Types of Treatability Studies, U.S. EPA (online).

Vapor Intrusion

Sample Collection and Evaluation of Vapor Intrusion to Indoor Air, Ohio EPA DERR, May 2010.

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Disclaimer: Please note that web links are not maintained.

March 28, 2012 updates

APPENDIX D

RD Work Plan



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Transmitted Via Federal Express

May 27, 2015

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Site Coordinator
Ohio Environmental Protection Agency
Division of Emergency and Remedial Response
Central District Office
50 West Town Street, Suite 700
Columbus, OH 43215

**Re: Transmittal of Revised Remedial Design Work Plan for the former Thomson
Circleville, Ohio Facility**

Dear Mr. Crandall:

On behalf of the General Electric Company (GE) and Technicolor, Inc. (Technicolor, formerly Thomson, Inc.), enclosed for your review is the Revised Remedial Design Work Plan (RD Work Plan) for the former Thomson facility located at 24200 U.S. Route 23 South in Circleville, Ohio. Consistent with previous report submittals, we have enclosed two copies of the RD Work Plan.

If you have any questions concerning the RD Work Plan or require additional information, please feel free to contact me at (518) 862-2717.

Sincerely,

A handwritten signature in black ink that reads "John M. Uruskyj" with a stylized flourish at the end.

John M. Uruskyj, C.P.G.
Remedial Project Manager

Enclosure

cc: Ohio EPA, Attn: Manager, Technical and Program Support Section, DERR
Tom Sipher, Technicolor (2 copies)
Kirk Macfarlane, GE
Corey Averill, ARCADIS



**General Electric Company
Technicolor USA, Inc.**

Remedial Design Work Plan

Former Thomson Consumer Electronics Facility
Circleville, Ohio

November 2014, revised April & May 2015



Remedial Design Work Plan

Former Thomson Consumer
Electronics Facility
Circleville, Ohio

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November 2014, revised April & May 2015

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1. Introduction

1.1 General

On January 19, 1994, the Ohio Environmental Protection Agency (Ohio EPA) issued an Administrative Order on Consent (Consent Order, journalized on February 14, 1994; Ohio EPA, 1994) for the Thomson Consumer Electronics facility located at 24200 U.S. Route 23 in Circleville, Ohio (the Site). That Consent Order was entered into between Ohio EPA, the General Electric Company (GE) and Thomson Consumer Electronics (Thomson, now Technicolor) for the purpose of conducting a Remedial Investigation and Feasibility Study (RI/FS) at the Site. In accordance with the requirements of that Consent Order, several RI/FS submittals were provided to Ohio EPA in accordance with the *Remedial Investigation/Feasibility Study Work Plan* (PTI Environmental Services [PTI], August 1995), as amended (GE 1997; Blasland, Bouck, & Lee [BBL, then ARCADIS BBL, now ARCADIS] 2002, 2003, 2005; Exponent [formerly PTI] 2007). Those submittals (collectively referred to as the RI/FS Work Plan) provided details regarding the proposed approach for various RI/FS activities at the Site and the corresponding submittals to be provided to Ohio EPA.

Most recently, those submittals have included a March 2013 *Feasibility Study Report* (FS Report), which was prepared in accordance with Task 10 (FS Report) of the RI/FS Work Plan. Ohio EPA provided comments on the FS Report in a letter to GE/Technicolor dated May 29, 2013. Representatives of Ohio EPA and GE/Technicolor participated in a conference call to discuss Ohio EPA's comments on June 19, 2013. Subsequent to that call, Ohio EPA provided revisions to certain of those comments in an e-mail from Mr. David O'Toole to Mr. John Uruskyj of GE dated July 11, 2013. The FS Report was subsequently revised to incorporate Ohio EPA's comments (as revised) and GE's/Technicolor's responses to those comments and resubmitted to Ohio EPA on July 19, 2013. Ohio EPA approved the FS Report in a letter to GE/Technicolor dated August 21, 2013.

On February 25, 2014, Ohio EPA issued a Preferred Plan, based on the FS Report, which outlined the preferred remedial alternative for impacted soils and sediments at the Site (i.e., removal of soils and sediments until the calculated 95% upper confidence limit [UCL] concentrations for lead are below the remediation goals established for the various Areas of Concern at the Site). Ohio EPA held a public meeting on April 9, 2014 to provide details regarding the preferred remedial alternative to the public. A public comment period was offered between March 4 and April 18, 2014; however, no comments were received by Ohio EPA. Ohio EPA subsequently issued a Decision Document based on the Preferred Plan on June 4, 2014 which identified the selected remedial alternative for the cleanup of contaminated soils and sediment at the Site and provided the rationale for Ohio EPA's selection of that alternative.

1.2 Purpose and Scope of Remedial Design Work Plan

Section 3 of Ohio EPA's Generic Statement of Work for conducting Remedial Designs and Remedial Actions (RD/RA SOW, which is Appendix B to the Director's Final Findings and Orders for Remedial Design and Remedial Action [RD/RA Order]) provides a generic outline for the preparation of an RD/RA Work Plan presenting the overall strategy for performing the design, construction, operation, maintenance and monitoring of the Remedial Action. This approach does not contemplate the procurement and selection of a Remedial Action Contractor (RAC) to implement the Remedial Action. As GE/Technicolor believe that a RAC will have valuable input to the development of the implementation-related details to be included in a Remedial Action Work Plan (RA Work Plan), GE/Technicolor are proposing to prepare and submit separate Remedial Design and Remedial Action Work Plans. In accordance with those requirements, a *Remedial Design Work Plan* (RD Work Plan) was prepared and submitted to Ohio EPA on November 6, 2014 for review and approval.

Ohio EPA provided comments to the RD Work Plan (along with other project related communications) on November 25, 2014. Representatives of GE and Ohio EPA participated in a conference call on December 4, 2014 to discuss those comments. In response, Ohio EPA provided additional comments related to the scope of pre-design sampling on December 16, 2014 and representatives of GE and Ohio EPA participated in a follow-up conference call on December 17, 2014. Subsequent to that call, GE provided additional requested information to Ohio EPA in e-mails dated December 22, 2014 and January 13, 2015. Recently, Ohio EPA provided additional comments on the RD Work Plan in letters to GE dated February 6 and April 9, 2015. GE has prepared this revision to the RD Work Plan, incorporating Ohio EPA's comments and GE's Responses as discussed during a March 13, 2015 conference call between representatives of GE and Ohio EPA, and submitted that document to Ohio EPA on April 29, 2015. Subsequent to that submittal, Ohio EPA provided a proposed schedule for the Remedial Design/Remedial Action phases of the project to GE in an electronic mail dated May 6, 2015. Representatives of GE and Ohio EPA participated in a conference call on May 6, 2015 to discuss that proposed schedule. In response to those discussions, GE has prepared this revision to the RD Work Plan, providing a revised schedule for the Remedial Design/Remedial Action phase of the project. Once approved, this RD Work Plan will be attached to the RD/RA Order. The RA Work Plan will be submitted for review and approval by Ohio EPA in accordance with the schedule in the approved RD Work Plan.

The purpose of this RD Work Plan is to describe the major tasks and deliverables associated with the pre-design investigations and the design of the remedy for the Site, and to provide a proposed schedule for the performance of those activities. As such, the scope of this RD Work Plan provides certain pre-design and design-related information consistent with that outlined in Sections 3.1 (RD/RA Work Plan), 3.2 (Pre-Design Studies), and 3.3

(Remedial Design) of the RD/RA SOW, as well as a proposed schedule for implementing those activities.

1.3 Format of Document

The remainder of this RD Work Plan is presented in the following sections:

- **Section 2 – Background Information**, provides a brief history and description of the Site followed by a summary of the activities performed to date.
- **Section 3 – Description of Selected Remedial Alternative**, briefly summarizes the selected remediation goals for various portions of the Site and provides an overview of the selected remedial action for the Site.
- **Section 4 – Pre-Design Studies**, discusses the preparation of a Pre-Design Studies Plan.
- **Section 5 – Remedial Design Tasks and Deliverables**, describes the proposed activities that will be performed and information that will be provided in the proposed Pre-final (90%) Design and Final (100%) Design submittals.
- **Section 6 – Contractor Procurement and Development of a Remedial Action Work Plan**, describes the proposed activities that will be performed to select a Remedial Action Contractor to implement the Remedial Action and the subsequent preparation of a RA Work Plan.
- **Section 7 – Schedule** provides a proposed schedule for the performance of the various Pre-Design, Remedial Design, Contractor Procurement, and Remedial Action Work Plan development activities described herein.

2. Background Information

2.1 General

This section of the RD Work Plan provides a general overview of information concerning the Site, including an overview of the collected historical and pre-design data. Specifically, Section 2.2 provides a brief history and description of the specific areas comprising the Site, while Section 2.3 summarizes the historical site investigation activities performed by GE/Technicolor at the Site.

2.2 Site History and Description

A detailed description of the operational and regulatory history at the Site is presented in Section 1 of the RI Report. As indicated therein, the Site consists of approximately 230 acres along the east side of U.S. Route 23, located approximately 0.5 miles south of developed areas of the City of Circleville, Ohio (Figure 1). The Site is surrounded by open fields, with a small residential area located approximately 1,000 feet south-southwest of the former plant area. The Scioto River is located approximately 0.75 miles west of the Site. The uplands of the Scioto River Valley contain small streams and unnamed ditches that drain to the Scioto River. The South Ditch flows from east to west along the south side of the former plant and discharges to the offsite creek area (OCA) and subsequently to the Scioto River.

The plant was built in 1969 on a "greenfield site" and began operation in 1970 as part of the Radio Corporation of America (RCA). The plant was operated by RCA until 1986, when it was acquired through a corporate merger with GE. GE maintained ownership of the Site for approximately 1 year before the Site was acquired by Thomson in 1987. Thomson maintained ownership of the Site from 1987 until it sold the property in 2008. From the time operations began in 1970 until shutdown in 2004, the plant manufactured the face plate or panel (3 percent lead) and funnel (24 percent lead) components of television picture tubes. During this time, the plant consisted primarily of interconnected administration, production, laboratory, batch house, and warehouse buildings. Batch house silos were used to contain raw and intermediate production materials such as sand, litharge (lead oxide), and cullet (recycled glass).

Thomson ceased manufacturing operations on March 30, 2004 and subsequently sold a large portion of their glass manufacturing equipment, which was removed from the Site. The demolition of the structures (including building slabs) located within the melting and forming operations areas of the former plant were initiated in November 2005 and completed in 2006. Following demolition, only the warehouse, former administrative offices, and associated paved parking areas remain at the Site, as shown on Figure 2. The remainder of the Site consists of unpaved gravel and vegetated areas.

On April 3, 2008, Thomson sold the property to Circleville Pickaway, LLC. In accordance with the Consent Order, two copies of the journalized deed notice were provided to Ohio EPA on April 10, 2008. Technicolor and GE have worked with the current property owner to develop and put in place an Environmental Covenant (EC), which includes activity and use limitations restricting possible future uses of the "developed portion" of the Site, including the East Fenced Area (EFA), the East Swale, and identified portions of the South Ditch. That EC, which was developed pursuant to the Ohio Uniform Environmental Covenants Act, Ohio Revised Code §5301.80-5301.92, was revised and resubmitted to the Ohio EPA on June 17, 2011. The EC was executed by all parties and then recorded on December 28, 2011 in the office of the Pickaway County Recorder. A copy of that EC was provided in Appendix A of the FS Report.

Technicolor and GE have worked with the current property owner of the deltaic and non-deltaic portions of the OCA (Richards Entities) to develop and put in place an EC, which includes activity and use limitations restricting possible future uses of the OCA, and prohibits the use of groundwater for any potable purposes. That EC, which was developed pursuant to the Ohio Uniform Environmental Covenants Act, Ohio Revised Code §5301.80-5301.92, was executed by all parties and then recorded on August 24, 2012 in the office of the Pickaway County Recorder. A copy of that EC was provided in Appendix B of the FS Report.

2.3 Summary of Historical Site Investigations

To supplement the historical investigation activities performed at the Site between 1988 and 1995, extensive field investigation activities were performed in accordance with the RI/FS Work Plan beginning in late 1995 at the various Areas of Interest (Aols, Figure 3) comprising the Site. The historical investigations and initial field investigations provided the basis for an initial draft *Remedial Investigation Report* (RI Report; Exponent, April 1998) submitted to Ohio EPA in April 1998. Following that submittal, GE/Technicolor and Ohio EPA discussed and reached agreement on the procedure necessary for finalizing the RI. Subsequent to those discussions, an interim action, which involved limited soil/sediment removal along the west side of the railroad tracks at the OCA, was performed in 2002 to accommodate construction of an access road by an offsite property owner. Additional field investigations were then performed in 2003 within the OCA and portions of the South Ditch and revised drafts of the RI Report, incorporating the results of the 2002 interim action and 2003 sediment investigations and certain comments from Ohio EPA, were submitted to Ohio EPA in June and October 2004. Subsequent to those revised draft RI Report submittals and discussions with Ohio EPA, supplemental sediment sampling activities were performed within portions of the OCA and South Ditch in 2005 and 2007 and the results of those investigations were incorporated into a revised draft RI Report submitted to Ohio EPA in November 2009 and a final RI Report submitted to Ohio EPA in March 2010. Ohio EPA provided final approval of the RI Report in a letter dated March 23, 2010.

Upon completion and approval of the RI phase of the project, several feasibility study-related submittals were made to Ohio EPA, beginning with the May 2010 *Interim Remedial Action Objectives Report* (Interim RAO Report, as revised in August 2011), which was prepared in accordance with Task 8A (Remedial Action Objectives) of the RI/FS Work Plan. That document presented a summary of the remedial action objectives that had been developed for the Site on the basis of the results of the RI. Ohio EPA and GE/Technicolor subsequently exchanged several letters related to finalizing the Interim RAO Report and the need for supplemental investigations in the vicinity of the former Raw Materials Handling Area (RMHA) portion of the Site. In response to those discussions, CTL Engineering, Inc. (CTL) prepared and submitted (on behalf of Technicolor) a *Supplemental Site Investigation Work Plan* (Supplemental Work Plan) proposing supplemental investigations for the former Raw Materials Handling Area to Ohio EPA on December 16, 2011. Ohio EPA provided comments on the Supplemental Work Plan in a letter to Technicolor dated January 18, 2012 and revised pages of that document were submitted to Ohio EPA on January 30, 2012.

Following the performance of the supplemental investigations for the former Raw Materials Handling Area, CTL submitted a *Supplemental Site Investigation Report* (Supplemental Investigation Report) providing the results of those supplemental investigations to Ohio EPA on May 10, 2012. Ohio EPA provided comments on that report in a letter to Technicolor dated June 13, 2012. In response to those comments, revised elements of the Supplemental Investigation Report were submitted by CTL to Ohio EPA on July 31, 2012 and Ohio EPA submitted a letter approving that document on August 2, 2012. The results of the supplemental investigations (as well as Ohio EPA comments and GE's/Technicolor's responses to those comments) were also incorporated into a Revised Interim RAO Report submitted to Ohio EPA on November 13, 2012. Ohio EPA provided approval of the Revised Interim RAO Report in a letter to the GE/Technicolor dated November 21, 2012.

The cumulative results of the site investigations formed the basis for the Feasibility Study Report that was prepared in accordance with Task 10 (FS Report) of the RI/FS Work Plan and submitted to Ohio EPA on March 1, 2013 (as revised on July 19, 2013). Ohio EPA approved the FS Report in a letter to the GE/Technicolor dated August 21, 2013. Additional details regarding the various FS-related submittals for this site and the associated correspondence between the Ohio EPA and the GE/Technicolor are provided in Section 1.1 of the FS Report. A summary of the results for the RI and supplemental investigations is provided in Section 2 of the FS Report, with detailed summaries provided in the RI and Supplemental Investigation Reports.

3. Description of Selected Remedial Alternative

3.1 General

This section of the RD Work Plan identifies the remediation goals established by the Ohio EPA for the various Aols at the Site (Section 3.2) and also summarizes the remedial alternative selected by Ohio EPA for the Site (Section 3.3). Specific details regarding the development and selection of the preliminary remediation goals (PRGs) and RAOs for the Site are provided in the FS Report.

3.2 Selected Remediation Goals and Remedial Action Objectives

Section 3.2.1 of the FS Report identified several PRGs potentially applicable to the Site. From that listing of PRGs, the following remediation goals were established for each Aol at the Site:

Table 3-1 – Selected Lead Remediation Goals

Area of Interest	Selected Lead Remediation Goal ¹ (mg/kg)
Former RMHA	750
East Swale	750
South Ditch	750
Upper Creek Area	400
Offsite Creek Area	1,505

Section 3.2.2 of the FS Report summarized the RAOs that were developed based on the results of the RI, Human Health and Phase I Ecological Risk Assessments, and the PRGs specified in Section 3.2.1 of that document to be protective of human health and the environment and were therefore proposed for the Site. In accordance with Ohio EPA's approval of the FS Report and the RD/RA Order, those RAOs were revised (where appropriate) to incorporate the above-listed remediation goals, as follows:

¹ As indicated in Section 3.3.2 of the FS Report, the 95% UCL removal focuses on the achievement of the specified lead RGs, because: 1) a preliminary review of the arsenic and antimony data indicated that the elevated concentrations of those constituents were generally collocated with lead samples requiring remediation under the 95% UCL; and 2) the data set for lead is significantly larger than the data sets for either antimony or arsenic.

1. Implement/maintain measures to prevent Current and Potential Future Site Worker exposure to East Fenced Area (EFA) sludge.
2. Prevent Current/Future Site Worker direct exposure to soils/sediments within the Former Manufacturing Area (which includes the former RMHA), EFA, East Swale/South Ditch, and Upper Creek Area that contain exposure point concentrations (EPCs) of lead above the applicable remediation goals calculated using the 95% UCL.
3. Prevent Future Construction/Excavation Worker direct exposure to soils/sediments within the Former Manufacturing Area (which includes the former RMHA), East Swale/South Ditch, and Upper Creek Area that contain exposure point concentrations (EPCs) of lead above the applicable remediation goals calculated using the 95% UCL.
4. Prevent Recreational User/Trespasser direct exposure to soils/sediments in the East Swale/South Ditch, Upper Creek Area, and Deltaic/Non-Deltaic portions of the OCA that contain exposure point concentrations (EPCs) of lead above the applicable remediation goals calculated using the 95% UCL.
5. Prevent Future Resident direct exposure to soils/sediments within the Upper Creek Area that contain exposure point concentrations (EPCs) of lead above the applicable remediation goals calculated using the 95% UCL.

3.3 Summary of the Selected Remedy

Per the Decision Document issued by Ohio EPA on June 6, 2014 and the RD/RA Order, the selected remedial alternative for the Site consists of soil/sediment removal in the East Swale, South Ditch, former RMHA, Upper Creek Area, and OCA until the calculated 95% UCL lead concentration for each area does not exceed the applicable remediation goal; rehabilitation and maintenance of the EFA by installing a one-foot thick soil cover and expanding the existing fenced area to fully secure the material in the EFA; and adhering to the institutional controls (*i.e.*, activity and use limitations) included in the environmental covenants established for portions of the Site. Additional details regarding the calculation of the 95% UCL concentrations and development of the preliminary limits of soil/sediment removal for each area of interest are provided in Section 5.2.2 of the FS Report.

As indicated in the Decision Document, implementation of a 95% UCL removal remedy would result in the excavation of approximately 4,260 cy of soil/sediment. Based on subsequent discussions between GE and Ohio EPA (as summarized in Section 1.2), the limits of removal in portions of the Off-Site Creek Area, Upper Creek Area, and South Ditch were slightly modified, such that the revised limits of excavation will result in the removal of approximately 4,320 cy of soil/sediment. The anticipated limits of soil/sediment removal associated with the selected remedy are shown on Figures 4 through 6 and a summary of

the excavation volumes associated with the former RMHA, South Ditch, East Swale, Upper Creek Area and deltaic/non-deltaic portions of the OCA is provided in the following table.

Table 3-2 – Estimated Soil Removal Volumes for 95% UCL Removal Scenario

Area	Lead PRG (mg/kg)	Excavation Volume (cy)
Former RMHA	750	585
East Swale	750	130
South Ditch	750	280
Upper Creek Area	400	915
OCA	1,505	2,410

As described in Sections 5.1 and 6.2 of the FS Report (as modified herein), the primary components of the preferred remedial alternative are anticipated to consist of the following:

- Conducting pre-design/pre-construction investigations to refine/verify the extent of soil/sediment removal and determine the waste characterization of those soils/sediments;
- Excavating an estimated 4,320 cy of soil/sediment that contain CoIs at concentrations which result in calculated 95% UCL concentrations that are greater than the applicable PRGs, including:
 - Former RMHA (including removal in paved areas) – 585 cy
 - East Swale – 130 cy
 - South Ditch – 280 cy
 - Upper Creek Area – 915 cy
 - OCA – 2,410 cy
- Transporting excavated materials offsite for disposal at appropriately permitted facilities;
- Collection and treatment/disposal of construction-related waters;
- Restoring removal areas to match pre-construction levels and grades and vegetative restoration of disturbed areas;

- Rehabilitating the EFA which includes: clearing and grubbing existing vegetation; repair of the existing cover; placing an additional 1-foot of soil cover to improve the existing cover; and repair, replacement, and installation of EFA fencing; and
- Preparing an Operations and Management (O&M Plan) to document the following:
 - The institutional controls (ECs) that have been established and will be maintained for the Site;
 - Known locations of soil containing CoIs greater than unrestricted access concentrations;
 - Protocols (including health and safety requirements) for conducting invasive (i.e., subsurface) activities and managing potentially impacted material encountered during those activities; and
 - Protocols for conducting annual site inspection and maintenance activities.

As previously indicated, institutional controls in the form of ECs have already been established for the formerly developed portion of the former plant area and the portion of the OCA owned by the Richard's entities. As part of this remedial alternative, the institutional controls will be verified on an annual basis.

4. Pre-Design Investigations

4.1 General

This section of the RD Work Plan provides a description of the supplemental pre-design investigations proposed to aid in the development of the Remedial Design for the Site. Section 3.1.2 of the RD/RA SOW provides an outline for the preparation of a Pre-Design Studies Plan (PDSP) as part of the RD/RA Work Plan. To facilitate discussions regarding the scope of such supplemental investigations, GE developed an initial scope of sampling, as presented in the RD Work Plan provided to Ohio EPA in November 2014. As described in Section 1.2, that scope of sampling was revised based on: (1) multiple conference calls between representatives of Ohio EPA and GE subsequent to submittal of the November 2014 RD Work Plan; (2) Ohio EPA's February 6, 2015 letter providing comments on the RD Work Plan; and (3) a March 13, 2015 conference call between Ohio EPA and GE during which Ohio EPA agreed to eliminate certain of the samples requested in the February 6, 2015 letter to GE (e.g., samples in the South Ditch and Evaluation Area 6C of the OCA). As Ohio EPA and GE have reached consensus regarding the scope of the pre-design investigation activities to be performed at the Site (and the evaluation of the data resulting from those investigations), a separate PDSP is not required. However, as discussed with Ohio EPA, GE will prepare and submit the following documents in May 2015 for Ohio EPA review and approval prior to implementation of the pre-design investigations: a Quality Assurance Project Plan (QAPP) consistent with Section 4.1 of the RD/RA SOW; a Field Sampling Plan (FSP) consistent with Section 4.2 of the RD/RA SOW; and, a Health and Safety Plan (HASP) consistent with Section 4.3 of the RD/RA SOW. The remainder of this section provides details regarding the revised scope of pre-design investigations proposed by GE.

4.2 Scope of Supplemental Pre-Design Sampling

As noted in Section 5.2.2 of the FS Report, the preliminary limits of soil/sediment removal presented therein and on Figures 4 through 6 of the November 2014 RD Work Plan were developed by conservatively extending the limits of removal to the nearest adjacent sampling location with lower constituent concentrations or a topographic boundary feature (e.g., steep embankment, culvert, drainage ditch). Based on a comparison of those preliminary limits of soil/sediment removal and the existing sampling data, certain proposed supplemental sampling locations were identified in the November 2014 RD Work Plan to further refine the limits of soil removal. As noted in Section 3.3, the preliminary limits of soil/sediment removal were modified in response to discussions between Ohio EPA and GE. The revised limits of soil/sediment removal are presented on Figures 7 through 14. Similarly, as indicated in Section 4.1, the scope of the supplemental pre-design sampling was modified based on several discussions between Ohio EPA and GE.

The scope of the supplemental pre-design investigations involves the collection of approximately 130 samples at the locations shown on Figures 7 and 9 through 14. As indicated in Table 1, approximately half of those samples will be submitted for analysis of total lead, while the remaining samples will be held for potential future analysis. As discussed with Ohio EPA during the March 13, 2015 conference call, the samples to be held for potential future analyses will be released if: (1) the sample result from the overlying depth increment indicates lead at a concentration greater than or equal to the concentration of the last sample requiring remediation in the corresponding evaluation area; or (2) a sample from a corresponding depth increment at a designated adjacent sampling location contains lead at a concentration greater than or equal to the concentration of the last sample requiring remediation in the corresponding evaluation area. Finally, Ohio EPA's February 6, 2015 letter to GE requested contingencies for additional sampling in certain areas (e.g., South Ditch, Former Raw Materials Handling Area, and portions of Evaluation Area 3 [Upper Creek Area]) if needed to determine the horizontal extent of impacted materials. As discussed with Ohio EPA during the March 13, 2015 conference call, no additional contingency sampling is proposed in those areas at this time. However, it is anticipated that the pre-design sampling activities will be performed over several weeks in June 2015 (as indicated in Figure 15). Therefore, the supplemental samples that are to be collected within the areas identified by Ohio EPA as potentially requiring contingencies will be collected early in the pre-design sampling program to allow for receipt and review of the data and determination of the potential need for any additional sampling activities prior to demobilization from the Site.

Consistent with Section 3.2 of the RD/RA SOW, it is proposed that the results of the supplemental pre-design soil sampling be incorporated into the first design submittal - i.e., the Intermediate (60%) Design submittal, along with any proposed modifications to the limits of soil removal associated with those sample results. As described in GE's December 23, 2014 e-mail to Ohio EPA and Ohio EPA's January 13, 2015 response, GE will compare each individual pre-design sample result to the last sample requiring remediation under the 95% UCL calculations for the corresponding evaluation area. If any single analytical result is greater than or equal to the concentration of the last sample requiring remediation in the corresponding evaluation area, GE will propose appropriate revisions to the limits of soil/sediment removal. However, if each analytical result is less than the last sample concentration requiring remediation in the corresponding evaluation area, the limits of soil/sediment removal will either: (1) remain unchanged, if the subject samples were collected along the edges or outside the limits of soil removal; or (2) be revised accordingly (i.e., inward), if the subject samples were collected inside the current limits of soil removal.

5. Remedial Design Tasks and Deliverables

5.1 General

This section of the RD Work Plan provides a description of the major tasks, deliverables and anticipated schedule associated with the performance of the Remedial Design for the Site. Section 3.3 of the generic RD/RA SOW contemplates preliminary design, intermediate design, pre-final design, final design submittals during the remedial design phase of the project. Given the nature and scope of the remediation activities for the Site and GE's/Technicolor's extensive experience implementing projects of similar scope, and based on conference calls between representatives of Ohio EPA and GE on March 13 and May 6, 2015, GE/Technicolor are proposing to streamline the Remedial Design process by consolidating the Remedial Design into two submittals: an Pre-Final (90%) Design submittal (Section 5.2) and a Final (100%) Design submittal (Section 5.3).

Each design deliverable will include supporting data and documentation sufficient to define the functional aspects of the Remedial Action and will demonstrate that the Remedial Action will be capable of meeting the objectives of the RD/RA Order.

At a minimum, the plans and specifications included in each deliverable will be in general accordance with the General Requirements for Plans and Specifications outlined in Section 3.3.1 of the RD/RA SOW, including:

- Discussion of the design strategy and design basis, including:
 - Compliance with the requirements of the RD/RA Order and all applicable regulatory requirements;
 - Minimization of environmental and public health impacts;
- Discussion of the technical factors of importance including:
 - Use of currently accepted environmental control measures and technologies;
 - The constructability of the design;
 - Use of currently accepted construction practices and techniques;
- Description of the assumptions made and detailed justification for those assumptions;
- Discussion of possible sources of error and possible operation and maintenance problems;

- Detailed drawings of the proposed design including, as appropriate:
 - Qualitative flow sheets;
 - Quantitative flow sheets;
- Tables listing equipment and specifications;
- Tables giving material and energy balances;
- Appendices including:
 - Sample calculations (one example presented and clearly explained for significant or unique calculations);
 - Derivation of equations essential to understanding the report; and
 - Results of laboratory tests, field tests and any additional studies.

Additional details regarding the anticipated components for the two proposed design deliverables are provided in the following sections.

5.2 Pre-Final (90%) Design Submittal

The first proposed design submittal will be a Pre-Final Design, which reflects the design effort at approximately 90% completion and combines the elements of the Preliminary (30%), Intermediate (60%), and Pre-Final (90%) Designs (as outlined in Sections 3.3.2.1 through 3.3.2.3 of the RD/RA SOW). In support of this submittal, GE/Technicolor will verify existing conditions at the Site that may influence the design and implementation of the Remedial Action. This submittal will also include the following components:

- Design plans, drawings, calculations, and specifications;
- Results of any treatability studies and additional field sampling (if performed);
- Design assumptions and parameters, including design restrictions, process performance criteria, appropriate unit processes for treatment systems, and expected removal or treatment efficiencies for both the process and waste (concentration and volume);
- Proposed cleanup verification methods, including compliance with applicable laws and regulations;
- Proposed siting/locations of processes/construction activity;

- Real estate and easement requirements;
- A preliminary construction schedule, including contracting strategy.
- A draft Construction Quality Assurance Plan (CQAP), consistent with Section 4.4 of the RD/RA SOW;
- A draft Performance Standard Verification Plan (PSVP), consistent with Section 4.5 of the RD/RA SOW;
- A draft O&M Plan, consistent with Section 4.6 of the RD/RA SOW;
- A Cost Estimate; and
- A Health and Safety Plan.

It should be noted that the draft O&M Plan included as part of the Remedial Design will focus on the post-construction phase of the project. If it is determined that any elements of the Remedial Action require operations, monitoring, and/or maintenance (e.g., onsite water treatment, if proposed), GE/Technicolor will want the selected RAC to participate in the development of any necessary procedures. In such an instance, the RA Work Plan will include a separate O&M Plan that describes the operations, monitoring, and/or maintenance procedures for any such elements of the Remedial Action. As such, the technical specifications will include contractor requirements for providing appropriate service visits by qualified personnel to supervise the installation, adjustment, startup, and operation of any required treatment systems, including appropriate training on operational procedures once startup has been successfully completed.

Finally, as previously noted, GE/Technicolor will want the selected RAC to participate in the development of the implementation-related details associated with the Remedial Action. As such, GE/Technicolor propose that the Remedial Action Implementation Plan outlined in Section 3.3.4 of the RD/RA SOW be consolidated with and submitted as a part of the RA Work Plan instead of as part of the Pre-Final Design Submittal.

5.3 Final (100%) Design Submittal

GE/Technicolor will ensure that any appropriate modifications resulting from the Ohio EPA's prior review of the Pre-Final Design submittal are incorporated into the Final (100%) Design submittal. As outlined in Section 3.3.2.4 of the RD/RA SOW, the Final (100%) Design submittal will provide any necessary updates to the information provided in the Pre-Final Design submittal.

6. Contractor Procurement and Development of a Remedial Action Work Plan

6.1 Contractor Procurement

As previously indicated in Section 1.2 of this RD Work Plan, GE/Technicolor believe that a RAC will have valuable input to the development of the implementation-related details to be included in a RA Work Plan. Therefore, GE/Technicolor are proposing to prepare a Request for Proposal (RFP), solicit bids for the RA, and select a RAC that will participate in the preparation and submittal of an RA Work Plan. Additional information regarding the proposed schedule for procurement of an RAC and preparation of the RA Work Plan (and associated documents) are included in Section 7.

6.2 Remedial Action Work Plan

As discussed in Section 5.2 of this RD Work Plan, the selected RAC will assist GE/Technicolor in developing an RA Work Plan that is consistent with Sections 3.1, 3.3.4, and 3.3.5 of the RD/RA SOW, which are further described below. As such, the RA Work Plan will provide the following information:

- An update regarding the status of all required site access agreements which shall extend for the duration of all remedial activities and include allowances for all operations and maintenance considerations, as well as Ohio EPA oversight activities;
- The overall strategy for performing the construction, operation, maintenance and monitoring of the RA;
- Document the qualifications, responsibilities and authority of all organizations and key personnel involved with the implementation of the RA, including the lines of communication for discussing and resolving any problems that may arise;
- Detailed discussions of the specific tasks (e.g., site preparation; utility clearances; environmental and survey controls; water diversion and storm water management; excavation support; material excavation, management, and loading; backfilling and restoration; etc.) necessary to implement the RA, including a description of the technical approach, personnel requirements, equipment requirements, permit requirements, how the activities will be coordinated;
- A summary of potential major scheduling problems or delays which may impact the overall schedule, as well as common and/or anticipated controls/remedies to overcome potential problems (e.g., vehicular and pedestrian traffic, noise, dust, and delays, etc.); and

- A schedule that identifies the timing for initiation and completion of all critical path tasks associated with the RA, including dates for significant interim milestones and completion of the overall project.

In addition to the items listed above, a series of plans and assessments will be prepared in support of and provided as attachments to the RA Work Plan. Included among those plans are any necessary revisions to the Site HASP based upon a review of the specific activities proposed by the RAC to implement the Remedial Action.

As noted in Section 5.2, the RAC will assist GE/Technicolor with the development of an O&M Plan covering the operation, monitoring and maintenance for any components of the Remedial Action requiring such activities during the Remedial Action phase of the project. (The O&M Plan submitted as part of the Remedial Design submittals will focus on the post-construction phase of the project, as also noted in Section 5.2.) Finally, the RA Work Plan will include a Regulatory Compliance Plan, which will ensure that work activities conducted at the Site will comply with all applicable regulatory state and federal requirements. As outlined in Section 3.1.3 of the RD/RA SOW, the plan will include the following information:

- Permitting authorities;
- Permits required to conduct RA activities;
- Time required by the permitting agency(s) to process permit applications,
- Identification of all necessary forms;
- Schedule for submittal applications; and
- All monitoring and/or compliance testing requirements.

As part of this plan, GE/Technicolor will identify any possible inconsistencies between any regulatory requirements and permits that may affect the required work. The plan will also include an analysis of the possible effects such inconsistencies have on the implementation of the RA and provide recommendations including supporting rationale for addressing such inconsistencies.

7. Schedule

Figure 15 presents a schedule for the performance of major tasks and deliverables associated with the RD/RA phases of this project. For the purposes of the schedule, the duration of Ohio EPA review times for each required submittal has been estimated. The duration for GE/Technicolor tasks have also been estimated based upon the requirements in the RD/RA Order and the understanding of the required components of each deliverable, as documented herein. This schedule will be revised accordingly throughout the Remedial Design to reflect actual submittal, review, and approval dates and included in each of the subsequent RD/RA deliverables.



Table

**TABLE 1
SUMMARY OF PROPOSED SUPPLEMENTAL SAMPLING ACTIVITIES**

**REMEDIAL DESIGN WORK PLAN
FORMER THOMSON/RCA FACILITY - CIRCLEVILLE, OHIO
GENERAL ELECTIC COMPANY/TECHNICOLOR USA, INC.**

Sampling ID	Sample Interval	Lead Analysis ¹
Evaluation Area 6C (Figure 7)		
EA-6C-1	0-6"	Analyze
EA-6C-2	0-6"	Analyze
EA-6C-3	0-6"	Analyze
EA-6C-4	6-12"	Analyze
	12-18", 18-24", 24-30"	Hold Pending Results of Overlying Sample(s) ²
EA-6C-5	0-6", 6-12"	Analyze
EA-6C-6	0-6", 6-12"	Analyze
EA-6C-7	0-6", 6-12"	Analyze
EA-6C-8	0-6", 6-12"	Analyze
EA-6C-9	0-6", 6-12"	Analyze
EA-6C-10	0-6", 6-12"	Analyze
T5-C-1L	12-18"	Analyze
	18-24", 24-30"	Hold Pending Results of Overlying Sample(s) ²
Evaluation Area 6A (Figure 9)		
EA-6A-1	12-18"	Analyze
EA-6A-2	0-6", 6-12"	Analyze
EA-6A-3	0-6", 6-12", 12-18", 18-24"	Analyze
EA-6A-4	0-6", 6-12", 12-18", 18-24"	Analyze
Evaluation Area 3 (Figure 10)		
EA-3-1	6-12", 12-18", 18-24", 24-30"	Analyze
	30-36", 36-42", 42-48"	Hold Pending Results of Samples from Corresponding Depth Increments at T-OCA-15-C2L ²
EA-3-2	6-12", 12-18", 18-24", 24-30"	Analyze
	30-36", 36-42", 42-48"	Hold Pending Results of Samples from Corresponding Depth Increments at T-OCA-15-C2L ²
EA-3-3	0-6"	Analyze
	6-12", 12-18", 18-24", 24-30", 30-36", 36-42", 42-48"	Hold Pending Results of Overlying Sample(s) and Samples from Corresponding Depth Increments at EA-3-2 ²
EA-3-4	0-6"	Analyze
EA-3-5	0-6"	Analyze
EA-3-6	0-6"	Analyze
EA-3-7	0-6", 6-12"	Analyze
EA-3-8	0-6", 6-12"	Analyze
EA-3-9	0-6", 6-12"	Analyze
EA-3-10	0-6", 6-12"	Analyze
EA-3-11	0-6", 6-12"	Analyze
EA-3-12	0-6", 6-12"	Analyze
EA-3-13	0-6", 6-12"	Analyze
	12-18"	Hold Pending Results of Overlying Sample ²
T-OCA-15-C2L	30-36"	Analyze
	36-42", 42-48"	Hold Pending Results of Overlying Sample ²
T-OCA-15-OB1L	6-12", 12-18", 18-24", 24-30", 30-36", 36-42", 42-48"	Hold Pending Results of Samples from Corresponding Depth Increments at EA-3-1 and EA-3-2 ²

**TABLE 1
SUMMARY OF PROPOSED SUPPLEMENTAL SAMPLING ACTIVITIES**

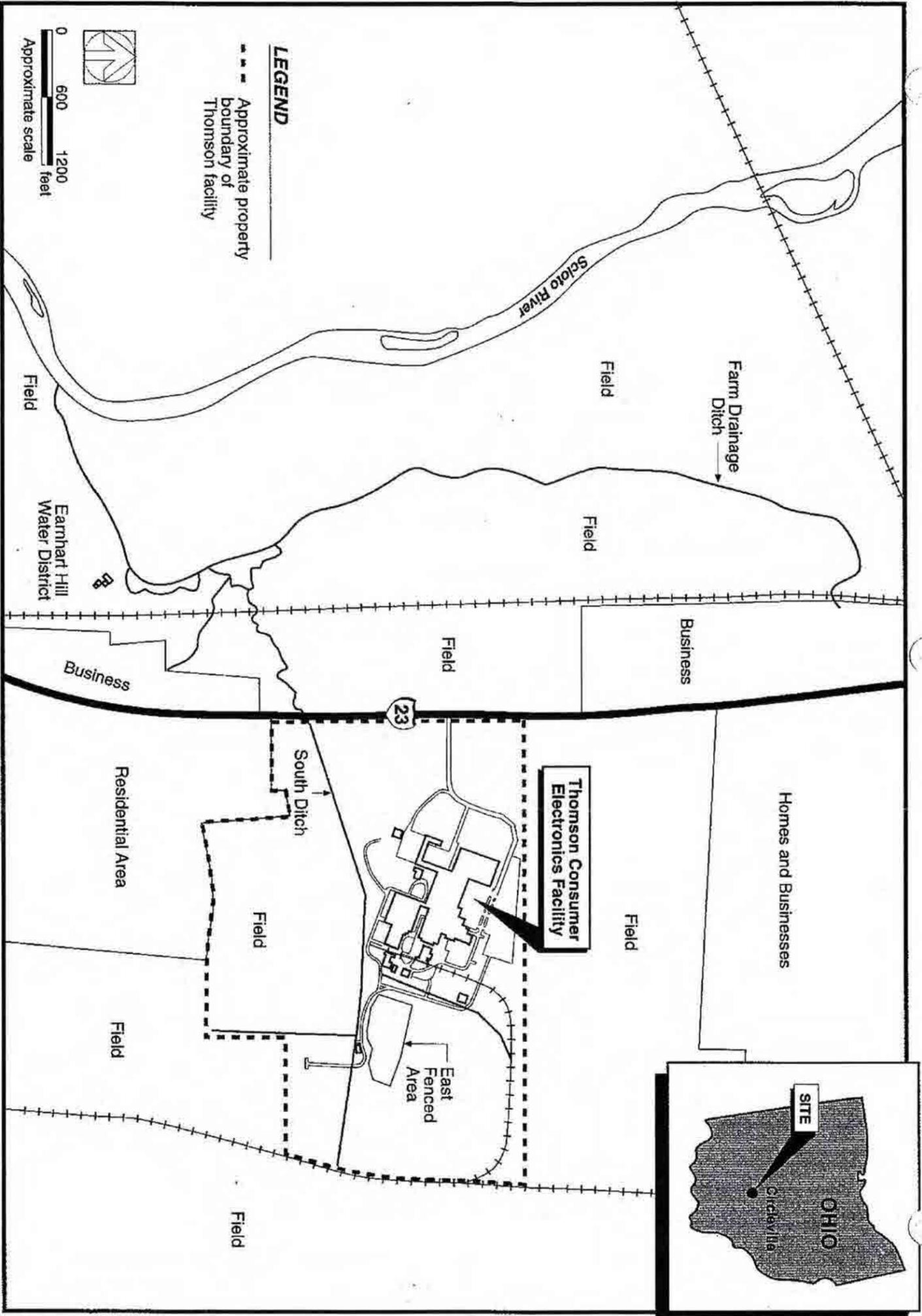
**REMEDIAL DESIGN WORK PLAN
FORMER THOMSON/RCA FACILITY - CIRCLEVILLE, OHIO
GENERAL ELECTRIC COMPANY/TECHNICOLOR USA, INC.**

Sampling ID	Sample Interval	Lead Analysis
South Ditch B Evaluation Area (Figure 11)		
SD-B-1	0-6", 6-12"	Analyze
	12-18"	Hold Pending Results of Overlying Sample(s) ²
South Ditch A Evaluation Area (Figure 12)		
SD-A-1	0-6"	Analyze
SD-A-2	0-6"	Analyze
East Swale Evaluation Area (Figure 13)		
ES-1	0-6", 6-12"	Analyze
	12-18"	Hold Pending Results of Overlying Sample(s) ²
ES-2	0-6", 6-12"	Analyze
	12-18"	Hold Pending Results of Overlying Sample(s) ²
Former Raw Materials Handling Area Evaluation Area (Figure 14)		
EB-4	24-30", 30-36", 36-42"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-9 ²
EB-8	24-30", 30-36", 36-42"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-9 ²
EB-9	24-30"	Analyze
	30-36", 36-42"	Hold Pending Results of Overlying Sample(s) ²
EB-10	24-30", 36-42"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-9 ²
EB-17	36-42", 42-48", 48-54"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-28 ²
EB-19	24-30", 36-42"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-9 ²
EB-27	36-42", 42-48", 48-54"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-28 ²
EB-28	36-42"	Analyze
	42-48", 48-54"	Hold Pending Results of Overlying Sample(s) ²
EB-29	36-42", 42-48", 48-54"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-28 ²
RMHA-1	18-24"	Analyze
RMHA-2	18-24", 30-36"	Analyze
	36-42", 42-48", 48-54"	Hold Pending Results of Samples from Corresponding Depth Increments at EB-28 ²
RMHA-3	18-24"	Hold Pending Results of Samples from Corresponding Depth Increments at RMHA-1 ²
RMHA-4	18-24", 30-36", 36-42", 42-48", 48-54"	Hold Pending Results of Samples from Corresponding Depth Increments at RMHA-2 ²

Notes:

1. Samples will be submitted for total lead analysis.
2. Held samples will be analyzed in a successive manner if: (1) the sample from the immediately overlying depth increment contains lead at a concentration greater than or equal to the concentration of the last sample requiring remediation in the corresponding evaluation area; or (2) a sample from a corresponding depth increment at the designated adjacent sampling location contains lead at a concentration greater than or equal to the concentration of the last sample requiring remediation in the corresponding evaluation area.

Figures

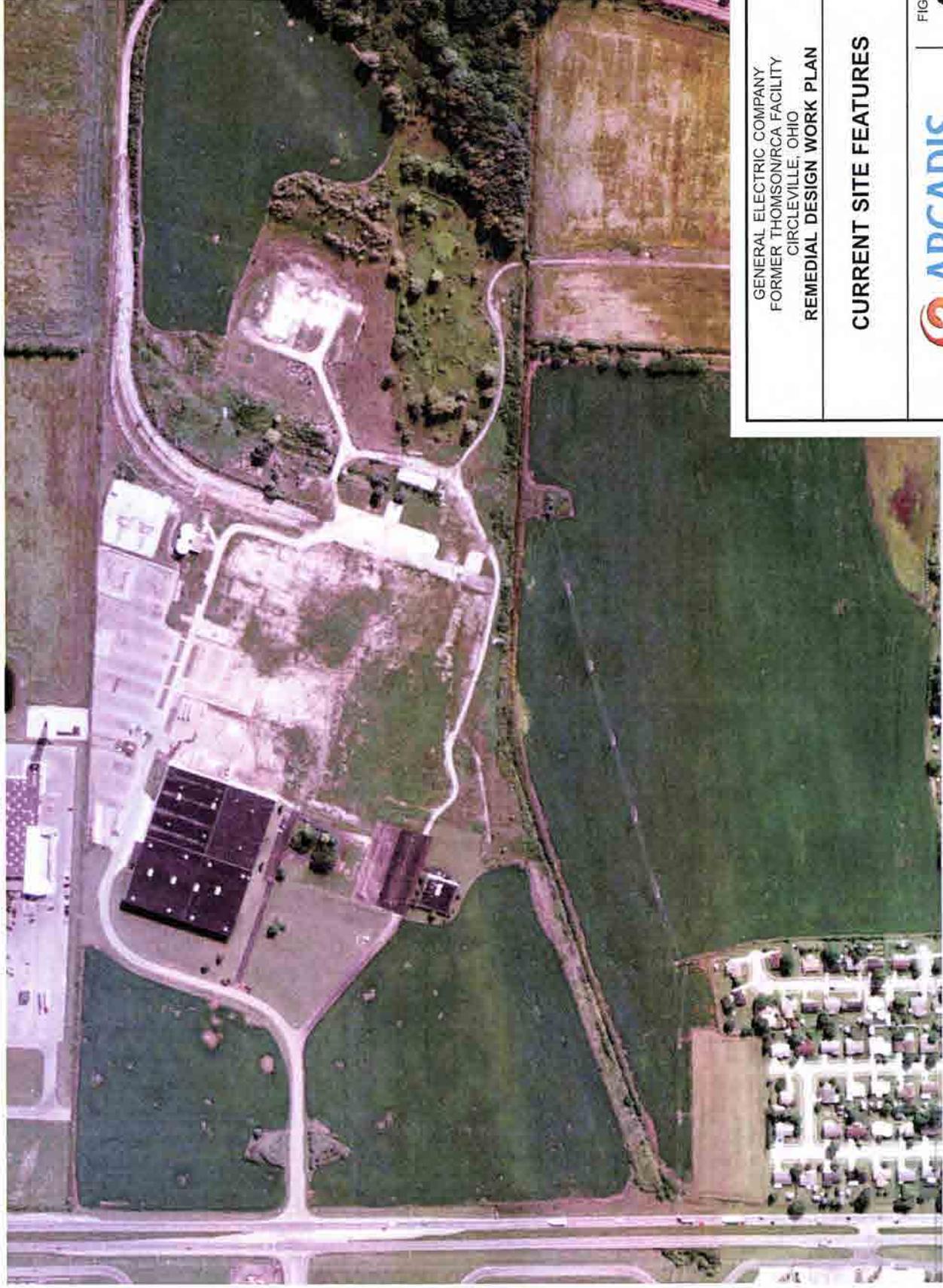


NOTE:
 1. DRAWING CREATED FROM FIGURE 1-1 OF REMEDIAL INVESTIGATION REPORT (EXONENT, MARCH 2010)

GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CLEVELAND, OHIO
 REMEDIAL DESIGN WORK PLAN

SITE LOCATION MAP





REFERENCE: AERIAL PHOTO GOOGLE EARTH © 2009.

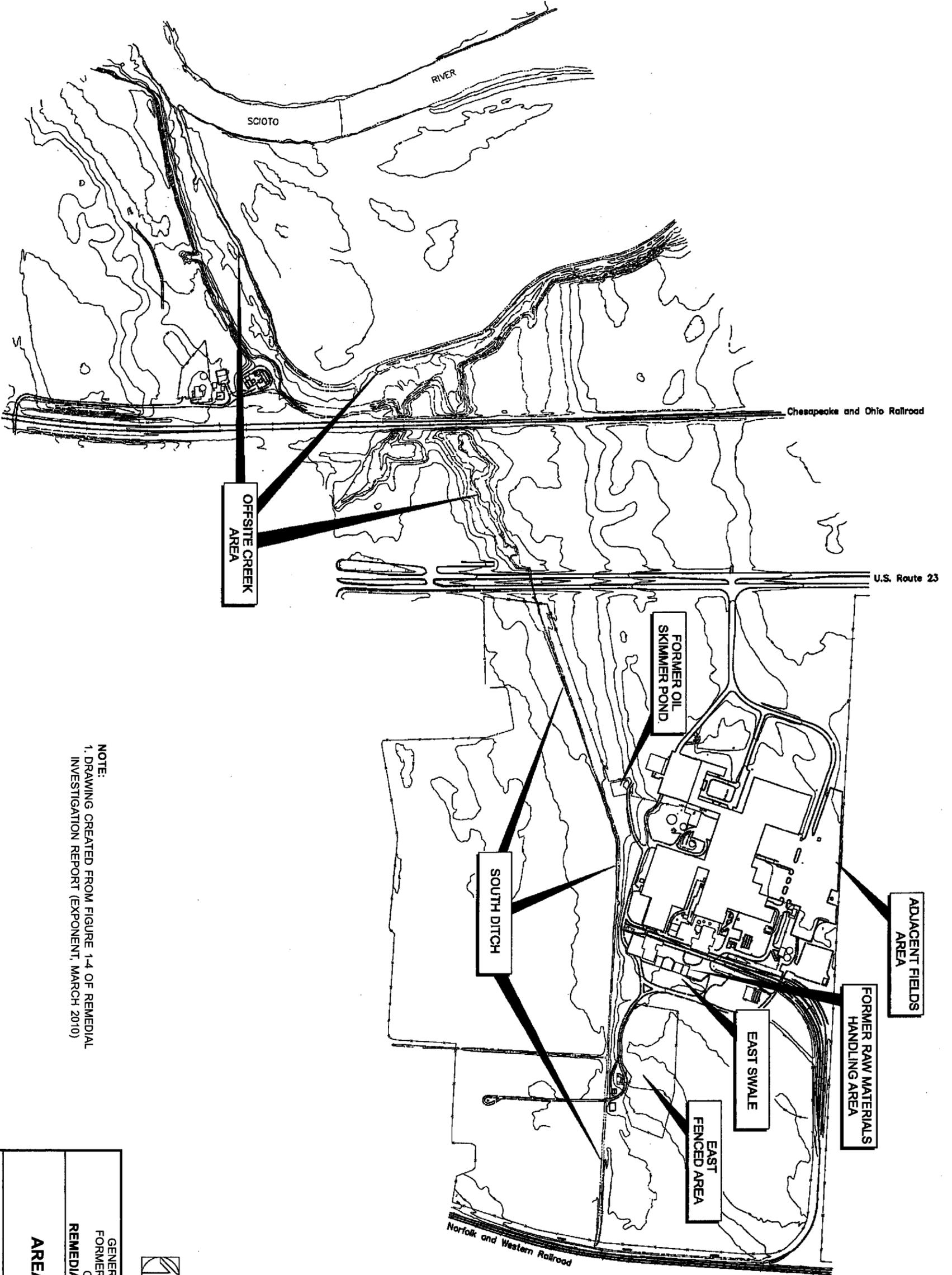
GENERAL ELECTRIC COMPANY
FORMER THOMSON/RCRA FACILITY
CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN

CURRENT SITE FEATURES

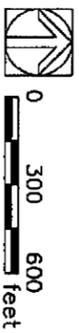


FIGURE

2



NOTE:
1. DRAWING CREATED FROM FIGURE 1-4 OF REMEDIAL
INVESTIGATION REPORT (EXPO-NENT, MARCH 2010)



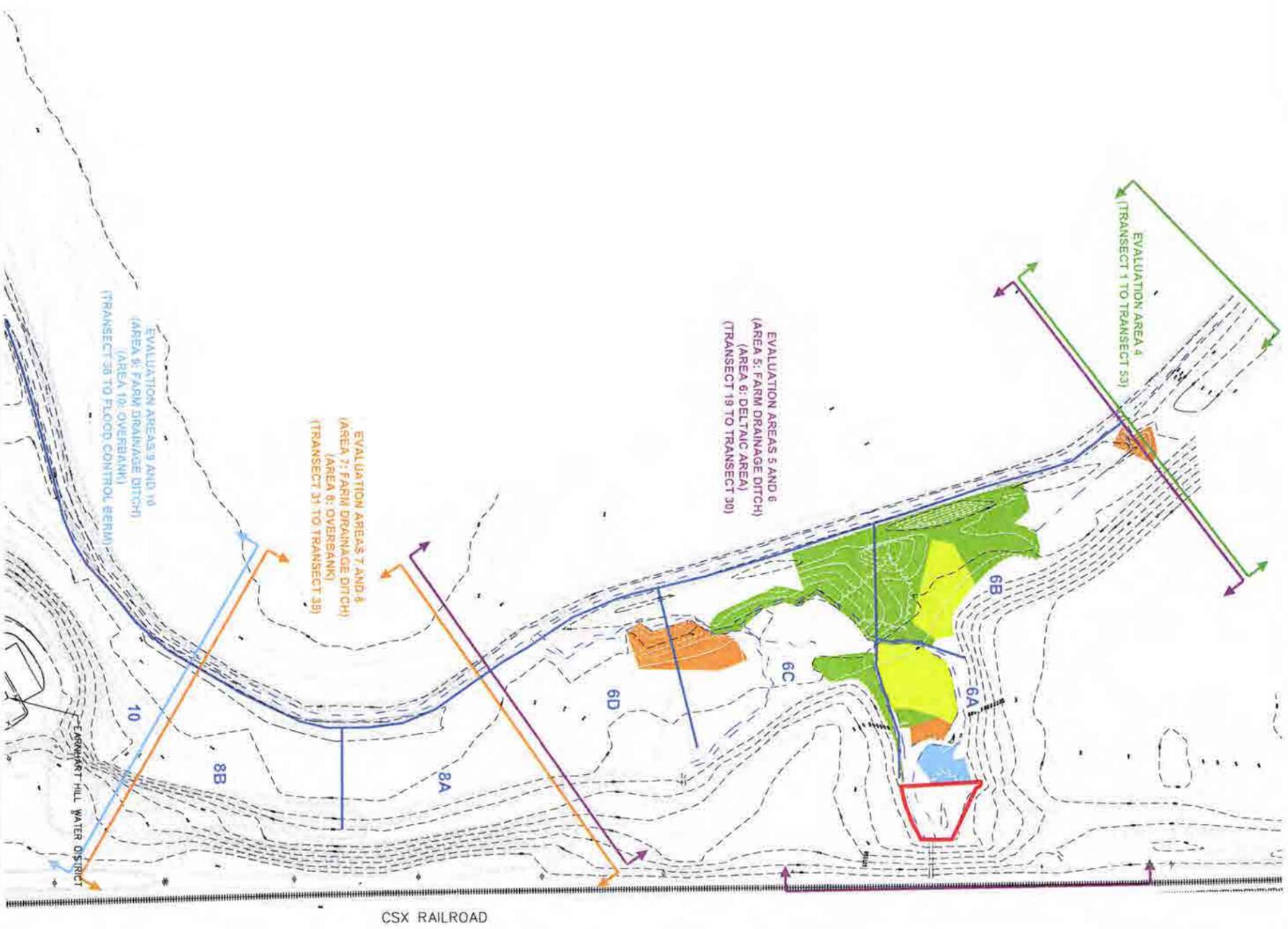
GENERAL ELECTRIC COMPANY
FORMER THOMSON/RCA FACILITY
CINCINNATI, OHIO
REMEDIAL DESIGN WORK PLAN

AREAS OF INTEREST

 ARCADIS

FIGURE
3

XREFS: IMAGES:
 10003X01
 10003X00
 10003X42



CSX RAILROAD



LEGEND:

- - - EXISTING CONTOUR
- - - EDGE OF WATER
- ~~~~~ TREELINE
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING UTILITY POLE

APPROXIMATE LIMITS OF EXCAVATION

- 6" REMOVAL
- 12" REMOVAL
- 18" REMOVAL
- 24" REMOVAL
- AREA OF 2002 IRM

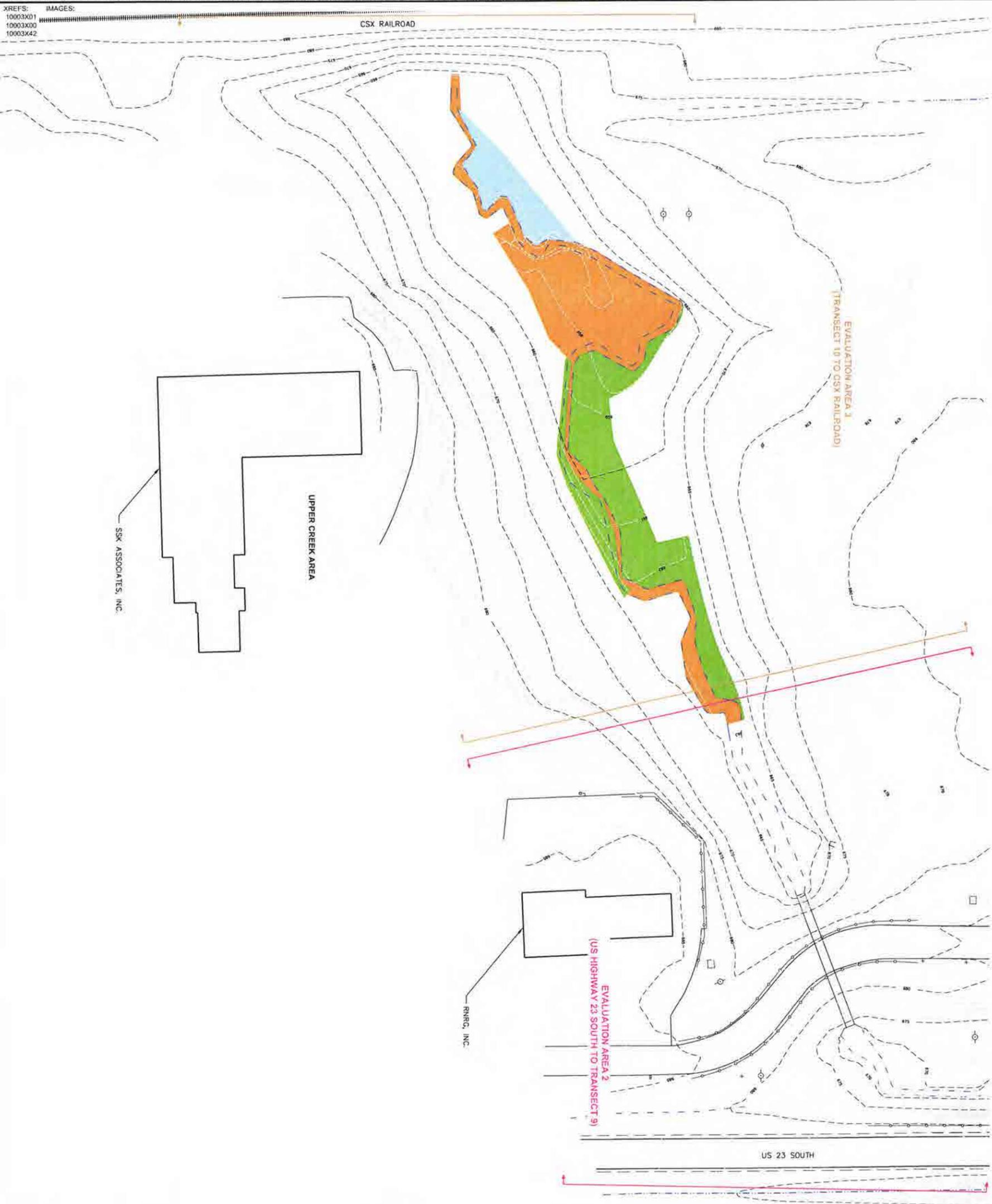
NOTE:

1. BASE MAP PROVIDED BY M.A.N. MAPPING SERVICES, INC. ENTITLED "03-62 THOMSON FACILITY," DATED SEPTEMBER 5, 2003 (FILE NO. THOMSON.DWG) AS REVISED BY BLASLAND, BOUCK & LEE, INC. ON JANUARY 12, 2004.



GENERAL ELECTRIC COMPANY
 FORMER THOMSON/IRCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN
APPROXIMATE EXCAVATION LIMITS
DELTAIC & NON-DELTAIC
PORTIONS OF OCA





LEGEND:

- - - EXISTING CONTOUR
- - - EDGE OF WATER
- ~~~~~ TREE LINE
- EXISTING GUARD RAIL
- EXISTING FENCE
- EXISTING UTILITY POLE

APPROXIMATE LIMITS OF EXCAVATION

- 6" REMOVAL
- 12" REMOVAL
- 30" REMOVAL

NOTE:

1. BASE MAP PROVIDED BY M.A.N. MAPPING SERVICES, INC. ENTITLED "03-62 THOMSON FACILITY" DATED SEPTEMBER 5, 2003 (FILE NO. THOMSON.DWG) AS REVISED BY BLASLAND, BOUCK & LEE, INC. ON JANUARY 12, 2004.



GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN

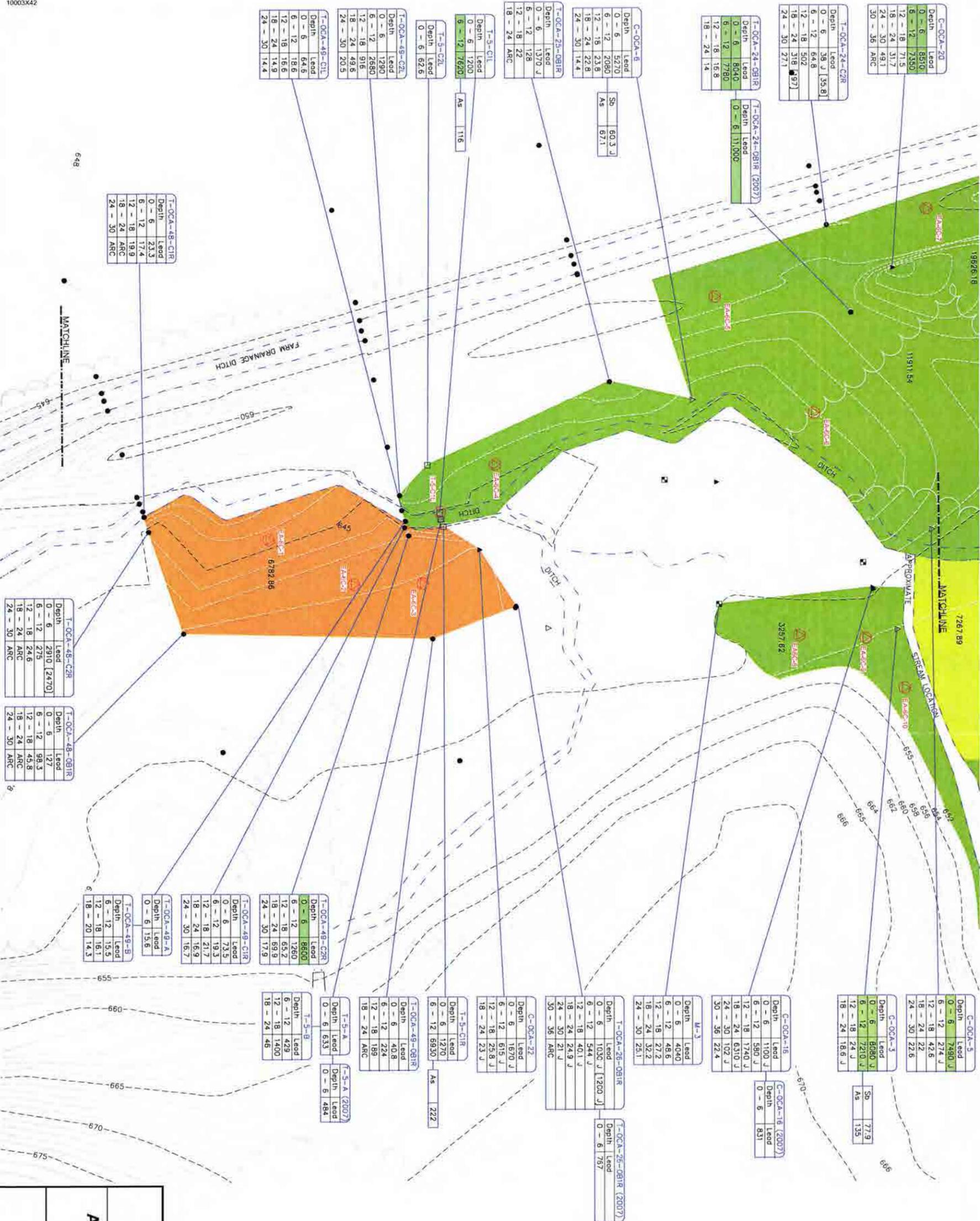
APPROXIMATE EXCAVATION LIMITS
UPPER CREEK AREA

ARCADIS

FIGURE **5**

XREFS: IMAGES:
 10003X01
 10003X00
 10003X42

XREFS: IMAGES:
 10003X00
 10003X01
 10003X42



APPROXIMATE EXCAVATION LIMITS

GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN

APPROXIMATE EXCAVATION AREA 6C
 EVALUATION AREA 6C
 1,505 ppm 95% UCL

LEGEND:

- ⊗ PROPOSED SUPPLEMENTAL SAMPLING LOCATION (FOR LEAD ANALYSIS)
- SAMPLE REQUIRING REMEDIATION
- EXISTING CONTOUR
- EDGE OF WATER
- TREE LINE

APPROXIMATE LIMITS OF EXCAVATION

- 6" REMOVAL
- 12" REMOVAL
- 18" REMOVAL

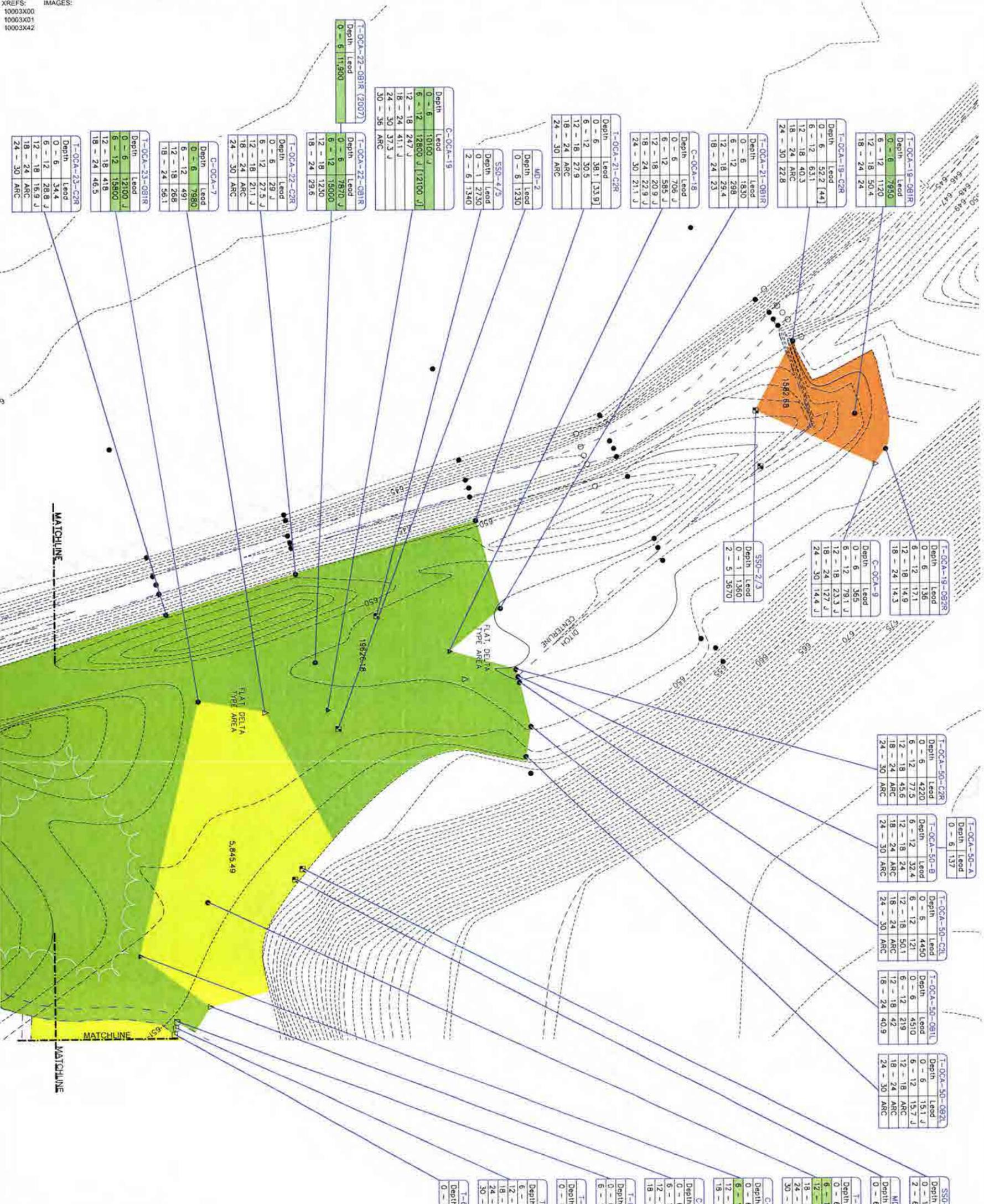
0 20' 40'

GRAPHIC SCALE

ARCADIS

FIGURE **7**

XREFS: IMAGES:
 10003X00
 10003X01
 10003X42



GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN
APPROXIMATE EXCAVATION LIMITS
 EVALUATION AREA 6B
 1,505 ppm 95% UCL

LEGEND:

- 0 - 6 7870 SAMPLE REQUIRING REMEDIATION
- EXISTING CONTOUR
- EDGE OF WATER
- TREELINE

APPROXIMATE LIMITS OF EXCAVATION

- 6" REMOVAL
- 12" REMOVAL
- 18" REMOVAL

0 20' 40'
 GRAPHIC SCALE

ARCADIS

FIGURE **8**

XREFS: IMAGES:
 10003X00
 10003X01
 10003X42



GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN

**APPROXIMATE EXCAVATION LIMITS
 EVALUATION AREA 6A
 1,505 ppm 95% UCL**

0 20' 40'
 GRAPHIC SCALE

LEGEND:

- PROPOSED SUPPLEMENTAL SAMPLING LOCATION (FOR LEAD ANALYSIS)
- 0 - 6 | 9920
- SAMPLE REQUIRING REMEDIATION
- EXISTING CONTOUR
- EDGE OF WATER
- TREELINE

APPROXIMATE LIMITS OF EXCAVATION

- 6" REMOVAL
- 12" REMOVAL
- 18" REMOVAL
- 24" REMOVAL
- AREA OF 2002 RMI

FIGURE **9**

XREFS: IMAGES:
 10003X00
 10003X01
 10003X42



XREFS: IMAGES:
 10003X00
 10003X01
 10003X42



LEGEND:

- PROPOSED SUPPLEMENTAL SAMPLING LOCATION (FOR LEAD ANALYSIS)
- 0 - 6 | 4320 SAMPLE REQUIRING REMEDIATION
- EXISTING CONTOUR
- EDGE OF WATER
- EXISTING UTILITY POLE
- TREELINE

APPROXIMATE LIMITS OF EXCAVATION

- 6" REMOVAL
- 12" REMOVAL

0 50' 100'
 GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN

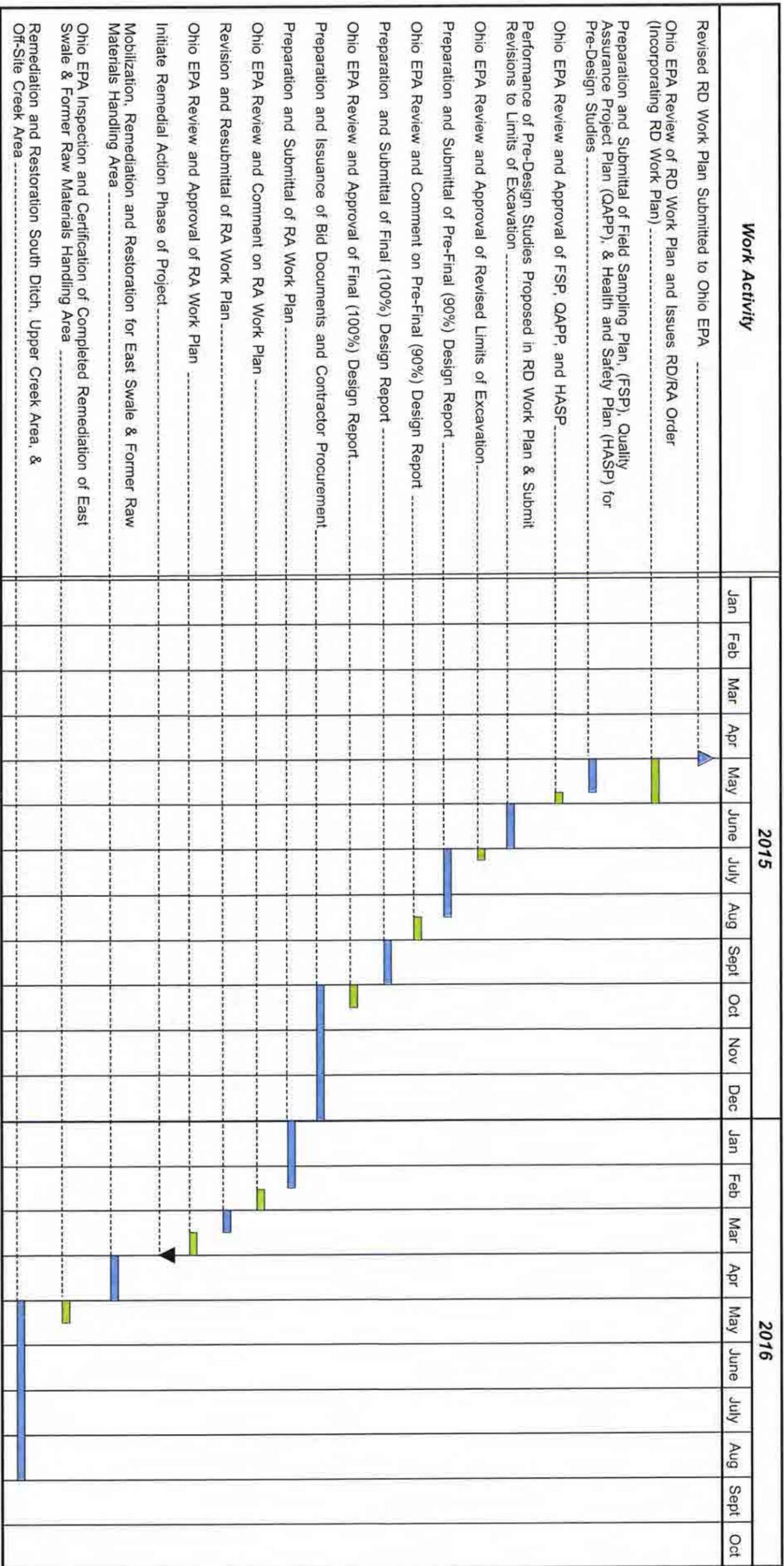
**APPROXIMATE EXCAVATION LIMITS
 SOUTH DITCH A EVALUATION AREA
 750 ppm 95% UCL**

XREFS: IMAGES:
 10003X00
 10003X01
 10003X42



GENERAL ELECTRIC COMPANY
 FORMER THOMSON/RCA FACILITY
 CIRCLEVILLE, OHIO
REMEDIAL DESIGN WORK PLAN
APPROXIMATE EXCAVATION LIMITS
EAST SWALE EVALUATION AREA
 750 ppm 95% UCL

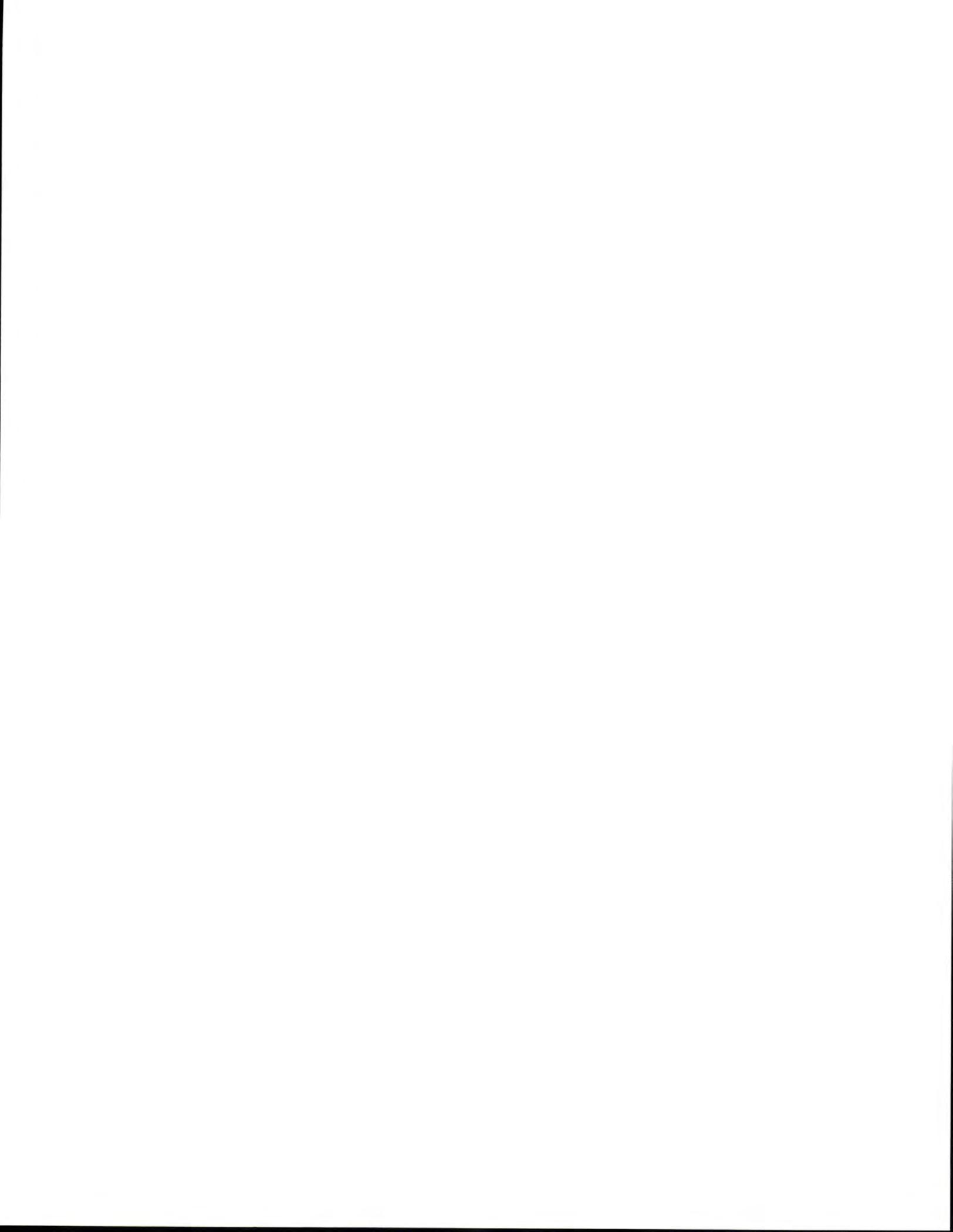




- Notes:**
1. Tasks in blue represent tasks performed by GE/Technicolor.
 2. Tasks in green represent tasks performed by Ohio EPA.
 3. Upside-down Black triangles represent meetings/milestones.
 4. The duration of Ohio EPA review/approval of certain submittals has been assumed for the purposes of this schedule.
 5. Schedule does not account for winter weather which could impact the timing/duration of certain field activities (e.g. sample collection, pre-bid site meeting, etc.)

APPENDIX E

Site Environmental Covenant



ORIGINAL

RECEIVED-ALBANY

JAN 13 2012

GE CEP

201100006478
Filed for Record in
PICKAWAY COUNTY, OHIO
JOYCE R. GIFFORD, COUNTY RECORDER
12-28-2011 At 03:07 pm.
EPA LIEN 212.00
OR Volume 659 Page 2744 - 2768

To be recorded with Deed
Records - ORC § 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by US 23 Circleville, LLC and IRG Circleville, LLC ("Owners"), General Electric Company ("GE"), Technicolor USA, Inc. (formerly Thomson Consumer Electronics, Inc.) ("Technicolor") (GE and Technicolor collectively, the "Holders") and the Ohio Environmental Protection Agency ("Ohio EPA") pursuant to Ohio Revised Code ("ORC") §§ 5301.80 to 5301.92 for the purpose of subjecting the Property to the activity and use limitations set forth herein.

WHEREAS, Director's Final Findings and Orders ("Orders") for a Remedial Investigation and Feasibility Study ("R/FS") were issued to Thomson Consumer Electronics and GE by the Ohio EPA on February 14, 1994;

WHEREAS, the Property has been the subject of investigation work conducted pursuant to the Orders;

WHEREAS, the investigation has identified areas where lead and other contaminants are or may be present on the Property that may present pathways of exposure;

WHEREAS, the remedy to be selected for the Property will include the activity and use limitations set forth in this Environmental Covenant for those areas;

WHEREAS, the activity and use limitations protect against potential hazardous substances in soil on the Property and will support the issuance of an NFA Letter and a Covenant Not to Sue for the Property;

WHEREAS, the administrative record for the project may be reviewed by contacting: Records Management Officer, Ohio EPA, Division of Environmental Response and Revitalization, P.O. Box 1049, Columbus, Ohio 43216-1049, 614-644-2924; or the Ohio EPA, Central District Office; and

WHEREAS, GE, Technicolor, and Owners hereby desire to establish and impose certain covenants and restrictions on portions of the Property;

Now therefore, for valuable consideration received, Owners, GE, Technicolor and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns a portion of an approximately 230 acre

tract of real property owned by Owners, located at 24200 U.S. Route 23, in Circleville, Pickaway County, Ohio, and more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein ("Property").

3. Owners. US 23 Circleville, LLC and IRG Circleville LLC ("Owners") with an address of 12214 Lakewood Blvd, Downey, CA 90242, are the owners of the Property.

4. Holder. GE, whose business address is 319 Great Oaks Boulevard, Albany, NY 12203, and Technicolor, whose business address is 101 W. 103rd Street, Indianapolis, IN 46290, are the holders of this Environmental Covenant.

5. Activity and Use Limitations. As part of the remedial action to be implemented on the Property, Owners hereby impose and agree to comply with the following activity and use limitations:

- a. Former Manufacturing Area – Residential and Agricultural Land Use Prohibition. The portions of the Property indicated on Exhibit B as the "Former Manufacturing Area" shall not be used for any residential land use, as defined in OAC Rule 3745-300-08(C)(2)(c)(i) (effective March 1, 2009) (*Exhibit C*), or for agricultural use, as defined in Exhibit C.
- b. Prohibition Against Extraction or Use of Ground Water. Ground water underlying the Property shall not be extracted or used for any purpose, potable or otherwise, except for investigation, monitoring or remediation of the groundwater.
- c. East Fenced Area – No Disturbance and Use Restriction.
 1. The existing soil cover and any future cover, implemented as part of an Ohio EPA - approved remedy for the Property, on the "East Fenced Area," as shown on Exhibit B, shall not be graded, excavated or disturbed except for maintenance of the existing and/or future soil cover, and any activities at or near the East Fenced Area shall not, in any way, interfere with the integrity of the cover thereon and the fence around it.
 2. The portions of the Property identified on Exhibit B as the "East Fenced Area"; (a) shall not be used for any residential land use, commercial land use, or industrial land use, as such terms are defined in OAC Rule 3745-300-08(C)(2)(c)(i), 3745-300-08(C)(2)(c)(ii), and 3745-300-08(C)(2)(c)(iii), respectively (effective March 1, 2009) (*Exhibit C*), or for agricultural use, as defined in Exhibit C; and (b) shall be used only as a covered and secured disposal area, without any human structures, human occupancy, or human activity, except for maintenance of the existing and/or future soil cover, and the fence, implemented as part of an Ohio EPA-approved remedy for the Property.

d. East Swale and South Ditch – Use Restriction.

- i. The portions of the Property identified on Exhibit B as the "East Swale" and "South Ditch": (a) shall not be used for any residential land use, commercial land use, or industrial land use, as such terms are defined in OAC Rule 3745-300-08(C)(2)(c)(i), 3745-300-08(C)(2)(c)(ii), and 3745-300-08(C)(2)(c)(iii), respectively (effective March 1, 2009) (*Exhibit C*), or for agricultural use, as defined in Exhibit C; and (b) shall be used only for (1) its present, known use, which is as undeveloped natural area, without any human structures, human occupancy, or human activity, and (2) for construction or excavation activities, as defined in OAC Rule 3745-300-08(C)(2)(c)(iv) (effective March 1, 2009) (*Exhibit C*). Any and all such construction or excavation activities performed in the East Swale or South Ditch soils shall be conducted pursuant to and in compliance with a Soil Management Plan approved by Ohio EPA that includes waste characterization and proper disposal of the excavated soils.

If any event or action by or on behalf of a person who owns an interest in or holds an encumbrance on those areas of the Property, identified as the Former Manufacturing Area, the East Fenced Area, or the East Swale and South Ditch on Exhibit B, constitutes a breach of the activity and use limitations set forth above, Owners or Transferee shall notify Ohio EPA within thirty (30) days of becoming aware of the event or action, and shall remedy each such breach of the activity and use limitations within sixty (60) days of becoming aware of the event or action, or such other time frame as may be agreed to by the Owners or Transferee (as defined below) and Ohio EPA.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owners and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owner of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

7. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce any non-compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA from exercising any authority under applicable law.

8. Rights of Access. Owners hereby grant to Ohio EPA, its agents, contractors, and employees, and to GE and Technicolor, the right of access to the Property for implementation

or enforcement of this Environmental Covenant.

9. Compliance Reporting. Owners or any Transferee, if applicable, shall submit to Ohio EPA, GE and Technicolor on an annual basis written documentation verifying that the activity and use limitations remain in place and are being complied with.

10. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE PICKAWAY COUNTY RECORDER ON _____ 2011, IN [DOCUMENT _____, or BOOK _____, PAGE _____]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS: FORMER MANUFACTURING AREA - RESIDENTIAL LAND USE PROHIBITION; GROUND WATER PROHIBITION; EAST FENCED AREA - DISTURBANCE AND USE RESTRICTION; AND EAST SWALE AND SOUTH DITCH - USE RESTRICTION.

Owners or Transferee, if applicable, shall notify Ohio EPA, GE and Technicolor within ten (10) days after each conveyance of an interest in any portion of the Property. The notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

11. Representations and Warranties. Owners hereby represent and warrant to the other signatories hereto:

- a. that the Owners are the sole owners of the Property;
- b. that the Owners hold fee simple title to the Property which is subject to the interests or encumbrances identified in Exhibit D attached hereto and incorporated by reference herein;
- c. that the Owners have the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder;
- d. that the Owners have identified all other persons that own an interest in or hold an encumbrance on the Property and notified such persons of the Owners'

intention to enter into this Environmental Covenant; and

e. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owners are a party or by which Owners may be bound or affected.

12. Amendment or Termination. This Environmental Covenant may be amended or terminated by consent of all of the following: the Owners or a Transferee, if applicable; GE, Technicolor and the Ohio EPA, pursuant to ORC § 5301.90 and other applicable law. The term, "Amendment," as used in this Environmental Covenant, shall mean any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations so long as there is at least one limitation remaining. The term, "Termination," as used in this Environmental Covenant, shall mean the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant.

This Environmental Covenant may be amended or terminated only by a written instrument duly executed by the Director of Ohio EPA and the Owners or Transferee, if applicable, and Holders. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, the Owners or Transferee, if applicable, shall file such instrument for recording with the Pickaway County Recorder's Office, and shall provide a file- and date-stamped copy of the recorded instrument to Ohio EPA.

13. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

14. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.

15. Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, Owners shall file this Environmental Covenant for recording, in the same manner as a deed to the Property, with the Pickaway County Recorder's Office.

16. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Pickaway County Recorder's Office.

17. Distribution of Environmental Covenant. The Owners shall distribute a file- and date-stamped copy of the recorded Environmental Covenant to: Ohio EPA; City of Circleville; each person who signed the Environmental Covenant, each person holding a recorded

interest in the Property; any and all lessees, and any other person designated by Ohio EPA.

18. Notice. Unless otherwise notified in writing by or on behalf of the current owner or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

For Ohio EPA:

Division of Environmental Response and Revitalization
Ohio EPA – Central Office
50 West Town Street
P.O. Box 1049
Columbus, Ohio 43216-1049
Attention: Records Management Officer

and

Division of Environmental Response and Revitalization
Ohio EPA - Central District Office
50 West Town Street
P.O. Box 1049
Columbus, Ohio 43216-1049
Attention: RCA Thomson Site Coordinator

For Owners:

US 23 Circleville, LLC
IRG Circleville LLC
12214 Lakewood Blvd
Downey, CA 90242

With copies to:

US 23 Circleville, LLC
IRG Circleville LLC
3623 Brecksville Road
Richfield, OH 44286

and

Thomas H. Bergman, Esq.
4695 Lake Forest Drive
Suite #200
Cincinnati, OH 45242

For Technicolor:

Meggan Ehret
Technicolor USA, Inc.
101 West 103rd Street
Indianapolis, Indiana 46290

For GE:

John Uruskyj
General Electric Company
Corporate Environmental Programs
319 Great Oaks Blvd.
Albany, NY 12203

The undersigned representatives of Owners, GE and Technicolor represent and certify that they are authorized to execute this Environmental Covenant.

IT IS SO AGREED:

US 23 Circleville, LLC

(20) [Signature]
Signature of Owner

Stu Lichter
Printed Name and Title

December 22, 2011
Date

State of Ohio)
County of Cuyahoga) ss:

Before me, a notary public, in and for said county and state, personally appeared Stu Lichter, a duly authorized representative of US 23 Circleville, LLC, who acknowledged to me that [he/she] did execute the foregoing instrument on behalf of US 23 Circleville, LLC.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 22 day of December, 2011.

[Signature]
Notary Public



SHARON MURTON
Resident Cuyahoga County
Notary Public, State of Ohio
My Commission Expires
December 7, 2012

IRG Circleville LLC

[Handwritten Signature]

Signature of Owner

Stuart J. Lichter

Printed Name and Title

10-31-11
Date

State of _____ }
County of _____ } ss:

Before me, a notary public, in and for said county and state, personally appeared _____, a duly authorized representative of IRG Circleville LLC, who acknowledged to me that *[he/she]* did execute the foregoing instrument on behalf of IRG Circleville LLC.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____ day of _____, 2011.

See Attachment for Notary
Notary Public

Ohio Environmental Protection Agency

[Handwritten Signature]
Scott J. Nally, Director

11/30/11
Date

State of Ohio }
County of Franklin } ss:

Before me, a notary public, in and for said county and state, personally appeared Scott J. Nally, the Director of Ohio EPA, who acknowledged to me that he did execute the foregoing instrument on behalf of Ohio EPA.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 30th day of November, 2011.

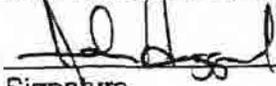


Charma Diane Casteel
Notary Public

CHARMA DIANE CASTEEL
NOTARY PUBLIC
STATE OF OHIO
MY COMMISSION EXPIRES

May 10, 2014

General Electric Company



Signature
John Haggard, Manager, Site Evaluation &
Remediation Program

Printed Name and Title

8/26/2011
Date

State of New York)

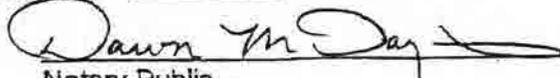
County of Rensselaer)

) ss:
)

DAWN M. DAYTER
Notary Public, State of New York
No. 01DA5056438
Qualified in Albany County
Commission Expires March 4, 2014

Before me, a notary public, in and for said county and state, personally appeared John Haggard, a duly authorized representative of the General Electric Company, who acknowledged to me that (he/she) did execute the foregoing instrument on behalf of the General Electric Company.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 26 day of August, 2011.


Notary Public

Technicolor USA, Inc.

Signature

Printed Name and Title

Date

State of _____)

County of _____)

) ss:
)

Before me, a notary public, in and for said county and state, personally appeared _____, a duly authorized representative of Technicolor USA, Inc., who acknowledged to me that [he/she] did execute the foregoing instrument on behalf of Technicolor USA, Inc.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this ___ day of _____, 2011.

Notary Public

General Electric Company

Signature

Printed Name and Title

Date

State of _____)
County of _____) ss:

Before me, a notary public, in and for said county and state, personally appeared _____, a duly authorized representative of the General Electric Company, who acknowledged to me that [he/she] did execute the foregoing instrument on behalf of the General Electric Company.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this _____ day of _____, 2011.

Notary Public

Technicolor USA, Inc.

Meghan Ehret
Signature

MEGAN EHRET SECRETARY
Printed Name and Title

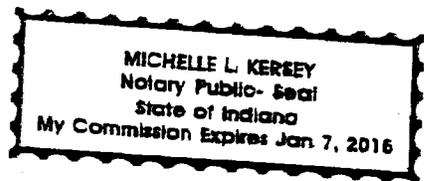
AUG 23, 2011
Date

State of Indiana)
County of Hamilton) ss:

Before me, a notary public, in and for said county and state, personally appeared Meghan Ehret, a duly authorized representative of Technicolor USA, Inc., who acknowledged to me that [he/she] did execute the foregoing instrument on behalf of Technicolor USA, Inc.

IN TESTIMONY WHEREOF, I have subscribed my name and affixed my official seal this 23 day of August, 2011.

Michelle Kersey
Notary Public



This instrument prepared by:

Mark A. Norman
Vorys, Sater, Seymour and Pease LLP
221 East Fourth Street, Suite 2000
Atrium Two
Cincinnati, OH 45202

Exhibit A

EXHIBIT A

226.552 Acre Tract
24200 U.S. Route 23, South
Circleville, Ohio 43113-8002

Situated in the State of Ohio, in the County of Pickaway, partially in the City of Circleville and partially in the Township of Circleville and being a part of Section 31, Township 11, Range 21, and being a part of the Consumer Electronics Holdings, Inc. 162.167 acre tract (162.243 acre tract by survey) of record in Deed Book 304, Page 708, and a part of the Thomson Consumer Electronics, Inc. 44.325 acre Parcel I and the 23.761 acre Parcel II of record in Deed Book 311, Page 617, except as noted all references being to the Recorder's Records, Pickaway County, Ohio, and being more particularly described as follows:

Beginning, for reference, at a magnetic nail found marking the northeast corner of Section 31;

thence North $86^{\circ}59'00''$ West 50.01 feet, in the northerly line of said Section 31, to a $\frac{3}{4}$ inch iron pin found marking the Place of Beginning in the westerly right-of-way line of the Norfolk and Western Railroad and northeasterly corner of said 162.167 acre tract;

thence South $04^{\circ}09'22''$ West 1035.37 feet, in said westerly right-of-way line and an easterly line of said 162.167 acre tract, to an iron pipe set marking a point of curve to the right;

thence in the Arc of a Curve to the right, with a Radius of 3768.53 feet, an Arc distance of 967.78 feet, a Delta angle of $14^{\circ}42'50''$ and a Chord bearing South $11^{\circ}30'58''$ West 965.12 feet, in an easterly line of said 162.167 acre tract and the westerly line of said Railroad, to an iron pipe set;

thence South $18^{\circ}52'29''$ West 320.55 feet, in an easterly line of said 162.167 acre tract and in the westerly line of said railroad, to the southeasterly corner of said 162.167 acre tract, a northeasterly corner of the Roger H. & Mary H. May 82.45 acre tract of record in Deed Book 282, Page 58 and being referenced by a 4 inch square concrete post 1.73 feet west;

thence North $88^{\circ}30'30''$ West 930.05 feet, in a southerly line of said 162.167 acre tract and in a northerly line of said 82.45 acre tract, to a 4 inch steel post in the easterly line of said 44.325 acre tract;

thence South $03^{\circ}34'08''$ West 415.80 feet, in the easterly line of said 44.325 acre tract and in a westerly line of said 82.45 acre tract, to a 4 inch steel post;

thence North $86^{\circ}45'21''$ West 886.36 feet, in a southerly line of said 44.325 acre tract and in a northerly line of said 82.45 acre tract, to a $\frac{5}{8}$ inch iron pin found at

a southwesterly corner of said 44.325 acre tract, in the easterly line of said 23.761 acre tract and at a northwesterly corner of said original 92.45 acre tract;

thence South $05^{\circ}42'05''$ West 48.85 feet, in the easterly line of said 23.761 acre tract and in a westerly line of said original 92.45 acre tract, to a 5/8 inch iron pin found marking the southeasterly corner of said 23.761 acre tract and the northeasterly corner of Lot 321 as shown and delineated on the plat of Logan Elm Village Section 7 of record in Plat Book 7, page 17;

thence North $85^{\circ}06'43''$ West 124.00 feet, in a southerly line of said 23.761 acre tract and in the northerly line of said Lot 321, to an iron pipe set in the easterly right-of-way line of Chickasaw Drive as shown and delineated on said plat of Logan Elm Village Section 7;

thence North $04^{\circ}53'17''$ East 15.00 feet, in the easterly right-of-way line of said Chickasaw Drive, to a 5/8 inch iron pin found;

thence North $85^{\circ}08'43''$ West 478.08 feet, in a southerly line of said 23.761 acre tract and in the northerly lines of Chickasaw Drive and Lots 322 to 327, to an iron pipe set;

thence South $80^{\circ}42'57''$ West 635.45 feet, in a southerly line of said 23.761 acre tract and in the northerly lines of Lots 327 to 335, to a 5/8 inch iron pin found marking a southwesterly corner of said 23.761 acre tract and the corner common to Lots 335, 336 and 337 of said Logan Elm Village Section 7;

thence North $09^{\circ}20'45''$ West 110.06 feet, in a westerly line of said 23.761 acre tract and the easterly line of said Lot 337, to an iron pin found marking the northeasterly corner of said Lot 337 and in the southerly right-of-way line of Iroquois Drive;

thence North $80^{\circ}28'15''$ East 39.58 feet, in a northerly line of said 23.761 acre tract and in the southerly right-of-way line of said Iroquois Drive, to a 5/8 inch iron pin found;

thence North $09^{\circ}20'45''$ West 50.00 feet, in a westerly line of said 23.761 acre tract and in the easterly line of said Iroquois Drive, to a 5/8 inch iron pin found;

thence North $00^{\circ}34'35''$ West 384.50 feet, in a westerly line of said 23.761 acre tract and in the easterly lines of Lots 338 to 342, to a 5/8 inch iron pin found marking an angle point in a westerly line of said 23.761 acre tract and the northeasterly corner of said Lot 342;

thence North $09^{\circ}20'45''$ West 180.00 feet, in a westerly line of said 23.761 acre tract and in the easterly lines of Lot 343 and Apache Drive, to a 5/8 inch iron pin found marking an angle point in a westerly line of said 23.761 acre tract and in the northeasterly corner of said Apache Drive;

thence South $80^{\circ}39'15''$ West 6.80 feet, in the northerly line of said Apache drive, to an iron pin found marking the southeasterly corner of Lot 344 as shown and delineated on the Plat of said Logan Elm Village Section 7;

thence North $09^{\circ}20'45''$ West 110.00 feet, in a westerly line of said 23.761 acre tract and in the easterly line of said Lot 344, to an iron pipe set at the northwesterly corner of said 23.761 acre tract, in the northeasterly corner of said Lot 344 and in a southerly line of said 44.325 acre tract;

thence South $80^{\circ}39'15''$ West 224.74 feet, in a southerly line of said 44.325 acre tract and in the northerly lines of Lots 344 and 345, to a 5/8 inch iron pin found at a southwesterly corner of said 44.325 acre tract and in the easterly line of the Board of Trustees, Circleville Township 3.30 acre tract of record in Deed Book 356, page 771;

thence North $00^{\circ}34'38''$ West 106.58 feet, in the easterly line of said 3.30 acre tract and a westerly line of said 44.325 acre tract, to an iron pipe set;

thence North $88^{\circ}31'47''$ West 559.71 feet, in the northerly line of said 3.30 acre tract and a southerly line of said 44.325 acre tract, to an iron pipe set at the northwesterly corner of said 3.30 acre tract, the southwesterly corner of said 44.325 acre tract and in the easterly right-of-way line of United States Route 23;

thence North $07^{\circ}04'56''$ East 82.01 feet, in a westerly line of said 44.325 acre tract and in said easterly right-of-way line, to an iron pipe set in a southerly line of said 162.167 acre tract;

thence South $71^{\circ}37'46''$ West 132.13 feet, in a southerly line of said 162.167 acre tract, to a point;

thence North $30^{\circ}07'42''$ West 20.77 feet, in a southwesterly line of said 162.167 acre tract, to the centerline of the southbound lanes of said US Route 23;

thence North $00^{\circ}03'27''$ West 1114.25 feet, in a westerly line of said 162.167 acre tract and in the centerline of said southbound lanes, to a point;

thence North $00^{\circ}13'03''$ East 73.80 feet, in a westerly line of said 162.167 acre tract and in the centerline of said southbound lanes, to the southwesterly corner of the City of Circleville 0.28 acre tract of record in Deed Volume 346, page 203;

thence South 89°39'24" East 211.42 feet, in the southerly line of said 0.28 acre tract, passing an iron pin with identification cap stamped "R Johnson PS 6622" at 136.28 feet, to an iron pin with "Johnson" identification cap found;

thence North 00°43'36" West 60.07 feet, in the easterly line of said 0.28 acre tract, to an iron pin with "Johnson" identification cap found;

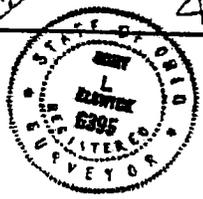
thence North 89°39'24" West 210.43 feet, in the northerly line of said 0.28 acre tract, passing an iron pin with "Johnson" identification cap found at 75.08 feet, to the centerline of said southbound lanes;

thence North 00°13'03" East 712.02 feet, in a westerly line of said 152.167 acre tract and in the centerline of said southbound lanes, to a spike found marking the northwesterly corner of said 152.167 acre tract and in the northerly line of said Section 31;

thence South 86°59'00" East 4174.67 feet, in the northerly line of said 162.167 acre tract and in the southerly lines of Circleville Crossing Subdivision of record in Plat Cabinet 2, Slide 5 and the Circleville Partners Limited Partnership original 102.905 acre tract of record in Official Record 555, page 088, to the Place of Beginning containing 226.552 acres, more or less, of which there is 23.112 acres in Circleville Township Logan Elm School District, 64.599 acres in Circleville Township Logan Elm School District Number 1, 138.841 acres in City of Circleville School District and there is within the Right-of-Way of U.S. Route 23 5.423 acres in Circleville Township and 0.144 acres in the City of Circleville.

This description is based on a field survey in June, July and August, 2006 by Gary L. Eberick, Professional Surveyor #6395. Iron pipes set are 3/4 inch galvanized iron pipe. Bearings are based on the northerly line of said 162.167 acre tract being South 86°59'00" East as described in said Deed Book 304, Page 708.

Gary L. Eberick 4-2-08
Gary L. Eberick, Professional Surveyor #6395 Date



2080000274
CONCOR LAND TITLE AGENCY, LTD
180 E BROAD STREET SUITE 805
COLUMBUS OH 43215

Exhibit B

Legal Description
City of Circleville &
Circleville Township, Pickaway County, Ohio
Section 31, Township 11, Range 21
65.092 Acres
Former Manufacturing Area

Situated in the City of Circleville, Township of Circleville, County of Pickaway, the State of Ohio and being part of Section 31, Township 11, Range 21 more particularly bounded and described as follows:

Being part of a 226.552 acre tract as described in Official Record 616, Page 1087 in the Pickaway County Recorder's Office.

Beginning at a point in the North line of said 226.552 acre tract and in the South line of Lot 4 of Circleville Crossing (reference Plat Cabinet 2, Slide 5) being S87°06'29"E 1381.82 feet distant from the Northwest corner of said 226.552 acre tract which is in the centerline of U.S. Route 23;

Thence with the South line of said Circleville Crossing and partially with the South line of a 102.305 acre tract (reference Official Record 555, Page 68) S87°06'29"E 209 1.03 feet to a point;

Thence leaving said South line and going with six new lines through said 226.552 acre tract the following calls;

S00°00'00"W 1353.76 feet to a point;

Thence N86°24'19"W 145.00 feet to a point;

Thence N87°31'43"W 408.56 feet to a point;

Thence N86°49'27"W 1297.07 feet to a point;

Thence S71°48'17"W 253.04 feet to a point;

Thence N00°00'00"W 1439.70 feet to the **POINT OF BEGINNING**;

Containing 65.092 Acres more or less, being 17.64 acres in Section 4 and 8.36 acres in Section 5.

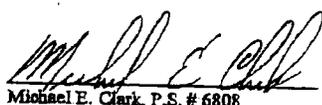
Subject to all existing valid rights-of-way and easements of record.

All iron pins set are 5/8" diameter x 30" long rebar with a 1 1/4" yellow plastic identification cap stamped "M.E. CLARK ASSOC."

Bearing reference for this survey is the City of Circleville Control Network.

I hereby certify that the foregoing legal description and the attached plat are a true representation of the conditions, as they existed on the date of the survey and that the accuracy of the same is consistent with accepted surveying standards.

This description is based on an actual field survey performed under the direct supervision of Michael E. Clark, Registered Surveyor #6808.


Michael E. Clark, P.S. # 6808



File No. E111002-65.092

12-13-11
Date

Legal Description
City of Circleville &
Circleville Township, Pickaway County, Ohio
Section 31, Township 11, Range 21
9.449 Acres
East Fenced Area

Situated in the City of Circleville, Township of Circleville, County of Pickaway, the State of Ohio and being part of Section 31, Township 11, Range 21 more particularly bounded and described as follows:

Being part of a 226.552 acre tract as described in Official Record 616, Page 1087 in the Pickaway County Recorder's Office.

Beginning for reference in the North line of said 226.552 acre tract and in the South line of a 102.305 acre tract (reference Official Record 555, Page 68) being S87°06'29"E 3472.85 feet distant from the Northwest corner of said 226.552 acre tract which is in the centerline of U.S. Route 23;

Thence leaving said common line and going with a new line through said 226.552 acre tract S00°00'00"E 874.12 feet to the TRUE POINT OF BEGINNING;

Thence with six more new lines through said 226.552 acre tract the following calls;

S00°00'00"E 479.64 feet to a point;

Thence N86°24'19"W 145.00 feet to a point;

Thence N87°31'43"W 408.56 feet to a point;

Thence N86°49'27"W 348.83 feet to a point;

Thence N00°00'00"E 433.60 feet to a point;

Thence N90°00'00"E 901.20 feet to the POINT OF BEGINNING;

Containing 9.449 Acres more or less.

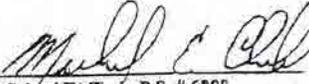
Subject to all existing valid rights-of-way and easements of record.

All iron pins set are 5/8" diameter x 30" long rebar with a 1 1/4" yellow plastic identification cap stamped "M.E. CLARK ASSOC."

Bearing reference for this survey is the City of Circleville Control Network.

I hereby certify that the foregoing legal description and the attached plat are a true representation of the conditions, as they existed on the date of the survey and that the accuracy of the same is consistent with accepted surveying standards.

This description is based on an actual field survey performed under the direct supervision of Michael E. Clark, Registered Surveyor #6808.


Michael E. Clark, P.S. # 6808



File No. E111002-9.449

12-13-11
Date

Legal Description
City of Circleville, Pickaway County, Ohio
Section 31, Township 11, Range 21
1.140 Acres
East Swale

Situated in the City of Circleville, the County of Pickaway, the State of Ohio and being part of Section 31, Township 11, Range 21 more particularly bounded and described as follows:

Being part of a 226.552 acre tract as described in Official Record 616, Page 1087 in the Pickaway County Recorder's Office.

Beginning at a point within the said 226.552 acre tract being S87°06'29"E 1381.82 feet and S83°28'26"E 1566.73 feet distant from the Northwest corner of said 226.552 acre tract which is in the centerline of U.S. Route 23;

Thence with ten new lines through said 226.552 acre tract the following calls;

S82°43'47"E 59.24 feet to a point;

Thence S49°05'18"W 195.74 feet to a point;

Thence S40°40'41"W 300.31 feet to a point;

Thence S21°14'43"W 577.19 feet to a point;

Thence S07°24'05"W 75.29 feet to a point;

Thence N87°37'24"W 36.18 feet to a point;

Thence N03°40'11"W 53.81 feet to a point;

Thence N25°23'47"E 74.08 feet to a point;

Thence N19°46'23"E 594.04 feet to a point;

Thence N46°28'59"E 428.34 feet to the POINT OF BEGINNING;

Containing 1.140 Acres more or less.

Subject to all existing valid rights-of-way and easements of record.

All iron pins set are 5/8" diameter x 30" long rebar with a 1 1/4" yellow plastic identification cap stamped "M.E. CLARK ASSOC."

Bearing reference for this survey is the City of Circleville Control Network.

I hereby certify that the foregoing legal description and the attached plat are a true representation of the conditions, as they existed on the date of the survey and that the accuracy of the same is consistent with accepted surveying standards.

This description is based on an actual field survey performed under the direct supervision of Michael E. Clark, Registered Surveyor #6808.


Michael E. Clark, P.S. # 6808

File No. E111002-1.698

12-13-11
Date

Legal Description
City of Circleville &
Circleville Township, Pickaway County, Ohio
Section 31, Township 11, Range 21
4.844 Acres
South Ditch

Situated in the City of Circleville, Township of Circleville, County of Pickaway, the State of Ohio and being part of Section 31, Township 11, Range 21 more particularly bounded and described as follows:

Being part of a 226.552 acre tract as described in Official Record 616, Page 1087 in the Pickaway County Recorder's Office.

Beginning at a point within the said 226.552 acre tract being S00°12'53"W 841.43 feet, S00°14'42"E 1062.18 feet and N89°30'45"E 139.93 feet distant from the Northwest corner of said 226.552 acre tract which is in the centerline of U.S. Route 23;

Thence with five new lines through said 226.552 acre tract the following calls;

N71°21'44"E 1569.20 feet to a point;

Thence S86°11'42"E 650.83 feet to a point;

Thence N56°07'15"E 55.08 feet to a point;

Thence S80°42'34"E 283.44 feet to a point;

Thence S87°30'12"E 1463.60 feet to a point in the East line of said 226.552 acre tract;

Thence with said East line an arc to the right 53.04 feet, having a radius of 3769.80 feet and a chord of which bears S08°43'34"W 53.04 feet distant, to a point;

Thence leaving said East line and going with four new lines through said 226.552 acre tract the following calls;

N85°17'58"W 286.25 feet to a point;

Thence N87°46'22"W 2209.57 feet to a point;

Thence S69°21'25"W 709.23 feet to a point;

Thence S72°47'47"W 801.06 feet to a point in the West line of said 226.552 acre tract;

Thence with said West line N06°45'08"E 50.85 feet to the **POINT OF BEGINNING**;

Containing 4.844 Acres more or less.

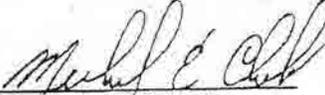
Subject to all existing valid rights-of-way and easements of record.

All iron pins set are 5/8" diameter x 30" long rebar with a 1/4" yellow plastic identification cap stamped "M.E. CLARK ASSOC."

Bearing reference for this survey is the City of Circleville Control Network.

I hereby certify that the foregoing legal description and the attached plat are a true representation of the conditions, as they existed on the date of the survey and that the accuracy of the same is consistent with accepted surveying standards.

This description is based on an actual field survey performed under the direct supervision of Michael E. Clark, Registered Surveyor #6808.


Michael E. Clark, P.S. # 6808



File No. E111002-4.844

12-13-11
Date

Exhibit C

"Agricultural use" means land use with potential exposure of adult workers during a business day and potential exposure of adults and children to agricultural land and facilities during the business day. Agricultural use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles of soil and ingestion of soil. Examples of agricultural use include, but are not limited to the pasturing, grazing and watering of livestock and poultry, and the raising, cultivation and harvesting of agricultural crops.

"Commercial land use" means "land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are customers, patrons or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of commercial land uses include, but are not limited to warehouses; retail gasoline stations; retail establishments; professional offices; hospitals and clinics; religious institutions; hotels; motels; and parking facilities." OAC Rule 3745-300-08(C)(2)(c)(ii) (effective March 1, 2009).

"Construction or excavation activities" include "invasive activities that result in potential exposure of adult workers during the business day for a portion of one year. Exposures during construction or excavation activities are of greater intensity and shorter duration than those for the commercial and industrial land use categories. Construction or excavation activities have potential exposures of adults to dermal contact with soil, inhalation of vapors and particles from soil, and ingestion of soil. Examples of construction or excavation activities include but are not limited to maintenance or installation of utilities; installation of building footers or foundations; grading; trenching; or laying utility lines or cables; and repair of engineering controls where there is significant exposure to soils." OAC Rule 3745-300-08(C)(2)(c)(iv) (effective March 1, 2009).

"Industrial land use" means "land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of industrial land uses include, but are not limited to: lumberyards; power plants; manufacturing facilities such as metal-working shops, plating shops, blast furnaces, coke plants, oil refineries, brick factories, chemical plants and plastics plants; assembly plants; non-public airport areas; limited access highways; railroad switching yards; and marine port facilities." OAC Rule 3745-300-08(C)(2)(c)(iii) (effective March 1, 2009).

"Residential land use" means "land use with a high frequency of potential exposure of adults and children to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Residential land use is considered protective for, and may be applied to, any and all categories of land use, without further restriction. Examples of residential land uses include, but are not limited to residences; day care facilities; schools, colleges and other educational institutions; nursing homes, elder care and other long-term health care facilities; and correctional facilities." OAC Rule 3745-300-08(C)(2)(c)(i) (effective March 1, 2009).

EXHIBIT D

The Property is subject to a mortgage held by:

RBS Citizens, National Association
d/b/a Charter One Bank, N.A.
1215 Superior Avenue
Cleveland, OH 44114

201100006478
VORYS SATER SEYMOUR & PEASE LLP
221 E FOURTH ST
CINCINNATI OH 45201



APPENDIX F

Richards Environmental Covenant



201200004889
 Filed for Record in
 PICKAWAY COUNTY, OHIO
 JOYCE R. GIFFORD, COUNTY RECORDER
 08-16-2012 At 11:45 am.
 MISCELL 156.00
 OR Volume 670 Page 86 - 100

To be recorded with Deed
 Records - ORC § 317.08

ENVIRONMENTAL COVENANT

This Environmental Covenant is entered into by Richards Farms, Inc., an Ohio corporation, Richards Land Company, an Ohio general partnership, William J. Richards, an individual, and Grace S. Richards, an individual, (collectively, the "Owners"), General Electric Company ("GE"), Technicolor USA, Inc. (formerly Thomson Consumer Electronics, Inc.) ("Technicolor") and the Ohio Environmental Protection Agency ("Ohio EPA") (collectively, the "Parties") pursuant to Ohio Revised Code ("ORC") §§ 5301.80 to 5301.92 for the purpose of subjecting the Property (defined below) to the activity and use limitations set forth herein.

WHEREAS, Director's Final Findings and Orders ("Orders") for a Remedial Investigation and Feasibility Study ("RI/FS") were issued to Thomson Consumer Electronics and GE by the Ohio EPA on February 14, 1994 for the former Thomson Consumer Electronics site located at 24200 U.S. Route 23 South, Circleville, Pickaway County, Ohio ("Site");

WHEREAS, the Site has been the subject of investigation work conducted pursuant to the Orders;

WHEREAS, Owners have previously executed a Declaration of Use Restrictions on the Property (defined below), which was recorded with the Pickaway County Recorder in Deed Records Volume 611, Pages 72 - 80, on November 14, 2007, which contains certain land use restrictions, covenants and stipulations;

WHEREAS, the Parties agree that land use restrictions on the so-called Off-Site Creek Area ("OCA") (which includes the Property) should be documented in an environmental covenant under ORC Sections 5301.80 to 5301.92;

WHEREAS, one of the remedial alternatives to be proposed in the Feasibility Study report to be prepared by GE and Technicolor for the OCA will include the activity and use limitations set forth in this Environmental Covenant for the Property;

WHEREAS, the administrative record for the project may be reviewed by contacting: Records Management Officer, Ohio EPA, Division of Environmental Response and Revitalization, P.O. Box 1049, Columbus, Ohio 43216-1049, telephone 614-644-2924; or the Ohio EPA Central District Office, P.O. Box 1049, Columbus, OH 43216-1049, telephone 614-728-3778;

WHEREAS, Owners, GE, and Technicolor hereby desire to establish and impose certain activity and use limitations on the Property;

NOW THEREFORE, for valuable consideration received, Owners (for themselves, and for all future owners of all or any part of the Property, and their respective successors and assigns), GE, Technicolor and Ohio EPA agree to the following:

1. Environmental Covenant. This instrument is an environmental covenant developed and executed pursuant to ORC §§ 5301.80 to 5301.92.

2. Property. This Environmental Covenant concerns a 9.314 acre tract of real property owned by Owners, located in Circleville Township and Wayne Township, Pickaway County, Ohio, and more particularly described in Exhibit A attached hereto and hereby incorporated by reference herein ("Property").

3. Owners. The Owners ("Owners") of the property are: Richards Farms, Inc., an Ohio corporation, with an address of 24537 Canal Road, Circleville, OH 43113, Richards Land Company, an Ohio general partnership, with an address of 24537 Canal Road, Circleville, OH 43113, William J. Richards, an individual, with an address of 24537 Canal Road, Circleville, OH 43113 and Grace S. Richards, an individual, with an address of 24537 Canal Road, Circleville, OH 43113.

4. Holdings. GE, whose business address is 319 Great Oaks Boulevard, Albany, NY 12203, and Technicolor, whose business address is 101 W. 103rd Street, Indianapolis, IN 46290, are the holders ("Holders") of this Environmental Covenant.

5. Activity and Use Limitations. As part of the remedial action to be implemented on the Property, Owners hereby impose and agree to comply with the following activity and use limitations:

Use Restriction. Except as noted otherwise herein, the use of the Property is hereby restricted and limited as follows: (i) the Property shall not be used for any residential land use, commercial land use, or industrial land use, as such terms are defined in Ohio Administrative Code ("OAC") Rule 3745-300-08(C)(2)(c)(i), 3745-300-08(C)(2)(c)(ii) and 3745-300-08(C)(2)(c)(iii)(effective March 1, 2009)(see, Exhibit B), and (ii) the Property shall be used only for its present, known land use, which is as an undeveloped wetland, floodplain, woodlands, and natural area without any human structures, human occupancy, or human activity, but may also be used for both existing and future roadways, extraction or use of groundwater for any non-potable purpose, the extraction of oil and gas, the installation of public utility lines, including but not limited to, water lines, sewer lines, telecommunications lines and gas and electric lines, and construction or excavation activities related thereto, as defined in OAC Rule 3745-300-08(C)(2)(c)(iv)(effective March 1, 2009)(see, Exhibit B). Any and all such aforementioned construction or excavation activities performed on the Property shall be conducted pursuant to and in compliance with a Soil Management Plan ("SMP"), proposed and approved by GE and Technicolor at their sole cost and expense, and approved by Ohio EPA that includes waste characterization and proper management and disposal, if any, of the excavated soils. GE and Technicolor shall be responsible for the reasonable costs of waste characterization and proper disposal required under the SMP for excavated soils containing lead that result from the above-referenced construction or excavation activities on the Property.

Prohibition Against Extraction or Use of Groundwater. Groundwater underlying the Property shall not be extracted or used for any potable purpose.

If any event or action by or on behalf of a person who owns an interest in or holds an encumbrance on those areas of the Property on Exhibit A constitutes a breach of the activity and use limitations set forth above, Owners or Transferee (as defined below) shall notify Ohio EPA within thirty (30) days of becoming aware of the event or action, and shall remedy each such breach of the activity and use limitations within sixty (60) days of becoming aware of the event or action, or such other time frame as may be agreed to by the Owners or Transferee and Ohio EPA.

6. Running with the Land. This Environmental Covenant shall be binding upon the Owners and all assigns and successors in interest, including any Transferee, and shall run with the land, pursuant to ORC § 5301.85, subject to amendment or termination as set forth herein. The term "Transferee," as used in this Environmental Covenant, shall mean any future owners of any interest in the Property or any portion thereof, including, but not limited to, owners of an interest in fee simple, mortgagees, easement holders, and/or lessees.

7. Compliance Enforcement. Compliance with this Environmental Covenant may be enforced pursuant to ORC § 5301.91. Failure to timely enforce compliance with this Environmental Covenant or the activity and use limitations contained herein by any party shall not bar subsequent enforcement by such party and shall not be deemed a waiver of the party's right to take action to enforce compliance. Nothing in this Environmental Covenant shall restrict the Director of Ohio EPA from exercising any authority under applicable law.

8. Rights of Access. Owners hereby grant to Ohio EPA, its agents, contractors, and employees and GE and Technicolor the right of access to the Property for implementation or enforcement of this Environmental Covenant.

9. Compliance Reporting. GE and Technicolor, on behalf of Owners or any Transferee, if applicable, shall submit to Ohio EPA on an annual basis written documentation verifying that the activity and use limitations remain in place and are being complied with.

10. Notice upon Conveyance. Each instrument hereafter conveying any interest in the Property or any portion of the Property shall contain a notice of the activity and use limitations set forth in this Environmental Covenant, and provide the recorded location of this Environmental Covenant. The notice shall be substantially in the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AN ENVIRONMENTAL COVENANT, RECORDED IN THE DEED OR OFFICIAL RECORDS OF THE PICKAWAY COUNTY RECORDER ON _____, 20____, IN [DOCUMENT _____, or BOOK____, PAGE ____]. THE ENVIRONMENTAL COVENANT CONTAINS THE FOLLOWING ACTIVITY AND USE LIMITATIONS: RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL USE RESTRICTION; PROHIBITION AGAINST EXTRACTION OR USE OF POTABLE GROUNDWATER.

Owners or Transferee, if applicable, shall notify Ohio EPA, GE and Technicolor within ten (10) days after each conveyance of an interest in any portion of the Property. The notice shall include the name, address, and telephone number of the Transferee, a copy of the deed or other documentation evidencing the conveyance, and a survey map that shows the boundaries of the property being transferred.

11. Representations and Warranties. Owners hereby represent and warrant to the other signatories hereto:

- A. that the Owners are the sole Owners of the Property;
- B. that the Owners hold fee simple title to the Property which is subject to the interests or encumbrances identified of record;
- C. that the Owners have the power and authority to enter into this Environmental Covenant, to grant the rights and interests herein provided and to carry out all obligations hereunder; and,
- D. that this Environmental Covenant will not materially violate or contravene or constitute a material default under any other agreement, document or instrument to which Owners are a party or by which Owners may be bound or affected.

12. Amendment or Termination. This Environmental Covenant may be amended or terminated by consent of all of the following: the Owners or a Transferee; GE, Technicolor, and Ohio EPA, pursuant to ORC § 5301.90 and other applicable law. The term, "Amendment," as used in this Environmental Covenant, shall mean any changes to the Environmental Covenant, including the activity and use limitations set forth herein, or the elimination of one or more activity and use limitations so long as there is at least one limitation remaining. The term, "Termination," as used in this Environmental Covenant, shall mean the elimination of all activity and use limitations set forth herein and all other obligations under this Environmental Covenant.

This Environmental Covenant may be amended or terminated only by a written instrument duly executed by the Director of Ohio EPA, GE, and Technicolor, and the Owners or Transferee of the Property, or portion thereof, as applicable. Within thirty (30) days of signature by all requisite parties on any amendment or termination of this Environmental Covenant, the Owners or Transferee shall file such instrument for recording with the Pickaway County Recorder's Office, and shall provide a file- and date-stamped copy of the recorded instrument to Ohio EPA.

13. Severability. If any provision of this Environmental Covenant is found to be unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired.

14. Governing Law. This Environmental Covenant shall be governed by and interpreted in accordance with the laws of the State of Ohio.
15. Recordation. Within thirty (30) days after the date of the final required signature upon this Environmental Covenant, GE shall cause this Environmental Covenant to be filed for recording, in the same manner as a deed to the Property, with the Pickaway County Recorder's Office.
16. Effective Date. The effective date of this Environmental Covenant shall be the date upon which the fully executed Environmental Covenant has been recorded as a deed record for the Property with the Pickaway County Recorder's Office.
17. Distribution of Environmental Covenant. GE shall cause a file- and date-stamped copy of the recorded Environmental Covenant to be distributed to: Ohio EPA; Circleville Township; Wayne Township; each person who signed the Environmental Covenant; each person holding a recorded interest in the Property; any and all lessees; and any other person designated by Ohio EPA.
18. Revocation of 2007 Declaration of Use Restrictions. As of the Effective Date of this Environmental Covenant identified in Section 16 above, the Declaration of Use Restrictions, executed on November 9, 2007 and recorded in the Pickaway County Recorder's Office on November 14, 2007 in Deed Records, Volume 611, Pages 72 - 80, is hereby revoked and shall be null and void and of no further force or effect.
19. Notice. Unless otherwise notified in writing by or on behalf of the current Owners or Ohio EPA, any document or communication required by this Environmental Covenant shall be submitted to:

For Ohio EPA:

Division of Environmental Response and Revitalization
Ohio EPA - Central Office
P.O. Box 1049
Columbus, Ohio 43216-1049
Attention: Records Management Officer

For Owners:

Richards Farms, Inc., Richards Land Company, William J. Richards, and
Grace S. Richards
24537 Canal Road
Circleville, OH 43113

By: Grace S. Richards
Grace S. Richards, General Partner

Date: July 19, 2012

STATE OF OHIO)
) SS:
COUNTY OF PICKAWAY)

BEFORE ME, a Notary Public in and for said County and State, personally came Grace S. Richards as General Partner of Richards Land Company who acknowledged the signing of the foregoing instrument to be his/her free act and deed and that of Richards Land Company for the uses and purposes therein mentioned.

Witness my hand and Notarial Seal this 19th day of July, 2012.

[Signature]
Notary Public

FRANK MERRILL
ATTORNEY-AT-LAW
NOTARY PUBLIC - STATE OF OHIO



RICHARDS FARMS, INC.

By: Bruce S. Richards
Name: Bruce S. Richards
Title: pres
Date: July 19, 2012

STATE OF OHIO)
) SS:
COUNTY OF PICKAWAY)

BEFORE ME, a Notary Public in and for said County and State, personally came Bruce Richards as President of Richards Farms, Inc. who acknowledged the signing of the foregoing instrument to be his/her free act and deed and that of Richards Farms, Inc. for the uses and purposes therein mentioned.

Witness my hand and Notarial Seal this 19th day of July, 2012.

[Signature]
Notary Public

FRANK MERRILL
ATTORNEY-AT-LAW
NOTARY PUBLIC - STATE OF OHIO



William J. Richards
WILLIAM J. RICHARDS, Individually

Date: 7-18-12

STATE OF OHIO)
) SS:
COUNTY OF PICKAWAY)

BEFORE ME, a Notary Public in and for said County and State, personally came William J. Richards, an individual, who acknowledged the signing of the foregoing instrument to be his free act and deed. for the uses and purposes therein mentioned.

Witness my hand and Notarial Seal this 19th day of July, 2012

Frank Merrill
Notary Public

FRANK MERRILL
ATTORNEY-AT-LAW
NOTARY PUBLIC - STATE OF OHIO



and

Grace S. Richards
GRACE S. RICHARDS, Individually

Date: July 19, 2012

STATE OF OHIO)
) SS:
COUNTY OF PICKAWAY)

BEFORE ME, a Notary Public in and for said County and State, personally came Grace S. Richards, an individual, who acknowledged the signing of the foregoing instrument to be her free act and deed Inc. for the uses and purposes therein mentioned.

Witness my hand and Notarial Seal this 19th day of July, 2012

Frank Merrill
Notary Public

FRANK MERRILL
ATTORNEY-AT-LAW
NOTARY PUBLIC - STATE OF OHIO



OHIO ENVIRONMENTAL PROTECTION AGENCY

By: [Signature]

Date: 8/8/12

STATE OF OHIO)
) SS:
COUNTY OF FRANKLIN)

BEFORE ME, a Notary Public in and for said County and State, personally came Scott J. Nally, the Director of Ohio EPA, who acknowledged the signing of the foregoing instrument on behalf of Ohio EPA.



Witness my hand and Notarial Seal this 8th day of AUGUST, 2012

Charma Diane Casteel
Notary Public

CHARMA DIANE CASTEEL
NOTARY PUBLIC
STATE OF OHIO
MY COMMISSION EXPIRES
May 16, 2014

GENERAL ELECTRIC COMPANY

By: [Signature]

Date: 7/19/2012

STATE OF New York)
) SS:
COUNTY OF ALBANY)

BEFORE ME, a notary public in and for said county and state, personally appeared John Haggard, a duly authorized representative of GENERAL ELECTRIC who acknowledged to me that [he/she] did execute the foregoing instrument on behalf of GENERAL ELECTRIC.

Witness my hand and Notarial Seal this 19th day of July, 2012.

[Signature]
Notary Public

DAWN M. DAYTER
Notary Public, State of New York
No. 01DA505639
Qualified in Albany County
Commission Expires March 4, 2014

TECHNICOLOR USA, INC.

By: Max Jinet

Date: July 16, 2012

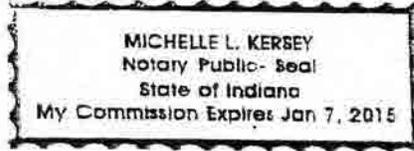
STATE OF Indiana)
) SS:
COUNTY OF Hamilton)

BEFORE ME, a notary public, in and for said county and state, personally appeared Max Jinet, a duly authorized representative of TECHNICOLOR USA, INC., who acknowledged to me that he/she did execute the foregoing instrument on behalf of TECHNICOLOR USA, INC.

Witness my hand and Notarial Seal this 16 day of July, 2012

Michelle L. Kersey
Notary Public

This instrument prepared by:



Mark A. Norman
Vorys, Sater, Seymour and Pease LLP
301 East Fourth Street, Suite 3500
PO Box 236
Cincinnati, OH 45201-0136
(513) 723-4006
manorman@vorys.com

Exhibits

- A. Legal Description
- B. Definitions of Certain Land Uses

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Exhibit A

Legal Description

Legal Description
Circleville Township, Pickaway County, Ohio
Section 7, Township 4, Range 22
Section 31, Township 11, Range 21
Wayne Township, Pickaway County, Ohio
V.M.S. 452
9.314 Acre Easement

Situated in the Township of Circleville, County of Pickaway, the State of Ohio and being a part of Section 7, Township 4, Range 22 a part of Section 31, Township 11, Range 21 also in Wayne Township, Pickaway County, the State of Ohio being a part of V.M.S. 452 more particularly bounded and described as follows:

Being part of a 41.90 acre tract as described in Deed Book 294, Page 549, a part of a 219.64 acre tract as described in Deed Book 255, Page 742, a part of a 67.50 acre tract as described in Deed Book 255, Page 742 and also being a part of a 3.429 acre tract as described in Official Record 201, Page 193 all being of record in the Pickaway County Recorder's Office;

Beginning at an iron pin set in the South line of said 41.90 acre tract and in the North line of a 40.674 acre tract (reference Official Record 39, Page 678) being in the line between Wayne Township, V.M.S.452 and Circleville Township, Section 7, Range 22 also being N03°20'58"E 19.59 feet, N86°39'02"W 1199.65 feet, N30°44'43"W 916.26 feet, N74°05'47"E 279.22 feet and N78°35'49"E 500.28 feet distant from a T-rail post found at the Southeast corner of Section 7, Township 4, Range 22 and the Southwest corner of Section 31, Township 11, Range 21 also being in the line between Circleville Township and Pickaway Township;

Thence leaving said common line and going with nine new lines through said 41.90 acre tract the following calls;

N07°12'11"W 76.53 feet to an iron pin set;

Thence N59°46'28"E 288.20 feet to an iron pin set;

Thence N66°57'45"E 465.32 feet to an iron pin set;

Thence N73°44'09"E 220.19 feet to an iron pin set;

Thence N51°16'06"E 175.09 feet to an iron pin set;

Thence N30°59'09"E 131.75 feet to an iron pin set;

Thence N27°21'11"E 48.22 feet to an iron pin set;

Thence N00°56'32"W 116.62 feet to an iron pin set;

Thence N33°02'48"W 189.55 feet to an iron pin set;

Thence again through said 41.90 acre tract and through said 3.429 acre tract also through said 219.64 acre tract N17°34'53"W 707.79 feet to an iron pin set;

Thence again through said 219.64 acre tract N43°26'01"W 98.38 feet to an iron pin set;

Thence continuing through said 219.64 acre tract and also through said 67.50 acre tract N53°21'32"E 158.74 feet to an iron pin set;

Thence continuing through said 67.50 acre tract the following three calls;

S42°45'35"E 140.02 feet to an iron pin set;

Thence S26°53'28"E 160.23 feet to an iron pin set;

ORIGINAL

RECORDED

JUL 27 2007

GEORGE W. BROWN
 CIVIL ENGINEER

Legal Description
 Circleville Township, Pickaway County, Ohio
 Section 7, Township 4, Range 22
 Section 31, Township 11, Range 21
 Wayne Township, Pickaway County, Ohio
 V.M.S. 452
 9.314 Acre Easement

Thence N80°30'57"E 221.94 feet to an iron pin set;

Thence again through said 67.50 acre tract and with the East line of said 3.429 acre tract and also with the West line of the C&O Railroad S01°32'18"E 172.97 feet to an iron pin set;

Thence leaving said common line and going with a new line through said 3.429 acre tract S67°47'07"W 135.67 feet to an iron pin set;

Thence again with a new line through said 3.429 acre tract and through said 41.90 acre tract S33°42'28"E 197.13 feet to an iron pin set;

Thence with four more new lines through said 41.90 acre tract the following calls;

S19°36'07"E 139.73 feet to an iron pin set;

Thence S08°51'09"E 67.98 feet to an iron pin set;

Thence S88°27'38"W 45.00 feet to an iron pin set;

Thence S01°32'22"E 317.69 feet to an iron pin set a fine Northeast corner of an 8.41 acre tract (reference Official Record 39, Page 678) being in the West line of the C&O Railroad being a common corner to said 41.90 acre tract and also being in the line between Wayne Township and Circleville Township;

Thence with said Township line being the South line of said 41.90 acre tract and the North line of said 8.41 acre tract and the North line of a 5.01 acre tract (reference Official Record 39, Page 678) and also being the North line of a said 40.674 acre tract the following three calls;

S24°42'38"W 142.49 feet to an iron pin set;

Thence S59°46'31"W 824.36 feet to an iron pin set;

Thence S67°58'50"W 567.09 feet to the POINT OF BEGINNING;

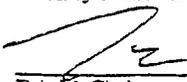
Containing 9.314 Acres more or less.

Subject to all existing valid rights-of-way and easements of record.

Bearings are based on found monuments referenced from the City of Circleville State Plane Coordinate System.

All iron pins shown as set are 5/8" diameter by 30 inch long rebar with yellow plastic cap stamped "M.E. Clark Assoc."

I hereby certify that the foregoing legal description and the attached plat are a true representation of the conditions as they existed on the date of the survey and that the accuracy of same is consistent with accepted surveying standards


 Eric M. Clark
 P. S. No. S-08354

7/23/07
 Date
 File No. S07-2340



Exhibit B

"Commercial land use" means "land use with potential exposure of adult workers during a business day and potential exposure of adults and children who are customers, patrons or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of commercial land uses include, but are not limited to warehouses; retail gasoline stations; retail establishments; professional offices; hospitals and clinics; religious institutions; hotels; motels; and parking facilities." OAC Rule 3745-300-08(C)(2)(c)(ii) (effective March 1, 2009).

"Construction or excavation activities" include "invasive activities that result in potential exposure of adult workers during the business day for a portion of one year. Exposures during construction or excavation activities are of greater intensity and shorter duration than those for the commercial and industrial land use categories. Construction or excavation activities have potential exposures of adults to dermal contact with soil, inhalation of vapors and particles from soil, and ingestion of soil. Examples of construction or excavation activities include but are not limited to maintenance or installation of utilities; installation of building footers or foundation; grading; trenching or laying utility lines or cables; and repair of engineering controls where there is significant exposure to soils." OAC Rule 3745-300-08(C)(2)(c)(iv) (effective March 1, 2009).

"Industrial land use" means "land use with potential exposure of adult workers during a business day and potential exposure of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Examples of industrial land uses include, but are not limited to: lumberyards; power plants; manufacturing facilities such as metal-working shops, plating shops, blast furnaces, coke plants, oil refineries, brick factories, chemical plants and plastic plants; assembly plants; non-public airport areas; limited access highways; railroad switching yards; and marine port facilities." OAC Rule 3745-300-08(C)(2)(c)(iii) (effective March 1, 2009).

"Residential land use" means "land use with a high frequency of potential exposure of adults and children to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Residential land use is considered protective for, and may be applied to, any and all categories of land use, without further restriction. Examples of residential land uses include, but are not limited to residences; day care facilities; schools, colleges and other educational institutions; nursing homes, elder care and other long-term health care facilities; and correctional facilities." OAC Rule 3745-300-08(C)(2)(c)(i) (effective March 1, 2009).

201200004889
VORYS SATER BEYNDORF & PEASE LLP
301 E FOURTH ST
STE 3600
CINCINNATI OH 45202

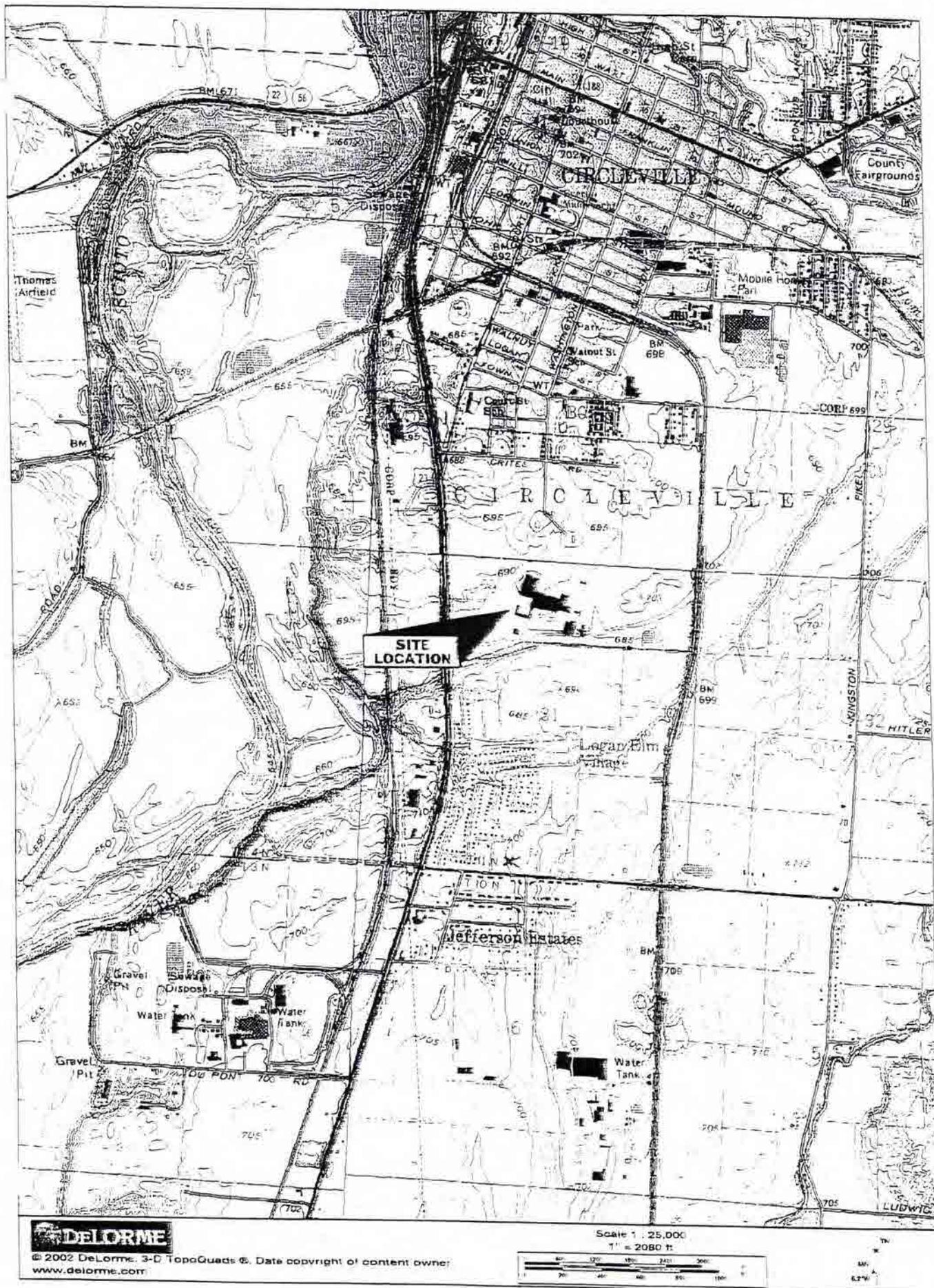


FIGURE 1

Site Location Map

(from CTL Engineering's May 2012 Supplemental Site
Investigation Report's Figure 1)

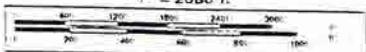
Figure 1



DELORME

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www.delorme.com

Scale 1 : 25,000
1" = 2080 ft

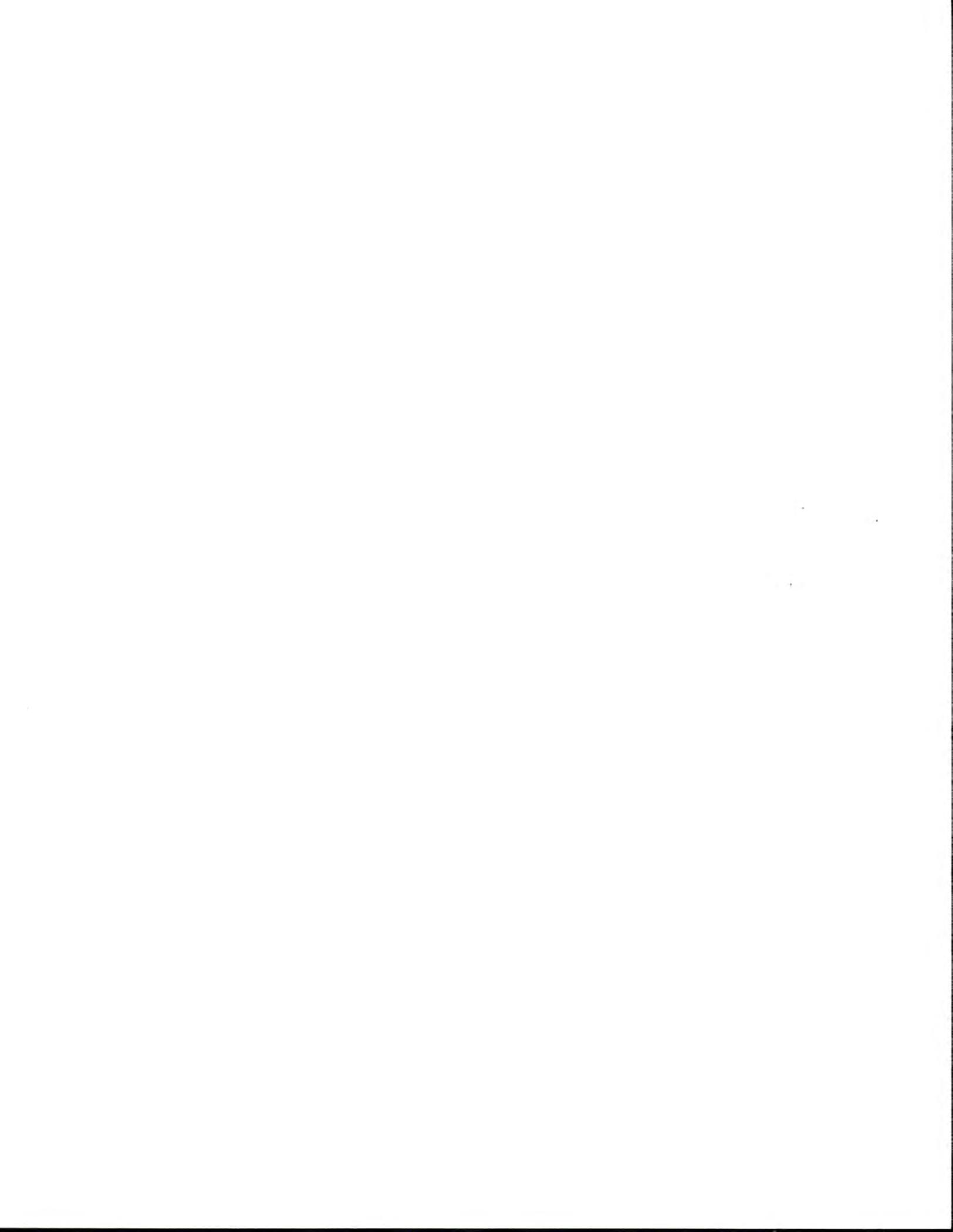


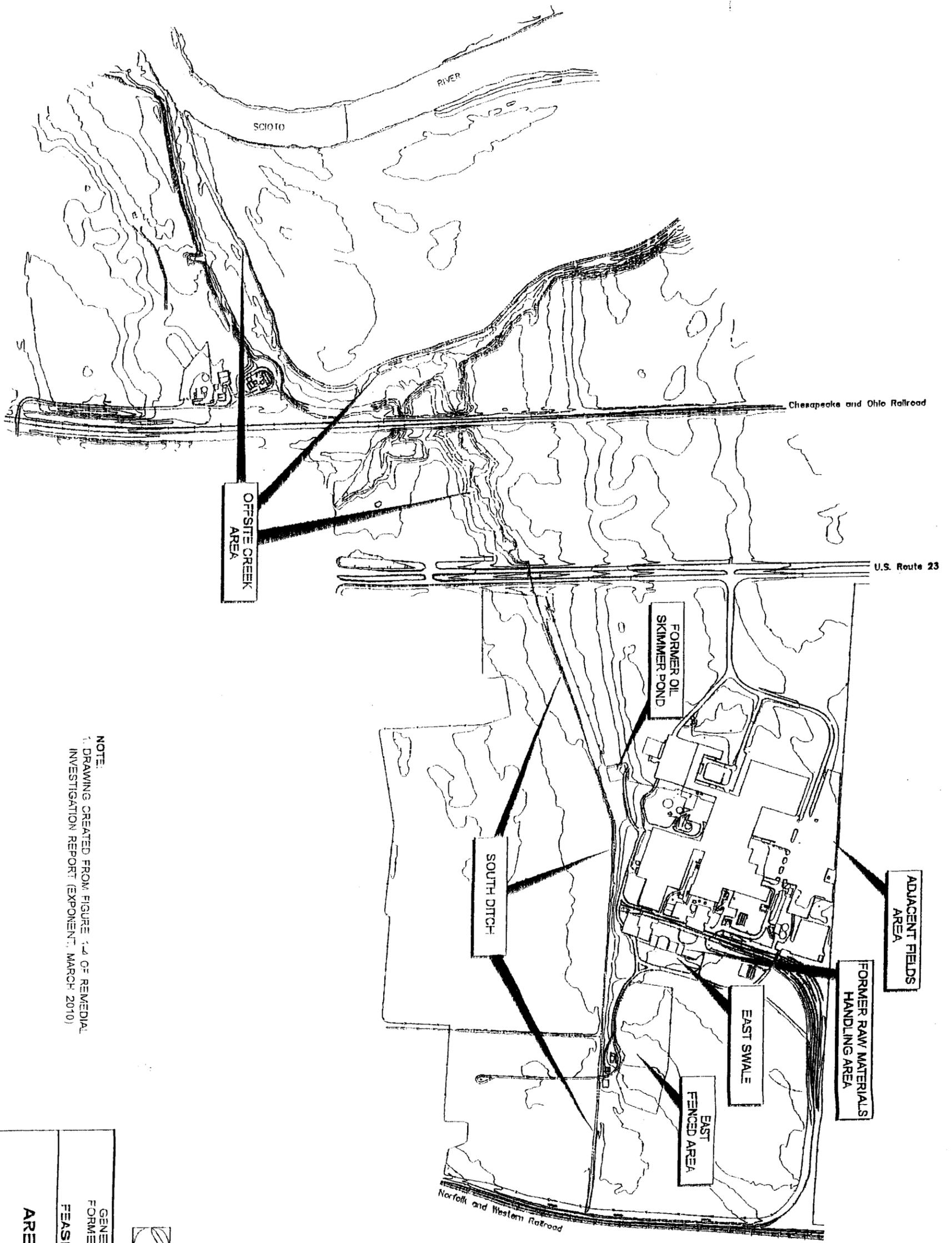
6.2°

FIGURE 2

Site Areas of Concern Map

(from Arcadis' July 2013 Feasibility Study Report's Figure 3)





NOTE:
1. DRAWING CREATED FROM FIGURE 1-4 OF REMEDIAL
INVESTIGATION REPORT (EXPONENT, MARCH 2010)



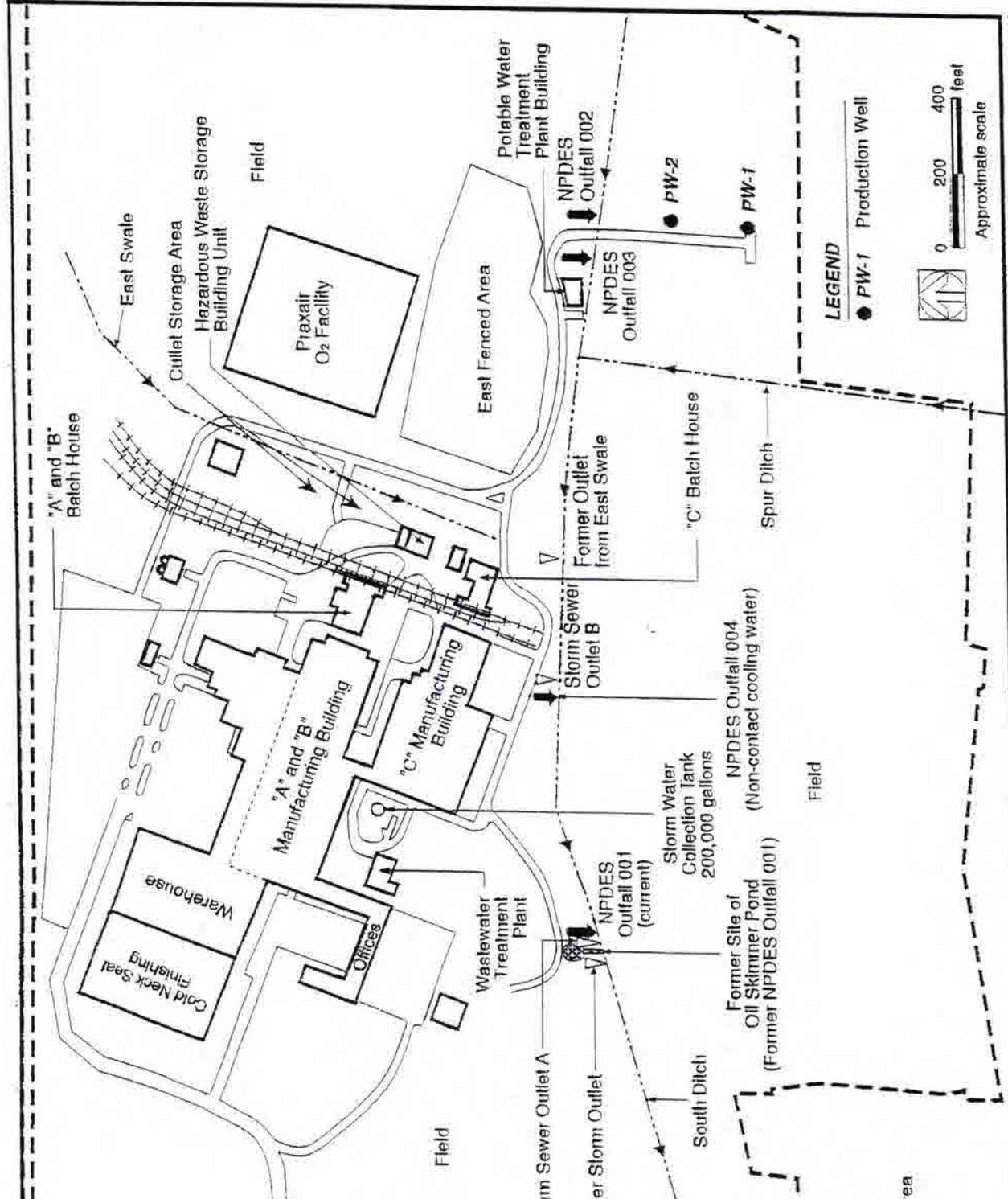
GENERAL ELECTRIC COMPANY
FORMER THOMSON/ICA FACILITY
CIRCLEVILLE, OHIO
FEASIBILITY STUDY REPORT

AREAS OF INTEREST

FIGURE 3

Former Facility Plan

(from Exponent's March 2010 Final Remedial Investigation Report's Figure 1-2)



Site features.

FIGURE 4

Off-Site Creek Area Plan

(from Exponent's March 2010 Final Remedial Investigation Report's Figure 4-6)

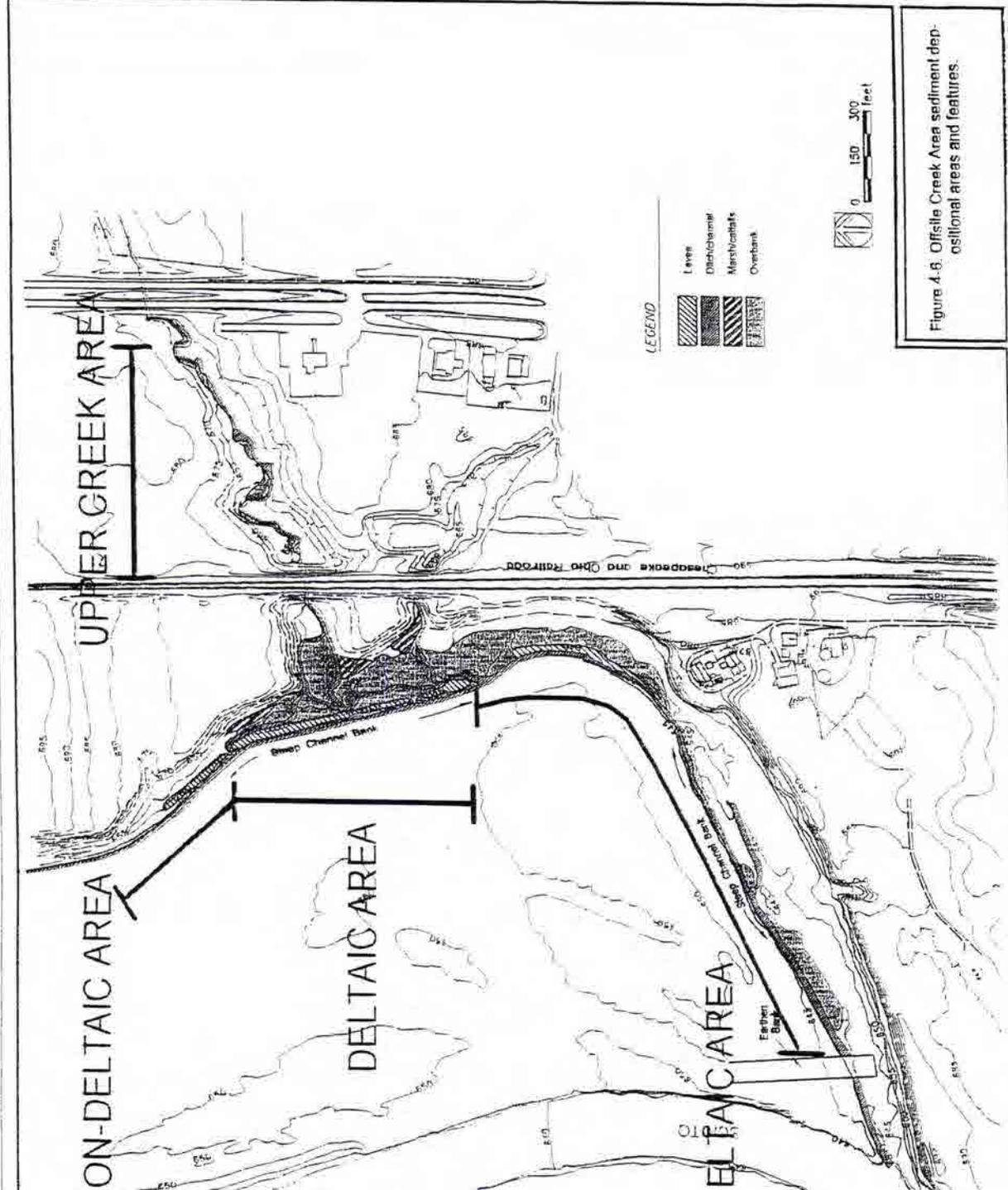
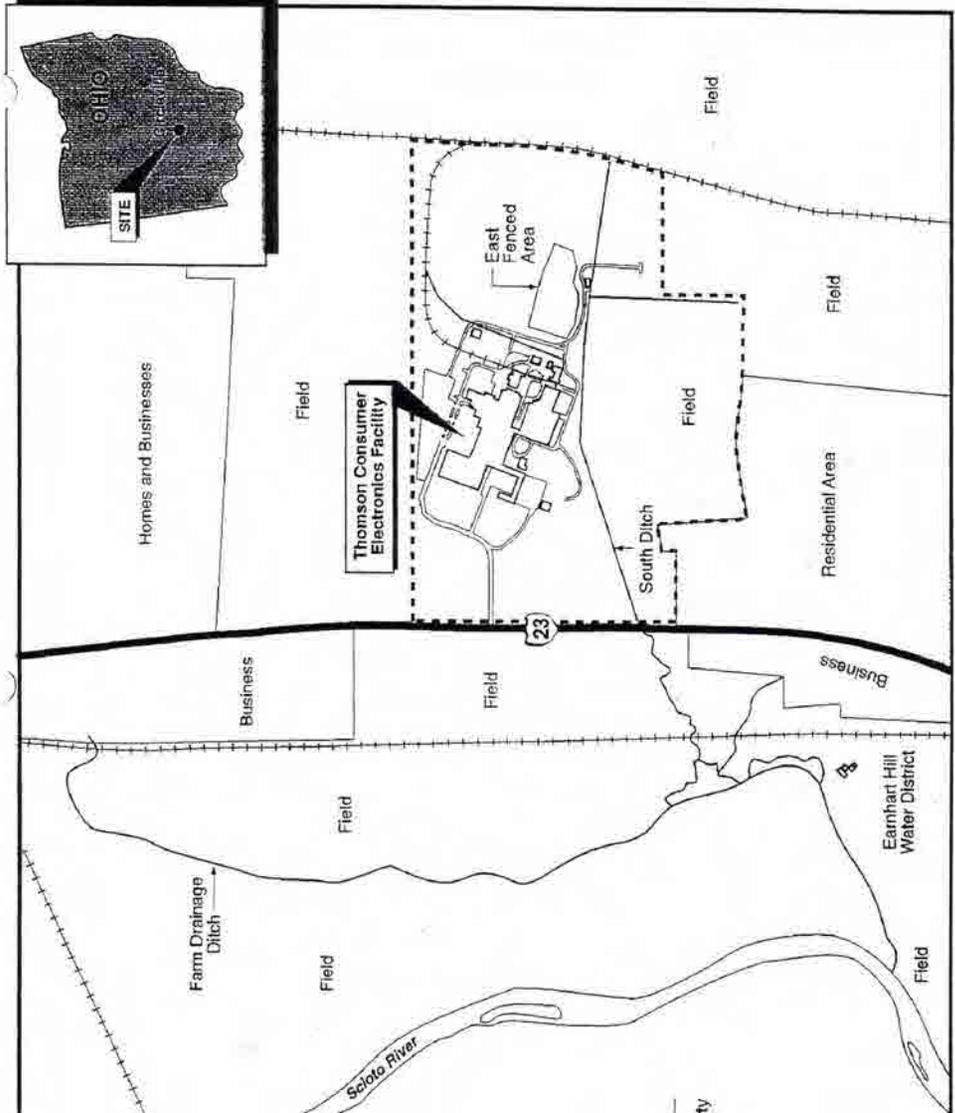


Figure 4.6. Offsila Creek Area sediment depositional areas and features.

CI000202, AUG 1984, 4x7, 12,700,800, 00

APPENDIX G

Site Map



NOTE:
 1. DRAWING CREATED FROM FIGURE 1-1 OF REMEDIAL INVESTIGATION REPORT (EXHIBIT, MARCH 2010)

GENERAL ELECTRIC COMPANY
 FORMER THOMSON/IRCA FACILITY
 CINCINNATI, OHIO
 REMEDIAL DESIGN WORK PLAN

SITE LOCATION MAP



ARCADIS

FIGURE
1