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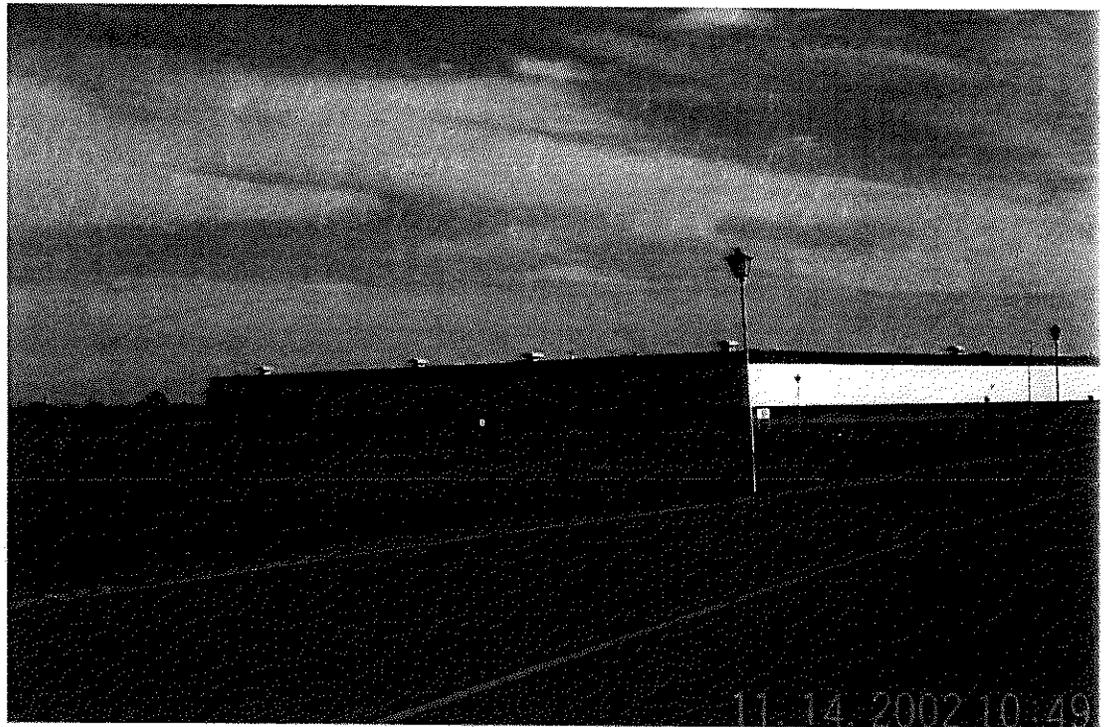


By: *John Lassiter* Date: 6-4-14

DECISION DOCUMENT

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

OHIO E.P.A.
JUN - 4 2014
MILWAUKEE COUNTY



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 Design/Remedial Action activities outlined 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 µg/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 µg/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 PRG ¹ (in ppm)	USEPA RSL PRG ² (in ppm)	VAP PRG ³ (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	--- ⁴	---	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 T, M and/or V by Treatment	5. Short Term Effectiveness	6. Implementable		7. Costs
1	<input type="checkbox"/>	<input type="checkbox"/>						
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" 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 C - ARARs Table

Table 1
Summary of Chemical-Specific ARARs

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

Medium	Status	Potential Requirement	Requirement Synopsis	Action to be Taken to Attain ARAR
Federal Soil	Applicable	RCRA-Regulated Levels for Toxic Characteristics Leaching Procedure (TCLP) Constituents 40 CFR Part 261	These regulations specify the TCLP constituent levels for identification of hazardous wastes that exhibit the characteristic of 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 by characteristic. All excavated material generated during the implementation of Alternative 2 or 3 would be disposed of at an appropriate/approved off-site disposal facility in accordance with these regulations.
Soil	Applicable	Universal Treatment Standards/Land Disposal Restrictions (UTS/LDRs) 40 CFR Part 268	Identifies hazardous wastes for which land disposal is restricted and provides a set of numerical constituent concentration criteria at which hazardous waste is restricted from land disposal (without treatment).	Wastes exhibiting a hazardous characteristic would need to be treated to meet the UTS for all hazardous constituents present in the residuals prior to disposal, in accordance with these regulations.
Soil	To be considered	U.S. EPA Regional Soil Screening Levels	Provides risk-based screening values used in baseline human health risk assessments to focus efforts on contaminants of concern (COCs) by eliminating compounds that are below levels considered to adversely impact human health.	This guidance was considered when developing the Preliminary Remedial Goals (PRGs) for contaminated media.
Soil	To be considered	U.S. EPA Risk Assessment Guidance for Superfund (RAGS)	Provides guidance for developing health risk information at Superfund sites and provides guidance for environmental assessment at Superfund sites. Guidance in both human health evaluation and environmental assessment is needed so that USEPA can fulfill CERCLA's requirement to protect human health and the environment.	This guidance was considered when developing the PRGs for contaminated media.
Surface Water	Relevant and appropriate	Clean Water Act (CWA) s. 304(a), Ambient Water Quality Criteria (AWQC) for Protection of Human Health and Aquatic Life, 40 CFR 131	AWQCs are developed under the CWA as guidelines from which states develop water quality standards for protection of human health and aquatic organisms.	AWQCs would be attained by Alternative 2 or 3 in adjacent surface waters via source control (i.e., soil/sediment removal), erosion and sedimentation control, and water column monitoring during remediation and annual verification of the executed institutional controls following remediation.
Surface Water	Relevant and appropriate	Clean Water Act (CWA) Ambient Water Quality Criteria (AWQC) for Protection of Human Health and Aquatic Life, Env-ws 430.	Establishes water quality standards for protection of human health and aquatic organisms. Standards include dissolved oxygen, pH, bacteria, toxic substances, etc.	AWQCs would be attained by Alternative 2 or 3 in adjacent surface waters via source control (i.e., soil/sediment removal), erosion and sedimentation control, and water column monitoring during remediation and annual verification of the executed institutional controls following remediation.
State				
Waste Material	Relevant and appropriate	Ohio Administrative Code (OAC) 3745-207-48 Paragraph A Universal Treatment Standards	Provides chemical specific standards for land disposal.	All excavated material generated during the implementation of Alternative 2 or 3 would be disposed of in accordance with applicable state and federal land disposal regulations.
Waste Material	Relevant and appropriate	OAC 3745-54-13 General Analysis of Hazardous Waste	Prior to any treatment, storage, or disposal of hazardous wastes, a representative sample of the waste must be chemically and physically analyzed.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific waste management plan.
Soil and Groundwater	Applicable	OAC 3745-300-08	Ohio EPA's Division of Emergency and Remedial Response (DERR) Voluntary Action Program (VAP, 2009) generic numerical standards for soil and groundwater.	This guidance was considered when developing the soil/sediment PRGs.
Soil and Groundwater	Applicable	OAC 3745-300-09	Ohio EPA's Division of Emergency and Remedial Response (DERR) Voluntary Action Program (VAP, 2009) provisions for calculating site-specific standards for soil and groundwater.	The guidance was considered when developing the soil/sediment PRGs. This guidance would be achieved by Remedial Alternative 2 or 3 through the removal of soil/sediment that result in exposure point concentrations of antimony, arsenic, or lead above the appropriate PRGs.

Table 2
Summary of Action-Specific ARARs

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

Medium	Status	Potential Requirement	Requirement Synopsis	Action to be Taken to Attain ARAR
Federal				
Soil	To be considered	Land Disposal Facility Notice in Deed 40 CFR Parts 264 and 265 Sections 116-119(b)(1)	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	Applicable	40 CFR 122.26(C)(1)(i)(C); 40 CFR 122.44(i); NPDES General Permit for Construction Stormwater Management	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	Applicable	RCRA - 40 CFR 261.24	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	Applicable	Clean Water Act (CWA), Section 402, National Pollutant Discharge Elimination System (NPDES), 33 USC 1342; 40 CFR 122-125; 129, 131	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 soils/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	To be considered	CWA, Section 404, Permits to Discharge Dredged or Fill Material	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 sludge/dredge to waterways.
Site Worker	Applicable	Occupational Safety and Health Act (OSHA) - General Industry Standards 29 CFR Part 1910	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	Applicable	OSHA - Safety and Health Standards 29 CFR Part 1926	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	Applicable	OSHA - Record-keeping, Reporting and Related Regulations 29 CFR Part 1904	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	Applicable	RCRA - Preparedness and Prevention 40 CFR Part 264.30 - 264.31	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	Applicable	RCRA - Contingency Plan and Emergency Procedures 40 CFR Part 264.50 - 264.56	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	Applicable	Clean Air Act-National Ambient Air Quality Standards 40 CFR Part 60	Establishes ambient air quality standards for protection of public health.	Air emissions monitoring will be conducted as required during remediation to verify compliance with these requirements.
Air	Applicable	RCRA (40 CFR 264, Subpart AA)	Air emission standards for process vents and closed-vent systems and control devices associated with air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10 ppmw.	Should air stripping operations manage hazardous wastes with organic concentrations of at least 10 ppm by weight, vents operated as part of the air stripper system will comply with Sections 1032 through 1036 of this Subpart.
Air	Applicable	RCRA (40 CFR 264, Subpart BB)	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 1065 of this Subpart.
Waste Material	Applicable	90 Day Accumulation Rule for Hazardous Waste 40 CFR Part 262.34	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	Applicable	RCRA - General Standards 40 CFR Part 264.111	General performance standards requiring minimization of need for further maintenance and control; 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 WMP.
Waste Material	Applicable	Standards Applicable to Transporters of Applicable Hazardous Waste - RCRA Section 3003 40 CFR Parts 170-179, 262, and 263	Establishes the responsibility of off-site transporters of hazardous waste in the handling, transportation and management of the waste. Requires manifesting, recordkeeping 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 WMP.

Table 2
Summary of Action-Specific ARARs

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

Medium	Status	Potential Requirement	Requirement Synopsis	Action to be Taken to Attain ARAR
Waste Material	Applicable	United States Department of Transportation (USDOT) Rules for Transportation of Hazardous Materials 49 CFR Parts 107 and 171.1 - 172.558	Outlines procedures for the packaging, labeling, manifesting and transporting of hazardous materials.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific WMP.
Waste Material	Relevant and appropriate	USEPA-Administered Permit Program: The Hazardous Waste Permit Program RCRA Section 3005; 40 CFR Part 270.124	Covers the basic permitting, application, monitoring and reporting requirements for off-site hazardous waste management facilities.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by shipping wastes to appropriately licensed, permitted facilities.
Waste Material	Applicable	Land Disposal Restrictions 40 CFR Part 368	Restricts land disposal of hazardous wastes that exceed specific criteria. Establishes Universal Treatment Standards (UTS) to which hazardous waste must be treated prior to land disposal.	Wastes exhibiting a hazardous characteristic would need to be treated to meet the UTS for all hazardous constituents present in the residuals prior to disposal, in accordance with these regulations.
Waste Material	Applicable	RCRA Subtitle C 40 U.S.C. Section 6901 et seq.; 40 CFR Part 268	Restricts land disposal of hazardous wastes that exceed specific criteria. Establishes UTS to which hazardous wastes must be treated prior to land disposal.	Wastes exhibiting a hazardous characteristic would need to be treated to meet the UTS for all hazardous constituents present in the residuals prior to disposal, in accordance with these regulations.
State Soil	Applicable	Ohio Administrative Code (OAC) 3745-270-49 Paragraphs A - E Land Disposal Restriction for Contaminated Soils	Specifies standards for soil treatment.	Wastes exhibiting a hazardous characteristic would need to be treated to meet these standards for all hazardous constituents present in the residuals prior to disposal, in accordance with these regulations.
Surface Water	To be considered	Ohio Revised Code (ORC) 1517.16 Channel Modification Requirements	No governmental body may modify the channel of any watercourse within a wild, scenic, or recreational river area outside the limits of a municipal corporation without approval from the director of the Ohio Department of National Resources.	The Ohio Department of National Resources will be contacted, as necessary, to discuss any modification to any watercourse during the implementation of the remedial alternative. However, no modification to any watercourse is anticipated for Alternative 2 or 3.
Surface Water	Applicable	OAC 3745-1-04 Paragraphs A - E The "Five Freedoms" for Surface Water	All surface waters of the state shall be free from a) objectionable suspended solids, b) floating debris, oil, and scum, c) materials that create a nuisance, d) toxic, harmful, or lethal substances, e) nutrients that create nuisance growth. Pertains to both discharges to surface waters as a result of remediation and any onsite surface waters affected by site conditions.	Discharges associated with dewatering of solidification 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	Applicable	OAC 3745-1-05 Paragraphs A - C Antidegradation Policy for Surface Water	Requires that best available technology be used to treat surface water discharges. Prevents degradation of surface water quality below designated use or existing water quality.	Discharges associated with dewatering of solidification 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	To be considered	Ohio Administrative Code (OAC) 3745-32, Section 401 - Water Quality Certification	Provides requirements for obtaining 401 water quality certification.	An application for obtaining 401 water quality certification will be submitted to the OEPA, as required. However, remedial activities under Alternative 2 or 3 will be conducted only within South Ditch and Offsite Creek (i.e., no work proposed in the implementation of Alternatives 2 and 3 by diverting storm water around work areas and, if necessary, collecting storm water in work areas for treatment, as necessary).
Surface Water	Applicable	OAC 3745-33, Storm Water Program	Regulates sources to protect water quality and to establish a comprehensive storm water management program.	Air emissions monitoring will be conducted as required during remediation to verify compliance with these requirements. However, no air handling/treatment process requirement is anticipated for Alternatives 2 and 3.
Air	To be considered	OAC 3745-15-07, Emission Restrictions on Fugitive Dust	Prohibits the emission/discharge of substances that endanger the health, safety or welfare of the public, or cause unreasonable injury or damage to property.	Air emissions monitoring will be conducted as required during remediation to verify compliance with these requirements. However, no air handling/treatment process requirement is anticipated for Alternatives 2 and 3.
Air	To be considered	OAC 3745-15-08, Air Pollution Nuisances	Provides requirements to secure and maintain those levels of air quality which are consistent with the protection of health and the prevention of injury to plant, animal life, and property in the state of Ohio.	Air emissions monitoring will be conducted as required during remediation to verify compliance with these requirements. However, no air handling/treatment process requirement is anticipated for Alternatives 2 and 3.
Waste Material	Relevant and appropriate	ORC 16301.00, Uniform Environmental Covenants Act	Provides standards for environmental covenants.	These provisions would be attained by Alternatives 1, 2, or 3 via annual verification of the executed Institutional controls.
Waste Material	Applicable	OAC 3745-52-11, 12, 14, 20, 22, 23, 30-34, 40, and 41	Presents requirements for hazardous waste identification, manifest, packaging, labeling, marking, placarding, accumulation, record keeping.	Compliance with these ARARs would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific WMP.
Waste Material	Applicable	OAC 3745-55-14 Disposal/Decontamination of Equipment, Structures, and Soils	Requires that all contaminated equipment, structures, and soils be properly disposed of or decontaminated. Removal of hazardous wastes or constituents from a unit may constitute generation of hazardous wastes.	Compliance with these ARARs would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific WMP.

Table 3
Summary of Location-Specific ARARs

General Electric Company - Former ThomsonRCA Facility - Circleville, Ohio
Feasibility Study Report

Medium	Status	Potential Requirement	Requirement Synopsis	Action to be Taken to Attain ARAR
Federal Sediment	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.	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.
Wetlands	Applicable	Protection of Wetlands (Executive Order No. 11990) 40 CFR 6.302(b) and 40 CFR 6.303; 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.	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.
Floodplains	Applicable	Floodplain Management (Executive Order No. 11989) 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.	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.
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 or resource area. See prior synopsis regarding wetlands medium.	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.
Surface Water	Applicable	Fish and Wildlife Coordination Act (16 USC 861-866)	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.	The U.S. Fish and Wildlife Service will be consulted, as required, during the implementation of Alternative 2 or 3 to comply with this regulation.
Habitat	Applicable	Endangered Species Act - 16 USC 1536(a)-(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.	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.
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, failing agreement, implementation of such measures identified by the authorizing agency.	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 exists within or adjacent to areas subject to remediation, the applicable requirements will be met.

Table 3
 Summary of Location-Specific ARARs
 Feasibility Study Report
 General Electric Company - Former Thomson/RCA Facility - Circleville, Ohio

Medium	Status	Potential Requirement	Requirement Synopsis	Action to be Taken to Attain ARAR
Wetlands	Applicable	Ohio Administrative Code (OAC) 3745-1-51 Paragraphs A - C Wetland Narrative Criteria	Lists criteria to be protected in wetland environments.	Remedial activities in wetlands located in the limits of Alternative 2 or 3 will avoid or minimize impacts to the greatest extent possible. Any excavation in wetlands will meet the applicable substantive requirements.
Wetlands	Applicable	OAC 3745-1-54, Wetland Antidegradation	Requires that the degradation of surface waters through direct, indirect, or cumulative impacts does not result in the net loss of wetland acreage.	Remedial activities in wetlands located in the limits of Alternative 2 or 3 will avoid or minimize impacts to the greatest extent possible. Any excavation in wetlands will meet the applicable substantive requirements.
Surface Water	To be considered	OAC 3734.03, Prohibition of Open Dumping or Burning	Prohibits disposal of solid wastes by open burning or open dumping.	Compliance with these ARARs would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific waste management plan. Open dumping or burning is not an element of Alternative 2 or 3.
Surface Water	To be considered	OAC 3767.13, Prohibition of Nuisances in Waterways	Prohibits obstruction or impeding the passage of a navigable river, harbor, or collection of water, or conduit or render unwholesome or impure, a watercourse, stream, or water, or unlawfully divert such watercourse from its natural course or state to the injury or prejudice of others.	Alternative 2 or 3 will be implemented in accordance with these requirements. However, remedial activities under Alternative 2 or 3 will be conducted only within South Ditch and Offsite Creek (i.e., no work proposed in the Scioto River).
Waste Material	To be considered	OAC 3745-57-47, Monitoring and Inspections	Provides requirements for monitoring while incinerating hazardous waste.	Compliance with this ARAR would be accomplished during the implementation of Alternative 2 or 3 by following a site-specific air monitoring plan. However, no incineration of hazardous waste is anticipated under Alternative 2 or 3.
Waste Material	To be considered	OAC 3745-54-52, Establishment of a Contingency Plan	Provides the content requirements for contingency plans for waste disposal facilities.	Compliance with this ARAR would be accomplished by following a site-specific health and safety plan and contingency plan.
Waste Material	To be considered	OAC 3745-55-16, Notification to Local Land Authority	Provides notification requirements regarding the closure of hazardous waste disposal units.	Compliance with this ARAR would be accomplished by following the site-specific Operations and Management Plan and the annual verification of institutional controls.
Endangered Species	Applicable	Ohio Revised Code (ORC) 1518.02 Endangered Plant Species	Prohibits removal or destruction of endangered plant species. Applies to sites where chemicals may harm endangered species.	State agencies will be consulted prior to implementation of Alternative 2 or 3. If endangered/threatened animal species exists, applicable requirements will be met.
Endangered Species	Applicable	ORC 1531.26 Endangered Animal Species	Prohibits removal or destruction of endangered animal species. Applies to sites where chemicals may harm endangered species.	State agencies will be consulted prior to implementation of Alternative 2 or 3. If endangered/threatened animal species exists, applicable requirements will be met.
Surface Water	Applicable	OAC 3745-1-09 Water Use for Scioto River	Establishes water use designations for stream segments within the Scioto River Basin.	This Ohio Environmental Protection Agency will be consulted prior to implementation of Alternative 2 or 3 to meet any applicable requirements.
Local Site Structures	Applicable	Local Building Codes	Local authorities may require a building permit for any permanent or semi-permanent structure such as an on-site water treatment system building or a retaining wall.	An application for obtaining a building permit will be submitted to the local agencies, as required, under Alternative 2 or 3.

Appendix D - Environmental Covenants



Appendix A

Environmental Covenant for a Portion
of the Formerly Developed Portion of
the Site

VORYS

Vorys, Sater, Seymour and Pease LLP
Legal Counsel

221 East Fourth St.
Suite 2000, Atrium Two
PO Box 0236
Cincinnati, OH 45201-0236

513-723-4000 | www.vorys.com

Founded 1909

ORIGINAL

RECEIVED-ALBANY

JAN 13 2012

GE CEP

Mark A. Norman
Direct Dial (513) 723-4006
Direct Fax (513) 852-7881
Email manorman@vorys.com

January 9, 2012

VIA US MAIL

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

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

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

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

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

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

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

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

Mayor
City of Circleville Ohio
130 S. Court Street
Circleville, OH 43113

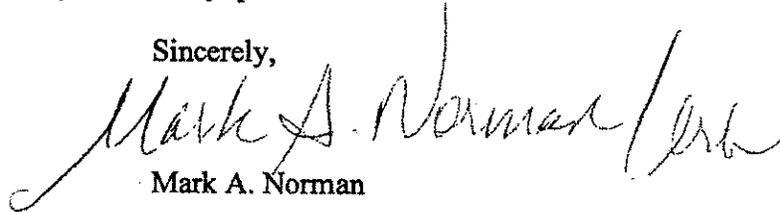
January 9, 2012
Page 2

Re: RCA Thomson Electronics Site ("Site")
Pickaway County
Environmental Covenant

Dear Recipients:

Pursuant to paragraph 17 of the Environmental Covenant by and among US 23 Circleville LLC, IRG Circleville, General Electric Company, Technicolor USA, Inc., and Ohio EPA, with respect to the Site, enclosed is a time-stamped, recorded copy of that Environmental Covenant. Please contact me should you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Mark A. Norman". The signature is written in a cursive style with a large, sweeping initial "M".

Mark A. Norman

Enclosure

cc: Kirk Macfarlane, Esq., GE (w/encl.)
Mark Navarre, Esq., Ohio EPA (w/encl.)

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 ("RI/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. Holders. 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:

and

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

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

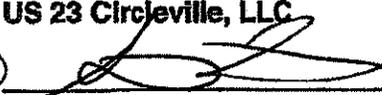
For GE:

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

(X) 

Signature of Owner

Stu Lichter

Printed Name and Title

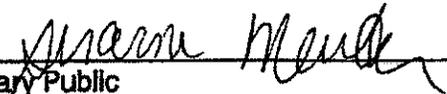
December 22, 2011

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.



Notary Public



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

IRG Circleville LLC

(X) [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 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 22 day of December, 2011.

[Signature]
Notary Public



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

Ohio Environmental Protection Agency

Scott J. Nally, Director

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 ___ day of _____, 2011.

Notary Public

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.

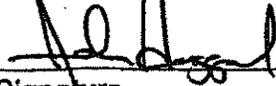


Charma Diane Casteel
Notary Public

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. 01DA5056439
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 26th 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

MEGHAN EHRET SECRETARY
Printed Name and Title

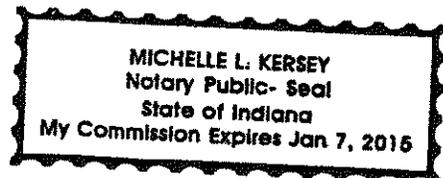
AUG 23, 2011
Date

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 43113-9002

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°59'00" West 50.01 feet, in the northerly line of said Section 31, to a 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°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 957.78 feet, a Delta angle of 14°42'50" and a Chord bearing South 11°30'56" 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 16°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 92.45 acre tract of record in Deed Book 292, Page 59 and being referenced by a 4 inch square concrete post 1.73 feet west;

thence North 86°30'30" West 930.05 feet, in a southerly line of said 162.167 acre tract and in a northerly line of said 92.45 acre tract, to a 4 inch steel post in the easterly line of said 44.325 acre tract;

thence South 03°34'09" West 415.80 feet, in the easterly line of said 44.325 acre tract and in a westerly line of said 92.45 acre tract, to a 4 inch steel post;

thence North 86°45'21" West 666.36 feet, in a southerly line of said 44.325 acre tract and in a northerly line of said 92.45 acre tract, to a 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 48.65 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 $85^{\circ}06'43''$ West 478.09 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 636.45 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 $80^{\circ}39'15''$ East 39.68 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 $05^{\circ}20'45''$ 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°20'45" West 160.00 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°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°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°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 southwest 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 358, page 771;

thence North 00°34'35" West 108.58 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 89°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 southwest corner of said 44.325 acre tract and in the easterly right-of-way line of United States Route 23;

thence North 07°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°37'46" West 132.13 feet, in a southerly line of said 162.167 acre tract, to a point;

thence North 30°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°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°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 southwest 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 6822" at 136.29 feet, to an iron pin with "Johnson" identification cap found;

thence North 00°43'35" 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 162.167 acre tract and in the centerline of said southbound lanes, to a spike found marking the northwesterly corner of said 162.167 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 102.305 acre tract of record in Official Record 555, page 068, 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. Elswick, 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. Elswick
Gary L. Elswick, Professional Surveyor #6395

4-2-08
Date



20080002274
CONRAD 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 2091.03 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 1/4" 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.

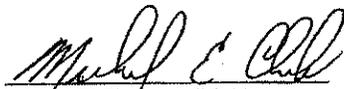
Subject to all existing valid rights-of-way and easements of record.

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.

File No. E111002-1,698


Michael E. Clark, P.S. # 6808

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.

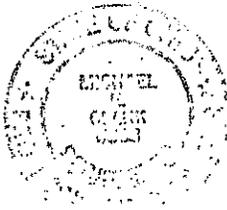
All iron pins set are 5/8" diameter x 30" long rebar with a 1 1/4" yellow plastic identification cap stamped "M.E. CLARK ASSOC."

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.

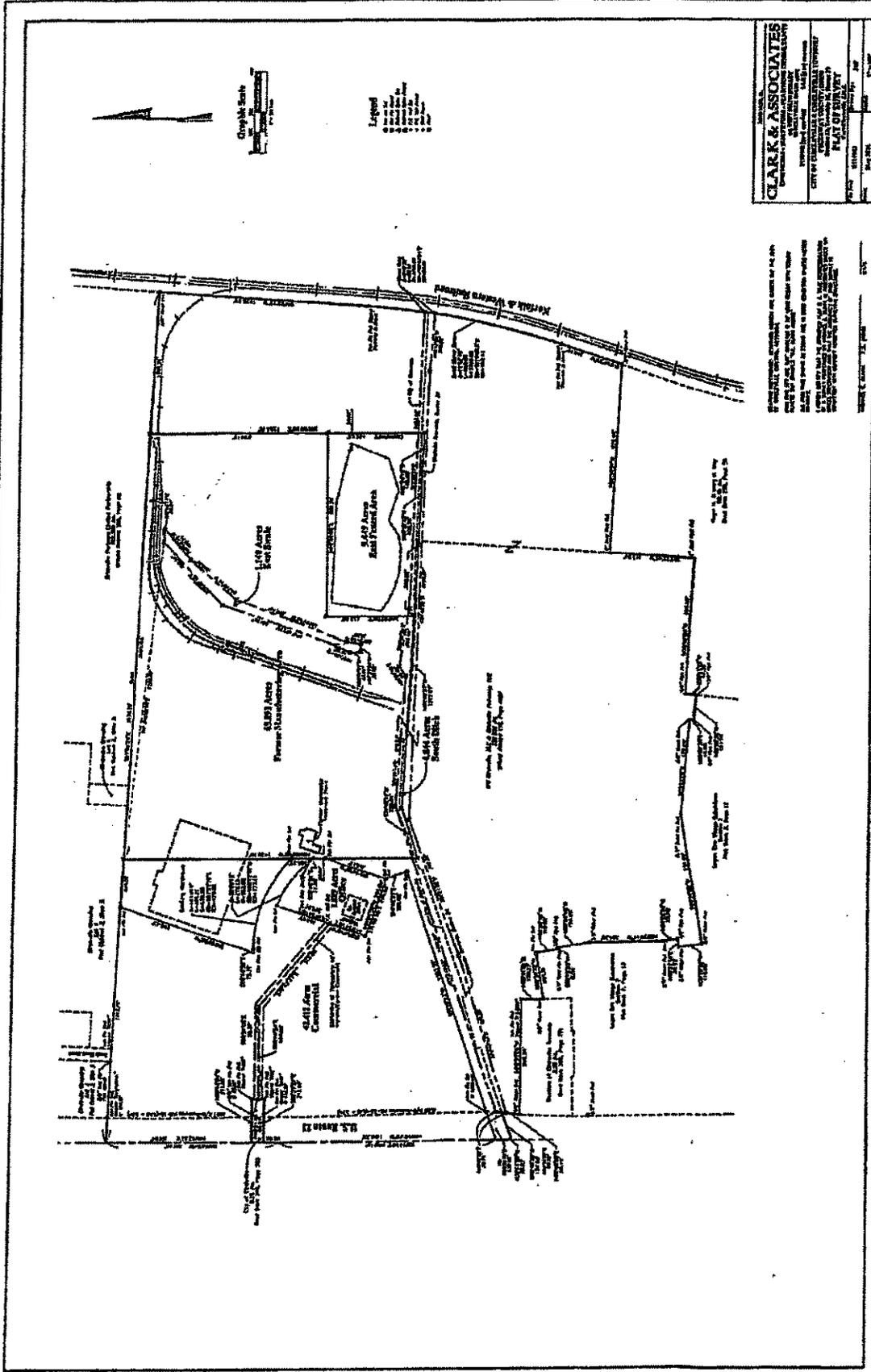
This description is based on an actual field survey performed under the direct supervision of Michael E. Clark, Registered Surveyor #6808.


Michael E. Clark, P.S. # 6808



File No. E111002-4.844

12-13-11
Date



- Legend**
- 1. Proposed Canal
 - 2. Existing Canal
 - 3. Proposed Embankment
 - 4. Existing Embankment
 - 5. Proposed Flooded Area
 - 6. Existing Flooded Area
 - 7. Proposed Sub Bank
 - 8. Existing Sub Bank
 - 9. Proposed Flooded Area
 - 10. Existing Flooded Area

CLARK & ASSOCIATES
 ENGINEERS AND ARCHITECTS
 1000 PINE STREET
 NEW YORK, N. Y. 10028
 CITY OF CHESAPEAKE & VIRGINIA UNIVERSITY
 CHESAPEAKE, VIRGINIA
PLAN OF SURVEY

THIS PLAN OF SURVEY WAS PREPARED BY THE ENGINEER AND ARCHITECTS CLARK & ASSOCIATES, NEW YORK, N. Y., FOR THE CITY OF CHESAPEAKE AND VIRGINIA UNIVERSITY, CHESAPEAKE, VIRGINIA, AND IS SUBJECT TO THE APPROVAL OF THE BOARD OF SUPERVISORS OF THE CITY OF CHESAPEAKE AND VIRGINIA UNIVERSITY, CHESAPEAKE, VIRGINIA.

DATE	NOV 1964	BY	W. J. CLARK
SCALE	AS SHOWN	CHECKED BY	W. J. CLARK

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 B

Environmental Covenant for the
Portion of OCA Owned by Richards
Entities

VORYS

Vorys, Sater, Seymour and Pease LLP
Legal Counsel

301 East Fourth Street
Suite 3500, Great American Tower
Cincinnati, OH 45202

513-723-4000 | www.vorys.com

Founded 1909

Mark A. Norman
Direct Dial (513) 723-4006
Direct Fax (513) 852-7861
Email manorman@vorys.com

RECEIVED-ALBANY

AUG 30 2012

GE CEP . . .

August 24, 2012

Division of Environmental Response
and Revitalization
Ohio EPA - Central Office
P. O. Box 1049
Columbus, OH 43216-1049
Attn: Records Management Officer

Richards Farms, Inc.
Richards Land Company
William J. Richards and Grace S. Richards
24537 Canal Road
Circleville, OH 43113

ORIGINAL

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

Mr. John Uruskyi
General Electric Company
Corporate Environmental Programs
319 Great Oaks Boulevard
Albany, NY 12203

Circleville Township
c/o Jeffrey R. Palm, Fiscal Officer
915 Stoutsville Pike
Circleville, OH 43113

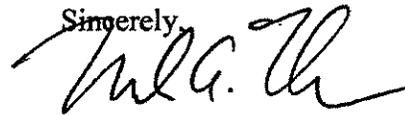
Wayne Township
c/o John D. Hoffman, Fiscal Officer
24737 State Route 104
Circleville, OH 43113

Re: Environmental Covenant/Pickaway County/24200 U.S. Route 23 South

Dear Sir or Madam:

Please find enclosed a fully executed and recorded copy of an Environmental Covenant with respect to the above-referenced property, as recorded in the records of the Pickaway County Recorder.

Sincerely,



Mark A. Norman

MAN/brt
Enclosure

cc: Mark A. Navarre, Esq., Ohio EPA
Frank Merrill, Esq.
Kirk Macfarlane, Esq.

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

For Technicolor:

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

For GE:

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

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

IT IS SO AGREED:

THE RICHARDS LAND COMPANY
an Ohio general partnership

By: *William J. Richards*
William J. Richards, General Partner

Date: 7-19-12

STATE OF OHIO)
) SS:
COUNTY OF PICKAWAY)

BEFORE ME, a Notary Public in and for said County and State, personally came William J. Richards 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
and



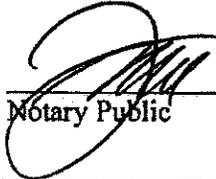
By: Grace S. Richards
Grace S. Richards, General Partner

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


Notary Public

FRANK MERRILL
ATTORNEY-AT-LAW
NOTARY PUBLIC - STATE OF OHIO



RICHARDS FARMS, INC.

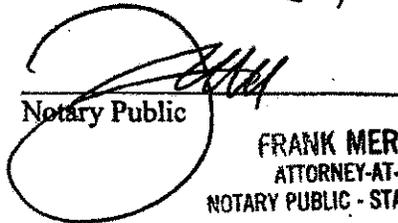
By: Bruce S. Richards
Name: Bruce S Richards
Title: pres
Date: July 19, 2012

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




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



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;

N01°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
COUNTY RECORDER

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 at the 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;

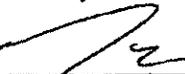
Containing 9.314 Acres more or less.

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).

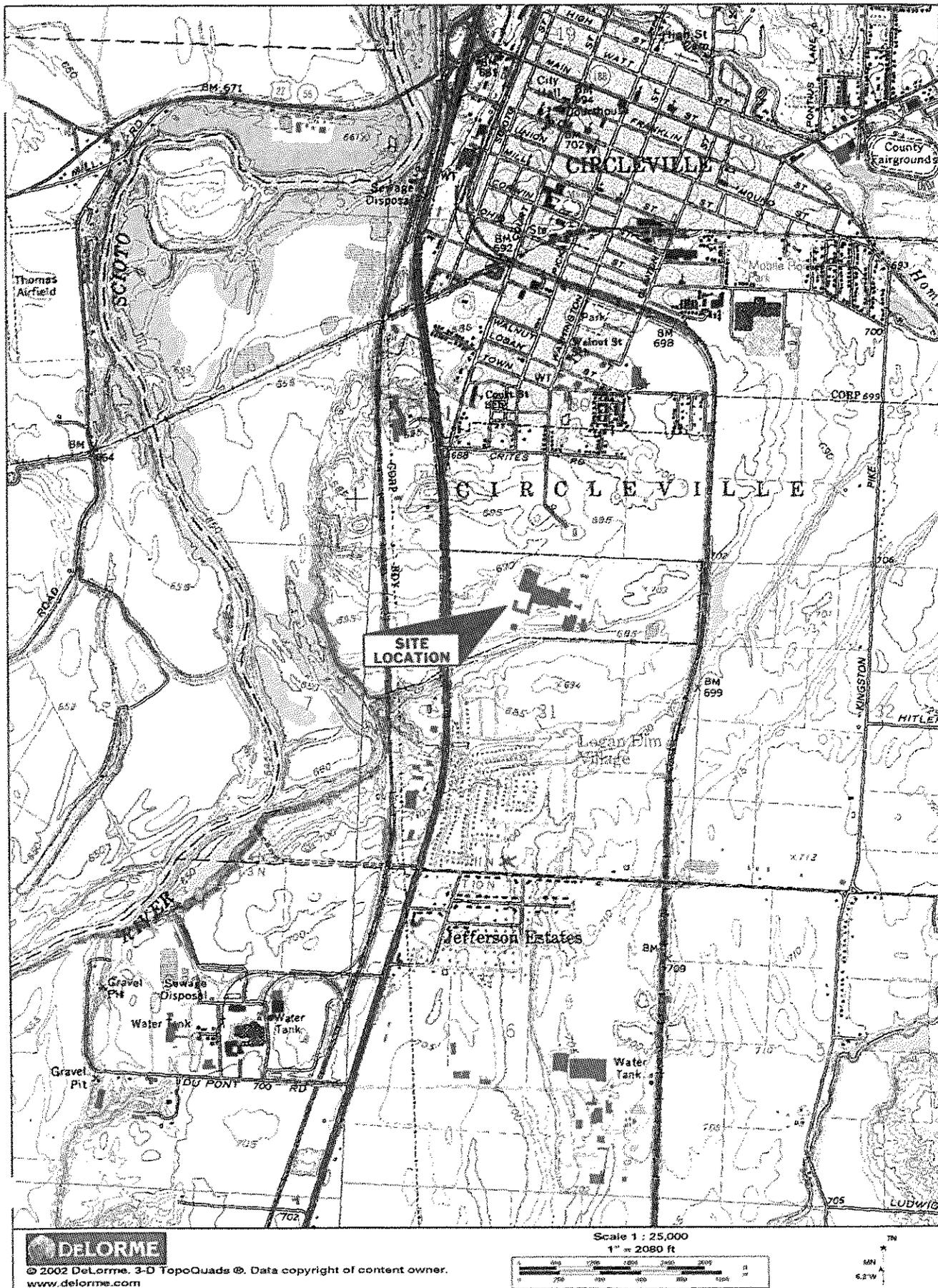
"Residential land use" means "land use with a high frequency of potential exposure of adults and children to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil. Residential land use is considered protective for, and may be applied to, any and all categories of 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).

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



7N
63°W

FIGURE 2

Site Areas of Concern Map

(from Arcadis' July 2013 Feasibility Study Report's Figure 3)

FIGURE 3

Former Facility Plan

(from Exponent's March 2010 Final Remedial Investigation Report's Figure 1-2)

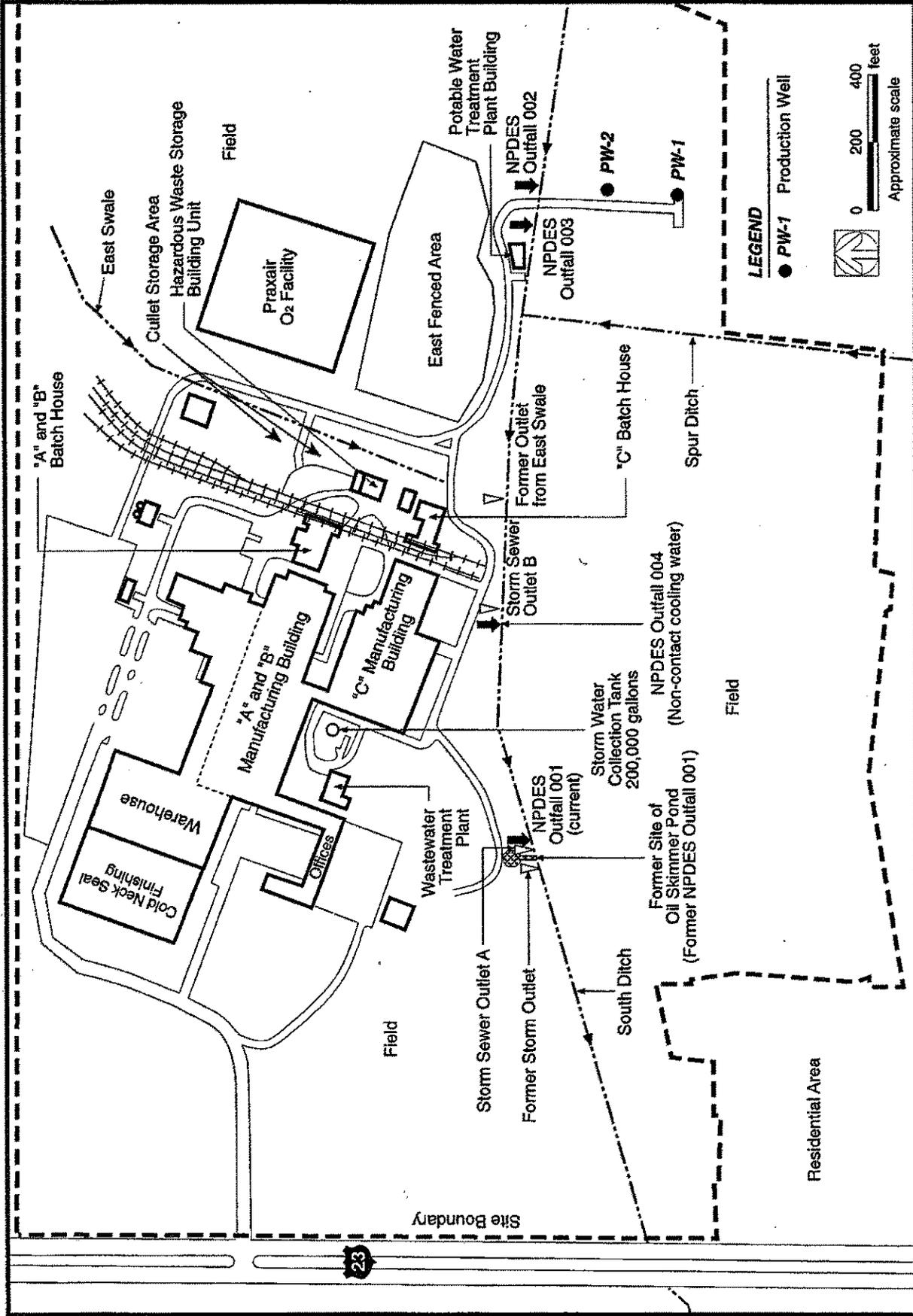


Figure 1-2. Site features.

FIGURE 4

Off-Site Creek Area Plan

(from Exponent's March 2010 Final Remedial Investigation Report's Figure 4-6)

