Haley's Run Remediation Certification Report

Prepared for:

Lockheed Martin Corporation

Prepared by:

ARCADIS US, Inc. (ARCADIS)

January 2010

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Patrick T. Farr

Project Officer

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Mark Hurban

Project Manager

Table of Contents

Section **Page**

List of Figures

List of Tables

List of Appendices

Acronyms and Abbreviations

AL	Action Level
ASE	Automated Soxhlet Extraction
BMP	Best Management Practice
CFR	Code of Federal Regulations
cm^2	square centimeters
EQ	Environmental Quality
GPS	Global Positioning System
HDPE	high-density polyethylene
IRG	IRG Rubber City LLC
mg/kg	milligrams per kilogram
NAAQS	National Ambient Air Quality Standard
NIOSH	National Institute of Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
Ohio EPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
PEL	Permissible Exposure Limit
POTW	Publicly Owned Treatment Works
ppb	parts per billion
RPM	Robertson Protected Metal
SAP	Sampling and Analysis Plan
SWCD	Soil and Water Conservation District
SWP3	Storm Water Pollution Prevention Plan
TSCA	Toxic Substances Control Act
USACOE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency

Section 1
Introduction

On behalf of Lockheed Martin Corporation (Lockheed Martin), ARCADIS US, Inc. (ARCADIS) has prepared this Haley's Run Remediation Certification Report (Report) to document voluntary remedial construction work within and along portions of Haley's Run (also known as Haley's Ditch) located north of Triplett Boulevard in Akron, Ohio. Sediments and adjacent soils along portions of Haley's Run had historically been impacted by polychlorinated biphenyls (PCBs).

Haley's Ditch and Haley's Run have been locally used interchangeably as the name of the stream channel. For this report the name Haley's Run will be used.

The objective of the remedial construction was to remove PCB-containing soil and sediment within and near Haley's Run (an urban drainage ditch) such that any remaining PCBs will not pose an unreasonable risk to human health or to the environment. The cleanup approach was presented in Lockheed Martin's Risk-Based Disposal Approval Request for PCB Remediation Waste (January 9, 2009), approved by the United States Environmental Protection Agency (USEPA) on May 8, 2009 (Appendix A). The risk-based cleanup was based on the Toxic Substances Control Act (TSCA) regulations presented in 40 Code of Federal Regulations (CFR) 761.61(c).A more detailed description of the remedial approach was provided in Lockheed Martin's Haley's Ditch Remediation Plan, dated May 15, 2009.

This report documents construction activities completed by Lockheed Martin in 2009 to remove the targeted PCB-impacted soils (soils containing total PCBs at concentrations above 1 milligram per kilogram [mg/kg]) and sediments from areas along approximately 1,800 feet of Haley's Run; the remediated area extends from the storm drain culvert originating north of Triplett Boulevard to the end of the open channel near the intersection of Archwood Avenue and Sieberling Streets (Figures 1 and 2). The remediation activities were completed in a manner consistent with the

methods and approach described in both the USEPA-approved Risk-Based Disposal Approval Request for PCB Remediation Waste and the Haley's Ditch Remediation Plan.

Haley's Run is being restored through relocation of the stream channel, backfill, seeding, and planting in accordance with the Haley's Ditch Restoration Plan (Riverworks, May 18, 2009). Restoration activities were initiated as the remediation activities were being completed in each area of the site, and proceeded independent of the remediation program. As of December 2009, restoration is essentially complete in the South and Middle Zones (as defined later in this report); restoration of the North Zone is expected to be completed during the 2010 spring planting season. A separate restoration report will be prepared and submitted to USEPA upon completion of restoration.

1.1 SITE BACKGROUND AND HISTORY

In 2003, the uncommon PCB Aroclor 1268 was discovered to have been a component of the Akron Airdock's original roof and siding (which consisted of a manufacturing material known as Robertson Protective Metal [RPM]). The Akron Airdock was constructed in 1929 by the Goodyear Zeppelin Corporation to manufacture airships for the U.S. Navy. Lockheed Martin assumed ownership of the Airdock in 1987. In 2005 the Airdock was acquired by LMA Commerce LLC, and the Airdock was transferred to the Summit County Port Authority. PCBs may have been included in the coating of the RPM roofing and siding material to serve as a fire retardant. Historical deterioration of the material, caused by aging and weathering, had resulted in exfoliation of a solid granular material that contains PCBs (specifically Aroclor 1268) on the ground around the exterior of the Airdock facility. Storm water drainage from the Airdock facility is conveyed through a system of subsurface storm water drainage structures that discharge to Haley's Run in the area north of Triplett Boulevard. An aerial photograph which shows the Airdock facility, the storm drains that convey storm water from the Airdock property, and Haley's Ditch is presented as Figure 1.

As previously reported to the United States Environmental Protection Agency [USEPA] (see Lockheed Martin letters dated June 9, 2005, December 21, 2005, January 24, 2007, and June 22, 2007), the presence of PCB Aroclor 1268 within the sediment and floodplain soils along

Haley's Ditch indicates that exfoliated RPM from the Airdock facility property was washed through the drainage system and ultimately deposited in Haley's Ditch and the immediate surrounding area. As indicated by the presence of additional PCB Aroclors that are not present in the RPM, a portion of the PCBs in soil and sediment along Haley's Run may have been released from sources in the surrounding area other than operations related to the Airdock. All references to PCBs in this plan refer to total PCBs and not to any specific Aroclor.

To manage the source of PCBs from the Airdock facility, Lockheed Martin has completed a number of source control and remedial actions at the Airdock and provided USEPA with reports and updates of these efforts. These activities have included:

- Installing a rubber membrane over the roof of the Airdock structure.
- Replacing rain gutters to control storm flow from the roof of the Airdock.
- Installing and maintaining filter fabric over all storm drain surface openings around the Airdock to capture solid particles until all remediation in the vicinity of the Airdock is complete.
- Replacing the vertical RPM siding with aluminum siding that does not contain PCBs.
- Remediating the interior of the Airdock in accordance with a plan approved by USEPA on December 22, 2006.
- Removing PCB-containing soil located adjacent to the Airdock.
- Removing debris from the pavement around the Airdock to remove residual RPM.
- Removing debris from the storm sewer system from the facility to Triplett Boulevard to remove residual RPM.

Together, these remedial activities are expected to mitigate the future release of PCBs from the

Airdock facility to the storm water system and Haley's Run. In addition, Lockheed Martin is performing post clean-up storm water monitoring under the supervision of Ohio EPA to verify the effectiveness of these remedial actions.

Portions of Haley's Run are located on property currently owned by Lockheed Martin, while other portions are located on property owned by IRG Rubber City LLC [IRG]) (formerly owned by the Goodyear Corporation), the City of Akron, and several private parties. A salvage yard and industrial property are located on the western side of Haley's Run, while residential properties are located on the eastern side. The Akron-Fulton Airport is located to the south of Haley's Run. A fence surrounds the portion of Haley's Run located on the Lockheed Martin property, IRG property, and a combination of City of Akron property and privately-owned property between Wildon Avenue and Archwood Avenue.

1.2 OVERVIEW OF HALEY'S RUN REMEDIATION

This section provides an overview of the Haley's Run remediation activities. The extent of remediation was dictated based on pre-remediation site characterization PCB data for Haley's Run, additional characterization data collected during the remediation, verification sample data collected during remediation, and site conditions. Detailed descriptions of the remedial plan were presented in Lockheed Martin's Risk-Based Disposal Approval Request for PCB Remediation Waste (January 9, 2009) (approved by the United States Environmental Protection Agency (USEPA) on May 8, 2009) (Appendix A), and Lockheed Martin's Haley's Ditch Remediation Plan, dated May 15, 2009.

In general terms, the project involved the excavation, removal, and off-site transportation and disposal of accumulated, unconsolidated sediment deposits in Haley's Run, as well as adjacent soils containing PCBs at concentrations above the approved soil cleanup level of 1.0 mg/kg total PCBs. Soil removal activities were initiated on June 22, 2009 and completed on November 24, 2009. A total of 28,725 tons of soil and sediment were transported off-site for disposal as part of the remedial activities. Excavated material was managed as PCB remediation waste and disposed of in accordance with TSCA PCB regulations based on the as-found PCB concentration. For the purposes of describing disposal activities in this report, the term "soils and sediments" shall also

include all materials disposed including soil, sediments, tree stumps, concrete, steel sheeting and other construction-related debris.

Remediation of Haley's Run generally proceeded in an upstream-to-downstream sequence (south to north, Figure 2). The remediation activities commenced in the South Zone, which extends from the 60-inch storm drain pipe outfall to Haley's Run, located on a small parcel of Lockheed Martin property to the adjacent IRG (formerly Goodyear) property. Remediation continued to the north onto the adjacent IRG property (Middle Zone) and from the IRG property starting near Wildon Avenue and proceeding north to Archwood Avenue (North Zone). Figure 2 illustrates the project boundaries, remediation zones, operations layout (e.g., staging areas, soil stockpile areas), horizontal soil and sediment removal limits, and excavation depths.

The Haley's Run remediation activities included the following tasks, generally performed in sequential order within each remediation zone:

- Mobilization and site preparation, including utility mark-outs, pre-remediation surveying and site control layout, installation of erosion and sedimentation controls, removal of above-grade vegetation, installation of temporary access roads and ditch crossings, collection and analysis of additional characterization samples, and construction of temporary staging areas.

- Setup and operation of a surface water bypass pumping system to divert the water flow in Haley's Run around the active work areas, where needed, to allow for completion of the removal activities "in the dry".

- Excavation and off-site disposal of unconsolidated sediment deposits in Haley's Run and soils exceeding the soil cleanup level of 1.0 mg/kg total PCBs.

- Post-excavation verification sampling in soil removal areas to document that the cleanup level has been achieved. Additional soil excavation was conducted, as necessary, to achieve the cleanup level, followed by additional verification sampling.

- Off-site disposal of PCB remediation wastes at concentrations greater than 25 mg/kg at the Environmental Quality (EQ) facility located in Belleville, Michigan. The EQ facility is a permitted and licensed Toxic Substances Control Act- (TSCA-) regulated disposal facility.

- Off-site disposal of PCB remediation wastes at concentrations less than 25 mg/kg at the Waste Management American Landfill located in Waynesburg, Ohio. American Landfill is permitted and licensed to receive non-TSCA PCB waste containing PCBs at concentrations less than 50 mg/kg.

- Site demobilization, including removal of the temporary access road(s) and soil and sediment staging area(s), equipment decontamination, restoration of disturbed areas, and demobilization of equipment and any unused materials.

Restoration of remediated and disturbed areas, including the channel bottom, ditch banks, and adjacent soil areas as described the Haley's Run Restoration Plan is outside the scope of the remediation activities and was performed by others.

The project also included an extensive communications and community outreach plan, which is discussed in Section 4 of this Report.

1.3 REPORT ORGANIZATION

The remaining portions of this Report are organized into the following sections:

- Section 2 describes the project organization, pre-remediation activities that were completed before initiating the on-site remediation activities for Haley's Run.
- Section 3 describes the Haley's Run remediation activities.
- Section 4 describes community outreach activities employed by Lockheed Martin throughout the project.
- Section 5 provides a Project Summary
- Supporting figures and appendices referenced throughout the text are included at the end of this document.

Section 2
Project Organization, Property Access, Permits, and Approvals

2.1 PROJECT ORGANIZATION

This section describes the project organization and responsibilities of parties involved in the remediation of Haley's Run.

2.1.1 Regulatory Oversight

The project was completed in accordance with the Risk-Based Disposal Approval Request for PCB Remediation Waste, approved by USEPA (included in Appendix A). A representative of the USEPA visited the site prior to remediation and twice during the project to observe site activities and meet with Lockheed Martin representatives. The USEPA also attended a public meeting in Akron prior to project initiation. USEPA was provided with regular updates during the course of the project.

Other regulatory agencies involved with the cleanup included USACOE – Buffalo District, Ohio EPA – Northeast District Office, Summit County Soil and Water Conservation District, and City of Akron Public Works Department. All of these agencies visited the site at least once while the remediation was underway.

2.1.2 Lockheed Martin Corporation

Lockheed Martin contracted and directed the work throughout remediation. Lockheed Martin contracted with the construction contractor, engineer, laboratory, off-site disposal facilities, and third-party overseer of the remedial activities. Lockheed Martin's address is:

Lockheed Martin Corporation
1210 Massillon Road
Akron, Ohio 44315

2.1.3 Construction Contractor

Lockheed Martin contracted with ARCADIS to perform construction activities associated with the soil removal and handling. ARCADIS' address is:

ARCADIS
One Adams Place
310 Seven Fields Boulevard, Suite 210
Seven Fields, PA 16046

2.1.4 Engineer

Lockheed Martin contracted with ARCADIS to prepare the remediation work plan, obtain necessary approvals, provide engineering support during construction, implement the verification sampling program, provide data validation, and prepare this Certification Report.

2.1.5 Laboratory

Lockheed Martin contracted with Test America, Inc. to provide sample analysis. Test America's address is:

Test America
4101 Shuffel Street, N.W.
North Canton, OH 44720

2.1.6 Disposal Facilities and Transporters

Lockheed Martin contracted with EQ (Wayne Disposal, Inc.) for disposal of removed materials containing total PCBs at concentrations above or equal to 25 mg/kg at their TSCA-permitted facility. EQ's address is:

EQ
49350 North I-94 Service Drive
Belleville, Michigan 48111
EPA ID #: MID 048 090 633

Lockheed Martin contracted with American Landfill for disposal of removed materials containing total PCBs less than 25 mg/kg. American Landfill's address is:

American Landfill
7916 Chapel St, S.E.
Waynesburg, OH 44688

Lockheed Martin contracted with Clean Harbors, Inc. to transport removed material containing total PCBs greater than or equal to 25 mg/kg for disposal. Clean Harbors' address is:

Clean Harbors Environmental Services, Inc.
2900 Rockefeller Avenue
Cleveland, OH 44115

Lockheed Martin contracted with Ray Bertolini Trucking Company to transport removed material containing total PCBs less than 25 mg/kg for disposal. Bertolini's address is:

Ray Bertolini Trucking Company
2070 Wright Road
Akron, Ohio 44320

2.2 PROPERTY ACCESS

The limits of remediation work included the section of Haley's Run beginning at the 60-inch storm drain pipe outfall located on a small parcel of Lockheed Martin property (South Zone), downstream to the IRG property (Middle Zone), and further downstream to additional IRG and privately owned properties to Archwood Avenue (North Zone). Figure 2 illustrates the remediation project area. Lockheed Martin obtained access agreements with all property owners within the project limits to perform the remediation and restoration activities.

2.3 PERMITS AND APPROVALS

The following permits and approvals were obtained prior to performing remediation activities at Haley's Run. In addition to the permits and approvals outlined below, the Ohio Environmental

Protection Agency (Ohio EPA) conducted a Limited Environmental Review of the project and issued a Finding of No Significant Impact on June 19, 2009. Copies of the permits and approvals are included in Appendix A.

Permits

- Grading Permit (City of Akron).
- Nationwide 38 Permit (US Army Corp of Engineers [USACOE]): a Nationwide 38 permit approving the disturbance and restoration of 3 wetland areas and Haley's Run was issued by USACOE on June 18, 2009.

Approvals

- Risk-Based Disposal Approval for PCB Remediation Waste (USEPA): USEPA's Risk-Based Disposal Approval request for remediation of Haley's Run was issued on May 8, 2009.
- National Pollutant Discharge Elimination System (NPDES) Notice of Intent (Ohio EPA): Ohio EPA issued an approval for discharge of storm water under the Ohio EPA General Permit – Storm Water Associated with Construction Activity on June 24, 2009.
- Storm Water Pollution Prevention Plan (Summit County Soil and Water Conservation District [SWCD]): SWCD approved the Storm Water Pollution Prevention Plan (SWP3) describing erosion and sediment controls to be implemented during the project on May 22, 2009.
- Discharge Authorization (City of Akron): the City of Akron approved the discharge of filtered water from the site to the sanitary sewer system on July 24, 2008 (2009).

Section 3
Haley's Run Remediation Activities

This section discusses the remediation activities completed for Haley's Run. The work was performed in accordance with the Haley's Ditch Remediation Plan, the approval granted by USEPA (including Lockheed Martin's application for that approval), the applicable requirements of 40 Code of Federal Regulations (CFR) 761.61(c) , which specify the procedures for risk-based management and disposal of PCBs under TSCA, and the permits and approvals issued for the project.

The risk-based cleanup pursuant to 40 CFR 761.61 (c) met the self-implementing on-site cleanup and disposal requirements of §761.61(a), with the USEPA-approved exceptions that (1) the cleanup involved removal of PCB-containing sediments from a drainage ditch and (2) verification sampling did not conform with the §761 Subpart O (cleanup verification sampling) grid spacing requirements because of the large area (approximately 5 acres) involved.

3.1 MOBILIZATION AND SITE PREPARATION

Site mobilization commenced on June 22, 2009 and included mobilizing the necessary manpower, equipment, and materials to the site to implement the Haley's Run remediation project. Equipment, trailers, water storage tanks and filtration equipment, temporary sanitary facilities, a trash collection area, and miscellaneous equipment were initially located within the South Staging Area (see Figure 2). As the project progressed to the north, a second staging area, the North Staging Area, was constructed. Both staging areas were located outside of the soil removal areas and were lined with geotextile fabric and stone to provide a suitable base for vehicle and equipment storage. Photos of the North and South Staging Areas are included in Appendix B.

In accordance with the Sampling and Analysis Plan (included with Remediation Plan), Lockheed Martin also conducted additional characterization sampling around the proposed excavation perimeter to verify that it encompassed the horizontal limits of soils impacted at concentrations greater than or equal to 1.0 mg/kg total PCBs.

In accordance with the Remediation Plan, following mobilization, ARCADIS proceeded with the following site preparation activities in advance of soil removal.

3.1.1 Identification of Utilities

Prior to any intrusive activities at the site, a utility identification and mark-out was performed. Utility location and mark-out was conducted to provide three lines of evidence regarding the presence, absence and location of utilities, including: contacting Ohio's Utility Protection Service (1-800-362-2764) to request a mark-out of utilities in the proposed work areas; consulting with Lockheed Martin and IRG regarding the locations of utilities in the vicinity of Haley's Run on their respective properties (in areas where public utilities are not marked); and utilizing a private utility locating company to locate electric, gas, water, and sewer utilities within the work areas and verify utilities identified from drawings and the public utility service. Utility location activities were conducted in several phases as the project progressed from south to north.

3.1.2 Surveying and Site Layout

To provide control for soil removal and verification sampling, surveying was conducted prior to conducting soil removal activities in each remediation zone. Both the outer boundary of the proposed soil removal area and the individual 25-foot by 25-foot excavation grids were established using survey-grade Global Positioning System (GPS) equipment. In a few isolated areas, GPS equipment was unusable because line of sight to satellites was obstructed by overhanging vegetation. In those few cases, the closest available points (e.g., grid corners, sample locations) were located, and the rest of the points were located through physical measurements by the on-site surveyor. An ARCADIS surveyor with GPS equipment was on-site throughout excavation activities to guide verification sampling (discussed below) and layout of any excavation footprint modifications.

3.1.3 Installation of Temporary Site Controls

Temporary site controls were established prior to the performance of remediation activities. The entire work area was enclosed with a perimeter chain-link fence to control access to the site. For the duration of the remediation activities, a log sheet was maintained at the site trailer. All project personnel and site visitors were required to sign in upon entering the site and to sign out upon leaving.

Warning tape or construction fence was used within the remediation area, as needed, to designate the work areas and restrict access at locations such as open excavations, equipment cleaning areas, and soil handling areas.

Temporary site controls were removed, as appropriate, following completion of remediation activities. The perimeter chain-link fence will remain in place until restoration is completed in the spring of 2010. Photographs of typical site controls are included in Appendix B.

3.1.4 Erosion and Sedimentation Control/Best Management Practices

Prior to initiation of remediation activities within each zone, the necessary erosion and sedimentation control measures were installed at the site in accordance with the SWP3 approved by the Summit County SWCD. In addition to the various physical types of control measures that were installed, certain operational and Best Management Practices (BMPs) were implemented throughout the project (e.g., use of wood chips on roads to provide dust control) to provide an additional measure of erosion and sedimentation control and storm water pollution prevention. Examples of the types of erosion and sedimentation controls that were employed during the remediation included:

- Silt fence and/or staked hay bales installed downgradient of work areas and along the creek banks around the perimeters of areas where vegetation was removed.
- Riprap and/or straw bales installed at or downstream of the creek bypass discharge point to provide energy dissipation and manage potential scouring of the channel bottom.
- Stone check dams to settle solids within the creek channel and control downstream migration.

- Pumps to collect potentially impacted water for filtration that accumulated within the active soil and sediment removal areas.

- Stabilized construction entrances to prevent the tracking of clean soil from access roads onto public roads.

The specific locations of these controls were adjusted, as appropriate, in the field, based on site-specific considerations related to drainage, topography, and work activities. In accordance with the SWP3, erosion and sediment control measures were inspected and maintained throughout the project. Photographs of typical erosion and sediment control efforts are included in Appendix B.

3.1.5 Removal and Disposal of Vegetation

Prior to removal activities in each remediation zone, brush and trees were removed, as required, to provide access to Haley's Run and adjacent work areas. Clearing of vegetation along the perimeter of the excavation area was minimized to the extent practical. The majority of the above-grade materials cleared from the excavation areas was chipped and stockpiled on-site for reuse; chipped materials were primarily used on the access roads within the remediation area to provide additional dust control. These materials were subsequently removed and disposed of along with excavated soils as the remediation progressed. A number of trees were cut and staged at designated areas on-site for use during restoration activities (e.g., used for creek bank stabilization and natural land cover/habitat). Below-grade materials (e.g., tree stumps and roots) were removed as part of the soil and sediment remediation activities and disposed of off-site along with the excavated soils.

Photographs of the clearing activities are included in Appendix B.

3.1.6 Temporary Haul Roads and Run Crossings

The remediation employed off-road dump trucks; thus, the need to construct temporary stone access roads within the remediation area was minimized. The off-road dump trucks were used to transport excavated materials from the excavation area to the designated stockpile area. Off-site transport vehicles (i.e., dump trucks and trailers) were limited to the North and South Staging Areas (Figure 2) and loaded directly from adjacent stockpiles. A small stone access road was

constructed near the North Staging Area to provide access to the North Zone; the access road was constructed with geotextile fabric covered with stone.

Two types of temporary stream crossings were used during the remediation activities. Initially, temporary stream crossings constructed of culvert pipe and stone were installed as necessary to allow equipment and vehicle access to both sides of Haley's Run. Due to concerns regarding flow constriction within the stream during high flow conditions, temporary sectional steel bridges were subsequently employed to provide access across the ditch. The bridges were installed at top of bank, which allowed unrestricted flow within the ditch.

Tracking of soils off-site was managed through the use of properly maintained construction exits and by manually cleaning truck tires, if needed, prior to leaving the site. As noted above, off-site transportation vehicles were not allowed to drive on soils designated for remediation; these vehicles remained within the stone-lined North and South Staging Areas. Thus, off-site vehicle tires were not in contact with soil containing PCBs above the 1 mg/kg cleanup goal. As an additional control measure, plastic sheeting was draped over the truck sides and tires (loading side only) to control the spillage of PCB-containing material onto the trucks and tires. Finally, trucks were loaded on top of plastic sheeting and separated from the soil stockpile using concrete Jersey barriers to prevent the truck from driving onto staged materials. The public roadway was also cleaned as needed by shoveling and sweeping.

Photographs of the loading areas, stream crossings, and construction entrances are included in Appendix B.

3.1.7 Temporary Soil and Sediment Stockpile Areas

It was anticipated that most of the excavated materials would be directly loaded into vehicles for off-site transport and disposal, thereby minimizing the need for temporary soil and sediment staging. However, due to the construction sequencing, the limited area for trucks within the remediation area, and the presence of soft materials throughout the remediation area, it was determined that the use of centralized temporary stockpile areas was the most appropriate

approach to handling and loading removed materials. Provisions for the use and management of temporary day piles were addressed in the Remediation Work Plan.

Two temporary stockpile and loading areas were used for the project, one within the remediation area near the South Staging Area, and one outside of the remediation area at the North Staging Area (Figure 2). Materials containing less than 50 mg/kg of total PCBs were typically stored for 1 to 3 days. Materials containing PCBs greater than or equal to 50 mg/kg were loaded for off-site transport as soon as practical following excavation and transport to the stockpile area; these materials were not staged overnight. Soils containing greater than 25 mg/kg total PCBs (targeted for TSCA disposal) were physically separated within the stockpile area from those soils containing less than 25 mg/kg total PCBs (targeted for non-TSCA facility disposal) to prevent commingling of waste materials. Each stockpile was clearly marked in the field with signage indicating PCB concentration (greater than or less than 25 mg/kg PCBs, and greater than 50 mg/kg PCBs). All staged materials were covered at the end of each work day and during significant precipitation events.

In the South Zone, the stockpile was located within the remediation footprint on soil areas targeted for subsequent excavation; soil containing total PCBs greater than 1 mg/kg beneath the stockpile were subsequently removed for disposal as the remediation was completed. In accordance with the remediation plan, because this area was subsequently excavated, it was not necessary to isolate these temporary staging piles from the underlying soil (e.g., with plastic).

In the North Staging Area, the soil stockpile was located outside of the remediation footprint. In accordance with the Remediation Plan, this stockpile area was graded and lined with an impermeable high-density polyethylene (HDPE) liner and covered with 12 inches of clean imported soil material to serve as a working surface and protect the liner from puncture. A berm was installed near the stockpile area to manage run-on or run-off from the staging area. As with the south stockpile, excavated materials were physically separated by relative concentration (less than 25 mg/kg PCBs, 25 – 50 mg/kg PCBs, and greater than 50 mg/kg PCBs), and clearly marked in the field for disposal purposes.

Following transfer of all materials from the temporary stockpile areas off-site for disposal, the temporary stockpile areas were decommissioned. The berm, sand layer, and liner materials (where used) were removed and transported off-site for disposal. Following decommissioning of the south stockpile area, the underlying soils were excavated pursuant to the Remediation Plan, and verification sampling was conducted (discussed below). Following decommissioning of the north stockpile area, two composite soil samples were collected from the stockpile area footprint and analyzed for PCBs to verify that the soil and sediment stockpiling did not impact the underlying site soils.

Photographs of the staging areas are included in Appendix B.

3.1.8 Additional Characterization Samples

In accordance with the Sampling and Analysis Plan (SAP), included with the Remediation Plan, prior to soil excavation activities in each zone, additional soil samples were collected around the perimeter of the proposed excavation area to verify that it encompassed the horizontal extent of soils containing PCBs at concentrations greater than or equal to 1.0 mg/kg. To complement existing site characterization data that were collected along transects spaced approximately 100 feet apart, additional borings were located between the existing transects to provide samples spaced at approximate 50-foot intervals around the proposed excavation perimeter. A total of 38 locations were initially identified.

Consistent with previous characterization efforts, sampling and analysis was performed in an iterative fashion (i.e., if PCBs were identified at concentrations above 1.0 mg/kg at any boring location, an additional boring[s] was installed further away from the excavation area); the location of the proposed and additional borings were determined in the field based on site conditions (e.g., topography, physical obstructions). Consistent with prior characterization efforts, samples from the top 1 foot were initially analyzed for each boring location. If PCBs were found to be at concentrations below 1.0 mg/kg in the top 1 foot, samples from deeper intervals were not analyzed at that location. If PCBs were reported at concentrations above 1.0 mg/kg in the top foot, deeper samples were analyzed to provide data necessary to guide initial excavation depths in that area; final excavation depths were determined through verification sampling (discussed below). Soil

samples were analyzed for total PCBs using USEPA SW-846 Method 8082, modified to include Aroclor 1268.

Five of the 38 boring locations were reported to contain PCBs at concentrations greater than 1 mg/kg total PCBs; three of these borings were located in the South Zone, and one was located in each the Middle and North Zones. Soil samples were obtained from eight additional borings to delineate PCBs at concentrations above 1.0 mg/kg, and the excavation perimeter was modified to encompass those soils. Final excavation limits and depths were determined based on verification sample results.

The remediation footprint was adjusted in two other areas based on field conditions and additional characterization data. In the Middle Zone a concrete storage pad is located immediately adjacent to the originally proposed excavation footprint. Due to structural concerns related to excavating adjacent to the pad, a more detailed refinement of the excavation limit was performed. Additional characterization samples SO-301, SO-302, and SO-303 were collected to assist in determining the appropriate excavation footprint; these data, along with sample location SO-266 were used to re-define the excavation footprint in this area. In northeast portion the North Zone a flood-prone low-lying horseshoe shaped area was excavated. This excavation footprint was adjusted from the grid outline to an elevation (contour) where characterization data indicated soil PCB concentrations were below 1 mg/kg total PCBs.

The locations of the additional characterization borings, along with corresponding PCB results, are presented on Figure 3. The additional characterization analytical data are summarized on Table 1.

As previously discussed, the restoration efforts include the relocation of the drainage channel in the North and South Zones. In order to obtain proper channel grades, additional vertical soil excavation (in addition to the excavation required as part of the remediation) was required in some areas of the site. In order to document that these deeper soils did not contain PCBs, five additional soil samples (three in the South Zone and two in the North Zone) were collected along the new channel alignment at the targeted invert of the channel and analyzed for PCBs. PCBs were not detected in any of these five additional new channel samples. The new channel sample locations are presented on Figure 3, and the corresponding data is summarized in Table 2.

3.1.9 Imported Backfill Sampling and Selection

Prior to importing material for use as backfill, candidate backfill sources were sampled and analyzed to document that they were suitable for use as backfill. Two primary criteria were established for imported backfill selection:

- The material met the functional specifications (e.g., textural properties, drainage capacity, soil chemistry, and nutrient content) necessary for restoration activities.

- The material is uncontaminated, specifically with a total PCB concentration less than 0.1 mg/kg. In addition to PCBs, acceptable clean imported material was defined as containing non-naturally occurring constituents below risk screening levels or by naturally occurring constituents (e.g., metals) within the range of local or regional background levels.

A total of 5 samples were collected from 3 candidate sources, each sample was analyzed for functional specifications as well as pesticides/herbicides, volatile organic compounds, semi-volatile organic compounds, PCBs, and metals. The chemical analytical results were screened against residential risk-based screening levels (RSLs) (USEPA, Region 9 Preliminary Remediation Goals 2009) and Ohio Voluntary Action Program (VAP) generic direct contact soil standards.

All five samples passed the criterion for PCBs below 0.1 mg/kg. No PCBs were detected above the analytical reporting limit range of 0.096 to 0.080 mg/Kg.

With the exception of Arsenic, the remaining detected analytes were below one or both of the residential risk-based screening levels. Arsenic results were further screened against published local and regional background values, and were found to be within the range of literature values for eastern Ohio. Each of the backfill sources was deemed suitable for use during restoration of the site. A URS memo detailing the backfill screening and selection process (including analytical data) is included in Appendix C.

Imported fill was only used for the restoration efforts and none was required for the remediation.

3.1.10 Utility Relocation

Several utility relocations and repairs were necessary to complete the remediation and restoration efforts. The utility relocations/repairs are described briefly below:

- An approximately 50-foot section of 20-inch diameter water main located in the North Zone near Wildon Avenue was replaced. During the permitting process the City of Akron determined that a small section of the pipe that is located beneath the stream channel would not have sufficient soil cover following the remediation activities. In accordance with a city-approved design, this section of pipe was removed and reinstalled at a lower elevation beneath the ditch to provide the appropriate cover depth. Following installation the line was pressure tested and approved by the City.

- A six-inch diameter sewer line originating at the IRG property and discharging to the sanitary sewer located within Landon Street was located within the excavation area. This line was removed during excavation activities and replaced with a new line installed below the restored ditch.

- A small potable water line leak was discovered in the northwest portion of the North Zone; the leak was outside of the remediation area. The City of Akron was notified, and City personnel repaired this leak.

- The chain-link IRG property fence along Landon Avenue was relocated west of the middle-zone area.

- Five light poles owned by IRG and located adjacent to the Middle Zone east of the ditch were de-energized and removed during the remediation activities. These light poles were reinstalled west of the newly relocated IRG property fence.

3.2 WATER MANAGEMENT

This section describes water management during the Haley's Run remediation activities. In accordance with the Remediation Plan, the existing ditch was maintained to the extent practical and used to convey surface water flows, as it historically has. Surface water diversion was

required during the sediment removal work in order to perform the removal "in the dry." Two types of surface water diversion were employed: construction of a bypass channel and bypass pumping. In the South Zone, a bypass channel was constructed within remediated areas to bypass storm flow around Haley's Run to facilitate removal of unconsolidated sediments in the ditch and remediation of the remaining areas. This bypass channel was supplemented with bypass pumping (described below), which was employed to carry base flow from the ditch. In the Middle and North Zones, the existing ditch and bypass pumping was used for water management.

3.2.1 Bypass Pumping

Surface water was diverted from the ditch to facilitate efficient removal of sediments and adjacent bank soils containing PCBs. The diversion was completed in several phases as remediation progressed from south to north, depending upon accessibility and other site conditions.

Surface water collection sumps were constructed by removing targeted sediments and lining the sumps with geotextile fabric and stone. The pump inlet was placed in the collection sump, and float controls were employed to actuate the electric pump. As discussed above, bypass pumping was typically used to carry base flow within the ditch; storm flow was allowed to overflow the sump and continue into the ditch consistent with historical flow. Bypass water was conveyed around the work area and discharged downstream back into Haley's Run. Energy dissipation features, including geotextile fabric, riprap and hay bales, were installed at the bypass pump discharge locations to prevent scouring of the ditch.

Photographs of the typical bypass pumping system configuration are included in Appendix B.

3.3 SOIL AND SEDIMENT REMOVAL

This section describes the remediation efforts for site soils, top of bank soil, and ditch sediment. Remediation activities progressed from upstream to downstream (south to north). Site soils were remediated first, followed by bank soils and ditch sediment. Figures 4 through 6 illustrate the actual soil and sediment removal limits and depths.

As shown on Figures 4 through 6, a 25-foot grid system was established over the entire project site to manage excavation footprint and depths and to facilitate collection of verification samples after

soil and sediment were removed from a grid area. As discussed in the SAP (included with the Remediation Plan), verification samples were collected from 25-foot sub-grids. The grid system contains areas of soil and sediment removed from depths that ranged between 1 to 5 feet based on initial proposed limits and depths of excavation and verification data collected during the remediation activities.

A total of 350 grids (including additional grids added based on additional characterization data) were excavated as part of the remediation, and 28,715 tons of site soils and sediment were transported off-site for disposal. Twenty-five of the grids required additional vertical excavation based on verification sample results as discussed in Section 3.4. Ultimately, final verification samples all met the total PCB cleanup goal of 1 mg/kg.

The Remediation Plan estimated the removal and disposal of approximately 10,600 cubic yards (the equivalent of approximately 18,550 tons) of soil and sediment versus the actual removal of 28,715 tons. In general the excavation footprint and depths were consistent with the original plan, however as discussed above several grids were added based on additional characterization samples, and 25 grids (of the 350 excavated grids) required additional vertical excavation to achieve the cleanup goal. Additional soil was also excavated in some areas due to health and safety considerations (e.g., slope stability and safe access for sampling personnel). Other factors for the increase in the volume/weight disposed include: soil mounds which were removed and not included in the original estimates; additional initial vertical excavation within the excavation footprint to remove soils to the depth of an underlying clay layer that was found to be representative of a "clean" zone (verification sampling was used to demonstrate the clean-up levels were met); and the removal and disposal of concrete and steel sheeting and other debris from within the excavation footprint.

3.3.1 Site Soil Removal

The soils along Haley's Run were excavated to achieve the approved PCB cleanup level of 1.0 mg/kg. Soils were removed using conventional construction equipment (e.g., track-mounted

excavators and dump trucks). Dust control procedures (e.g., water misting, use of wood chips as cover) were implemented, as necessary, based on field conditions. The existing wooden bridge, sheet piling, and concrete structure located at the Lockheed Martin property in the South Zone was also removed in conjunction with soil and sediment removal activities; these features were not replaced.

To the extent practical, excavation activities were initiated at the outermost edge (or higher elevation) of the excavation area and progressed toward Haley's Run (upgradient to downgradient). Excavated soil was loaded into an off-road dump truck and transported to the soil stockpile areas, where the soils were subsequently loaded into trucks for off-site transportation and disposal. Following completion of excavation activities in a grid area, verification soil samples were collected to verify that the targeted cleanup goal of 1.0 mg/kg total PCBs was achieved. If the verification samples contained PCBs at concentrations above 1.0 mg/kg within a grid area, additional soil removal (typically 1 additional vertical foot) was conducted within the entire grid followed by additional verification sampling until each grid achieved the 1.0 mg/kg total PCB cleanup goal. Twenty-five sub-grids required additional excavation based on the verification sample results. Sub-grids that achieved the cleanup level were backfilled to planned restoration grades as soon as was practical. The as-remediated limits of soil excavation are shown on Figures 4 through 6.

3.3.2 Bank Soil and Sediment Removal

The existing stream channel and creek banks in each work zone were excavated following soil removal in each zone. Excavation started at the upstream limit of the work area and progressed downstream. Soils and sediments were removed and transported in the same manner as described in the preceding section. Following completion of excavation activities in each grid area, confirmation soil samples were collected to verify that the total PCB cleanup goal of 1.0 mg/kg was achieved.

In accordance with the Remediation Plan, unconsolidated sediments were removed from the ditch. Depending on the moisture content of the sediment materials removed, some sediment was mixed

with dryer stream bank soils at the point of removal to provide adequate solidification (the elimination of free-standing water) prior to transfer to the temporary stockpile area.

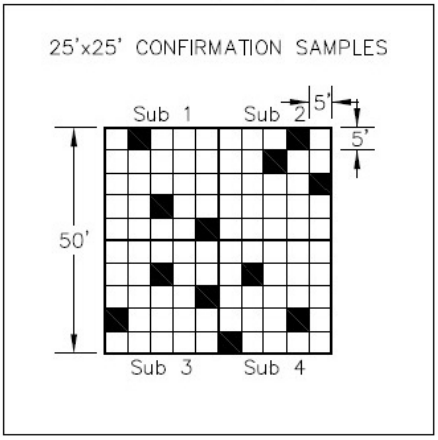
3.3.3 Site Restoration

Site restoration activities (backfilling to restoration grades and planting) are being performed by River Works, a Lockheed Martin subcontractor. River Works performed restoration activities as soon as practicable following remediation in each zone. In general, the restoration efforts included backfilling of excavated areas with imported soils, realignment of the ditch to create a meandering stream, and planting with native plantings. A full description of the restoration activities was included in the Restoration Plan submitted to USEPA. As discussed above, restoration activities were completed in the South and Middle Zones by November 2009, at which time construction was halted due to weather considerations (i.e., the end of the planting season). The North Zone has been backfilled and the preliminary grading completed. Final grading and planting of the North Zone will resume when weather conditions permits with completion planned for early summer 2010. A separate Restoration Report, which documents the completed restoration efforts, will be submitted once the restoration activities have been completed.

3.4 VERIFICATION SAMPLING

As described in the Remediation Plan, following the removal of soil to targeted depths from the excavation areas, verification samples were collected for analysis of PCBs. As described in the Risk-Based Disposal Approval Request, verification soil samples were collected from 25-foot square sub-grids established across the excavation area. These sub-grids were further subdivided into 25, 5-foot by 5-foot sample squares (see below). Each sub-grid that encompassed an excavation area was characterized by analyzing a sample consisting of a composite of sample aliquots from three randomly selected sample squares, selected via random number generator, within the sub-grid. Note that samples were collected from excavated areas; sub-grids that were not excavated (grids that fell outside of the actual excavation perimeter) were not sampled. Sample locations were also adjusted within sub-grids that were partially excavated (e.g., a grid was bisected by the excavation perimeter) to locate samples within the excavated portion of the sub-grid.

Three individual sample aliquots were collected and composited from each randomly identified sample square from each sub-grid. Sample aliquot locations were selected using an online random number generator provided by Randomizer.org (http://www.randomizer.org).



Verification samples were submitted for laboratory analysis for total PCBs using USEPA SW-846 Method 8082, modified to include Aroclor 1268, with Automated Soxhlet Extraction (ASE, SW-846 3545A). If the analytical result for any of the verification samples equaled or exceeded the cleanup objective, additional soil removal was conducted for the corresponding 25-foot sub-grid square. Where additional excavation was necessary, additional verification samples were collected in the same manner at the same randomly selected locations following the additional excavation to verify that the cleanup objective was achieved.

The sampling grids were individually numbered for ease of sample identification and tracking, and the soil excavation areas are shown on Figures 4 through 6. In addition, separate figures for each sampling grid, showing excavation limits/depths and sample aliquot locations were developed and used by field personnel to guide sample collection; a sample of the individual grid figures is included in Appendix D (Lockheed Martin maintains copies of all individual grid figures at its Akron facility). As shown on the sample individual grid figure, each aliquot location (identified via random number generator), sample coordinate, and sample identification had been predetermined to assist the field crew in proper sample identification and tracking. For sub-grids that were only to be partially excavated, the random selection process was modified to only select samples within the excavation footprint. As discussed in the Remediation Plan, in cases where

excavation footprints were modified in the field, the sample locations were modified accordingly on a case-by-case basis to be representative of the excavation footprint.

As shown on Figure 6, the excavation of the ditch at the north end of the remediation area is a linear feature; this linear feature does not lend itself to the randomly selected sample location because of the limited excavation footprint within each grid; thus, the grid system was modified in this area. Grid numbers 473, 474, 481, 482, 484, and 485 were combined to form a single verification sampling grid (Grid 500); and grid numbers 488, 489, 491, 492, and 494 were combined to form a single sampling grid (Grid 501). Verification samples were collected only from the combined grids 500 and 501.

A total of 366 verification samples (including re-samples) were collected and analyzed as part of the remediation project. Of the 341 initial verification samples, only 25 were reported to contain total PCBs at concentrations above the cleanup goal of 1.0 mg/kg. Each grid with a reported concentration above 1.0 mg/kg was re-excavated vertically to remove approximately 1 foot of additional soil and the grid was re-sampled. At the completion of the excavation activities, all remediated grids were documented to contain less than 1.0 mg/kg total PCBs. A summary of the verification sample data is presented in Table 3. Based on the verification sample results, the average total PCB concentration remaining within the excavated footprint is 0.16 mg/kg (assuming non-detects equal ½ of the detection limit).

3.5 MATERIALS HANDLING AND DISPOSAL

This section describes the various waste materials (soils, sediments, liquids, residual wastes, and general trash) generated during the remedial activities and the handling and disposal procedures employed during the Haley's Run remedial activities.

Lockheed Martin contracted with URS Corp. to provide third-party oversight during the remediation activities. URS' representative was also responsible for:

- Reviewing waste manifests and their associated documents to confirm that they meet requirements for signature.
- Coordinating with waste shipments with trucking companies and disposal facilities.

- Signing waste manifests on behalf of Lockheed Martin.
- Tracking returned manifests and maintaining on file all shipping documents (including manifests) and related documents.

A summary of the soil and sediment shipments from the site, including shipment date, manifest number, and weight, is provided in Appendix E.

3.5.1 Soil and Sediment Management and Disposal

As discussed above, excavated soil and sediment were loaded into an off-road dump truck and transported to designated stockpile areas for load out. The temporary staging areas functioned as the soil and sediment load-out area for waste transport vehicles upon their arrival at the site. Excavated materials were loaded using an excavator from the temporary stockpile areas into dump trucks and dump trailers for off-site transport and disposal. As discussed above, wet materials were mixed with dryer materials at the point of excavation to address the presence of any free liquids; thus, the addition of solidification agents was not necessary prior to off-site transport.

Soil and sediment removed during the Haley's Run remediation activities that contained PCB concentrations greater than or equal to 25 mg/kg were transported off-site to the TSCA-permitted EQ facility located in Belleville, Michigan. Off-site transport of materials was performed by licensed haulers in accordance with appropriate local, state, and federal regulations. Loaded vehicles leaving the work area were covered; cleaned to remove any accumulated dirt as needed to prevent tracking; manifested; and placarded in accordance with federal, TSCA, and US Department of Transportation requirements, as well as any equivalent state requirements. A total of 3,558 tons of soil and sediment containing greater than or equal to 25 mg/kg total PCBs was transported off-site for disposal.

Materials containing less than 25 mg/kg total PCBs were transported off-site for disposal at American Landfill located in Waynesburg, Ohio. American Landfill is a permitted solid waste management facility meeting the requirements of 40 CFR 761.61(a)(5)(i)(B)(2)(ii). A total of 25,157 tons of soil and sediment containing less than 25 mg/kg of total PCBs was transported off-site for disposal.

3.5.2 Liquid Waste Management and Disposal

Water removed from the active excavation areas and temporary staging areas was temporarily stored and allowed to settle in storage tanks that were initially located in the South Staging Area. The water storage and water filtration activities were relocated to the North Water Filtration Area as the remediation progressed to the north. Water from the excavation areas was first placed into a 20,000-gallon weir tank where fine materials were allowed to settle out. The water was then pumped through a dual 5-micron bag filter system to remove suspended material, through dual 2,000-pound activated carbon units operated in series to remove any residual PCBs, and into a 20,000-gallon Frac tank. Photographs of the water filtration system are presented in Appendix B. The filtered water was then sampled for total PCBs using USEPA Method SW846 8082. Once the analytical results indicated non-detectable concentrations at a 1 part per billion (ppb) detection limit, the water was discharged from the Frac tank to the City of Akron Publicly Owned Treatment Works (POTW) in accordance with the Temporary Groundwater Discharge Authorization issued by the City of Akron (Appendix A). Filtered water from the South Water Filtration area was discharged to the sanitary sewer manhole located on the west side of Landon Street at the intersection of Landon Street and Salem Avenue; filtered water from the North Water Filtration Area was discharged to the sanitary sewer manhole on the west side of Landon Street and the intersection of Wildon Avenue. Six batches of filtered water, totaling 78,678 gallons, were discharged to the POTW. No detectable concentrations of PCBs were reported in the six samples of filtered water that were collected and analyzed prior to discharge. A summary of the filtered water analytical results and one untreated water analytical result is included in Table 4.

3.5.3 Decontamination Wastes

Solid decontamination wastes, including used disposable equipment and personal protective equipment, were placed in appropriate containers, labeled, temporarily stored within the staging areas, and disposed of at American Landfill along with the removed soils and sediment.

3.6 EQUIPMENT DECONTAMINATION

Construction equipment (e.g., off-road dump truck, excavators, water filtration equipment) used for handling PCB-impacted material was cleaned prior to being shipped off-site. Equipment was

cleaned by using dry cleaning methods (shovels, brushes) followed by high-pressure, low-volume power washing to remove residual material. Equipment was cleaned within the remediation area, which allowed collection and off-site disposal of removed materials as part of the soil excavation. In accordance with the Remediation Plan, wipe samples were collected from heavy equipment (e.g., excavators, loaders, water storage tanks) following final cleaning of equipment that worked in PCB-impacted areas. Multiple wipe samples were collected from each piece of heavy equipment to document the cleaning effectiveness. To provide a conservative evaluation of the cleaning process, the wipe samples were obtained from areas that were known to be in direct contact with PCB-containing materials (e.g., equipment tracks, dump truck bed, and excavator bucket). The residual PCB concentration cleaning objective established in the Remediation Plan is 10 micrograms (µg)/100 square centimeters (cm^2); none of the wipe samples collected from cleaned equipment contained PCBs above a concentration of 10 µg/100 cm^2. A summary of the wipe sample data is provided in Table 5.

3.7 STORM WATER MANAGEMENT

As expected, the Haley's Ditch soil and sediment removal activities were weather-dependent. Daily remedial activities were scheduled in accordance with anticipated weather conditions to minimize adverse impacts as a result of heavy rain.

Storm water management included erosion control measures that were installed and maintained in accordance with the SWP3. Storm water diversion measures were used as appropriate to manage run-on to active work areas. Run-on from storms events was limited to the extent possible by bypass pumping, construction of a diversion ditch, and limiting the extent of disturbed work areas. BMPs such as soil berms, sand bags, hay bales, and diversion swales were also used to prevent excessive run-on into excavation areas.

Where feasible, excavation in active grids was completed prior to forecast storm events, and excavated soil was either transported off-site for disposal or placed in a staging area and covered with sheeting during the storm event. As discussed above, because bypass pumping of significant storm flows was not practical, storm water was allowed to flow through Haley's Run.

Water that entered active excavations (excavations that were not confirmed to meet the cleanup objective) was collected and filtered in the on-site water filtration system; filtered water was discharged to the POTW as described above. Water that entered completed excavations (excavations that were confirmed to meet the cleanup objective) was allowed to naturally percolate or drain to Haley's Ditch.

3.8 AIR MONITORING

As described in the Remediation Plan, an air emission status program was implemented to determine that work practices and control measures maintained airborne emissions below the applicable air monitoring action thresholds. Air monitoring was conducted during all removal activities that involved the handling, movement, or disturbance of soil and all excavation activities. The program included field monitoring and laboratory analysis for dust and PCBs.

Engineering controls for dust management (e.g., water misting, use of wood chips on roadways, controlled access to disturbed areas) were implemented as part of the BMPs employed throughout the project. These engineering controls, along with precipitation events, effectively controlled the generation and migration of dust. There were no exceedances of the air monitoring action thresholds established in the Remediation Plan.

The laboratory analysis results conducted as part of the air monitoring program are included in Table 6. Copies of the field monitoring data are maintained by Lockheed Martin at their Akron facility.

Section 4
Community Outreach

Lockheed Martin prepared and implemented a Community Outreach Plan prior to and throughout the remediation project. The Community Outreach Plan was designed to establish working relationships and develop constructive communication channels with any stakeholders to resolve issues or concerns that arose throughout the project. Community Outreach tasks included:

- Preparation of a Citizen's Guide which was mailed to nearby property owners and residents.
- Participation at a public information exchange held at a local library to present the proposed project and answer any questions.
- Preparation and distribution of a monthly newsletter to interested parties.
- Participation at public meetings with the City Council member whose jurisdiction includes Haley's Run.
- Construction of a publically accessible job-site information sign with pockets for distribution of the Citizen's Guide and monthly newsletter.
- Maintenance of a project web page with links to all project documents.
- Maintenance of a file at the reference desk of a local library containing hard copies of all documents listed on the web page.
- Establishment of a "hotline" for the public to call with any questions or concerns.

Section 5
Project Summary

As documented in this Certification Report, Lockheed Martin has successfully completed the remedial construction work within and along portions of Haley's Run. The remediation was completed pursuant to the necessary permits and approvals including Lockheed Martin's Risk-Based Disposal Approval Request for PCB Remediation Waste (January 9, 2009), approved by the USEPA on May 8, 2009, and Lockheed Martin's Haley's Ditch Remediation Plan, dated May 15, 2009.

The remediation activities included the removal and off-site disposal of 28,715 tons of accumulated, unconsolidated sediment deposits in Haley's Run, as well as adjacent soils containing PCBs at concentrations above the soil cleanup level of 1.0 mg/kg total PCBs. The verification sampling program documented that all excavated areas contain less than 1 mg/kg total PCBs, with an average residual concentration of 0.16 mg/kg PCBs. Restoration of the South and Middle Zones has been completed. The North Zone has been backfilled and the preliminary grading completed. Final grading and planting of the North Zone will resume when weather permits and with completion planned for early summer 2010. A separate report will be submitted to document the restoration activities.

ARCADIS

Figures

LEGEND:

STORM SEWER

0 600' 1200'
GRAPHIC SCALE

LOCKHEED MARTIN CORPORATION
AKRON, OHIO

HALEY'S RUN REMEDIATION CERTIFICATION REPORT

SITE LOCATION AERIAL

ARCADIS

FIGURE
1

CITY: SYRACUSE, NY DIV/GROUP: 141/ENVCAD DB: LJPOSENAUER LD: LJPOSENAUER PIC: L.MCBURNEY PM: M.HURBAN TM: M.PELTON LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0001\00001\DWG\HALEYS\RCR\38063B02.dwg LAYOUT: 2 SAVED: 1/26/2010 1:41 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 1/26/2010 1:41 PM BY: POSENAUER, LISA

XREFS:
38063X01
38063X00
38063X04
38063X06
38063X07

IMAGES:

PROJECTNAME: ----

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- MINIMUM EXCAVATION DEPTH OF 1 FOOT
- MINIMUM EXCAVATION DEPTH OF 2 FOOT
- MINIMUM EXCAVATION DEPTH OF 3 FOOT
- MINIMUM EXCAVATION DEPTH OF 4 FOOT
- MINIMUM EXCAVATION DEPTH OF 5 FOOT

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5, WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
2. MAP FEATURE LOCATIONS ADJUSTED PER USGS ORTHO PHOTO IN UTM 17N NAD 83 METERS, SUPPLIED BY WESTON SOLUTIONS.
3. BASE MAP HAS BEEN CONVERTED TO OHIO STATE PLANE, NORTH ZONE, U.S. FOOT COORDINATES.
4. ALL LOCATIONS ARE ASSUMED APPROXIMATE ONLY.

0 70' 140'
GRAPHIC SCALE

ARCHWOOD AVE.
HALEY'S DITCH
STORM SEWER PIPE
HEADWALL
GRAVEL DRIVE PARKING
CHAIN LINK FENCE
GATE
JOB TRAILER
HAUL ROAD
EXCLUSION ZONE
GRAVEL
JERSEY BARRIER
STAGING AREA
NORTH STAGING AREA
HOBART AVE.
HALEY'S DITCH
IRG PROPERTY (FORMERLY GOODYEAR PROPERTY)
HALEY'S RUN NORTH ZONE
WILDON AVE.
NORTH WATER FILTRATION AREA
SEIBERLING ST.
CANADIEN AVE.
IRG PROPERTY (FORMERLY GOODYEAR PROPERTY)
HALEY'S RUN MIDDLE ZONE
SALEM AVE.
CITY OF AKRON PROPERTY
CHAIN LINK FENCE
DITCH
APPROXIMATE LOCATION CORRUGATED METAL WALL
LOCKHEED MARTIN CORPORATION PROPERTY LINE
LANDON STREET
SOUTH STAGING AREA
HALEY'S RUN SOUTH ZONE
SOUTH WATER FILTRATION AREA
60" OUTFALL
TRIPLETT BLVD.

LOCKHEED MARTIN CORPORATION
AKRON, OHIO
HALEY'S RUN REMEDIATION CERTIFICATION REPORT

HALEY'S RUN OPERATIONS SITE PLAN

ARCADIS

FIGURE 2

CITY: SYRACUSE, NY DIV/GROUP: 141/ENVCAD DB: LJPOSENAUER LD: LJPOSENAUER PIC: L.MCBURNEY PM: M.HURBAN TM: M.PELTON LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0001\00001\DWG\HALEYS\RCR\38063G01.dwg LAYOUT: 3 SAVED: 1/26/2010 1:42 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 1/26/2010 1:42 PM BY: POSENAUER, LISA

XREFS: IMAGES: PROJECTNAME: ----
38063X01
38063X04
38063X00
38063X06
38063X07

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- MINIMUM EXCAVATION DEPTH OF 1 FOOT
- MINIMUM EXCAVATION DEPTH OF 2 FOOT
- MINIMUM EXCAVATION DEPTH OF 3 FOOT
- MINIMUM EXCAVATION DEPTH OF 4 FOOT
- MINIMUM EXCAVATION DEPTH OF 5 FOOT
- SOIL SAMPLE LOCATIONS
- NEW CHANNEL SOIL SAMPLE LOCATIONS

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5, WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
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3. BASE MAP HAS BEEN CONVERTED TO OHIO STATE PLANE, NORTH ZONE, U.S. FOOT COORDINATES.
4. ALL LOCATIONS ARE ASSUMED APPROXIMATE ONLY.

0 70' 140'
GRAPHIC SCALE

LM–SO281	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.78

LM–SO280	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.35

LM–SO279	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.66

LM–SO278	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.14

LM–SO277	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.12

LM–SO276	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO275	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO274	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.214

LM–SO267	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO303	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.4
1.0 – 2.0	0.4
2.0 – 3.0	0.098

LM–SO266	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.098

LM–SO302	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.47
1.0 – 2.0	1.02
2.0 – 3.0	1.43

LM–SO301	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	1.68
1.0 – 2.0	1.37
2.0 – 3.0	1.84

LM–SO265	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.710

LM–SO264	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO263	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.187

LM–SO262	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.290

LM–SO261	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO292	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	ND
0.5 – 1.0	ND

LM–SO291	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	ND
0.5 – 1.0	ND

LM–SO295	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	1.18
1.0 – 2.0	ND

LM–SO296	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	32.00
1.0 – 2.0	9.3
2.0 – 3.0	0.085

LM–SO293	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	32.00
0.5 – 1.0	52.10
1.0 – 2.0	30.50
2.0 – 3.0	72.00
3.0 – 4.0	67.7
4.0 – 5.0	3.07

LM–SO294	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	28.00
1.0 – 2.0	42.00
2.0 – 3.0	15.7

LM–SO284	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.083

LM–SO287	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.082

LM–SO286	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO285	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO304	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO283	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	1.3
1.0 – 2.0	ND

LM–SO282	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO273	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO272	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.089

LM–SO271	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO268	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO269	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO270	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO260	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO300	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.67

LM–SO259	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	4.46
1.0 – 2.0	0.19

LM–SO256	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	1.12
0.5 – 1.0	16.60
1.0 – 2.0	0.493
2.0 – 3.0	ND

LM–SO257	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	0.768
0.5 – 1.0	0.79
1.0 – 2.0	9.55
2.0 – 3.0	0.130

LM–SO258	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	ND
0.5 – 1.0	ND

LM–SO299	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	1.80

LM–SO298	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	ND

LM–SO290	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	1.39
0.5 – 1.0	0.85
1.0 – 2.0	0.14

LM–SO297	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 1.0	0.69

LM–SO289	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	0.53
0.5 – 1.0	0.74

LM–SO288	
Depth(ft)	Total PCBs (mg/kg)
0.0 – 0.5	0.31
0.5 – 1.0	ND

ARCHWOOD AVE.
HALEY'S DITCH
STORM SEWER PIPE
HEADWALL
HOBART AVE.
WILDON AVE.
CANADIEN AVE.
SALEM AVE.
TRIPLETT BLVD.
GOODYEAR PROPERTY
GOODYEAR PROPERTY
CITY OF AKRON PROPERTY
LOCKHEED MARTIN CORPORATION PROPERTY LINE
LANDON STREET
APPROXIMATE LOCATION CORRUGATED METAL WALL
60" OUTFALL
CHAIN LINK FENCE
GRAVEL DRIVE PARKING
HAUL ROAD
GRAVEL
JERSEY BARRIER
STAGING AREA
UDB TRAILER
EXCLUSION ZONE
DATES
STA-04+50
STA-06+50
STA-16+75
STA-17+75
STA-19+25
LM-SO280
LM-SO281
LM-SO279
LM-SO278
LM-SO277
LM-SO276
LM-SO275
LM-SO274
LM-SO267
LM-SO303
LM-SO302
LM-SO266
LM-SO301
LM-SO265
LM-SO264
LM-SO263
LM-SO262
LM-SO261
LM-SO292
LM-SO291
LM-SO296
LM-SO293
LM-SO295
LM-SO294
LM-SO288
LM-SO284
LM-SO287
LM-SO286
LM-SO285
LM-SO284B
LM-SO304
LM-SO283
LM-SO282B
LM-SO273
LM-SO272
LM-SO271
LM-SO268
LM-SO269
LM-SO270
LM-SO260
LM-SO300
LM-SO259
LM-SO256
LM-SO257
LM-SO258
LM-SO299
LM-SO298
LM-SO290
LM-SO297
LM-SO289

LOCKHEED MARTIN CORPORATION
AKRON, OHIO
HALEY'S RUN REMEDIATION CERTIFICATION REPORT

HALEY'S RUN ADDITIONAL CHARACTERIZATION DATA

ARCADIS

FIGURE
3

CITY: SYRACUSE, NY DIV/GROUP: 141/ENVCAD DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: M.PELTON LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0001\00001\DWG\HALEYS\RCR\38063G02.dwg LAYOUT: SOUTH SAVED: 1/26/2010 1:43 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 1/26/2010 1:43 PM BY: POSENAUER, LISA

XREFS: IMAGES: PROJECTNAME: ----
38063X01
38063X04
38063X00
38063X06
38063X07

CITY OF AKRON PROPERTY

MATCHLINE TO MIDDLE ZONE

CHAIN LINK FENCE

APPROXIMATE LOCATION CORRUGATED METAL WALL

HALEY'S DITCH

LANDON STREET

CHAIN LINK FENCE

CHAIN LINK FENCE

CHAIN LINK FENCE

60" OUTFALL (REPLACED BY CITY OF AKRON)

TRIPLETT BLVD.

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- EXCAVATION LIMITS
- MINIMUM EXCAVATION DEPTH OF 1 FOOT
- MINIMUM EXCAVATION DEPTH OF 2 FOOT
- MINIMUM EXCAVATION DEPTH OF 3 FOOT
- MINIMUM EXCAVATION DEPTH OF 4 FOOT
- MINIMUM EXCAVATION DEPTH OF 5 FOOT

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5, WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
2. MAP FEATURE LOCATIONS ADJUSTED PER USGS ORTHO PHOTO IN UTM 17N NAD 83 METERS, SUPPLIED BY WESTON SOLUTIONS.
3. BASE MAP HAS BEEN CONVERTED TO OHIO STATE PLANE, NORTH ZONE, U.S. FOOT COORDINATES.
4. ALL LOCATIONS ARE ASSUMED APPROXIMATE ONLY.

0 20' 40'
GRAPHIC SCALE

LOCKHEED MARTIN CORPORATION
AKRON, OHIO

HALEY'S RUN REMEDIATION CERTIFICATION REPORT

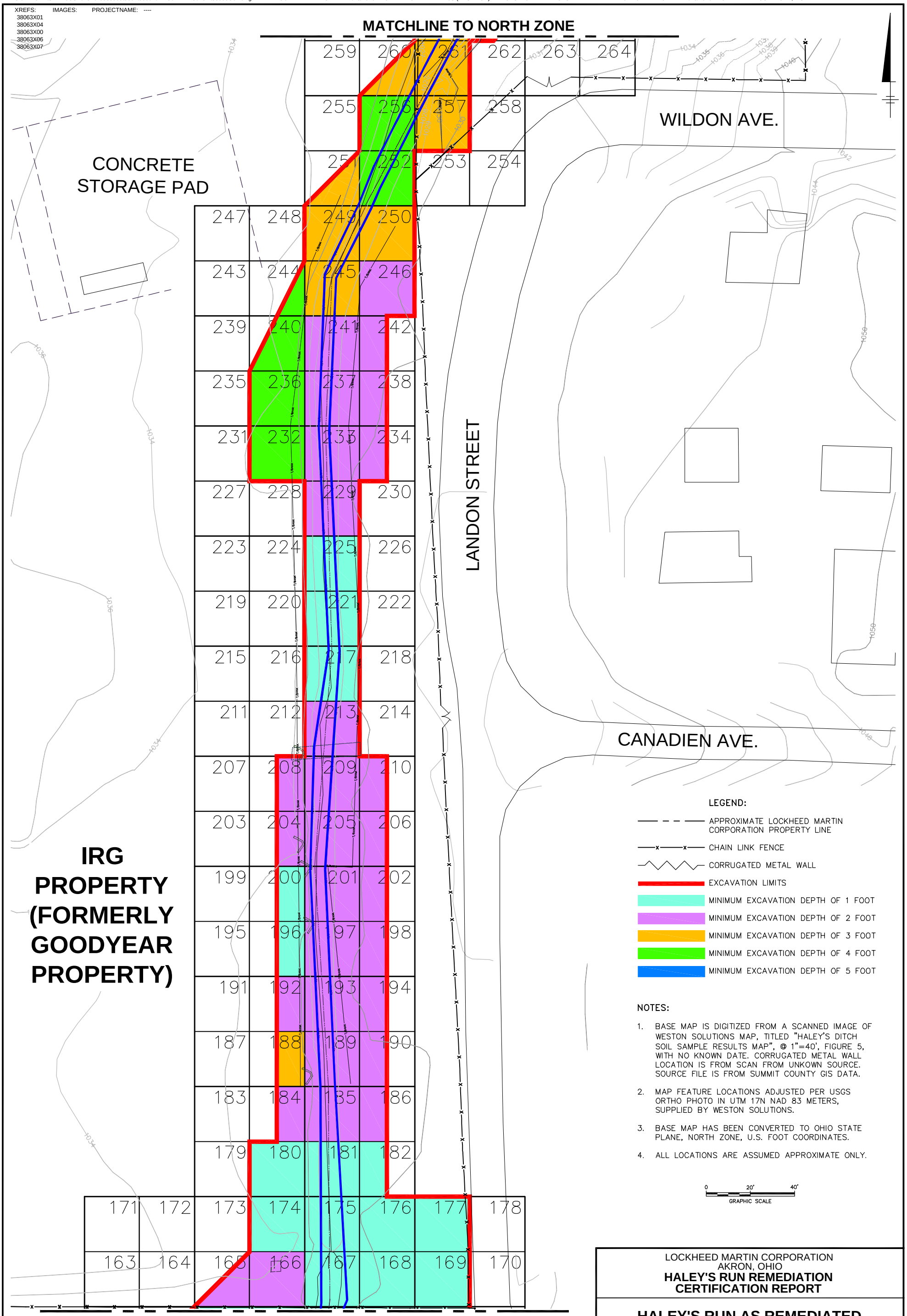
HALEY'S RUN AS REMEDIATED SOUTH ZONE

ARCADIS

FIGURE 4

CITY: SYRACUSE, NY DIV/GROUP: 141/ENVCAD DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: M.PELTON LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0001\00001\DWG\HALEYS\RCR\38063G02.dwg LAYOUT: MIDDLE SAVED: 1/26/2010 1:43 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 1/26/2010 1:43 PM BY: POSENAUER, LISA

XREFS: IMAGES: PROJECTNAME: ----
38063X01
38063X04
38063X00
38063X06
38063X07



LOCKHEED MARTIN CORPORATION
AKRON, OHIO

HALEY'S RUN REMEDIATION CERTIFICATION REPORT

HALEY'S RUN AS REMEDIATED MIDDLE ZONE

ARCADIS

FIGURE 5

CITY: SYRACUSE, NY DIV/GROUP: 141/ENVCAD DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: M.PELTON LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0001\00001\DWG\HALEYS\RCR\38063G02.dwg LAYOUT: NORTH SAVED: 1/26/2010 1:43 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 1/26/2010 1:44 PM BY: POSENAUER, LISA

XREFS: IMAGES: PROJECTNAME: ----
38063X01
38063X04
38063X00
38063X06
38063X07

GRAVEL DRIVE PARKING
CHAIN LINK FENCE
CHAIN LINK FENCE
GATES
JOB TRAILER
HAUL ROAD
GRAVEL
EXCLUSION ZONE
JERSEY BARRIER
STAGING AREA
HALEY'S DITCH

MATCHLINE TO MIDDLE ZONE

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- EXCAVATION LIMITS
- MINIMUM EXCAVATION DEPTH OF 1 FOOT
- MINIMUM EXCAVATION DEPTH OF 2 FOOT
- MINIMUM EXCAVATION DEPTH OF 3 FOOT
- MINIMUM EXCAVATION DEPTH OF 4 FOOT
- MINIMUM EXCAVATION DEPTH OF 5 FOOT

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5, WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
2. MAP FEATURE LOCATIONS ADJUSTED PER USGS ORTHO PHOTO IN UTM 17N NAD 83 METERS, SUPPLIED BY WESTON SOLUTIONS.
3. BASE MAP HAS BEEN CONVERTED TO OHIO STATE PLANE, NORTH ZONE, U.S. FOOT COORDINATES.
4. ALL LOCATIONS ARE ASSUMED APPROXIMATE ONLY.

0 25' 50'
GRAPHIC SCALE

LOCKHEED MARTIN CORPORATION
AKRON, OHIO

HALEY'S RUN REMEDIATION CERTIFICATION REPORT

HALEY'S RUN AS REMEDIATED NORTH ZONE

ARCADIS

FIGURE
6

ARCADIS

Tables

Table 1
Additional Characterization Soil Samples
Lockheed Martin Akron, Ohio
Haley's Ditch Remediation Certification Report

Location ID:	Depth (Feet)	Date Collected	Total PCBs mg/kg
Cleanup Objective			1
LM-SO-256	0 - 0.5	7/8/2009	**1.12**
	0.5 - 1	7/8/2009	**16.6**
	1 - 2	7/8/2009	0.493
	2 - 3	7/8/2009	ND
LM-SO-257	0 - 0.5	7/8/2009	0.768 [0.66]
	0.5 - 1	7/8/2009	0.79
	1 - 2	7/8/2009	**9.55**
	2 - 3	7/8/2009	0.13
LM-SO-258	0 - 0.5	7/7/2009	ND
	0.5 - 1	7/7/2009	ND
LM-SO-259	0 - 1	9/2/2009	**4.46**
	1 - 2	9/3/2009	0.19
LM-SO-260	0 - 1	9/2/2009	ND
LM-SO-261	0 - 1	9/2/2009	ND
LM-SO-262	0 - 1	9/2/2009	0.29
LM-SO-263	0 - 1	9/2/2009	0.187
LM-SO-264	0 - 1	9/2/2009	ND
LM-SO-265	0 - 1	9/2/2009	0.71
LM-SO-266	0 - 1	9/2/2009	0.098
LM-SO-267	0 - 1	9/2/2009	ND
LM-SO-268	0 - 1	9/4/2009	ND
LM-SO-269	0 - 1	9/4/2009	ND
LM-SO-270	0 - 1	9/2/2009	ND
LM-SO-271	0 - 1	9/4/2009	ND
LM-SO-272	0 - 1	9/4/2009	0.089
LM-SO-273	0 - 1	9/28/2009	ND
LM-SO-274	0 - 1	9/25/2009	0.214
LM-SO-275	0 - 1	9/28/2009	ND
LM-SO-276	0 - 1	9/28/2009	ND
LM-SO-277	0 - 1	9/25/2009	0.12
LM-SO-278	0 - 1	9/25/2009	0.14
LM-SO-279	0 - 1	9/25/2009	0.66
LM-SO-280	0 - 1	9/25/2009	0.35
LM-SO-281	0 - 1	9/25/2009	0.78 [0.86]
LM-SO-282	0 - 1	9/28/2009	ND
LM-SO-283	0 - 1	10/1/2009	**1.3**
	1 - 2	10/5/2009	ND
LM-SO-284	0 - 1	9/28/2009	0.083
LM-SO-285	0 - 1	9/28/2009	ND
LM-SO-286	0 - 1	9/28/2009	ND
LM-SO-287	0 - 1	9/28/2009	0.082
LM-SO-288	0 - 0.5	7/7/2009	0.31
	0.5 - 1	7/7/2009	ND
LM-SO-289	0 - 0.5	7/7/2009	0.53
	0.5 - 1	7/7/2009	0.74
LM-SO-290	0 - 0.5	7/7/2009	**1.39**
	0.5 - 1	7/7/2009	0.85
	1 - 2	7/8/2009	0.14
LM-SO-291	0 - 0.5	7/7/2009	ND
	0.5 - 1	7/7/2009	ND

Location ID:	Depth (Feet)	Date Collected	Total PCBs mg/kg
Cleanup Objective			1
LM-SO-292	0 - 0.5	7/7/2009	ND
	0.5 - 1	7/7/2009	ND
LM-SO-293	0 - 0.5	7/7/2009	**32**
	0.5 - 1	7/7/2009	**52.1**
	1 - 2	7/8/2009	**30.5**
	2 - 3	7/8/2009	**72**
	3 - 4	7/10/2009	**67.7**
	4 - 5	7/10/2009	**3.07**
LM-SO-294	0 - 1	7/9/2009	**28**
	1 - 2	7/9/2009	**42**
	2 - 3	7/9/2009	**15.7**
LM-SO-295	0 - 1	7/10/2009	**1.18**
	1 - 2	7/10/2009	ND
LM-SO-296	0 - 1	7/10/2009	**32**
	1 - 2	7/10/2009	**9.3**
	2 - 3	7/10/2009	0.085
LM-SO-297	0 - 1	7/14/2009	0.69
LM-SO-298	0 - 1	7/14/2009	ND
LM-SO-299	0 - 1	7/14/2009	**1.8**
LM-SO-300	0 - 1	9/3/2009	0.67
LM-SO-301	0 - 1	9/18/2009	**1.68**
	1 - 2	9/18/2009	**1.37**
	2 - 3	9/18/2009	**1.84**
LM-SO-302	0 - 1	9/18/2009	0.47
	1 - 2	9/18/2009	**1.02**
	2 - 3	9/18/2009	**1.43**
LM-SO-303	0 - 1	9/18/2009	0.4
	1 - 2	9/18/2009	0.4
	2 - 3	9/18/2009	0.098
LM-SO-304	0 - 1	10/12/2009	0.11

Notes:

- Results shaded and bold exceed the 1 mg/kg Total PCB screening

- Results shown in parenthese represent the field duplicate results

- ND = No individual PCB congeners were detected.

- mg/kg = milligram per kilogram (parts per million) in soil

Table 2
New Channel Soil Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Depth (Feet)	Date Collected	Total PCBs mg/kg
Cleanup Objective			1
LM-SO-STA1675	2.5 - 3.5	8/21/2009	ND
LM-SO-STA1775	2 - 3	8/20/2009	ND
LM-SO-STA1925	2.5 - 3.5	8/20/2009	ND
STA-4+50	2.6 - 3.6	11/3/2009	ND
STA-6+50	3.5 - 4.5	11/3/2009	ND

Notes:
- ND = No individual PCB congeners were detected.

Table 3
Verification Soil Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Date Collected	Total PCBs mg/kg
Cleanup Objective		1
LM-SO-C-01	8/17/2009	ND
LM-SO-C-02	8/17/2009	ND
LM-SO-C-05	8/17/2009	0.11
LM-SO-C-06	8/17/2009	ND
LM-SO-C-13	8/19/2009	0.16
LM-SO-C-14	8/19/2009	0.15
LM-SO-C-15	8/19/2009	**2.08**
LM-SO-C-15-R1	9/3/2009	ND
LM-SO-C-16	8/19/2009	ND
LM-SO-C-21	7/27/2009	0.27
LM-SO-C-22	9/1/2009	0.33
LM-SO-C-23	9/3/2009	0.23
LM-SO-C-24	9/3/2009	ND
LM-SO-C-29	7/27/2009	0.9
LM-SO-C-30	9/1/2009	ND
LM-SO-C-31	9/3/2009	**5.8**
LM-SO-C-31-R1	9/4/2009	ND
LM-SO-C-32	9/3/2009	ND
LM-SO-C-37	7/27/2009	0.75
LM-SO-C-38	9/2/2009	ND [ND]
LM-SO-C-39	9/2/2009	ND
LM-SO-C-40	9/3/2009	ND
LM-SO-C-43	7/28/2009	ND
LM-SO-C-44	7/28/2009	**4.7**
LM-SO-C-44-R1	7/29/2009	0.66
LM-SO-C-45	8/4/2009	ND
LM-SO-C-46	8/4/2009	ND
LM-SO-C-47	9/2/2009	ND
LM-SO-C-48	9/3/2009	ND
LM-SO-C-49	9/3/2009	ND
LM-SO-C-51	7/28/2009	ND
LM-SO-C-52	7/29/2009	0.087
LM-SO-C-53	8/4/2009	0.45
LM-SO-C-54	8/10/2009	ND
LM-SO-C-55	8/11/2009	0.37
LM-SO-C-56	9/8/2009	0.087
LM-SO-C-57	9/11/2009	ND
LM-SO-C-58	9/11/2009	ND
LM-SO-C-61	7/28/2009	ND
LM-SO-C-62	7/30/2009	0.09
LM-SO-C-63	8/3/2009	ND
LM-SO-C-64	8/10/2009	ND
LM-SO-C-65	8/13/2009	0.37
LM-SO-C-66	9/8/2009	ND
LM-SO-C-67	9/11/2009	ND
LM-SO-C-68	9/11/2009	**1.32**
LM-SO-C-68-R1	9/14/2009	ND
LM-SO-C-69	9/11/2009	ND
LM-SO-C-71	7/28/2009	ND
LM-SO-C-72	7/28/2009	ND
LM-SO-C-132	9/15/2009	ND
LM-SO-C-133	9/29/2009	ND
LM-SO-C-134	9/29/2009	ND [ND]
LM-SO-C-139	8/6/2009	ND
LM-SO-C-140	8/6/2009	ND
LM-SO-C-141	8/11/2009	0.41
LM-SO-C-142	9/15/2009	0.4
LM-SO-C-143	9/28/2009	ND
LM-SO-C-144	9/28/2009	ND
LM-SO-C-145	9/25/2009	ND
LM-SO-C-148	8/6/2009	ND
LM-SO-C-149	8/11/2009	**1.59**
LM-SO-C-149-R1	8/12/2009	0.52
LM-SO-C-150	9/15/2009	ND
LM-SO-C-151	9/28/2009	ND
LM-SO-C-152	9/28/2009	ND
LM-SO-C-153	9/25/2009	ND
LM-SO-C-156	8/14/2009	ND

Location ID:	Date Collected	Total PCBs mg/kg
Cleanup Objective		1
LM-SO-C-73	7/30/2009	ND
LM-SO-C-74	8/5/2009	ND
LM-SO-C-75	8/13/2009	ND [ND]
LM-SO-C-76	9/8/2009	ND
LM-SO-C-77	9/8/2009	ND
LM-SO-C-78	9/11/2009	ND [ND]
LM-SO-C-79	9/11/2009	ND
LM-SO-C-80	9/29/2009	ND
LM-SO-C-83	8/5/2009	ND
LM-SO-C-84	8/5/2009	ND
LM-SO-C-85	8/13/2009	0.19
LM-SO-C-86	9/8/2009	ND
LM-SO-C-87	9/8/2009	ND
LM-SO-C-88	9/29/2009	ND
LM-SO-C-89	9/29/2009	ND
LM-SO-C-90	9/30/2009	ND
LM-SO-C-91	8/5/2009	ND
LM-SO-C-92	8/5/2009	**4.5 [3.6]**
LM-SO-C-92-R1	8/6/2009	ND
LM-SO-C-93	8/13/2009	ND
LM-SO-C-94	8/13/2009	0.097
LM-SO-C-95	9/8/2009	ND
LM-SO-C-96	9/9/2009	ND [ND]
LM-SO-C-97	9/30/2009	ND
LM-SO-C-98	10/1/2009	ND
LM-SO-C-99	10/1/2009	ND
LM-SO-C-102	8/5/2009	ND
LM-SO-C-103	8/13/2009	ND
LM-SO-C-104	8/13/2009	ND
LM-SO-C-105	9/9/2009	0.69
LM-SO-C-106	9/9/2009	ND
LM-SO-C-107	9/30/2009	ND
LM-SO-C-108	10/1/2009	ND
LM-SO-C-109	10/1/2009	ND
LM-SO-C-111	8/13/2009	ND
LM-SO-C-112	8/13/2009	ND
LM-SO-C-113	8/6/2009	ND
LM-SO-C-114	9/9/2009	0.18
LM-SO-C-115	9/9/2009	ND
LM-SO-C-116	9/30/2009	ND
LM-SO-C-117	9/30/2009	ND
LM-SO-C-120	8/13/2009	ND
LM-SO-C-121	8/6/2009	0.179
LM-SO-C-122	8/12/2009	ND
LM-SO-C-123	9/9/2009	0.17
LM-SO-C-124	9/29/2009	ND
LM-SO-C-125	9/29/2009	ND
LM-SO-C-129	8/12/2009	0.77
LM-SO-C-130	8/12/2009	ND
LM-SO-C-131	9/15/2009	0.41
LM-SO-C-198	9/24/2009	0.53
LM-SO-C-200	9/17/2009	0.19
LM-SO-C-201	9/17/2009	ND
LM-SO-C-202	9/24/2009	0.6
LM-SO-C-204	9/17/2009	**2**
LM-SO-C-204-R1	9/19/2009	0.15
LM-SO-C-205	9/17/2009	0.15
LM-SO-C-206	9/24/2009	ND
LM-SO-C-208	9/17/2009	**19.5**
LM-SO-C-208-R1	9/19/2009	0.8
LM-SO-C-209	9/18/2009	**3.57**
LM-SO-C-209-R1	9/21/2009	ND
LM-SO-C-210	9/24/2009	ND
LM-SO-C-213	9/18/2009	**2.79**
LM-SO-C-213-R1	9/19/2009	ND
LM-SO-C-217	9/18/2009	ND
LM-SO-C-221	9/21/2009	ND
LM-SO-C-225	9/18/2009	0.13

Table 3
Verification Soil Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Date Collected	Total PCBs mg/kg
Cleanup Objective		1
LM-SO-C-157	8/14/2009	ND
LM-SO-C-158	8/14/2009	0.1
LM-SO-C-159	9/15/2009	ND
LM-SO-C-160	9/28/2009	0.34
LM-SO-C-161	9/28/2009	ND
LM-SO-C-165	9/14/2009	**2.39**
LM-SO-C-165-R1	9/15/2009	ND
LM-SO-C-166	9/14/2009	**10.4**
LM-SO-C-166-R1	9/15/2009	0.44
LM-SO-C-167	9/15/2009	ND
LM-SO-C-168	9/28/2009	0.31
LM-SO-C-169	9/28/2009	0.29
LM-SO-C-174	9/14/2009	0.098
LM-SO-C-175	9/16/2009	ND
LM-SO-C-176	9/28/2009	ND
LM-SO-C-177	9/28/2009	0.4
LM-SO-C-180	9/14/2009	ND
LM-SO-C-181	9/16/2009	0.32
LM-SO-C-182	9/25/2009	ND
LM-SO-C-184	9/16/2009	0.276 [0.37]
LM-SO-C-185	9/16/2009	ND
LM-SO-C-186	9/25/2009	ND
LM-SO-C-188	9/16/2009	**2.88**
LM-SO-C-188-R1	9/17/2009	0.69
LM-SO-C-189	9/16/2009	ND
LM-SO-C-190	9/24/2009	ND
LM-SO-C-192	9/16/2009	**1.13**
LM-SO-C-192-R1	9/17/2009	0.18
LM-SO-C-193	9/16/2009	0.31
LM-SO-C-194	9/24/2009	ND
LM-SO-C-196	9/16/2009	0.52
LM-SO-C-197	9/17/2009	ND
LM-SO-C-273	10/6/2009	ND
LM-SO-C-278	10/7/2009	0.15
LM-SO-C-279	10/8/2009	ND
LM-SO-C-280	10/8/2009	ND
LM-SO-C-284	10/8/2009	0.11
LM-SO-C-285	10/8/2009	ND
LM-SO-C-290	10/8/2009	0.25
LM-SO-C-291	10/8/2009	ND
LM-SO-C-292	10/8/2009	ND
LM-SO-C-296	10/8/2009	ND
LM-SO-C-297	10/8/2009	0.1
LM-SO-C-298	10/13/2009	**2.88**
LM-SO-C-298-R1	10/19/2009	ND
LM-SO-C-299	10/13/2009	0.46
LM-SO-C-302	10/8/2009	ND [ND]
LM-SO-C-303	10/8/2009	ND
LM-SO-C-304	10/8/2009	0.13
LM-SO-C-305	10/13/2009	ND
LM-SO-C-306	10/20/2009	0.093
LM-SO-C-308	10/9/2009	ND
LM-SO-C-309	10/9/2009	ND
LM-SO-C-310	10/9/2009	ND
LM-SO-C-311	10/13/2009	0.28 [0.16]
LM-SO-C-312	10/20/2009	ND
LM-SO-C-316	10/12/2009	ND
LM-SO-C-317	10/12/2009	ND
LM-SO-C-318	10/13/2009	0.13
LM-SO-C-319	10/13/2009	ND
LM-SO-C-320	10/14/2009	ND
LM-SO-C-324	10/12/2009	ND
LM-SO-C-325	10/12/2009	ND
LM-SO-C-326	10/12/2009	ND
LM-SO-C-327	10/14/2009	ND
LM-SO-C-328	10/14/2009	ND
LM-SO-C-329	10/14/2009	0.63
LM-SO-C-332	10/12/2009	ND

Location ID:	Date Collected	Total PCBs mg/kg
Cleanup Objective		1
LM-SO-C-229	9/19/2009	**1.44** [0.89]
LM-SO-C-229-R1	9/23/2009	ND
LM-SO-C-232	9/19/2009	**1.68**
LM-SO-C-232-R1	9/23/2009	0.19
LM-SO-C-233	9/19/2009	0.457
LM-SO-C-234	9/24/2009	ND
LM-SO-C-236	9/23/2009	**1.1**
LM-SO-C-236-R1	9/24/2009	ND
LM-SO-C-237	9/19/2009	ND
LM-SO-C-238	9/24/2009	ND
LM-SO-C-240	10/1/2009	0.5
LM-SO-C-241	9/19/2009	ND
LM-SO-C-242	9/24/2009	ND
LM-SO-C-244	10/1/2009	0.61
LM-SO-C-245	9/22/2009	0.09
LM-SO-C-246	9/24/2009	ND
LM-SO-C-249	9/22/2009	0.11
LM-SO-C-250	9/24/2009	0.14 [0.16]
LM-SO-C-251	9/24/2009	0.37
LM-SO-C-252	9/22/2009	**1.21**
LM-SO-C-252-R1	9/23/2009	ND
LM-SO-C-256	9/22/2009	**2.01**
LM-SO-C-256-R1	9/23/2009	ND
LM-SO-C-257	9/23/2009	ND
LM-SO-C-260	9/22/2009	0.46
LM-SO-C-261	9/22/2009	0.99
LM-SO-C-267	10/6/2009	ND [ND]
LM-SO-C-268	10/6/2009	ND
LM-SO-C-269	9/4/2009	ND
LM-SO-C-271	9/4/2009	ND
LM-SO-C-271-R1	10/6/2009	ND
LM-SO-C-272	10/6/2009	0.12
LM-SO-C-346	10/21/2009	ND
LM-SO-C-347	10/21/2009	ND
LM-SO-C-348	10/21/2009	ND
LM-SO-C-349	10/21/2009	ND
LM-SO-C-350	10/21/2009	ND
LM-SO-C-351	10/21/2009	ND
LM-SO-C-352	10/21/2009	ND
LM-SO-C-353	10/21/2009	0.21
LM-SO-C-354	10/21/2009	ND
LM-SO-C-355	10/21/2009	ND
LM-SO-C-356	10/21/2009	ND
LM-SO-C-357	10/21/2009	ND
LM-SO-C-358	10/21/2009	ND
LM-SO-C-359	10/21/2009	ND
LM-SO-C-360	10/21/2009	ND [ND]
LM-SO-C-361	10/21/2009	0.19
LM-SO-C-362	10/21/2009	ND
LM-SO-C-363	10/21/2009	ND
LM-SO-C-365	10/23/2009	ND [ND]
LM-SO-C-366	10/23/2009	ND
LM-SO-C-367	10/23/2009	ND
LM-SO-C-368	10/23/2009	ND
LM-SO-C-369	10/27/2009	ND
LM-SO-C-370	10/23/2009	ND
LM-SO-C-371	10/23/2009	ND
LM-SO-C-372	10/21/2009	0.14
LM-SO-C-373	10/21/2009	ND
LM-SO-C-375	10/28/2009	ND
LM-SO-C-376	10/28/2009	ND
LM-SO-C-377	10/28/2009	ND
LM-SO-C-378	10/28/2009	ND
LM-SO-C-379	10/27/2009	0.12 [0.27]
LM-SO-C-380	10/27/2009	ND
LM-SO-C-381	10/26/2009	ND
LM-SO-C-382	10/26/2009	ND
LM-SO-C-383	10/22/2009	0.17

Table 3
Verification Soil Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Date Collected	Total PCBs mg/kg
Cleanup Objective		1
LM-SO-C-333	10/12/2009	ND
LM-SO-C-334	10/12/2009	ND
LM-SO-C-335	10/14/2009	**1.01**
LM-SO-C-335-R1	10/19/2009	ND
LM-SO-C-336	10/14/2009	0.35
LM-SO-C-337	10/20/2009	ND [ND]
LM-SO-C-338	10/19/2009	0.34
LM-SO-C-339	10/13/2009	ND
LM-SO-C-340	10/13/2009	ND
LM-SO-C-341	10/13/2009	ND
LM-SO-C-342	10/12/2009	ND
LM-SO-C-343	10/21/2009	ND
LM-SO-C-344	10/21/2009	ND
LM-SO-C-345	10/21/2009	ND
LM-SO-C-397	10/26/2009	ND
LM-SO-C-398	10/26/2009	0.47
LM-SO-C-399	10/22/2009	ND
LM-SO-C-400	10/14/2009	0.37
LM-SO-C-401	10/14/2009	0.55
LM-SO-C-402	10/19/2009	0.92
LM-SO-C-403	10/19/2009	0.88
LM-SO-C-404	10/19/2009	ND
LM-SO-C-405	10/19/2009	ND
LM-SO-C-407	10/30/2009	ND [ND]
LM-SO-C-408	10/30/2009	ND
LM-SO-C-409	10/30/2009	ND
LM-SO-C-410	10/28/2009	ND
LM-SO-C-411	10/28/2009	ND
LM-SO-C-412	10/27/2009	ND
LM-SO-C-413	10/26/2009	ND
LM-SO-C-414	10/26/2009	ND
LM-SO-C-415	10/22/2009	0.27
LM-SO-C-416	10/22/2009	0.24
LM-SO-C-417	10/20/2009	0.53
LM-SO-C-418	10/20/2009	0.452
LM-SO-C-419	10/19/2009	ND
LM-SO-C-420	10/19/2009	**0.66 [1.2]**
LM-SO-C-420-R1	10/20/2009	ND
LM-SO-C-421	10/19/2009	ND
LM-SO-C-423	10/30/2009	ND
LM-SO-C-424	10/30/2009	ND
LM-SO-C-425	10/30/2009	ND
LM-SO-C-426	10/28/2009	ND
LM-SO-C-427	10/28/2009	ND
LM-SO-C-428	10/27/2009	ND
LM-SO-C-429	10/26/2009	ND
LM-SO-C-430	10/26/2009	ND
LM-SO-C-431	10/23/2009	ND
LM-SO-C-432	10/22/2009	ND
LM-SO-C-433	10/22/2009	**1.64**
LM-SO-C-433-R1	10/23/2009	ND
LM-SO-C-434	10/20/2009	0.25
LM-SO-C-435	10/19/2009	ND
LM-SO-C-441	11/2/2009	ND
LM-SO-C-442	11/2/2009	ND
LM-SO-C-443	11/2/2009	ND
LM-SO-C-444	10/28/2009	ND
LM-SO-C-445	10/28/2009	ND
LM-SO-C-450	10/22/2009	0.66
LM-SO-C-451	10/22/2009	ND
LM-SO-C-452	10/15/2009	ND
LM-SO-C-454	11/2/2009	0.3
LM-SO-C-455	11/3/2009	ND
LM-SO-C-456	11/3/2009	ND [ND]

Location ID:	Date Collected	Total PCBs mg/kg
Cleanup Objective		1
LM-SO-C-384	10/22/2009	0.28
LM-SO-C-385	10/20/2009	0.33
LM-SO-C-386	10/19/2009	**10.3**
LM-SO-C-386-R1	10/20/2009	ND
LM-SO-C-387	10/19/2009	**2.27**
LM-SO-C-387-R1	10/20/2009	ND
LM-SO-C-388	10/19/2009	0.12
LM-SO-C-389	10/19/2009	ND
LM-SO-C-391	10/28/2009	ND
LM-SO-C-392	10/28/2009	ND
LM-SO-C-393	10/28/2009	ND
LM-SO-C-394	10/28/2009	ND
LM-SO-C-395	10/28/2009	ND
LM-SO-C-396	10/27/2009	ND
LM-SO-C-457	11/2/2009	ND
LM-SO-C-458	10/28/2009	ND
LM-SO-C-465	10/22/2009	ND
LM-SO-C-466	10/22/2009	ND
LM-SO-C-467	11/2/2009	ND
LM-SO-C-468	11/3/2009	ND
LM-SO-C-469	11/3/2009	ND
LM-SO-C-470	11/3/2009	ND
LM-SO-C-471	11/3/2009	ND
LM-SO-C-472	11/3/2009	ND
LM-SO-C-475	11/2/2009	ND
LM-SO-C-476	11/3/2009	ND
LM-SO-C-477	11/3/2009	ND
LM-SO-C-478	11/3/2009	ND
LM-SO-C-495	10/1/2009	ND
LM-SO-C-500	10/22/2009	ND
LM-SO-C-501	10/22/2009	ND

Statistics:

Number of Grids:	341	
Number Detected:	114	
Average Residual - Post Excavation:	0.16	mg/kg

Notes:

- Results shaded and bold exceed the 1 mg/kg Total PCB screening criteria.

- Grids with >1 mg/kg total PCBs were re-excavated, and re-sampled. Samples with R1 designation represent sampling following the additional excavation.

- Results shown in parenthese represent the field duplicate results collected at that location.

- ND = No individual PCB congeners were detected.

- mg/kg = milligram per kilogram (parts per million) in soil

-Sample LM-SO-C-500 represents grid points 473, 474, 481, 482, 484 and 485 and sample LM-SO-C-501 represents grid points 488, 489, 491, 492, and 494.

Table 4
Filtered and Untfiltered Water Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Report

Location ID:	Date Collected	Total PCBs ug/L
Screening Criterion		**1**
LM-TW-02	8/4/2009	ND
	8/20/2009	ND
	11/13/2009	ND [ND]
LM-TW-03	8/21/2009	ND
	9/8/2009	ND
	9/11/2009	ND
LM-UW-01	8/4/2009	ND

Notes:

- LM-TW-02 was sampled from treated water tank number 2
- LM-TW-03 was sampled from treated water tank number 3
- LM-UW-01 was sampled from untreated water tank number 1

Table 5
Equipment Wipe Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Date Collected	Total PCBs ug/100cm2
LM-WP-01- OFF ROAD DUMP	10/2/2009	ND
LM-WP-02-02- OFF ROAD DUMP	10/26/2009	1.42 J
LM-WP-02-03- OFF ROAD DUMP	10/26/2009	0.82 J
LM-WP-02-04- OFF ROAD DUMP	10/26/2009	0.80 J
LM-WP-03-01- LONG REACH EXCAVATOR BUCKET	10/29/2009	1.23 J
LM-WP-03-02- LONG REACH EXCAVATOR IDLER	10/29/2009	1.27 J
LM-WP-03-03- LONG REACH EXCAVATOR TRACK	10/29/2009	2.45
LM-WP-03-04- LONG REACH EXCAVATOR BELLY PAN	10/29/2009	6.4
LM-WP-04-01- BRIDGE SECTION 1 -TOP	10/29/2009	1.87 J
LM-WP-04-02- BRIDGE SECTION 1- RIGHT END	10/29/2009	2.9
LM-WP-04-03- BRIDGE SECTION 1- CENTER	10/29/2009	4.4
LM-WP-04-04- BRIDGE SECTION 1- LEFT END	10/29/2009	3.3
LM-WP-05-01- BRIDGE SECTION 2- TOP	11/2/2009	ND
LM-WP-05-02- BRIDGE SCETION 2- NW BOTTOM	11/2/2009	ND
LM-WP-05-03- BRIDGE SECTION 2- SW CENTER	11/2/2009	0.82 J
LM-WP-05-04- BRIDGE SECTION 2- SW BOTTOM	11/2/2009	ND
LM-WP-06-01- BRIDGE SECTION 3- NE BOTTOM	11/2/2009	0.92 J
LM-WP-06-02- BRIDGE SECTION 3- SE CENTER	11/2/2009	0.50 J
LM-WP-06-03- BRIDGE SECTION 3- SW BOTTOM	11/2/2009	0.18 J
LM-WP-06-04- BRIDGE SECTION 3- TOP	11/2/2009	0.53 J
LM-WP-07-01- BRIDGE SECTION 4- NW BOTTOM	11/2/2009	0.99 J
LM-WP-07-02- BRIDGE SECTION 4- SW SIDE	11/2/2009	4.56
LM-WP-07-03- BRIDGE SECTION 4- NE BOTTOM	11/2/2009	1.69 J
LM-WP-07-04- BRIDGE SECTION 4- TOP	11/2/2009	2.46
LM-WP-08-01- OFF ROAD DUMP-BED FRONT	11/5/2009	ND [ND]
LM-WP-08-02- OFF ROAD DUMP- BED PASSENGER SIDE	11/5/2009	ND
LM-WP-08-03- OFF ROAD DUMP- BELLY PAN	11/5/2009	0.25 J
LM-WP-08-04- OFF ROAD DUMP- RR DRIVE COVER	11/5/2009	0.19 J
LM-WP-09-01-BUCKET R-OUT	11/10/2009	ND
LM-WP-10-01-RIGHT TRACK	11/10/2009	0.56 J
LM-WP-10-02-LEFT IDLER	11/10/2009	0.21 J
LM-WP-10-03-BELLY PAN	11/10/2009	0.77 J
LM-WP-10-04-BUCKET BOTTOM	11/10/2009	ND
LM-WP-11-01-BUCKET	11/12/2009	ND
LM-WP-11-02-LEFT REAR GUIDE	11/12/2009	ND
LM-WP-11-03-RIGHT IDLER COVER	11/12/2009	0.40 J
LM-WP-12-01-BUCKET	11/13/2009	0.42 J
LM-WP-12-02-IDLER COVER	11/13/2009	0.32 J [0.49 J]
LM-WP-12-03-RIGHT REAR GUIDE	11/13/2009	0.55 J
LM-WP-12-04-BELLY PAN	11/13/2009	0.73 J
LM-WP-12-05-RIGHT TRACK	11/13/2009	0.18 J
LM-WP-BF-01- BAG FILTER 01	11/19/2009	ND
LM-WP-BF-02- BAG FILTER 02	11/19/2009	ND
LM-WP-CU-01-01- CARBON UNIT 01	11/19/2009	ND
LM-WP-CU-01-02- CARBON UNIT 01	11/19/2009	ND
LM-WP-CU-02-01- CARBON UNIT 02	11/19/2009	ND [ND]
LM-WP-CU-02-02- CARBON UNIT 02	11/19/2009	ND
LM-WP-TW-02-01- TREATED WATER TANK 02	11/19/2009	ND
LM-WP-TW-02-02- TREATED WATER TANK 02	11/19/2009	ND
LM-WP-TW-02-03- TREATED WATER TANK 02	11/19/2009	ND
LM-WP-TW-02-04- TREATED WATER TANK 02	11/19/2009	ND
LM-WP-TW-02-05- TREATED WATER TANK 02	11/19/2009	ND
LM-WP-UW-01-01- UNTREATED WATER TANK	11/18/2009	ND
LM-WP-UW-01-02- UNTREATED WATER TANK	11/18/2009	ND
LM-WP-UW-01-03- UNTREATED WATER TANK	11/18/2009	ND
LM-WP-UW-01-04- UNTREATED WATER TANK	11/18/2009	ND
LM-WP-UW-01-05- UNTREATED WATER TANK	11/18/2009	ND

1/25/2010

Table 6
Dust Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Date Collected	Total PCBs ug/m3	Total Dust ug/m3
TWA		**500**	**1,000**
LM-A1-072709-B1	7/27/2009	ND	ND
LM-A1-072709-D1	7/27/2009	1.0 U	100 U
LM-A1-072709-P1	7/27/2009	1.0 U	300
LM-A1-072709-U1	7/27/2009	1.0 U	100 U
LM-A1-072809-B1	7/28/2009	ND	ND
LM-A1-072809-D1	7/28/2009	1.0 U	96 U
LM-A1-072809-P1	7/28/2009	1.0 U	140
LM-A1-072809-U1	7/28/2009	1.0 U	96 U
LM-A1-073009-B1	7/30/2009	ND	ND
LM-A1-073009-D1	7/30/2009	1.0 U	96 U
LM-A1-073009-P1	7/30/2009	1.0 U	97 U
LM-A1-073009-U1	7/30/2009	1.0 U	95 U
LM-A1-080309-B1	8/3/2009	ND	ND
LM-A1-080309-D1	8/3/2009	1.0 U	95 U
LM-A1-080309-P1	8/3/2009	1.0 U	150
LM-A1-080309-U1	8/3/2009	1.0 U	94 U
LM-A1-080409-B1	8/4/2009	ND	ND
LM-A1-080409-D1	8/4/2009	1.0 U	110
LM-A1-080409-P1	8/4/2009	1.0 U	300
LM-A1-080409-U1	8/4/2009	1.0 U	94 U
LM-A1-081209-B1	8/12/2009	ND	ND
LM-A1-081209-D1	8/12/2009	1.0 U	94 U
LM-A1-081209-P1	8/12/2009	1.0 U	59 U
LM-A1-081209-U1	8/12/2009	1.0 U	93 U
LM-A1-081909-B1	8/19/2009	ND	ND
LM-A1-081909-D1	8/19/2009	1.0 U	97 U
LM-A1-081909-P1	8/19/2009	1.0 U	96 U
LM-A1-081909-U1	8/19/2009	1.0 U	97 U
LM-A1-082609-B1	8/26/2009	ND	ND
LM-A1-082609-D1	8/26/2009	ND	140 U
LM-A1-082609-P1	8/26/2009	ND	330
LM-A1-082609-U1	8/26/2009	ND	210 U
LM-A1-090209-B1	9/2/2009	ND	ND
LM-A1-090209-D1	9/2/2009	ND	95 U
LM-A1-090209-P1	9/2/2009	ND	480
LM-A1-090209-U1	9/2/2009	ND	94 U
LM-A1-091009-B1	9/10/2009	NA	ND
LM-A1-091009-D1	9/10/2009	NA	84 U
LM-A1-091009-P1	9/10/2009	NA	280
LM-A1-091009-U1	9/10/2009	ND	83 U
LM-A1-091109-B1	9/11/2009	ND	NA
LM-A1-091109-P1	9/11/2009	ND	NA
LM-A2-091509-B1	9/15/2009	ND	ND
LM-A2-091509-D1	9/15/2009	ND	95 U
LM-A2-091509-P1	9/15/2009	ND	340
LM-A2-091509-U1	9/15/2009	ND	93 U
LM-A2-092309-B1	9/23/2009	ND	ND
LM-A2-092309-D1	9/23/2009	ND	95 U

Table 6
Dust Samples
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location ID:	Date Collected	Total PCBs ug/m3	Total Dust ug/m3
TWA		**500**	**1,000**
LM-A2-092309-P1	9/23/2009	ND	350
LM-A2-092309-U1	9/23/2009	ND	93 U
LM-A2-092909-B1	9/29/2009	ND	ND
LM-A2-092909-D1	9/29/2009	ND	95 U
LM-A2-092909-P1	9/29/2009	ND	93 U
LM-A2-092909-U1	9/29/2009	ND	93 U
LM-A3-101309-A	10/13/2009	ND	95 U
LM-A3-101309-B	10/13/2009	NA	ND
LM-A3-101309-B1	10/13/2009	ND	NA
LM-A3-101309-H	10/13/2009	ND	93 U
LM-A3-101309-W	10/13/2009	ND	93 U
LM-A3-102009-A	10/20/2009	ND	95 U
LM-A3-102009-B	10/20/2009	NA	ND
LM-A3-102009-B1	10/20/2009	ND	NA
LM-A3-102009-H	10/20/2009	ND	95 U
LM-A3-102009-W	10/20/2009	ND	95 U
LM-A3-102709-A	10/27/2009	ND	95 U
LM-A3-102709-B	10/27/2009	ND	ND
LM-A3-102709-E	10/27/2009	ND	95 U
LM-A3-102709-H	10/27/2009	ND	95 U

Legend:	
P1	Personal Sample
U1	Upwind Sample
D1	Downwind Sample
B1	Blank
A1	Area 1
A2	Area 2
A3	Area 3
H	Avenue
A	Archwood Avenue
W	Wildon Avenue

Notes
- ND - Not Detected or No Individual Congeners Detected for Total PCE
- NA - Not Analyzed

Table 7
Confirmation Soil Sampling for Stock Pile Locations and Northern Roadway
Lockheed Martin, Akron, Ohio
Haley's Ditch Remediation Certification Project

Location	Sample ID	Date Sampled	Data Received	Sample Results (mg/kg PCBs)
South end stockpile for light pole material	LM-SO-C-SP001	10/23/2009	10/26/2009	0.42
West End Roadway to North Stockpile	LM-SO-C-Roadway	11/6/2009	11/9/2009	0.17
East half of north end stockpile	LM-SO-C-SP002	11/6/2009	11/9/2009	ND
West half of north end stockpile	LM-SO-C-STOCKPILE-02 WEST	11/12/2009	11/13/2009	ND
East End Roadway to North Stockpile	LM-SO-C-ROADWAY EAST	11/12/2009	11/13/2009	ND
North End Truck Loading Area -	LM-SO-C-TRUCK LOAD AREA A	11/13/2009	11/16/2009	ND
North End Truck Loading Area (Dup of A) -	LM-SO-C-TRUCK LOAD AREA D	11/13/2009	11/16/2009	ND

ARCADIS

Appendix A

Project Permits and Approvals

State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

June 19, 2009

Notice of Issuance of a Limited Environmental Review and Finding of No Significant Impact to All Interested Citizens, Organizations, and Government Agencies

Haley's Ditch Restoration
WPCLF #CS396984-01

The purpose of this notice is to advise the public that Ohio EPA has reviewed the referenced project and finds neither an Environmental Assessment (EA) nor a Supplemental Study (SS) is required to implement the project as discussed in the attached Limited Environmental Review (LER). Therefore, a Finding of No Significant Impact is being issued for this project.

The Water Pollution Control Loan Fund program requires the inclusion of environmental factors in the decision-making process for project approval. Ohio EPA has done this by incorporating a detailed analysis of the environmental effects of the proposed action in its review and approval process. Environmental information was developed as part of the facilities plan, as well as through the facilities plan review process. A subsequent review by this Agency has found that the proposed action does not require the preparation of either an EA or an SS.

Our environmental review concluded that because the proposed project is limited in scope and meets all applicable criteria, a Limited Environmental Review is warranted. Specifically, the proposed storm sewer decontamination, contaminated soil and sediment removal, and natural stream channel design construction is a nonpoint source pollution control project consisting of non-structural practices that qualifies for a LER and meets the following additional criteria for a LER:

The proposed project:

has no significant environmental effect;
does not require extensive specific impact mitigation;
has no effect on high value environmental resources;
is cost effective;
is not a controversial action;
does not create a new, or relocate an existing discharge to surface or ground waters;
will not result in substantial increases in the volume of discharge or the loading of pollutants from an existing source or from new facilities to receiving waters; and
will not provide capacity to serve a population substantially greater than the existing population.

The LER presents additional information on the proposed project, costs, and basis for our decision. Further information can be obtained by calling or writing the contact person named at the end of the LER.

Upon issuance of this determination, loan award may proceed without being subject to further environmental review or public comment, unless information is provided which determines that environmental conditions on the proposed project have changed significantly.

Sincerely,

Gregory H. Smith, Chief
Division of Environmental and Financial Assistance

GHS/DH

c: Keith Riley, OEPA-NEDO-DSW
Sue Farmer, OWDA
File (2)

LIMITED ENVIRONMENTAL REVIEW

A. Project Identification

Project Name: Haley's Ditch Restoration Project

WPCLF# CS396984-01

Address: Christopher Burnham, President
Summit County Port Authority
One Cascade Plaza, 18th Floor
Akron, OH 44308

B. History and Existing Conditions

The historic Airdock in south Akron, built in 1929 by the then- Goodyear-Zeppelin Corporation for building dirigibles and blimps, was coated with a fire retardant substance that contained polychlorinated biphenyls (PCBs), including the compound known as Aroclor 1268. As the facility aged, roofing and siding disintegrated and released dust to the ground where rainwater carried contaminated particles into storm drains under the Airdock and Akron Fulton Airport and, ultimately, into Haley's Ditch. Haley's Ditch runs through industrial and municipal properties and is tributary to Adams Run, which is a direct tributary of the Little Cuyahoga River.

The Summit County Port Authority assumed ownership of the Airdock in 2006 and leases the building to Lockheed Martin Corporation.

Detection of PCBs in 2003 led Lockheed Martin to investigate the extent of the contamination and to remove PCBs from the Airdock and the surrounding pavement, soils, and storm drain system. That cleanup has been completed by Lockheed Martin. The risk of future contamination has been reduced by the installation of a rubber membrane over the roof of the Airdock, replacement of siding and rain gutters, and installation of filters over storm drain openings.

Lockheed Martin received a "No Further Action" letter for the cleanup from the Ohio EPA Voluntary Action Plan that allows voluntary environmental remediation to established standards in exchange for a covenant not to sue for further cleanup from Ohio EPA.

Based on studies of soil and sediment contamination in approximately 1,800 feet of Haley's Ditch immediately outside the airport property (between Triplett Boulevard and Archwood Avenue), Lockheed Martin submitted to U.S. EPA a cleanup plan to remove PCB-contaminated soil and sediment to a concentration below the threshold of safety for human health and the environment. Sediment samples from north of Archwood Avenue show concentrations of PCBs below the safety standard.

The Summit County Port Authority requested $8,700,000 from the federal American Recovery and Reinvestment Act of 2009 fund package (ARRA; "Stimulus") for this project to eliminate a threat to human and aquatic health, which will be managed by Lockheed Martin. Ohio EPA determined that the project is eligible for $1,819,990 from the ARRA fund package and $6,880,010 from the Ohio Water Pollution Control Loan Fund (WPCLF) qualifying as a "Green Infrastructure Project": a non-structural method of controlling water pollution (removing PCB-contaminated stream sediment and adjacent PCB-contaminated soil), particularly from sources related to stormwater or nonpoint source runoff (PCBs arrived from offsite in storm water) and includes stream corridor restoration actions (the stream and stream corridor will be reconstructed based on "natural stream channel design" standards).

C. Project Description

Lockheed Martin proposes removing PCB-contaminated sediment from the 175 linear feet of storm sewer immediately upstream of Haley's Ditch; removing contaminated sediment in the Haley's Ditch stream channel between Triplett Boulevard and Archwood Avenue; and removing adjacent contaminated soil (Figure 1). Sediment and soil with PCB concentrations greater than the U.S. EPA "action level" of 1.0 mg / kg will be removed and disposed at a regulated hazardous waste landfill. The major restoration excavation and remediation grading related to the stream include:
- removal of all soft sediments from the streambed
- collection of verification samples from soil remaining after streambed sediments are removed and continue to excavate until results are less than 1 mg/kg PCB
- creation of a sub-grade for the stream channel and potentially wetted areas by relocating soils with less than 1 mg/kg PCB within the project area, or importing soils with less than 1 mg/kg total PCB, as needed
- creation of a final grade in the stream channel with a one-foot thick top layer of sand, gravel, stone and other appropriate materials for erosion control having a total PCB concentration of 0.5 mg/kg or less
- creation of a final grade in potentially wetted areas including the flood plain areas and wetlands with a one-foot thick top layer of soil or other materials as appropriate having a total PCB concentration of 0.5 mg/kg or less.

Lockheed Martin has received a Nationwide Permit 38 from the Army Corps of Engineers authorizing proposed activities in waters of the United States (streams and wetlands) to contain, stabilize, or remove hazardous or toxic waste ordered or sponsored by a government agency with established legal or regulatory authority (in this case, the removal of soil and sediment contaminated with PCBs as regulated by U.S. EPA).

Restoration of the excavated areas after the cleanup is completed will be part of stream restoration based on natural stream channel design to create a sinuous channel with alternating riffles and pools and floodplain with restored wetlands to replace the straightened ditch. The restoration design will mitigate both the historical impact of

channelization and the disturbance required for contamination removal and is based on studies of similar streams in the area. The new streambed will be lined with a heterogeneous mix of sand, gravel, and cobble from a local sand and gravel quarry that mimics the glacial till streambed geology natural to the area. Re-creation of the floodway corridor allows space for a 0.8 acre wetland. The proposed design and planting of selected native wetland and riparian (streamside) species will further improve stream and terrestrial habitat quality.

Lockheed Martin has access agreements with the property owners to conduct the sediment and soil removals and stream restoration and is coordinating an effort through the not-for-profit Western Reserve Land Conservancy and the City of Akron, as one of the owners, to consolidate the land through donations or easements for eventual management as part of the integrated Summit County Trail and Greenway Plan. A Conservation Easement protecting the public's investment in the stream restoration will be applied to the property.

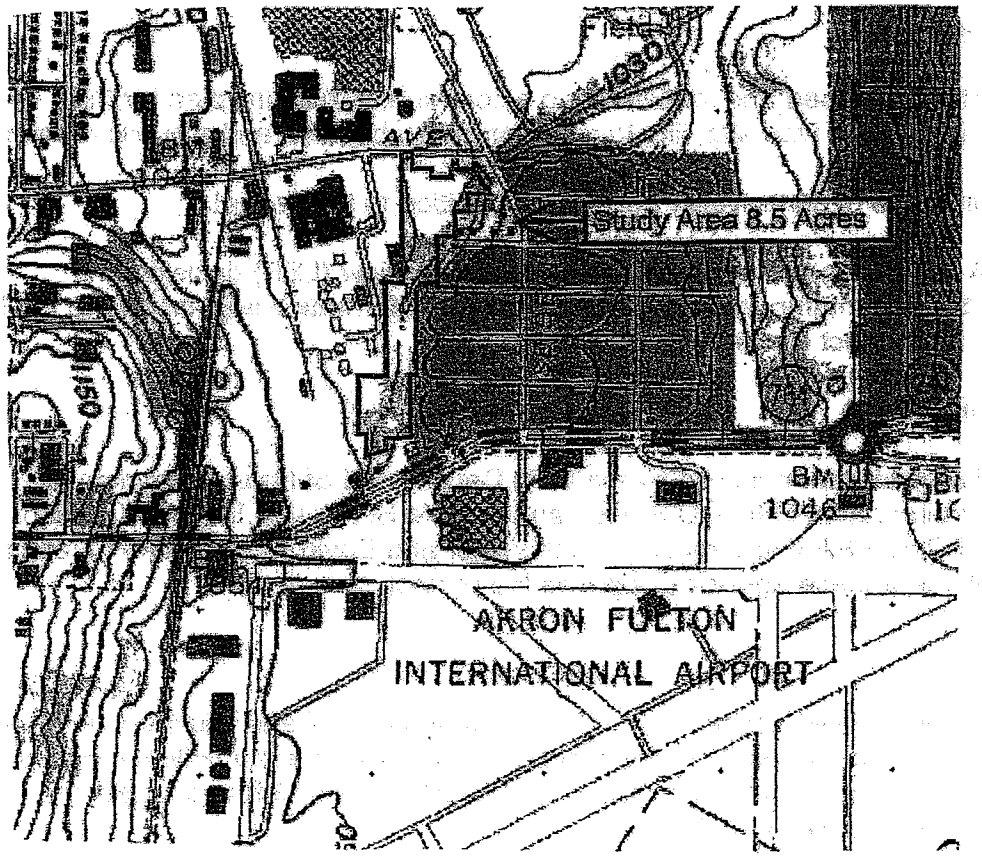


Figure 1 – Project Location

D. Estimated Project Costs

The Summit County Port Authority expects to borrow approximately $8,700,000 from the WPCLF, $6,888,010 at the "short-term construction" interest rate (3.2%), and $1,819,990 as ARRA funds awarded as "principal forgiveness" to reduce the amount of the loan.

Lockheed Martin will reimburse the Port Authority for the loan repayments.

During the 2-year loan period, the Port Authority will save approximately $198,000 by using WPCLF dollars at this rate, compared to the market rate of 5.45%.

E. Project Schedule

Assuming a June loan award, storm sewer decontamination will begin in July, with soil and sediment removal immediately following and construction of the natural stream channel and revegetation completed before December 2009.

F. Public Notification

Lockheed Martin developed and implemented a community relations plan for this project, which includes a web site, illustrated information booklet, and a public meeting.

Ohio EPA is unaware of controversy about or opposition to the project.

The Ohio EPA is sending this Limited Environmental Review (LER) decision and Finding of No Significant Impact to interested parties. Information supporting the LER is available from the project contact named below.

G. Planning Information

The proposed project was reviewed by the Ohio Department of Natural Resources, Ohio Historic Preservation Office, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and Ohio EPA divisions of Surface Water and Environmental and Financial Assistance. None of these agencies opposes the project.

H. Conclusion

The proposed storm sewer decontamination, contaminated soil and sediment removal, and natural stream channel design construction is a nonpoint source pollution control project consisting of non-structural practices that qualifies for a LER and meets the following additional criteria for a LER:

It has no significant environmental effect, has no effect on high value environmental resources, and requires no extensive specific impact mitigation – The project will remove a large volume of contaminated soil and sediment and re-establish a natural

stream channel with adjacent wetlands and floodplain. No important species or habitats occur on the project site. The project will eliminate a potential human health risk by removing soils and sediments contaminated with carcinogenic PCB and will restore natural hydrology.

It is cost effective and is not controversial – This publicly financed project managed by a private corporation has no effect on Akron water or sewer bills. The restored project site will be part of a proposed county trail and greenway system.

It does not create a new, or relocate an existing, discharge to surface or ground waters and will not result in substantial increases in the volume of discharge or the loading of pollutants from an existing source or from new facilities to receiving waters – The proposed removal of contaminated soil and sediment will eliminate a source of water pollution; the proposed stream restoration and floodplain and wetland creation will positively affect water quality.

It will not provide capacity to serve a population substantially greater than the existing population – (This is applicable to traditional public infrastructure projects rather than to the proposed nonpoint source pollution control project.)

The planning activities for the project have identified no potentially significant adverse impacts. The project is expected to have no significant short-term or long-term adverse impacts on the quality of the human environment or on sensitive resources (floodplains, wetlands, prime or unique agricultural lands, aquifer recharge zones, archaeologically or historically significant sites, or threatened or endangered species).

The project will eliminate contaminated soils and sediments that are a potential human health threat and restore a channelized ditch to a natural stream channel for improved aquatic health.

I. <u>For further information, please contact</u>:

Dan Halterman
Ohio EPA - DEFA
P.O. Box 1049
Columbus, OH 43216-1049
(614) 644-3658
dan.halterman@epa.state.oh.us

ARCADIS

Appendix A

USACOE Nationwide 38
Permit

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

REPLY TO

June 18, 2009

Regulatory Branch

SUBJECT: Department of Army Application No. 2008-01179, Nationwide Permit No. (38) as Published in the Federal Register, Volume 72, No. 47, on Monday March 12, 2007

Lockheed Martin Corporation.
Steve Vardavas
1210 Massillon Road
Akron, OH 44315

Dear Mr. Vardavas:

This pertains to your proposal to remove soils in wetlands and restore a stream located on your property. The property does not have a true street address and is bordered on the northern by East Archwood Avenue and to the south by Triplett Boulevard; South Seiberling Street and Landon Street are located to the east of the property in the city of Akron, Summit County, Ohio.

This project is requesting to impact 3 wetlands and a perennial stream known as Haley's Ditch to remove PCB contaminated soils and to restore the entire project area (Sheet 1 of 7 and 3 of 7). After PCB contaminated soils are removed under U.S. EPA cleanup goals guidance (see letter, Appendix B), the project will impact 0.84 acres of wetlands (Wetland A, B, and C) and 1,800 L.F. of Haley's Ditch (Sheet 2 of 7). Haley's Ditch is currently channelized the entire length of the property. To mitigate for the impact from the removal of the contaminated soils within the wetlands and Haley's Ditch, a natural stream channel design will be implemented to provide a more natural flow and improve water quality and local flood storage capability. The new location of the stream will be increased by 231 linear feet (L.F.), to total 2039 L.F. of stream when the project is completed. One and 0.36 acres of floodplain will be created where no floodplains were identified before. Wetland restoration after soil removal will increase to 0.95 total acres (Sheets 4 of 7, 5 of 7, 6 of 7, and 7 of 7; and Appendix A - 20 pages).

I have evaluated the impacts associated with your proposal, and have concluded that they are authorized by the enclosed Nationwide Permit provided that the attached conditions are satisfied.

Verification of the applicability of this Nationwide Permit is valid for two years from the date of this correspondence unless the Nationwide Permit is modified, suspended or revoked. This verification will remain valid for two years if during this two year period the

Regulatory Branch
SUBJECT: Application No. 2008-01179, Nationwide Permit No. (38) as Published in the Federal Register, Volume 72, No. 47, on Monday March 12, 2007

Nationwide Permit is reissued without modification or your activity complies with any subsequent permit modification. Please note that if you commence or are under contract to commence this activity in reliance of your Permit prior to the date this Nationwide Permit is suspended or revoked, or is modified such that your activity no longer complies with the terms and conditions, you have twelve months from the date of permit modification, expiration, or revocation to complete the activity under the present terms and conditions of this Nationwide Permit, unless this Nationwide Permit has been subject to the provisions of discretionary authority.

It is your responsibility to remain informed of changes to the Nationwide Permit program. A public notice announcing any changes will be issued when they occur. Finally, note that if your activity is not undertaken within the defined period or the project specifications have changed, you must immediately notify this office to determine the need for further approval or reverification.

This affirmation is limited to the attached Nationwide Permit and associated Water Quality Certification, and does not obviate the need to obtain any other project specific Federal, state, or local authorization.

In addition to the general conditions attached to the Nationwide Permit, your attention is directed to the following Special Conditions which are also appended at the end of the Nationwide Permit General Conditions:

1. All unsuitable/excess excavated material may not used as backfill and shall be removed and disposed of at a separately approved upland disposal site. Soils removal under this permit does not alleviate the applicant from other regulatory rules and standards established under the U.S. EPA clean up under 40 CFR 761.61 (c) for proper soil disposal. Contact their office to ensure you will stay in compliance under their rules and regulations for cleanup if questions arise.

2. That you are responsible for ensuring that the contractor and/or workers executing the activity(s) authorized by this permit have knowledge of the terms and conditions of the authorization and that a copy of the permit document is at the project site throughout the period the work is underway.

3. That the disposal of trees, brush and other debris in any stream corridor, wetland or surface water is prohibited.

4. Siltation barriers shall be installed using best management practices to protect downstream as much as possible during remedial work, to prevent siltation from entering into the stream. Barriers shall remain in place until all construction is

completed and the area is stabilized.

5. That no in-water work shall be performed between April 15- June 30 to preclude adverse impacts on the spawning, nursery, and feeding activities of indigenous fish species.

6. That at the request of an authorized representative of the Buffalo District, U.S. Army Corps of Engineers, you shall allow access to the project site to determine compliance with the conditions of this permit.

7. There shall be no construction or placing of buildings, camping accommodations or mobile homes, billboards or other advertising material, or other structures within the limits of the designated restoration area.

8. The restoration plan entitled "Haley's Ditch Restoration Plan" in Summit County, Ohio and dated May 18, 2009, is hereby incorporated into and made part of the permit as Appendix A.

9. A baseline report shall be forwarded to this office by December 31 in the year of completion of all construction activities, or by an approved extension. For purposes of this special condition, "completion" means all activities associated with site grading and seeding and/or planting. The baseline report must include the following:
    a. An "as-built" topographic survey of the restored area at 0.5 foot contour intervals.
    b. Photographs from fixed locations with a photo location map.
    c. A list of plants introduced through seeding and/or planting.
    d. A list of any modifications that were made from the original restoration plan.
    e. Summary statement regarding the perceived success of the project. The report will evaluate the success of the restoration as well as current wetland and stream functions. These reports must also address any potential problem areas and include suggestions and timetable for correction if it is anticipated that projected goals may not be met.
    f. Date of field inspection.

10. Annual monitoring reports for the restoration project must be submitted to this office for the first five years following completion of construction based upon data collected during each monitored year between June and October. The first annual report is due by December 31 in the year following completion of mitigation construction, or by an approved extension date. Subsequent reports must be submitted by December 31 of the subsequent four years, or by an approved extension date. This requirement may be

waived for years 3 and 4 if, after the first two growing seasons, the restoration area is shown to meet the requirements for successful mitigation.

These reports must include:

a. An "as-built" topographic survey of the mitigation area at 0.5 foot contour intervals, including a delineated boundary of the wetland and wetland acreage determination.
b. Photographs from fixed locations with a photo-location map.
c. A plant series list which give USFWS Wetland Indicator Status and strata. Dominant plants should be highlighted and the percent cover is to be noted. Plants introduced through seeding or planting shall also be indicated. The date of field inspection is to be noted.
d. Fish and wildlife observations on the site.
e. Summary statement regarding the perceived success of the project. The report will evaluate the success of the restoration as well as current wetland and stream functions. These reports must also address any potential problem areas and include suggestions and timetable for correction if it is anticipated that projected goals may not be met.

I have evaluated your submitted wetland delineation map and have determined that the wetland and water boundaries shown on the map accurately represent on-site conditions. Please note that this is a Preliminary Jurisdictional Determination (JD). Preliminary JDs are non-binding written indications that there may be waters of the United States on your parcel and approximate locations of those waters. Preliminary JDs are advisory in nature and may not be appealed.

Pursuant to Regulatory Guidance Letter 08-02, any permit application made in reliance on this Preliminary JD will be evaluated as though all wetlands or waters on the site are regulated by the Corps. Further, all waters, including wetlands will be used for purposes of assessing the area of project related impacts and compensatory mitigation. If you require a definitive response regarding Department of the Army jurisdiction for any or all of the waters identified on the submitted drawings, you may request an approved jurisdictional determination from this office. If an approved jurisdictional determination is requested, please be aware that this is often a lengthy process and we may require the submittal of additional information.

In accordance with Regulatory Guidance Letter 05-02, "Preliminary jurisdictional determinations are not definitive determinations of areas within regulatory jurisdiction and do not have expirations dates." Lastly, this determination has been conducted only to identify the limits of waters that may be subject to Corps Clean Water Act or Rivers and Harbors Act jurisdiction.

Regulatory Branch
SUBJECT: Application No. 2008-01179, Nationwide Permit No. (38) as Published in the Federal Register, Volume 72, No. 47, on Monday March 12, 2007

Questions pertaining to this matter should be directed to me at (440) 437-8970, by writing to the following address: U.S. Army Corps of Engineers, 33 Grand Valley Ave., Orwell, Ohio 44076, or by e-mail at: LChantelle.Carroll@usace.army.mil

Sincerely,

Chantelle Carroll
Biologist

CC: EnviroScience (Jamie Krejsa)
USEPA (Margaret Guerriero, John Nordine)

Enclosures

COMPLIANCE CERTIFICATION

General Condition 14 of the Nationwide Permit you were affirmed requires that:

"Every permittee who has received a Nationwide permit verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include: a) A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions; b) A statement that any required mitigation was completed in accordance with the permit conditions; c) The signature of the permittee certifying the completion of the work and mitigation."

APPLICANT:	POINT of CONTACT:	File Number: 2008-01179
Lockheed Martin Corp.	Mr. Steve Vardavas	File Closed: June 18, 2009
1210 Massillon Road	1210 Massillon Road	
Akron, OH 44315	Akron, OH 44315	

Upon completion of the activity authorized by this permit sign this certification and return it to the address listed below within **30-days** of project completion.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

_____ _____

Steve Vardavas Date

Permittee Telephone Number: _____

Project Location: Lockheed Martin Corp., 1210 Massillon Road, in the city of Akron, Summit County, Ohio

Project Description: impact 3 wetlands and a perennial stream known as Haley's Ditch to remove PCB contaminated soils

Authorized Impacts (Waters of U.S. Impacted by Project): 0.84 acres of wetland and 1,800 L.F. of stream
Waterway and/or Project Setting: Haley's Ditch and un-named wetlands

Return completed form to:

Dave Leput
Regulatory Branch
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 10-05-08

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: Lockheed Martin MS2, Steve Vardavas, 1210 Massillon Road, Akron, OH 44315

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Buffalo District, ARCADIS/EnviroScience/Davey– Haley Ditch, #2008-01179

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: no phsyical address, bordered by East Archwood Ave to the North and Triplett Blvd. to the South, and Landon Street to the East.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: OH County/parish/borough: Summit City: Akron
coordinates of site (lat/long in degree decimal format): Lat. 41.0469 ° N, Long. -80.4717 ° **W**.

Universal Transverse Mercator:

Name of nearest waterbody: Springfield Lake Outlet -Haley's Ditch

Identify (estimate) amount of waters in the review area:
Non-wetland waters: 1757 linear feet: 13 width (ft) and/or 0.52 acres.
Cowardin Class:
Stream Flow: Perennial
Wetlands: 0.839 acres.
Cowardin Class: PEM/PFO

Name of any water bodies on the site that have been identified as Section 10 waters: NONE

Tidal:

Non-Tidal:

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 10-01-08
☒ Field Determination. Date(s): 10-01-08

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant:from Arcadis/Davey Resource Group/EnviroScience.

☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.

- ☒ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report.

☐ Data sheets prepared by the Corps: .

☐ Corps navigable waters' study: .

☐ U.S. Geological Survey Hydrologic Atlas: .

- ☐ USGS NHD data.
- ☐ USGS 8 and 12 digit HUC maps.

☒ U.S. Geological Survey map(s). Cite scale & quad name:7.5 minute Akron East, OH.

☐ USDA Natural Resources Conservation Service Soil Survey. Citation:

.

☒ National wetlands inventory map(s). Cite name:Akron East Quadrangle.

☐ State/Local wetland inventory map(s): .

☐ FEMA/FIRM maps: .

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)

☐ Photographs: ☒ Aerial (Name & Date):TerraServer 1994 through 2006 project area unchanged by aerial.

or ☐ Other (Name & Date): .

☐ Previous determination(s). File no. and date of response letter: .

☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of 10-5-08
Regulatory Project Manager

Signature and date of
person requesting preliminary JD

File # 2003-01426	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Halley Ditch	**41.0429**	**-81.4732**	R4	1757 LF	non-section 10 – non-wetland
Wetland A	**41.0471**	**-81.4716**	PEM/PFO	0.722 acre	non-section 10 –wetland
Wetland B	**41.0438**	**-81.4729**	PFO	0.093 acre	non-section 10 –wetland
Wetland C	**41.0432**	**-81.4730**	PEM	0.024 acre	non-section 10 –wetland

20 May 2009

Ms. Chantelle Carroll
U.S. Army Corps of Engineers, Buffalo District
Regulatory Branch, Orwell Field Office
33 Grand Valley Avenue
Orwell, Ohio 44076
Phone: (440) 437-8970
Fax: (440) 437-5842

Re: *Section 404 Nationwide Permit Application,*
Haley's Ditch Restoration Project
North of East Archwood Avenue and south of Triplett Boulevard,
Akron, Summit County, Ohio 44306

Dear Ms. Carroll:

Enclosed please find a pdf. copy of the Haley's Ditch Stream and Wetland Restoration plan that details the restoration efforts to follow the remediation. After your review if you require additional information or have questions please contact myself (330-620-7756) or Joel Bingham (330-858-0298). A hard copy has also been sent.

Respectfully,

Jamie Krejsa
Vice President / Director of Ecological Services

enc: Haley's Ditch Stream and Wetland Restoration Plan

CC:
Mr. Dave Gunnarson, Lockheed Martin
File

Haley's Ditch Restoration Plan

Prepared By:

RiverWorks
A Partnership for Stream & Wetland Restoration

GPD GROUP

ES ENVIRO SCIENCE INCORPORATED

River Reach Construction
Specializing in Stream & Wetland Restoration

EnviroScience, Inc.
3781 Darrow Rd
Stow, OH 44224

May 18, 2009

Lockheed Martin
Haley's Ditch Stream and Wetland Restoration Plan

Tables and Figures

1. Introduction

1.1 Background

The following is a restoration plan for the Haley's Ditch remediation project in Summit County, Akron, OH. The following information is meant to provide additional detail regarding the proposed restoration for Haley's Ditch with regard to existing condition, restoration approach and design. For a more detailed background regarding the historical cause of PCB contamination refer to ARCADIS Remediation Plan section 1.1 and 1.2. In general, the remediation project will involve the excavation, removal, transportation and offsite disposal of accumulated, unconsolidated sediment deposits in Haley's Ditch, as well as adjacent soils containing PCBs at concentrations above the soil cleanup level of 1.0 mg/kg.

Remediation of Haley's Ditch will generally proceed in an upstream to downstream direction beginning at the culvert outlet from Triplett Blvd to the culvert invert at Archwood Ave. The project is roughly divided into three sections; South, Middle and North Areas. Figure 1 illustrates the project boundaries, proposed horizontal soil and sediment removal limits and depths. The following plan details the restoration activities post-remediation.

The restoration of Haley's Ditch centers on enhancing the remediation area within the limits of contaminated sediment removal. Although not required, Lockheed Martin has made a conscious decision to spend additional resources to provide a functional stream valley, floodplain and riparian corridor as a foundation for ecological recovery. Thus, the limits of remediation are largely the limits of restoration. The restoration approach is also centered on recognizing the existing impairments and limitations of channel morphology, habitat and riparian zone to mitigate for historical impacts as well as alleviate disturbance from remediation. The remediation and restoration activities within wetland areas and waters will be completed in accordance with a Nationwide 38 permit obtained by the United States Army Corps of Engineers.

1.2 Existing Conditions

Haley's Ditch is considered a headwater stream (1.04 sq mi drainage area) with a Warm Water Habitat (WWH) use designation by the Ohio EPA. Overall, the Haley's Ditch watershed is heavily urbanized. Prior to development, large portions of the Haley's Ditch watershed consisted of wetlands and forest. However, over the past 100 years of development, drainage, channelization, fill and other practices have altered the watershed from previous conditions. An evaluation of the existing channel morphology, habitat, local biology, vegetation and project area wetlands was performed to satisfy project permitting and facilitate restoration design.

1.2.1 Stream Morphology

Because the existing drainage channel will be excavated and relocated as part of the remediation efforts, limited channel morphology measurements were collected on the existing conditions. Four cross sections were performed in representative areas to assess channel characteristics and conditions. A longitudinal profile was not performed

because analysis of the channelized pattern (sinuosity 1.1) in relation to riffle-pool features would offer little information to the restored condition. However, an average slope (0.0035 ft/ft) and bankfull indicators were determined from survey and field observation. The channelized stream geometry is an obvious detriment to the existing channel function and habitat.

Cross sections were surveyed in four riffle areas to characterize channel conditions and their relationship to depositional and floodplain features and terraces (Figures 2-5). The results characterize the channel as a low width:depth ratio (ie. narrow deep) resembling a Type G or E channel. The cross sections represent a likely recovered condition (Type E) for the channelized ditch as there are indications of a small floodplain that has equilibrated within the bank levees. Nonetheless, the channelization and bank levels as they currently exist inhibit frequent flood inundation to the larger floodplain.

Table 1. Cross Section Summary

Cross Section	Bankfull width	Mean Depth	Cross Sectional Area	Width:Depth	Entrenchment Ratio
CS 1	8.58	1.56	13.68	5.4	2.0
CS 2	10.82	1.62	17.5	6.68	1.97
CS 3	15.4	1.16	17.95	13.32	1.68
CS 4	12.1	1.19	14.39	10.15	1.40

Figure 2. Cross Section 1 Riffle

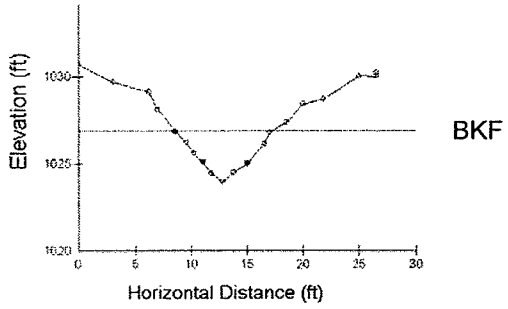


Figure 3. Cross Section 2 riffle

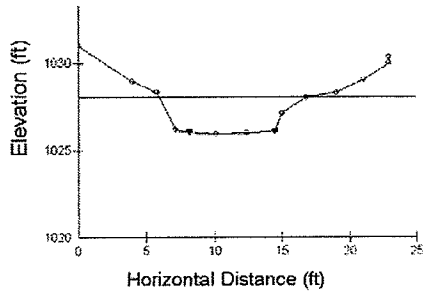


Figure 4. Cross Section 3 Riffle

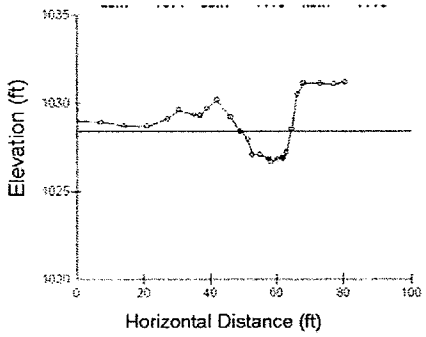
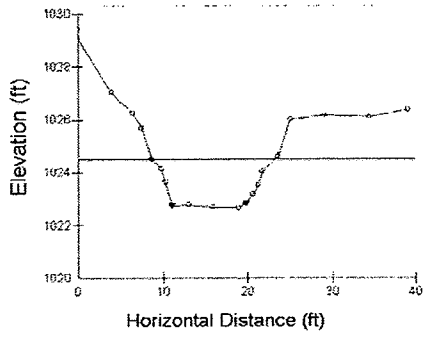


Figure 5. Cross Section 4 riffle

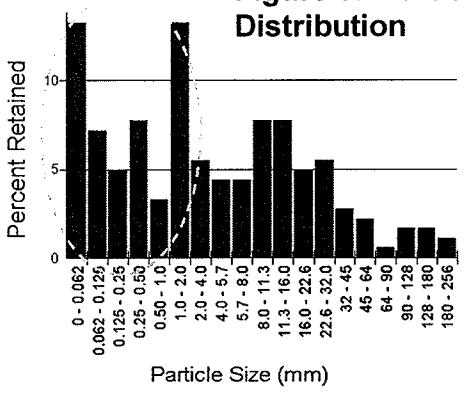


Streambed substrates were characterized using the Wolman pebble count methods. Samples were collected in riffle areas as these would represent best substrate conditions due to the depositional nature of pools. Below, Table 2 and Figure 6 summarize the particle distribution in riffle areas. Notice the high percentage of silt (13.2%) and its corresponding proportion (orange outline) in the bar chart depicting bimodal distribution. This is typical of many channelized or incised streams which do not have access to floodplains for storage of this finer material.

Table 2. Percent Particle Distribution

Type	Riffle Areas
Silt/Clay	13.2%
Sand	36.5%
Gravel	45.3%
Cobble	5.0%
Boulder	0%

Figure 6. Particle Distribution



1.2.2 Wetlands

The site contains three wetlands (referred to as Wetlands A, B, and C) totaling 0.84-acres of two types of wetland habitat: palustrine emergent and palustrine forested wetland habitat (Wetland Delineation, Davey Resources Group 2008). Wetlands A, B and C were assessed using the Ohio Rapid Assessment Methodology (ORAM) scoring forms (Ecological Resources Assessment and Indiana Bat Survey, EnviroScience 2008). Wetland A (0.72-acre) was determined to be a Category 2 wetland, Wetland B (0.093-acre) was determined to fall within the Category 1 or 2 gray zone, and Wetland C (0.024-acre) was determined to be a Category 1 wetland (USACE Jurisdictional Determination, 2009).

1.2.3 Habitat

In-stream habitat was evaluated with the Qualitative Habitat Evaluation Index (QHEI) which is a standard subjective evaluation performed by the Ohio EPA (Table 3). Haley's Ditch scored a 55.25 out of 100 possible points. Typically, scores >60 have sufficient habitat to support a WWH fish community. The results from Haley's Ditch suggest that the existing habitat has a marginal capability to meet WWH standards. Major limiting factors to the site related primarily to Metric 3 channel morphology, Metric 2 diversity of in-stream habitat and Metric 5 riffle-pool quality. Riffle quality was generally poor with shallow depths consisting of moderately embedded substrates. Pool depth was considered average but the number of quality pools was limiting.

Table 3. QHEI Summary

Haley's Ditch	Metric Score
Metric 1. Substrate 20pts max	12
Metric 2. In-Stream Cover 20 pts max	12
Metric 3. Channel Morphology 20 pts max	10
Metric 4. Riparian 10 pts max	4.75
Metric 5. Riffle Pool Quality 20 pts max	8.25
Metric 6. Gradient 10 pts max	8
Total Score	55.25

1.2.4 Biology

During June and August of 2008, EnviroScience conducted a supplemental biological evaluation to update biological information within the project area. The Haley's Ditch site evaluated by EnviroScience was located adjacent to the Goodyear Test track approximately 0.70 miles downstream from the project site. Overall, EnviroScience observed similar results as past Ohio EPA sampling events (Table 4). Therefore, it appears that the water quality in the reach has not improved substantially. EnviroScience, with concurrence from Ohio EPA, did not perform a biological evaluation on the Lockheed Martin reach of the Haley's Ditch for several reasons. First, the concurrent evaluation in the watershed provided a sufficient evaluation of the fishery community capable of inhabitating the area under the existing conditions. Second, EnviroScience and Lockheed wanted to avoid disturbing substrates within the project area to minimize the risk of downstream migration prior to remediation activities. Also, since there was no feasible upstream site of natural channel conditions, the downstream data was considered adequate. Additional data regarding the biological integrity of the Little Cuyahoga River watershed is available through the Ohio EPA report entitled; *Biological and Water Quality Study of the Little Cuyahoga River and Tributaries, 1996* (OEPA 1998),

Table 4. EnviroScience Biological Summary

Site	June 2008	August 2008	Attainment Status
	IBI	MIwb	WWH
RM 0.2 Springfield Lake Outlet	30	26	Non
RM 0.2 Haleys Ditch	30	N/A	Non

1.2.5 Vegetation and Soils

A majority of the site is surrounded by buildings, parking lots, or residential areas. Consequently, the historical vegetative communities are either lost or severely impacted. However, information on the existing conditions suggest a potential trajectory for recovery and species that will be successful post-restoration. During an ecological investigation of the site (*EnviroScience, Inc. 2008*), three upland plant communities were identified in the project area, consisting of urban, successional forest, and scrub shrub. The northern portion of the site consists primarily of successional forest as well as scrub shrub habitat. The central portion of the site consists primarily of urban area, mowed grass with shrubs and herbaceous vegetation lining Haley's Ditch. The southern portion of the site consists primarily of successional forest as well as scrub shrub and urban habitat types.

Common species found in the successional forest and scrub shrub habitat include *Acer saccharinum* (silver maple, FACW-), *Populus deltoides* (eastern cottonwood, FAC), *Prunus serotina* (black cherry, FACU), *Robinia pseudoacacia* (black locust, FACU-), and *Acer negundo* (box-elder, FAC+) in the tree canopy layer; *Crataegus sp.* (hawthorn), *Cornus foemina* (gray dogwood, FAC), *Lonicera tatarica* (Tartarian honeysuckle, FACU), *Rosa multiflora* (multiflora rose, FACU), and *Rhamnus frangula* (glossy buckthorn, FAC) in the shrub layer; *Alliaria petiolata* (garlic mustard, FACU-), *Impatiens capensis* (spotted touch-me-not, FACW), and *Toxicodendron radicans*

(poison ivy, FAC) in the herbaceous layer; *Vitis riparia* (river-bank grape, FACW) and *Parthenocissus quinquefolia* (Virginia creeper, FACU) in the vine layer.

In summary, the vegetative communities are impacted by regular maintenance or exist in a successional state. The three described communities do not represent a climax vegetative condition, and restoration of these areas will result in better ecological condition in the long term.

The site is found in the *Soil Survey of Summit County, Ohio* (Ritchie and Steiger 1990). According to the survey, the soils within the project area are one of four types consisting of Carlise muck (Cg), Chili-Urban (CuB), Chili-Urban (CuC) or Urban (Ur). The Carlise muck is a hydric soil typical of swampy wetland areas. The remaining soil types are indicative of areas where original Chili soils have been destroyed from borrow, fill or re-grading. The surface layer of the disturbed soil has low organic matter, is droughty and seed germination is poor. Urban land (Ur), a nonhydric soil, is defined as "areas ten acres of more in size that area covered by buildings, pavement, or other manmade surfaces" (Ritchie and Steiger 1990).

1.3 Summary

From a morphological, biological and habitat perspective, Haley's Ditch functions marginally well. This current condition is primarily the result of human induced alteration from industry and settlement in the watershed. However, the evaluation has identified some key impairments that, if restored or addressed through restoration efforts, could increase functionality. Channelization and loss of an accessible bankful floodplain appear to be the most limiting factors. The proposed restoration plan is designed to restore these features through the creation of a restored stream pattern and excavation of an accessible floodplain.

1.4 Restoration Approach

From a morphological, habitat and biological perspective, the restoration approach will provide a substantial basis for recovery through its focus of reversing the historical impairments and the impacts to habitat and morphology caused by remediation. The restoration of the physical habitat will be addressed with channel and floodplain restoration (Figure 7). The creation of additional meander bends and stream pattern will provide a basis for more habitat diversity and deeper more varied pool depths. One of the immediate benefits from channel and floodplain restoration will be the potential reduction of fine sediment storage within the channel. The restored floodplain, wetlands and channel will be restored to an elevation and to encourage a higher level of connectivity (Figures 8). The new stream geometry will create greater channel and flow variability and facilitate riffle-pool complexes. Imported substrate for the stream bed will consist of bank run from a nearby gravel-pit, supplemented by larger gravel and cobble sized material. Bank run is unwashed material that provides natural variability synonymous with glacial till. A depth of approximately 1 foot of substrate will be placed over sub-grade within the channel and planned flood storage areas to final grade.

The remediation effort will also displace a large amount of trees and understory but the restoration effort will use most of this material on-site as wood chips added to the soil or as deadfall or in-stream habitat. A significant planting effort of trees shrubs and live cuttings to replace the lost vegetation is proposed through the restoration area (Figure 9). Proposed native species and seed mixes vary depending on location in the floodplain, upland or wetland areas. The planting strategy employs groups and clusters of vegetation to increase chance of success with patchy development rather than randomization. Similar species will be planted together particularly with regard to the shrub species. Fast growing species such as willow and dogwood are focused along the stream banks in the form of containerized and live cuttings for banks stability and habitat. The recovery potential of the site will also increase with time as stream bank vegetation will provide root mats, undercuts, overhanging vegetation and more importantly shade for the restored reach.

Biologically, a regional species pool of 22 fish species is potentially available for recruitment into the restored reach. This pool was generated based on current and historical information from the main stem of the Little Cuyahoga, Springfield Lake Outlet and Haley's Ditch between the Kelly Ave. dam and Mogadore Reservoir Outlet. This pool of species is comprised of various trophic guilds and tolerant and non-tolerant species. This community does have the capacity from a species perspective to develop into a WWH supporting community. The restoration of more habitat heterogeneity, functional morphologic features and riparian zone will greatly assist in the development of that community. While the restored site will likely not support a diversity of 22 species, the regional pool provides a larger variability of tolerances and habitat preferences for potential colonization.

The expansion of the floodway corridor and restoration of a meandering channel provide opportunity to restore riverine wetlands. Wetland restoration efforts will primarily be directed at restoring a proposed 0.84-acre wetland in the northwest corner of the site at the location of existing Wetland A. Several other small seasonally inundated depressional areas will be created in floodplains to mimic oxbow wetlands. These riverine wetlands are prevalent in the Cuyahoga watershed and along intact areas of the Little Cuyahoga River corridor and its tributaries. Riverine wetlands will provide additional habitat diversity, refuge for fish during flooding and a source of food for wildlife. Other beneficial floodplain functions include flood storage, filtration and groundwater recharge. The primary source of hydrology for the wetlands will be precipitation and over bank flooding which will likely access these areas 3-4 times during the growing season. The large 0.84-acre wetland will be restored over top existing Carlise muck (Cg) soils to provide the hydric soil component.

2. Property Access and Permit Approvals

Permits and approvals will be obtained prior to performing remediation and restoration activities at Haley's Ditch. The permits and approvals are as follows:

Permits

- Grading Permit (City of Akron);

- US Army Corp of Engineers - Nationwide 38 Permit;

Approvals
- Risk-Based Disposal Approval for PCB Remediation Waste (US EPA);
- NPDES General Permit (Ohio EPA);
- Storm Water Pollution Prevention Plan (SWPPP) (Summit Soil and Water Conservation District);

3. Haley's Ditch Restoration Activities

3.1 Mobilization

Restoration activities will commence as soon as practical following the remediation effort, thus restoration activities are anticipated to begin approximately 3-4 weeks from remediation start date. Restoration activities will utilize the base equipment staging areas used initially by the remediation effort in the support zone "clean" areas only. Restoration activities will utilize the same construction entrances as remediation activities after the remediation crew has moved into the next zone.

3.2 Survey Layout

The restoration site will be stationed and referenced along the centerline of the proposed bankfull channel alignment. Stationing begins at 1+00 at the downstream culvert invert at E. Archwood Ave. and continues upstream to station 21+39.45 at the culvert invert at the south end of the site coming from Triplett Blvd. Station and offsets on survey lathe shall provide the location of grading limits, channel depth, bank heights etc. in the field. Cross sections were planned at specific locations perpendicular to the centerline to provide horizontal distances of channel shape and secondarily act as an as-built "check" discussed further in construction oversight. Cross sections are spaced approximately 25-50 ft apart.

3.3 Erosion Sediment Controls and Bypass Pumping

Storm water management will include erosion control measures to be installed in accordance with the SWPPP reviewed and approved by the local soil and water conservation district. Scheduling of daily restoration activities will be planned in accordance with the anticipated weather conditions to minimize adverse impacts as a result of severe weather. As a general guideline, the majority of channel restoration work will be performed in the "dry" through the use of either water diversion or bypass pumping. The existing channel will be restored to a sub-grade elevation by the remediation crew using clean soil to allow base flow to bypass long distances in the North and South work zones. If bypass diversion is not feasible (ie. Middle Zone), then daily bypass pumping will minimize water contact with exposed soils. Rock check dams will be installed at specified locations in the sub-grade restored channel and diversion bypass channel as an in-channel BMP. Rock check dams will be placed specifically at riffle crest locations and ultimately incorporated into the final restoration grade. Thus,

the rock checks also become points of vertical grade control. Rock check dams will be removed from diversion bypass channels prior to backfill and grading.

If significant storm events are anticipated, the remediation and restoration crews will perform all practical measures to ensure that the project site and downstream areas will not be negatively impacted. As a general rule, the restoration construction will be completed to a point that any rainfall event can flow through the newly restored areas at the end of each day. In other words, channel diversions are installed such that overtopping can flow into the restored channel if extra capacity is needed. Also, daily bypass pumping procedures will be ceased at the end of the work day. Any continual bypass pumping will be performed solely by the remediation crew.

3.4 Restoration Sequence

The Haley's Ditch restoration activities will include the following tasks, generally performed in sequential order. A brief description of each activity is provided below

- Dewatering and Channel diversion- See Section 3.3
- Refine subgrade and stream banks
- Placement of substrate
- In-stream woody habitat
- Finish Grade
- Erosion fabric and topsoil placement for stream banks
- Floodplain grading
- Wood chip placement
- Topsoil placement and grading
- Woody debris deadfall placement
- Tree and plant installation
- Seed and straw mulch
- Wetland Construction

- Refine subgrade and stream banks

  Excavation of constant slope sub-grade channel to provide a refined sub-grade of the riffle and pool features. Pool areas will be excavated deeper and material placed at the downstream or upstream area thereby creating the rise and fall of the profile.

- Placement of substrate

  Once the riffle and pool sub-grade has been achieved in a feasible length of stream (i.e. 100-300 ft), a base foundation of bank run material will be added of approximately 0.5 ft (6 inches) over the pool and riffle areas. Bank run material has a high percentage of sand and small gravel that is typical of "sub-pavement" areas of stream beds. This material will be compacted into place using a machine bucket or vibrating skid.

Compaction will be performed to avoid the redistribution of the base material during initial rain events and to increase precision of final grading due to the fine tolerances of low gradient streams.

- In-stream woody habitat

  Before finish grade and bank construction, it is beneficial to install any in-stream woody habitat features. Woody debris habitat is a large component of headwater stream habitat particularly in the Cuyahoga basin. Various types of woody debris habitat will be installed within riffle and pool areas. The length and diameter of the woody material will generally range from 10-20 feet in length and a diameter of 6-18 inches. Specific woody debris locations, alignment, type and size will be at the discretion of the restoration team due to the variability of each location and source of wood.

- Finish Grade

  The finish grading is the stage where the channel begins to take shape with regard to its fine details, bars and microfeatures typical of natural channels. Finish grade will be accomplished using a coarser mixture of medium-large gravel and small cobble substrate. Material will be compacted into place using machine bucket or vibrating skid. During finish grading, water may be diverted into the channel to facilitate minor adjustments to elevations of riffle crests and shaping of base flow channel areas.

- Erosion fabric and topsoil placement for stream banks

  Erosion fabric will provide both short and long-term protection for stream banks as native grasses and live stakes grow through the blanket. A North American Green C125 coconut fiber erosion fabric, Rolanka jute fabric, or equivalent will be applied along both banks. A section of channel that has reached finish grade will undergo topsoil placement and erosion fabric installation to meet final floodplain grade (ie. bankfull elevation). Erosion fabric will be initially laid out along the bank within the channel, so that the left edge is within the channel while the right edge is overlapping the sub-grade bank 1-2 ft (looking downstream). The right edge will be fastened with wooden stakes at regular intervals to lock in the bottom edge of the fabric. Topsoil will be placed at the designated bank edge, compacted in lifts to final elevation. Prior to rolling the left edge of the fabric, the bank will be seeded with native seed mix. Once the fabric has been overlaid and the bank edge is formed, wooden stakes will fasten the fabric in place according to manufacturer specifications.

- Floodplain grading

  Adjustments to the sub-grade floodplain will be made at this time to prepare the area for topsoil and finish floodplain grade. Identified areas of compaction from hauling or vehicle traffic will be ripped to a depth of 0.5-1.0 ft to loosen soils.

- Wood chip placement

A percentage of the cleared trees will be chipped and stockpiled. This is an effort not only to reduce material handling but also to keep carbon on-site as a soil additive. The wood chips will help increase the coarse woody organic layer and detritus to potentially increase successional recovery and establish a micro soil fauna similar to wooded or successional areas. Only trees greater than 4 in. dbh will be used to produce woody chips in order to avoid invasive species recruitment from the shrub layer. Wood chip mulch will be spread on the sub-grade in a relatively even layer of 1-3 inches.

- Topsoil placement and grading

  Clean topsoil free of PCB's (i.e., PCB concentration less than 0.1 mg/kg) from a local source will be imported and spread over the sub-grade to meet final floodplain and upland elevations. A soil test shall be performed to identify soil characteristics. A composite sample of the imported material will be used from the source location. A standard soil test provides an indication of levels of phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), pH, cation exchange capacity, lime requirement index and base saturation. An important soil characteristic is a soil pH around 6.5. At this level, most soil nutrients are readily available. Based on the results of the soil test(s) fertilizers or additional constituents can be added to the soil to provide an adequate balance for vegetation.

- Woody debris deadfall placement

  Following topsoil placement, woody debris and logs will be placed at locations specified by the restoration biologist. This deadfall will provide additional habitat for wildlife and mimic the natural conditions of a wooded corridor and floodplain. Logs will be slightly buried at one end or along its length in effort to help anchor the wood in case of a large flood event.

- Tree and plant installation

  The restored vegetation is an important component to the project as it provides the foundation for the community and sets the trajectory for recovery. The restored plantings will consist primarily of tree, shrub and live cuttings of varying sizes and species. A list of proposed species for each of the distinct areas (floodplain and stream banks, uplands, wetlands) for the project are included in Table 5. Depending on the weather conditions and timing of when areas are ready for plantings, installation may be delayed until early fall to increase chance of survivability. This would save time and effort on watering through hot summer months as the site will be devoid of most natural shade. Planting of containerized or ball and burlap (B&B) trees and shrubs shall be performed according to ODOT CMS 661. Spacing of the plant depends on the species but will generally be 10-15 ft centers for B&B trees and 6-8 ft for containerized plants. Tree guards may be installed at later date depending on deer activity following project completion. Wood chips or wood mulch will be placed around installed trees and shrubs to help

prevent weed competition in the drip line. Live stakes will be installed during March and April 2010 while species are still dormant.

- Seed and straw mulch

  Seeding of temporary and native seed will occur as soon as possible in disturbed areas. A table of the proposed seed mix species for each of the distinct areas (floodplain and stream banks, uplands, wetlands) is attached. The objective of seeding is to ensure good seed-to-soil contact at a depth of no more than ½ inch. Areas to be seeded will be properly prepared and seeded at a rate of 15 lbs per acre. All seeded areas shall be covered with straw mulch. Straw mulch will be applied by hand or straw blower at a rate of 2 tons per acre. Immediately after straw is laid, material will be crimped by tracked vehicle running against the slope as to not encourage rill erosion.

- Wetland Construction

  Emergent Riverine Wetlands

  Proposed emergent wetlands will be planted with a wide variety of native herbaceous vegetation, including grasses, sedges and forbs that generally grow 1-3 ft in height. Species were selected based on common species in northeast Ohio and those identified in reference wetland areas upstream. Emergent marshes will provide excellent fish refugia during flood events and possible spawning grounds for amphibians and wildlife habitat. Wetland restoration will entail the following bulleted activities below. Refer to the corresponding descriptions above for general guidelines on activities in addition to any particular notes provided.

- Refine Wetland sub-grade
  Grading depressions, swales and berms to create microtopography in accordance with the design plan will be performed at this stage
- Wetland finish grade
- Wetland wood chip placement
- Wetland topsoil placement and grading
- Wetland woody debris deadfall placement
- Wetlant tree and plant installation
- Wetland seed and straw mulch

3.5 Construction Inspection and Oversight

The restoration of Haley's Ditch stream and wetland features will be performed as a design build construction project. The restoration biologist, engineers and construction managers encompassing the restoration team that conceptualized and designed the project will implement the final product. The restoration biologist will be on-site daily for a majority of the restoration construction. In addition to directing operators and assisting in layout, part of this oversight is the periodic checking of the as-built condition utilizing the design plan sections, profile and plan view. Natural channel construction

provides flexibility from the design detail as simplified 2-D sections and profiles cannot represent the intricacies, details and variability of natural channels. However, critical elevations such as riffle crests, floodplain elevations and cross sectional areas provide the basis and range of tolerances. Ultimately, the restoration goal is to construct a stream and valley that functions ecologically and morphologically and provides a foundation that can evolve and adapt over time.

4. Schedule

Lockheed Martin plans to perform the Haley's Ditch remediation activities during the summer of 2009. ARCADIS plans to mobilize to the site in early May 2009 and complete the remediation work in early September 2009. Restoration work is scheduled to be complete by mid October, 2009 with supplemental plantings in spring 2010.

Table 5. Restoration Proposed Species

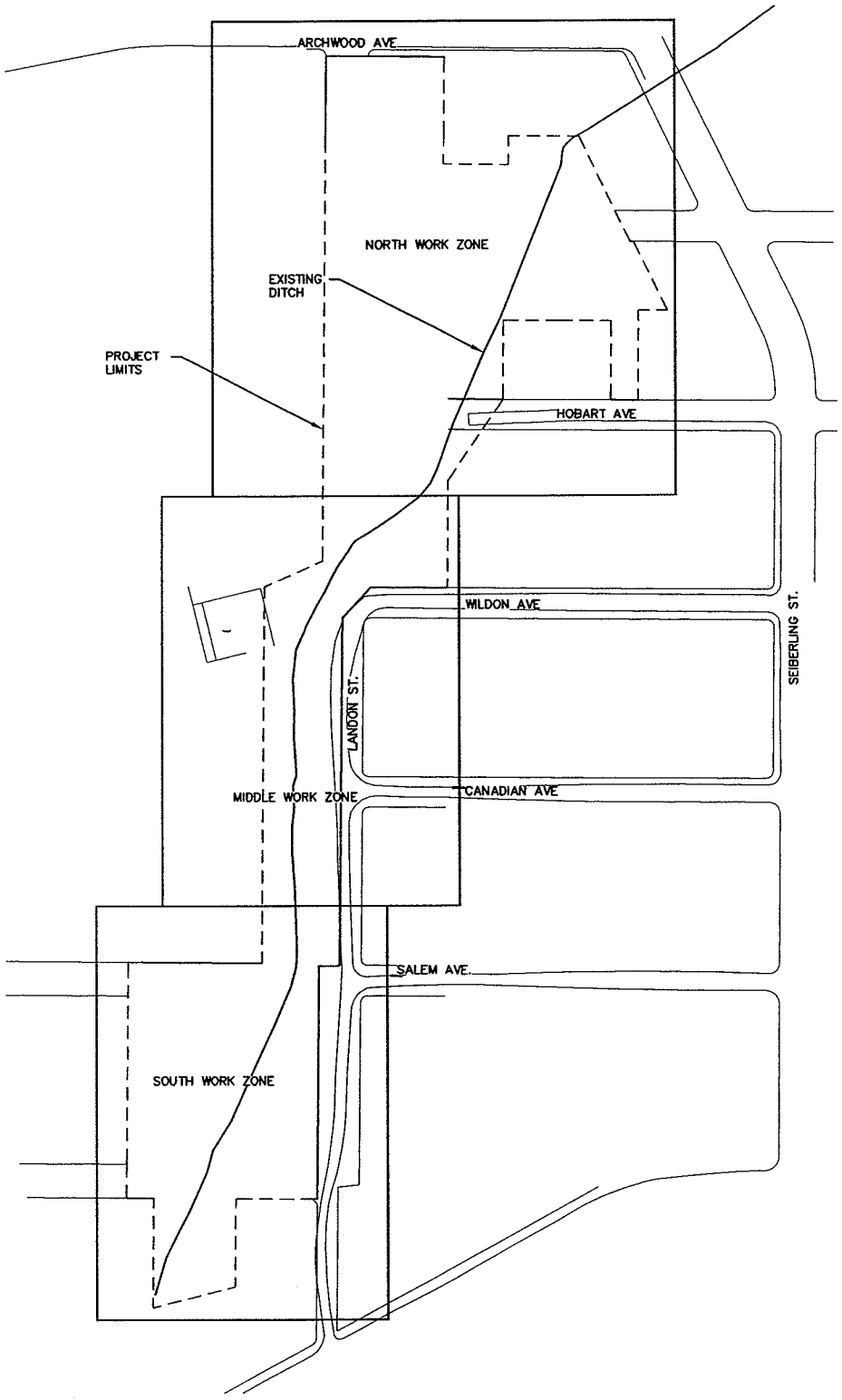
Floodplain / Riparian Areas	
Herbs	
Genus/Species	***Common Name***
Agrimonia parviflora	Small-flowered agrimony
Carex crinita	Fringed sedge
Carex grayi	Asa gray's sedge
Carex lurida	Lurid sedge
Carex vulpinoidea	Fox sedge
Cinna arundinacea	Wood reed grass
Elymus riparius	Riverbank wild rye
Elymus virginicus	(Virginia Wild Rye)
Eupatorium fistulosum	(Joe Pye Weed)
Eupatorium maculatum	(Spotted Joe Pye Weed)
Glyceria striata	Fowl manna grass
Impatiens capensis	Jewelweed
Juncus effusus	Soft rush
Leersia virginica	Whitegrass
Monarda fistulosa	Wild bergamot
Panicum clandestinum	Deertongue
Penstemon digitalis	Tall White Beard tongue)
Rudbeckia hirta	Black Eyed Susan
Senecio aureus	Golden ragwort
Verbesina alternifolia	wingstem

Shrubs/Trees	
Genus/Species	***Common Name***
Acer negundo	Box elder
Alnus rugosa	Speckled alder
Cornus amomum	Silky Dogwood
Cornus sericea	red osier dogwood
Lindera benzoin	Spicebush
Platanus occidentalis	American sycamore
Quercus bicolor	Swamp white oak
Spiraea alba	Meadow sweet
Ulmus americana	American elm

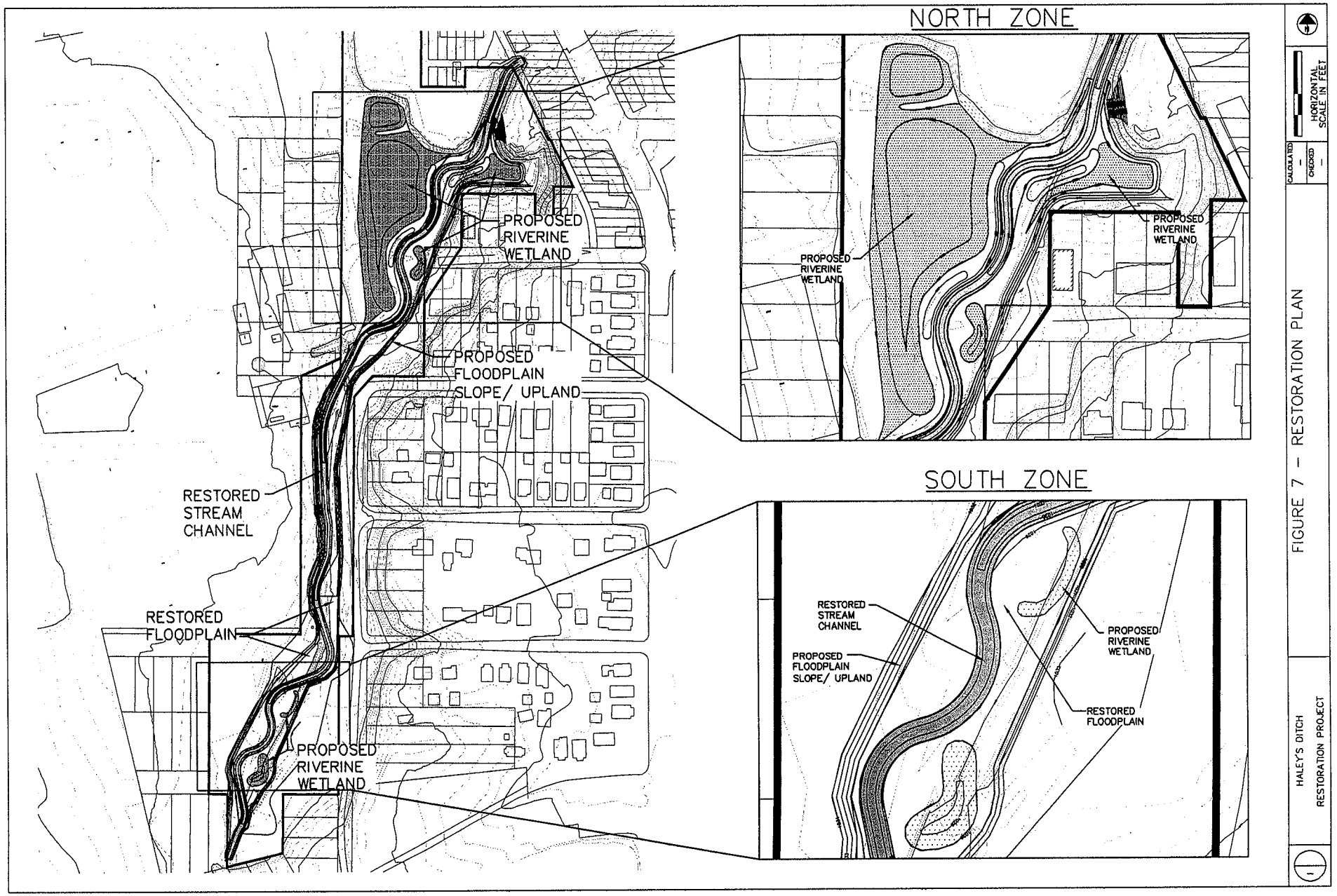
Wetland Areas	
Herbs	
Genus/Species	***Common Name***
Alisma subcordatum	Water plantain
Asclepias incarnata	Swamp milkweed
Carex crinita	Fringed sedge
Carex cristatella	Crested sedge
Carex lurida	Lurid sedge
Carex scoparia	Broom sedge
Carex tribuloides	Blunt broom sedge
Carex vulpinoidea	Fox sedge
Eleocharis obtusa	Blunt spike-rush
Eupatorium fistulosum	Joe Pye Weed
Eupatorium maculatum	Spotted Joe Pye Weed
Eupatorium perfoliatum	boneset
Glyceria striata	Fowl manna grass
Hibiscus moscheutus	Rose mallow
Iris versicolor	Blue flag
Juncus canadensis	Canada rush
Juncus effusus	Soft rush
Leersia oryzoides	Rice cutgrass
Lobelia cardinalis	Cardinal flower
Lycopus americanus	Water horehound
Mimulus ringens	Monkey flower
Onoclea sensibilis	Sensitive fern
Polygonum arifolium	halberdleaf tearthumb
Scirpus cyperinus	Woolgrass
Sisyrinchium angustifolium	Blue-eyed grass
Spiraea tomentosa	steeplebush
Verbena hastata	Blue vervain
Shrubs	
Genus/Species	***Common Name***
Cephalanthus occidentalis	buttonbush
Cornus amomum	Silky Dogwood
Cornus sericea	red osier dogwood
Sambucus canadensis	Common elderberry

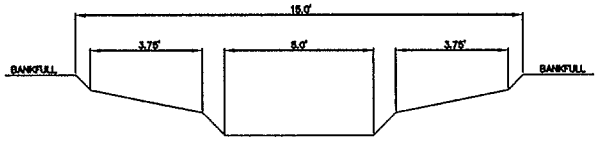
Upland Areas	
Herbs	
Genus/Species	***Common Name***
Aster dumosus	Rice button aster
Aster laevis	Smooth blue aster
Aster novae-angliae	New England aster
Elymus riparius	Riverbank Wild Rye
Elymus virginicus	Virginia Wild Rye
Schizachyrium scoparium	little Bluestem
Solidago altissima	Tall goldenrod
Sorghastrum nutans	Indian grass
Shrubs/Trees	
Acer saccharinum	Silver maple
Carpinus caroliniana	American hornbeam
Cornus racemosa	Gray dogwood
Liquidambar styraciflua	Sweetgum
Liriodendron tulipifera	Tulip poplar
Nyssa sylvatica	Sour gum
Quercus rubra	Red oak
Rhus glabra	Smooth sumac
Rhus typhina	Staghorn sumac

Area	**Acres**
Floodplain/Riparian	
Emergent Wetland	
Upland	
Total	

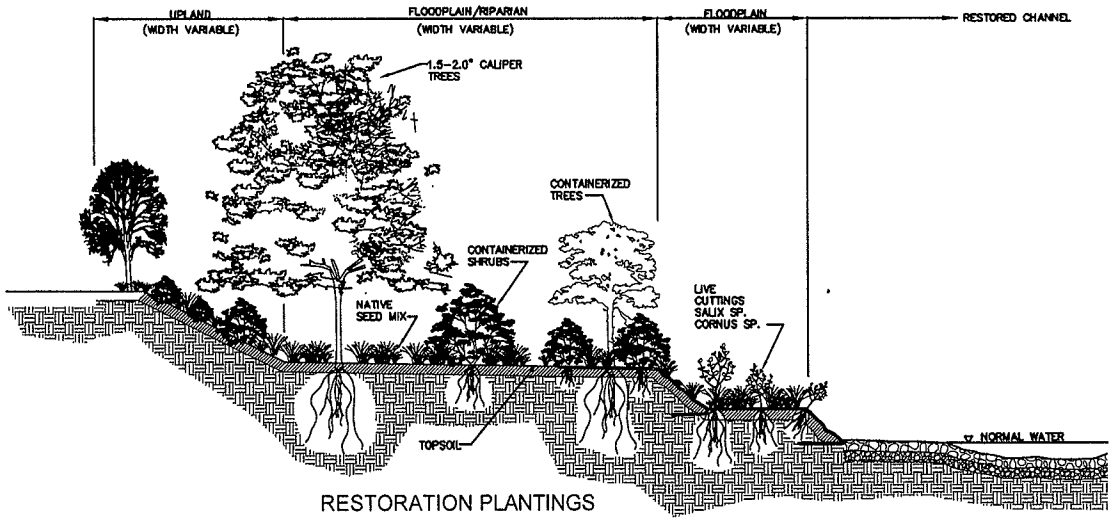


HALEY'S DITCH RESTORATION PROJECT	FIGURE 1 – PROJECT AREA	CALCULATED – CHECKED –	NOT TO SCALE HORIZONTAL SCALE IN FEET	N

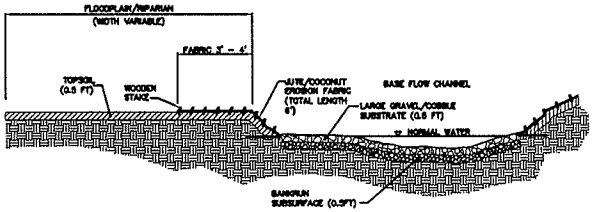

NORTH ZONE
SOUTH ZONE
PROPOSED RIVERINE WETLAND
PROPOSED FLOODPLAIN SLOPE/ UPLAND
RESTORED STREAM CHANNEL
RESTORED FLOODPLAIN
PROPOSED RIVERINE WETLAND
PROPOSED RIVERINE WETLAND
RESTORED STREAM CHANNEL
PROPOSED FLOODPLAIN SLOPE/ UPLAND
PROPOSED RIVERINE WETLAND
RESTORED FLOODPLAIN
HORIZONTAL SCALE IN FEET
CALCULATED
CHECKED
FIGURE 7 – RESTORATION PLAN
HALEY'S DITCH
RESTORATION PROJECT
1



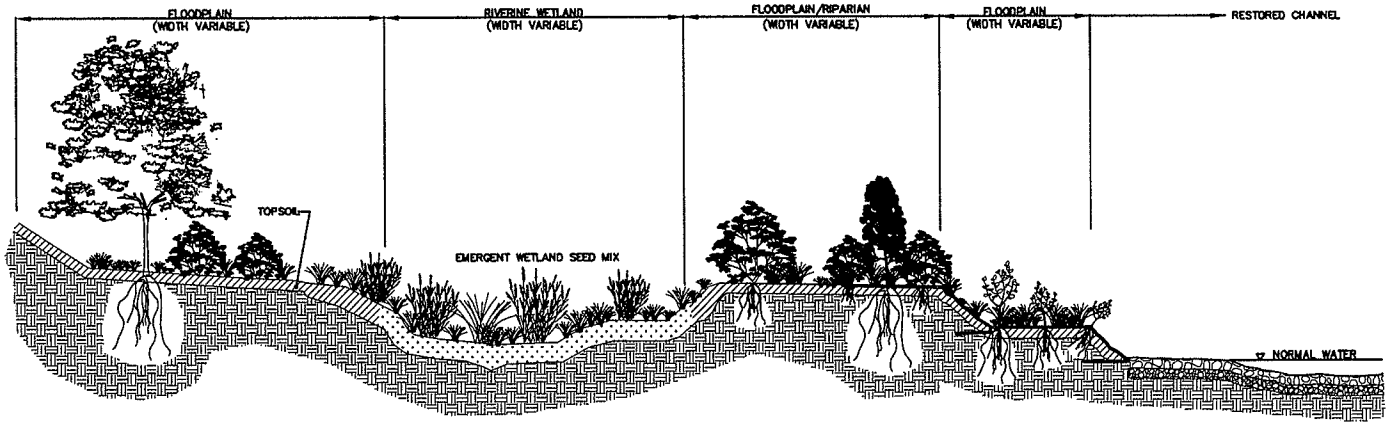
TYPICAL DESIGN SECTION
(N.T.S.)



RESTORATION PLANTINGS
(N.T.S.)



STREAMBANK AND
SUBSTRATE TYPICAL
(N.T.S.)



RIVERINE WETLANDS TYPICAL
(N.T.S.)

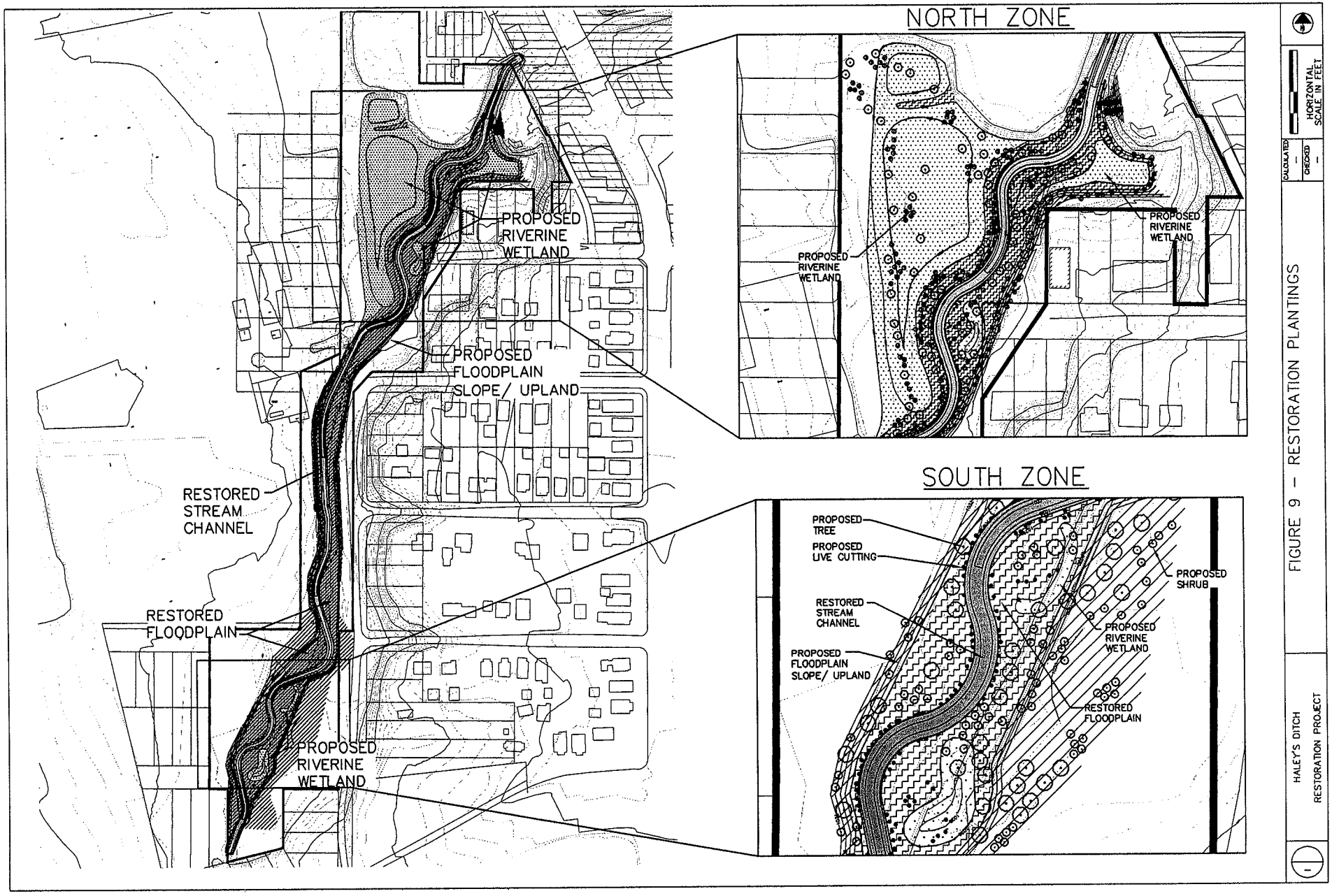
HORIZONTAL SCALE IN FEET

CALCULATED –
CHECKED –

FIGURE 8 – TYPICAL SECTIONS

HALEY'S DITCH
RESTORATION PROJECT

1


NORTH ZONE
PROPOSED RIVERINE WETLAND
PROPOSED FLOODPLAIN SLOPE/ UPLAND
RESTORED STREAM CHANNEL
RESTORED FLOODPLAIN
PROPOSED RIVERINE WETLAND
PROPOSED RIVERINE WETLAND
PROPOSED RIVERINE WETLAND
SOUTH ZONE
PROPOSED TREE
PROPOSED LIVE CUTTING
RESTORED STREAM CHANNEL
PROPOSED FLOODPLAIN SLOPE/ UPLAND
PROPOSED SHRUB
PROPOSED RIVERINE WETLAND
RESTORED FLOODPLAIN
CALCULATED
CHECKED
HORIZONTAL SCALE IN FEET
FIGURE 9 - RESTORATION PLANTINGS
HALEY'S DITCH
RESTORATION PROJECT
1

ARCADIS

Appendix A

USEPA Risk-Based
Disposal Approval

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAY 08 2009

REPLY TO THE ATTENTION OF:
L-8J

CERTIFIED MAIL: 7001 0320 0005 8933 2171
RETURN RECEIPT REQUESTED

Mr. David Gunnarson
Chemical and Environmental Programs
Lockheed Martin Corporation
9500 Godwin Drive
Manassas, Virginia 20110

Re: Risk-Based PCB Cleanup Approval
Massillon Road, Akron, Ohio 44315

Dear Mr. Gunnarson:

We have completed our review of your January 9, 2009 application for a risk-based cleanup under 40 CFR 761.61(c) for the soil/sediment contamination in Haley's Ditch, which originated from the Lockheed Martin Corporation property located at 1210 Massillon Road in Akron, Ohio. Your application was amended by your letters of March 5, 2009 and March 16, 2009. A self-implementing cleanup under 40 CFR 761.61(a) is not applicable because your application covers cleanup of sediments in a freshwater ecosystem.

Nevertheless, your application proposes a cleanup level of 1.0 ppm, similar to the cleanup level for high occupancy areas under the self-implementing regulations. Your application indicates that you also plan to follow the other procedures described in 40 CFR 761.61(a), except that you propose a more practical sampling and analysis plan for cleanup verification.

We have determined that your proposed cleanup level and your alternate sampling and analysis plan for cleanup verification will not pose an unreasonable risk of injury to human health or the environment. Based on our review, your amended application is hereby approved, subject to the following condition: you must prepare a cleanup completion summary report that describes how you conducted the cleanup in accordance with the approved application. You must send a copy to me within 60 days after the scheduled date for completion of the cleanup.

Please note that this approval does not relieve you from your duty to comply with all other applicable federal, state, and local requirements. For example, you must obtain access agreement form for the affected landowners prior to commencement of the work off-site. You must also make sure that all persons participating in the cleanup activities use the appropriate personal protective equipment.

If you have any questions, please contact John Nordine, of my staff by e-mail at nordine.john@epa.gov or via phone at (312) 353-2143.

Sincerely,

Willie H. Harris

for Margaret M. Guerriero
Director
Land and Chemicals Division

Lockheed Martin
Maritime Systems & Sensors
1210 Massillon Road Akron, OH 44315
Telephone 330.796.2800

LOCKHEED MARTIN

Transmitted Via Express Mail

January 9, 2009

Bharat Mathur
Acting Regional Administrator
United States Environmental Protection Agency, Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

Re: Lockheed Martin Corporation
Haley's Ditch, Akron, Ohio
Risk-Based Disposal Approval Request for PCB Remediation Waste

Dear Mr. Mathur:

Lockheed Martin is requesting approval from the United States Environmental Protection Agency (USEPA) for risk-based disposal of polychlorinated biphenyl (PCB) remediation waste to be generated by remedial activities along a portion of Haley's Ditch located in Akron, Ohio. This risk-based disposal approval request is being submitted in accordance with the Toxic Substances Control Act (TSCA) regulations presented in 40 Code of Federal Regulations (CFR) 761.61(c). A detailed application for this request and supporting information is attached.

This risk-based cleanup application pursuant to 40 C.F.R. §761.61(c) meets the self-implementing on-site cleanup and disposal requirements of §761.61(a), with the exception that (1) the cleanup involves removal of PCB-containing sediments from a drainage ditch and (2) verification sampling is not planned in exact accordance with the §761 Subpart O (cleanup verification sampling) grid spacing requirements because of the large area (approximately 5 acres) involved.

This is the final cleanup plan for PCB's originating from the Airdock roof and siding and is consistent with the Airdock Exterior Remediation Strategy documents previously submitted to your office. Cleanup of the Airdock facility has been conducted pursuant to a Consent Agreement and Final Order (CAFO) and several risk-based approvals granted by USEPA. Cleanup projects at the Airdock and surrounding pavement, soils and storm drain system from the Airdock to Triplett Boulevard have already been completed.

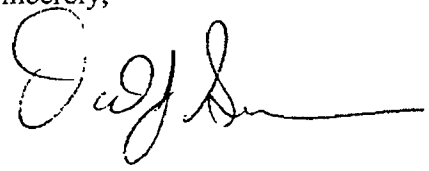
Once this soil and sediment removal is completed, residual PCB concentrations in the remaining soils in Haley's Ditch and adjacent areas will be less than 1 milligram per kilogram (mg/kg) and the stream channel will be restored using clean fill with PCB concentrations less than 0.5 mg/kg.

A community outreach program will also be conducted as part of this remediation project. Further details are included in the supporting documentation.

The schedule for completing this remediation plan by late fall 2009 is contingent upon Lockheed Martin receiving EPA's approval of this application prior to March 2009. The schedule is driven by other statutory permit application and approval requirements and the need to perform the remediation and restoration work in the late summer and early fall when weather conditions are most favorable.

Once you have had an opportunity to review this plan, I would like the opportunity to meet at your office to discuss this plan and answer any questions you may have.

Sincerely,



David Gunnarson
Lockheed Martin Corporation
1210 Massillon Road
Akron, Ohio 44315
330-796-8751

cc: Tony Martig, USEPA Region 5
Rod Beals, Ohio EPA, Northern Regional Office

Attachment:

Application for40 CFR §761.61(c) Risk-Based Cleanup of Soil At Haley's Ditch, Akron, Ohio, January 9, 2009

Application for
40 CFR §761.61(c) Risk-Based Cleanup of Soil
At Haley's Ditch
Akron, Ohio

January 9, 2009

Lockheed Martin Corporation
1210 Massillon Road
Akron, Ohio 44315

CONTENTS

Section **Page**

Tables

Figures

EXECUTIVE SUMMARY

This risk-based application, pursuant to 40 C.F.R. §761.61(c), addresses non-liquid polychlorinated biphenyls (PCBs) in soil and sediment from areas along approximately 1,800 feet of Haley's Ditch from the storm drain culvert originating at Triplett Boulevard to the end of the open channel at the intersection of Archwood Avenue and Sieberling Streets in Akron, Ohio. Lockheed Martin Corporation (Lockheed Martin) is requesting approval from the United States Environmental Protection Agency (USEPA) for the risk-based cleanup of PCBs along this portion of Haley's Ditch. The objective of this plan is to remove soil and sediment containing PCB such that any remaining PCBs will not pose an unreasonable risk to human health or the environment.

In 2003, the unusual non-liquid PCB Aroclor 1268 was discovered to have been a component of the Airdock's original roof and siding. Cleanup of the Airdock facility has been conducted pursuant to a Consent Agreement and Final Order (CAFO) and several risk-based approvals granted by USEPA. Cleanup projects at the Airdock and surrounding pavement, soils and storm drain system from the Airdock to Triplett Boulevard have already been completed (Figure 1). This final phase of cleanup for PCBs originating from the Airdock roof and siding is consistent with the Airdock Exterior Remediation Strategy documents that have been previously submitted to USEPA.

This risk-based cleanup application pursuant to 40 C.F.R. §761.61(c) meets the self-implementing on-site cleanup and disposal requirements of §761.61(a), with the exception that (1) the cleanup involves removal of PCB-containing sediments from a drainage ditch and (2) verification sampling is not planned in exact accordance with the §761 Subpart O (cleanup verification sampling) grid spacing requirements because of the large area (approximately 5 acres) involved. Further discussion of the verification sampling approach is presented in Sections 3 and 4, respectively.

Soils and sediments in and adjacent to Haley's Ditch have been sampled and analyzed for PCBs at 150 locations (512 samples) during several iterative events between 2005 and 2008 to delineate the horizontal and vertical extent of PCBs. The results from the sampling assessments are presented in this application along with a proposed cleanup plan.

Soils containing PCB concentrations greater than 1 mg/kg and all soft sediments will be removed and disposed off site. The excavation areas, except the stream channel and wetlands, will be backfilled, as needed, with soil containing less than 1 mg/kg total PCBs. The restored stream channel and wetland areas will be covered with clean fill material containing less than 0.5 mg/kg PCB. Excavated soil will be managed as PCB remediation waste and disposed of in accordance

with the Toxic Substances Control Act (TSCA) PCB regulations based on the as-found PDB concentration. Verification samples will be collected following the soil removal actions to document that remaining soil PCB concentrations are less than 1 mg/kg. If verification samples indicate that the removal objectives have not been met, additional soil removal will be conducted, followed by additional verification sampling; this process will continue until the cleanup objectives have been met.

Once the soil remedial actions are completed, restoration of the stream channel and wetlands areas will be performed in accordance to United States Army Corps of Engineers (USACOE) requirements.

A public outreach and communications plan will be developed and implemented for this project to ensure that opportunities for stakeholder awareness, information and involvement are provided.

1. INTRODUCTION

The objective of this cleanup is to remove PCB-contaminated soil and sediment such than any remaining PCBs will not pose an unreasonable risk of injury to health or to the environment. This risk-based application is for cleanup of non-liquid polychlorinated biphenyls (PCBs) in soil and sediment from areas along approximately 1,800 feet of Haley's Ditch from the storm drain culvert originating at Triplett Boulevard to the end of the open channel at the intersection of Archwood Avenue and Sieberling Streets in Akron, Ohio as illustrated in Figure 2.

This risk-based cleanup application pursuant to 40 C.F.R. §761.61(c) meets the self-implementing on-site cleanup and disposal requirements of §761.61(a), with the exception that (1) the cleanup involves removal of PCB-containing sediments from a drainage ditch and (2) verification sampling is not planned in exact accordance with the §761 Subpart O (cleanup verification sampling) grid spacing requirements because of the large area (approximately 5 acres) involved. Further discussion of the verification sampling approach is presented in Sections 3 and 4, respectively.

1.1 BACKGROUND

In 2003, the unusual non-liquid PCB Aroclor 1268 was discovered to have been a component of the Airdock's original roof and siding (which consisted of a manufacturing material known as Robertson Protective Metal [RPM]). PCBs may have been included in the coating of the RPM roofing and siding material to serve as a fire retardant. Historical deterioration of the material, caused by aging and weathering, has resulted in exfoliation of a solid granular material that contains PCBs (specifically Aroclor 1268) on the ground around the exterior of the Airdock facility. Stormwater drainage from the Airdock facility is conveyed through a system of subsurface stormwater drainage structures that discharge to Haley's Ditch in the area north of Triplett Boulevard. An aerial photograph which shows the Airdock facility, the storm drains that convey stormwater from the Airdock property, and Haley's Ditch is presented as Figure 1.

As previously reported to the United States Environmental Protection Agency [USEPA] (see Lockheed Martin letters dated June 9, 2005, December 21, 2005, January 24, 2007, and June 22, 2007), the presence of Aroclor 1268 within the sediment and floodplain soils along Haley's Ditch indicates that exfoliated RPM from the Airdock facility property was washed through the drainage system and ultimately deposited in Haley's Ditch and the immediate surrounding area. As indicated by the presence of additional PCB Aroclors that are not present in the RPM, a portion of the PCBs in soil and sediment along Haley's Ditch may also have been released from other sources in the surrounding area and not from operations related to the Airdock. All references to PCBs in this plan refer to total PCBs and not to any specific Aroclor.

To manage the source of PCBs from the Airdock facility, Lockheed Martin has completed a number of source control and remedial actions at the Airdock and provided USEPA with reports and updates of these efforts. These activities have included:

- Installing a rubber membrane over the roof of the Airdock structure;
- Replacing rain gutters to control storm flow from the roof of the Airdock;
- Installing and maintaining filter fabric over all storm drain surface openings around the Airdock to capture solid particles until all remediation in the vicinity of the Airdock is complete;
- Replacing the vertical RPM siding with aluminum siding that does not contain PCBs;
- Remediating the interior of the Airdock in accordance with a plan approved by USEPA on December 22, 2006;
- Removing PCB-containing soil located adjacent to the Airdock;
- Removing debris from the pavement around the Airdock to remove residual RPM; and,
- Removing debris from the storm sewer system from the facility to Triplett Boulevard to remove residual RPM.

Together, these remedial activities are expected to eliminate the future release of PCBs from the Airdock facility to the stormwater system and Haley's Ditch. In addition, Lockheed Martin is performing post clean-up storm water monitoring under the supervision of Ohio EPA to verify the effectiveness of these remedial actions.

1.2 APPLICATION ORGANIZATION

This application is organized in the following sections.

Section 2 – Remedial Approach and Objectives: describes the general approach to remediation, restrictions, and cleanup goals.

Section 3 –Sampling Approach and Characterization Data: describes the various phases of soil sampling and analysis investigations conducted between 2005 and 2008.

Section 4 – Soil Remediation Plan: describes the removal, off-site disposal, and verification sampling of soil containing PCBs greater than 1 mg/kg and removal and off-site disposal of sediments from the ditch.

Section 5 – Community Relations Plan: summarizes the key concepts and elements of a plan that is being developed and implemented for this project to ensure opportunities for stakeholder awareness, information and involvement are provided.

Tables and figures supporting this application follow the text.

2. REMEDIAL APPROACH AND OBJECTIVES

The overall goal of the Haley's Ditch remediation project is to remove PCB-contaminated soil and sediment such that any remaining PCBs will not pose an unreasonable risk to human health or the environment. To accomplish this goal, soils and sediments in the project area will be removed to less than 1 mg/kg PCBs. Soil will be replaced, as needed for planned restoration, with clean fill material containing less than 1 mg/kg PCBs (all soil borrow sources will be sampled and analyzed prior to being imported to the site for use as backfill). The existing ditch, which will be replaced with a meandering channel to improve hydraulics and habitat, will be restored using clean fill material containing less than 0.5 mg/kg PCBs.

The 1 mg/kg soil cleanup action level is based on the cleanup level established by USEPA for unrestricted use in "High Occupancy Areas" in §761.61(a)(4)(1)(A).

2.1 PROJECT BOUNDARIES AND OWNERSHIP

The Haley's Ditch project boundary is shown on Figure 2 and includes the storm drainage culvert originating at Triplett Boulevard. Land within the project boundary is owned by several individuals, corporations and the City of Akron. The total project area is approximately 5 acres. The shaded area shown on Figure 2 depicts portions of the site where soil and sediment will be removed based upon sampling results indicating PCBs are present at concentrations exceeding 1 mg/Kg. Based on results known at the time, a fence was installed in 2007 on properties with unrestricted access to prevent public access to areas with PCB concentrations greater that 1 mg/kg at the surface. Samples collected in September 2008 indicate a small area with PCB concentrations in shallow soil above 1 mg/kg outside the current fenced area. The existing fence is currently being modified to enclose this area.

Lockheed Martin has obtained access and permission for remediation from all land owners in the project area. Successful completion of this project is contingent upon continued cooperation of these land owners for access. Should any land owner withdraw permission for access or remediation, the project may not fully proceed. Lockheed Martin will endeavor to satisfy the land owners and maintain adequate permission for the duration of this project.

2.2 POST REMEDIATION LAND USE

Once the remediation project is completed, the land will meet the standards established in §761.61(a)(4)(1)(A) for High Occupancy Areas with ≤1 mg/kg PCBs and will not be subject to activity or land use restrictions.

2.3 PCB WASTE CLASSIFICATION AND MANAGEMENT

Soils and sediment containing PCB will, for purposes of this project, be managed as PCB remediation wastes under §761.3. The excavated material will be managed and disposed of based on the "as found" total PCB concentration of individual samples collected in situ.

As a conservative measure, soils and sediments containing PCBs with concentrations equal to or greater than 25 mg/kg will be disposed off site at a TSCA-permitted landfill; soils with a PCB concentration between 1 mg/kg and less than 25 mg/kg PCBs may be disposed off site at a Subtitle D landfill that is permitted to accept wastes containing PCBs at concentrations less than 50 mg/kg, consistent with § 761.61(a)(5)(v)(A). Soil with less than 1 mg/kg PCBs will remain within the excavation area without further conditions.

3. SAMPLING APPROACH AND CHARACTERIZATION DATA

The purpose of the sampling conducted along Haley's Ditch to date has been to characterize the horizontal and vertical extent of PCBs along Haley's Ditch. Deposition of the solid particles from the Airdock siding was assumed to occur in the channel of Haley's ditch and in adjacent low-lying areas subject to flooding during high stream flow events when Haley's Ditch exceeded its banks. The investigation included a series of sample transects established along Haley's Ditch at 100 foot intervals. Samples were collected for PCB analysis along each interval in the centerline of the channel of Haley's Ditch, at the top of stream bank, and at approximately 25 foot intervals extending away from the centerline of the channel on each side until sample results indicated PCBs were present at less than 1 mg/kg or property boundaries or some other physical obstruction or field condition limited the extent of soil sampling.

3.1 CHARACTERIZATION SAMPLING AND ANALYSIS METHOD

Soil sampling methods for all sampling events used direct-push technology to advance shallow borings. Soil core diameters were approximately 1.25 to 2 inches (3.2 to 5.1 cm). Sample core thickness ranged from 3 to 12 inches (7.6 to 30.5 cm); samples were subsequently analyzed starting with the 0" to 6" and 6" to 12" samples in 6-inch vertical increments until PCB concentrations less than 1 mg/kg were detected, to a maximum sample depth of 3 feet, or to refusal, whichever was encountered first. Samples were submitted to Severn Trent Laboratories, Inc. (STL) in Chicago, Illinois, or North Canton, Ohio for laboratory analysis of total PCBs using EPA Method 8082, modified to include Aroclor 1268.

3.2 CHARACTERIZATION SAMPLE COLLECTION EVENTS AND RESULTS

Preliminary investigative sampling in Haley's Ditch was conducted during June 2005 on property owned by Lockheed Martin. This initial sampling event indicated the presence of PCBs in sediment and floodplain soils along Haley's Ditch but did not delineate the full horizontal extent. Thus, additional investigation activities to delineate the extent of PCBs were implemented subsequent to obtaining access agreements with various private property owners. Soil and sediment sampling in the southern portion of Haley's Ditch was conducted in 2005 followed by investigations in the northern portion of the ditch in 2006. In 2008 additional samples were collected from both the southern and northern areas to further refine the characterization for purposes of the initial identification of areas to be excavated. The analytical results of the 2005 and 2006 Haley's Ditch investigation activities have been previously reported to USEPA in submissions dated December 21, 2005 and January 24, 2007. In combination, the various

PCB soil and sediment delineation tasks resulted in the analysis of 512 samples. All of these results are included in Table 1.

PCBs were detected in both surface and subsurface floodplain soil samples (see Table 1 and Figures 3 to 5). Soil samples exhibited PCB concentrations greater than 1 mg/kg with no uniform vertical distribution. PCBs were detected at four soil sampling locations in three discrete areas at concentrations exceeding 50 mg/kg (areas shaded green in Figure 2). PCBs detected in sediment samples were at concentrations below 50 mg/kg.

As shown in Table 1 and Figures 3 - 5, the PCB contamination in Haley's Ditch has been evaluated sufficiently to establish the initial excavation areas. It is recognized that the complete vertical and horizontal delineation of all areas that contain greater than 1 mg/kg has not been achieved through this initial characterization sampling. As described in Section 4.6, the verification sampling will accomplish the necessary degree of final delineation, and the soil and sediment removal process will continue until the cleanup objectives have been achieved and verified.

4. SOIL REMEDIATION PLAN

Remedial activities for Haley's Ditch will consist of removing all unconsolidated soft sediments (estimated removal depth 1 - 3 feet) and removing surface and subsurface soil along the banks and nearby floodplain soil of the ditch as illustrated by Figures 2 through 6. A 50-foot by 50-foot grid with 25-foot-square sampling sub-grids will be established over the entire remediation area to facilitate management of the excavation and verification sampling as shown in Figure 6.

Prior to implementing the remedial activities, appropriate permit applications and notices to excavate the sediment and soil along Haley's Ditch will be submitted to the Ohio Environmental Protection Agency (OEPA) and the U.S. Army Corps of Engineers (USACOE). A pre-construction notice (PCN) to conduct the removal activities under Nationwide Wetlands Permit 38 (NP-38), which covers environmental remediation activities in federal jurisdictional wetlands, will be submitted in parallel with this disposal approval application.

Estimates of soil and sediment removal areas and volumes were developed based on interpolation of the PCB data collected during previous characterization and delineation tasks. The in-situ PCB depth profile at each sample location will be used to estimate the initial depth of excavation (Figures 3 to 5). Approximately 600 cubic yards of unconsolidated sediment from the ditch and approximately 10,000 cubic yards of surface and subsurface soil will be excavated from the excavation limits indicated on Figure 2. Excavation limits will be modified vertically or horizontally in the event of unforeseen site conditions or if post-excavation verification sampling results exceed 1 mg/kg. If verification sampling data indicate the presence of PCBs greater than 1 mg/kg remain in-place, additional soil removal will be conducted in that area and additional verification samples will be collected until the 1 mg/kg PCB action level is met.

The soil and sediment removal activities will include the following activities.

4.1 MOBILIZATION

Mobilization will consist of completing site preparation activities, establishing access control, site clearing, construction of material staging areas, and assembly of material handling and water handling systems.

4.2 BYPASS FLOW

Base steam flow within the ditch will be bypassed around active remediation area by pumping from above the active remediation area to a location downstream of the active remediation activities; it is expected

that bypass pumping will be conducted in sections along the ditch. Energy dissipation measures will be employed to control potential erosion at the discharge locations. By-pass pumping will be conducted to facilitate "in-the-dry" excavation to the extent practical and minimize potential sediment transport from the remediation area to downstream portions of the ditch. Sediment removal activities and by-pass pumping will be suspended during significant storm events to further minimize potential sediment transport; sediment removal activities will be completed in anticipation of storm events such that disturbed sediments are not present within the channel during storm events.

4.3 SOIL REMOVAL AND HANDLING

Soil removal activities will be conducted in manageable segments beginning at the south (upstream) and progressing north (downstream). Sediment removal activities will also include the removal of accumulated sediments from a culvert that extends from the north side of Triplett Boulevard to the headwaters of Haley's Ditch; this action will complete the removal of sediments from the storm drain system extending from the Airdock to Haley's Ditch. Backfilling and restoration will be conducted concurrently following verification that cleanup objectives have been achieved.

It is anticipated that approximately 600 cubic yards of sediment and 10,000 cubic yards of soil will be excavated. Excavated sediment and soil will be transferred to a material staging area for short term storage (expected storage duration would be 1 to 3 days) when direct loading into dump trucks or other transportation containers is not feasible. Separate lined and bermed staging areas will be used for material containing more than 1 mg/kg but less than 25 mg/kg and for material containing greater than or equal to 25 mg/kg. If needed, natural drainage will be used to dewater the sediment and soil prior to loading for off-site transport and disposal and water generated by this process will be managed in accordance with Section 4.5 below. Any bulk PCB remediation waste at concentrations less than or equal to 50 mg/kg shall be stored onsite in accordance with § 761.65(c)(9). Although not anticipated to be necessary, stabilization may also be conducted via the addition and mixing of lime, Portland cement, or dry soil, if necessary to meet disposal facility requirements. Sediment and soil not requiring dewatering or stabilization may be directly loaded into trucks for immediate off-site transport for disposal.

Soil excavation will extend to the limits shown on Figures 3, 4 and 5 for the ground surface to one foot depth, one foot depth to two foot depth, and two foot depth to three foot depth respectively. Additional soil will be removed if verification sampling, as described in Section 4.6, indicates that remaining PCB's concentrations exceed 1 mg/kg.

4.4 OFF-SITE DISPOSAL

Approximately 9,200 cubic yards of soil and sediment containing an in-place concentration of PCBs equal to or greater than 1 mg/kg less and less than 25 mg/kg will be transported for disposal at a permitted solid waste landfill meeting the requirements of §761.61(a)(5)(i)(B)(2)(ii). Approximately 1,400 cubic yards of soil with in-place PCB concentrations exceeding 25 mg/kg will be transported for off-site disposal at a TSCA-permitted landfill.

4.5 WATER TREATMENT AND DISPOSAL

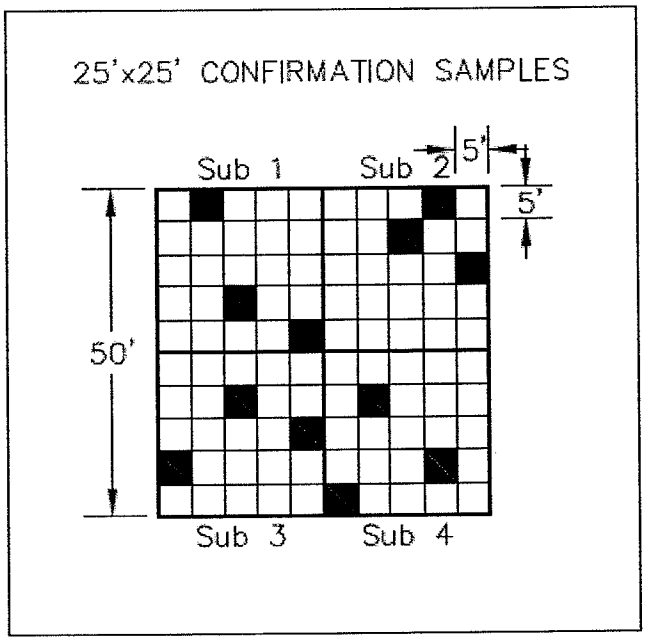
An on-site water treatment system will be used to treat water generated by remediation activities including water from dewatering, if needed, and water pumped directly from active excavations, if necessary and will not treat water moved through bypass pumping. The water treatment system will consist of a bag or multimedia filtration system to remove suspended solids, followed by granulated activated carbon filtration, if needed, to meet the requirements of the local Publicly Owned Treatment Works (POTW). Following sampling and analysis, the treated water will be discharged to the local POTW under approval of the City of Akron. Based on prior agreements with the City of Akron for discharge of water to the POTW, it is anticipated that the discharge limit will be a non-detectable result of the analytical method and less than the 3 parts per billion (ppb) standard presented in §761.79 (b)(1)(ii) for water discharged to a Clean Water Act-permitted treatment system.

Bag filters or multimedia filtration spoils will be transported for offsite disposal at a TSCA-permitted landfill. Activated carbon will be regenerated at an offsite location for re-use or transported for off-site disposal at a TSCA-permitted landfill.

4.6 VERIFICATION SAMPLING

Following the removal of soil and sediment from the excavation area, and before any backfilling or site restoration, verification samples will be collected for analysis of PCBs to demonstrate that remaining soil contains less than 1 mg/kg PCB. If verification samples are equal to or greater than 1 mg/kg, additional soil will be removed and additional verification samples will be collected for analysis. This process will continue until the vertical and horizontal verification samples are less than 1 mg/kg. To aid the excavation and sampling process, a 50 foot by 50 foot grid will be established over the entire project area as illustrated on Figure 6. Each 50-foot by 50-foot grid square will be subdivided into four 25-foot by 25-foot sub-grids. These sub-grids will be further subdivided into 25 5-foot by 5-foot sample squares as shown in the accompanying illustration. The grid pattern and sub-grid shape will be adjusted where needed to optimize alignment with the excavation areas and accommodate field conditions or physical barriers.

Each sub-grid will be sampled independently for cleanup verification purposes and the following sampling procedures will be used to locate, collect and analyze the samples. A coordinate-based random number generator will be used to identify three of the 25 samples squares from each excavation sub-grid. Three individual samples will be collected and composited from the center of each randomly identified sample square from each sub-grid using a core sampler with a diameter ≥2 cm and ≤ 3 cm from the base of the excavation to a maximum depth of 7.5 cm. Verification samples will be submitted for laboratory analysis for total PCBs using USEPA SW-846 Method 8082, modified to include Aroclor 1268, with Automated Soxhlet Extraction (ASE, SW-846 3545A). If the analytical result for verification samples from a sub-grid equals or exceeds the cleanup objective, additional soil removal will be conducted for that sub-grid. Once the additional soil is removed verification samples will be collected from the bottom of the excavation in the same manner as previously described using a new random number sequence for sample locations to determine if the additional excavation meets the cleanup objective. If not, additional excavation and verification sampling will continue until the cleanup goal is reached.



Coordinate Grid and Sample Location Identification Example

In areas where the excavation does not encompass a full 25-foot grid sub-square, such as where the excavation line bisects a sub-grid, the same random number generation process will be used to identify three sample locations from the total number of 5-foot by 5-foot sample squares in the partial sub-grid. The same sample collection technique and composite analysis method will be used.

Additional characterization samples will be collected at the perimeter of the excavation area at each depth level of the excavation to compliment prior characterization samples and verification samples collected during the soil removal process, to create a sample set with a minimum horizontal spacing of 50 feet along the perimeter and at one foot deep intervals to fully define the area where the in-place PCB concentration is less than 1 mg/kg.

4.7 SITE RESTORATION PLAN

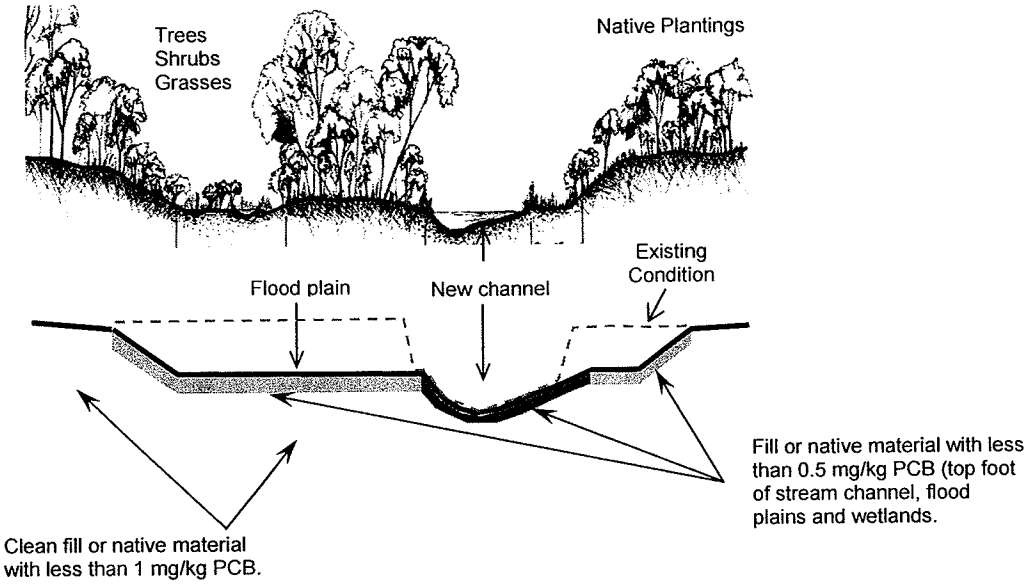
A proposed stream restoration project incorporating natural channel design strategies and native plantings is proposed for Haley's Ditch in conjunction with the PCB cleanup. The ditch will be replaced with a meandering stream designed to improve system hydraulics and habitat along the remediation corridor. The stream and wetland restoration will be completed in accordance with a Nationwide Wetlands Permit 38 pre-construction notice which will be submitted to the USACOE. The overall goal of the restoration is to enhance the hydraulic performance and habitat quality within the remediated area.

The existing condition of Haley's Ditch is largely the result of past management activities (not conducted by Lockheed Martin nor having anything to do with Airdock activities or operations). The past channelization of the ditch initiated a channel evolution process of down cutting and widening, leaving bank heights on average of 3 to 4 feet and eliminated normal access to a functional floodplain. This morphological impairment has reduced aquatic habitat quality by embedding substrates, decreasing pool depth, increasing flow velocity, and reducing overall stability. Despite the past activities affecting the morphology and habitat of Haley's Ditch, the surrounding riparian is in relatively good condition and is composed of a forested canopy through a majority of the project reach. Lockheed Martin recognizes both the degraded morphology and habitat conditions and functional riparian corridor will be impacted by the removal of sediments and soil. However, Lockheed Martin sees an opportunity to create a foundation for better ecological recovery potential through stream, wetland and riparian restoration.

In conjunction with the PCB remediation, a restoration plan is being finalized that is designed to replace and enhance stream habitat and riparian function. This will be done by recreating a natural meandering stream pattern appropriate to the valley slope. The additional sinuosity will add habitat heterogeneity by facilitating the development of riffle-pool complexes. The meandering channel will be constructed within a larger floodplain corridor. The opportunity for floodplain reconnection is very feasible with this project because of the required excavation of impacted soil will leave a large continuous area at a lower elevation. The expanded floodplain and renewed hydraulic access will also reduce energy within the channel and allow for deposition of fine sands and silts that are currently embedded substrates within the channel. An imported mixture of clean sand and gravel material that will contain less than 0.5 mg/kg PCBs, will be used to create the streambed.

The restored floodplain will be backfilled and graded to a final elevation with clean fill material containing less than 1 mg/kg PCBs with the top foot using imported topsoil that contains less than 0.5 mg/kg PCBs. The replacement of the forested condition will take time; however, the restoration plan will aim to establish an early successional community toward a trajectory of forest recovery. Perennial herbaceous vegetation containing a mixture of native riparian grasses, sedges and forbs will be seeded throughout the corridor and floodplain. Woody vegetation will be concentrated near the restored stream banks such as willow and dogwood cuttings for long-term stability. Larger woody riparian species such as sycamore, maple, ironwood etc. will be installed along the stream length as well.

In addition, to the stream restoration, three wetland areas totaling approximately 0.83-acres will be replaced and enhanced within the project area. These wetlands will be similar to the existing type of wetland but will actually have increased hydrology due to their presence in the new more hydraulically active floodplain. One to three depressional areas mimicking abandoned channel alignments or riverine floodplain wetlands will be integrated into the floodplain corridor. The restored wetland areas will be backfilled and graded to a final elevation with clean fill material containing less than 1 mg/kg PCBs with the top foot using imported topsoil that contains less than 0.5 mg/kg PCBs. These areas will be planted with native obligate or facultative species comprised of perennial grasses, sedges, rush and forb species. Wetland shrub and tree species will be planted in clusters surrounding and within the restored areas. A conceptual depiction of the restored channel is presented in the following illustration.



Conceptual Restored Channel

4.8 PROPOSED SCHEDULE

Lockheed Martin is planning to begin the remedial activities during June or July 2009 or earlier contingent upon approvals from USEPA, USACOE, and OEPA and any other land owner or other required approval. Completion of the site remediation activities will require approximately 140 days. The first 20 days will include contractor mobilization and site preparation. The next 120 days will include the sediment and soil removal efforts, material processing, site restoration, and demobilization from the site.

4.9 POST-CONSTRUCTION ACTIVITIES

A post-excavation report will be prepared following remediation to summarize the completed field activities and present the verification sampling data. All reports will be maintained on file at the Airdock, in accordance with the record-keeping requirements of §761 Subpart J. Copies of such reports will be made available to the USEPA, upon request.

5. COMMUNITY OUTREACH PLAN

As part of this project, a Community Outreach plan will be developed and implemented before any of the remediation work outlined in this application begins. The Community Outreach plan will be designed to establish and develop working relationships with any stakeholders to ensure that constructive communication channels are established to resolve any issues or concerns that might arise efficiently and effectively. The plan will include a systematic plan of action to communicate the remedial actions to the targeted audiences and to solicit their feedback.

The overarching goals of the outreach efforts are:

1. To continue Lockheed Martin's commitment to engage the public in an informational and educational process;
2. To better understand stakeholders' concerns, issues and needs, and if concerns are discovered, to resolve them efficiently and effectively while maintaining the integrity of Lockheed Martins' remediation and community outreach process. Whenever possible a mutually agreeable settlement of the issue will be reached.

The plan also will provide a fundamental understanding with the targeted audiences about the remedial project planned for Haley's Ditch. This will help ensure the interested stakeholders have front-end input into assisting Lockheed Martin in making the appropriate decisions for the impacted area. The intent of the plan is to enable resolution of any and all stakeholder issues and concerns efficiently and effectively with mutual gains for each party whenever possible.

The plan is designed to be resilient to meet any changing needs for information exchange or interaction between the stakeholders, Lockheed Martin and the regulators.

Table 1 - Haley's Ditch Soil And Sediment Data Summary

Sample ID	Total PCB Concentration (mg/kg)					
	Sample Depth (ft bgs)					
	0.0 - 0.5	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 3.0
SOIL						
LM-SO129	**20 J**	**2.5 J**	**10.1**	**31.9**	**18.6**	**43**
LM-SO130	**13 J**	**6.4 J**	**29.2**	**14.2**	**1.4**	0.85
LM-SO131	**1.59 J**	**1.6 J**	NC	NC	NC	NC
LM-SO132	**1.1 J**	0.84 J	NC	NC	NC	NC
LM-SO133	**28.5 J**	**37. 9 J**	**29.8**	**1.73**	**20.4**	**6.7 [5.6]**
LM-SO134	**1.07 J**	0.79	0.28	0.027	NA	NA
LM-SO135	**3.36 J**	0.97 J	**23.3**	0.94	NA	NA
LM-SO136	0.47	**3.46 J**	**1.51**	**13**	**1.27**	0.31
LM-SO137	**24 J**	**1.5 J**	NC	NC	NC	NC
LM-SO138	**13.2 J**	**13.6 J**	**7.8**	**9.2**	**3.2**	**1.2**
LM-SO139	**2.3 J**	0.65 J	**1.5**	**2.3**	**2**	**1**
LM-SO140	**2.33 J**	**7.2 J**	**2.13**	**4 [4.7]**	**36.3**	0.37
LM-SO141	**27.8 J**	**80 J**	**1.74**	**54.8**	0.064	0.014 J
LM-SO142	**15.4 J**	**22.9 J**	**1.2**	**2**	0.063 [0.048]	0.077
LM-SO143	0.69 J	0.64 J	NC	NC	NC	NC
LM-SO144	**5.53 J**	**1.65 J**	0.51	0.92	NA	NA
LM-SO145	**19.8 J [22.3J]**	**42 J [40.3 J]**	0.49	0.045	NA	NA
LM-SO146	**8.2**	**31.5 J**	**1.3**	ND	NA	NA
LM-SO147	**8.4 J**	**18.5 J**	**3.3 [2.6]**	**3.3**	ND	ND
LM-SO148	**22.9 J**	**2.01 J**	0.42	**2.02**	0.79	0.04
LM-SO149	0.97 J	NA	NA	NA	NA	NA
LM-SO150	**15.8 J**	NC	ND	0.048 [0.039 J]	NA	NA
LM-SO151	**23.1 J**	NC	**2.6**	**9.3**	**1.1**	**5.6**
LM-SO152	**7.2 J**	0.66 J	0.48	0.88	NA	NA
LM-SO153	**16.2 J**	**29.6 J**	0.047	ND	NA	NA
LM-SO154	**1.9 J**	0.29 J	**1.4**	**1.4**	0.14 [0.14]	0.93
LM-SO155	**44**	**7.4**	**12.8**	**14**	**41**	ND
LM-SO156	**5.4**	0.49	NA	NA	NA	NA
LM-SO157	0.31	0.046	NA	NA	NA	NA
LM-SO158	ND	ND [ND]	NA	NA	NA	NA
LM-SO159	**57**	**59**	**61**	**66**	**31**	**60**
LM-SO160	**31.6**	**7.8**	**20.5**	**21.5**	**26.5**	**15.4**
LM-SO161	0.95	0.27	NA	NA	NA	NA
LM-SO162	0.054	ND	NA	NA	NA	NA
LM-SO163	**17.4**	**1.41**	**2.11**	**12.8**	0.047	0.036 J
LM-SO164	ND	ND	NA	NA	NA	NA
LM-SO165	0.81	0.213	NA	NA	NA	NA
LM-SO166	0.296	0.087	NA	NA	NA	NA
LM-SO167	ND	ND	NA	NA	NA	NA
LM-SO168	**12**	**55**	0.45	0.104	NA	NA
LM-SO169	0.232	0.27	NA	NA	NA	NA

Sample ID	Total PCB Concentration (mg/kg)					
	Sample Depth (ft bgs)					
	0.0 - 0.5	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 3.0
LM-SO170	0.094	0.027	NA	NA	NA	NA
LM-SO171	0.102	ND	NA	NA	NA	NA
LM-SO172	**10.5**	**4.4**	**3.7**	**11.3**	0.1	ND
LM-SO173	0.36	**10.2**	0.321	0.89	NA	NA
LM-SO174	0.12	0.115	NA	NA	NA	NA
LM-SO175	0.089	0.087	NA	NA	NA	NA
LM-SO176	ND	ND	NA	NA	NA	NA
LM-SO177	**3.9**	**4.5**	**1.03**	0.29	NA	NA
LM-SO178	**8.2**	**5.2**	**2**	0.188	NA	NA
LM-SO179	0.159	0.024	NA	NA	NA	NA
LM-SO180	ND	ND	NA	NA	NA	NA
LM-SO181	0.146	0.135	NA	NA	NA	NA
LM-SO182	0.244	0.27	NA	NA	NA	NA
LM-SO183	**2.78**	0.44	0.258	0.028	NA	NA
LM-SO184	0.72	**1.08 J**	**6.6**	**4.1**	0.021	0.021
LM-SO185	ND	ND	NA	NA	NA	NA
LM-SO186	ND	ND	NA	NA	NA	NA
LM-SO187	0.38	0.021	NA	NA	NA	NA
LM-SO188	0.25	0.23	NA	NA	NA	NA
LM-SO189	0.35	0.121	0.032	0.17	NA	NA
LM-SO190	0.19	0.18	NA	0.25	NA	NA
LM-SO191	0.023	ND	NA	NA	NA	NA
LM-SO192	ND	ND	NA	NA	NA	NA
LM-SO193	0.333	0.189	NA	NA	NA	NA
LM-SO194	0.18	0.203	NA	NA	NA	NA
LM-SO195	**19**	**21**	**3.65**	**24.8**	**23.5**	**5.98**
LM-SO196	0.74	0.67	0.23	**6.1**	0.78	0.424
LM-SO197	0.03	0.025 [0.031]	ND	ND	NA	NA
LM-SO198	ND	NA	NA	NA	NA	NA
LM-SO199	0.071 J	0.077 J	NA	NA	NA	NA
LM-SO200	0.101	0.091	NA	NA	NA	NA
LM-SO201	0.06	0.24	0.19	**10**	0.22	0.67
LM-SO202	**1.09**	**1.9**	0.52	**2.2**	**1**	**1.5**
LM-SO203	0.42	0.238	NA	NA	NA	NA
LM-SO204	0.099	0.06 [0.048]	NA	NA	NA	NA
LM-SO205	0.92	**2.5**	**2.3**	0.38	0.59	**1.7**
LM-SO206	0.59	0.61	NA	NA	NA	NA
LM-SO207	0.065	0.009	NA	NA	NA	NA
LM-SO208	**1.3**	**1.0**	**1.4**	0.55	0.009	0.016
LM-SO209	0.49	0.14	NA	NA	NA	NA
LM-SO210	0.12	0.018	NA	NA	NA	NA
LM-SO211	0.067	0.085	NA	NA	NA	NA
LM-SO212	0.31	**2.8**	**4.4**	**4.0**	**10.5**	**20.6**
LM-SO213	**2.9**	**1.3**	0.30	NA	NA	NA

Sample ID	Total PCB Concentration (mg/kg)					
	Sample Depth (ft bgs)					
	0.0 - 0.5	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 3.0
LM-SO214	**3.3**	**2.3**	0.13	NA	NA	NA
LM-SO215	0.039	0.092	NA	NA	NA	NA
LM-SO216	0.055	0.041	NA	NA	NA	NA
LM-SO217	**1.4**	**39.8**	**12.0**	**17.7**	**24.1**	**1.9**
LM-SO218	**1.8**	**4.1**	**1.5**	**4.2**	**1.5**	**17.9**
LM-SO219	**4.2**	**30.9**	**2.7**	0.073	0.043	0.020
LM-SO220	**3.0**	**2.5**	**8.3**	0.042	0.046	ND
LM-SO221	**1.8**	0.088	NA	NA	NA	NA
LM-SO222	0.079	ND	NA	NA	NA	NA
LM-SO223	**3.4**	**3.7**	**1.9**	0.13	0.037	0.019
LM-SO224	**8.5**	**11.8**	**14.6**	**3.0**	**8.3**	**7.1**
LM-SO225	**12.6**	**13.3**	**1.1**	0.11	0.070	0.013
LM-SO226	**6.2**	**4.9**	0.18	NA	NA	NA
LM-SO227	0.27	**4.5**	0.008	NA	NA	NA
LM-SO228	**1.3**	0.90	NA	NA	NA	NA
LM-SO229	0.085	0.013	NA	NA	NA	NA
LM-SO230	**6.2**	**3.5**	**20.5**	**3.5**	0.11	0.007
LM-SO231	**2.5**	**9.4**	**34.9**	**20.5**	**23.6**	**5.7**
LM-SO232	**3.2**	**4.8**	**1.3**	0.54	0.30	0.66
LM-SO233	**6.1**	**17.0**	**3.1**	0.34	0.60	0.021
LM-SO234	**3.9**	**22.2**	**5.4**	**1.2**	0.015	0.048
LM-SO235	**3.7**	**5.5**	**10.2**	**5.2**	0.89	0.30
LM-SO236	**2.8**	**2.0**	0.049	NA	NA	NA
LM-SO237	**4.4**	0.26	NA	NA	NA	NA
LM-SO238	**1.5**	**2.3**	0.008	NA	NA	NA
LM-SO239	**1.8**	**2.6**	0.006	NA	NA	NA
LM-SO240	**6.4**	**43.5**	**57.2**	**20.5**	**18.6**	**13.6**
LM-SO241	**1.6**	**5.8**	**1.5**	**8.5**	**7.7**	**11.0**
LM-SO242	0.13	0.44	NA	NA	NA	NA
LM-SO243	**1.72**	**3.44**	NC	NC	NC	NC
LM-SO244	**8.50**	0.706 J	NC	NC	NC	NC
LM-SO245	0.79	0.78	NC	NC	NC	NC
LM-SO246	ND	ND	NC	NC	NC	NC
LM-SO247	0.023 J	0.24 J	NC	NC	NC	NC
LM-SO248	0.105 J	ND	NC	NC	NC	NC
LM-SO249	ND	ND	NC	NC	NC	NC
LM-SO250	0.416	**45.1 J**	NC	NC	NC	NC
LM-SO251	ND	ND	NC	NC	NC	NC
LM-SO252	ND	ND	NC	NC	NC	NC
LM-SO253	0.022 J	ND	NC	NC	NC	NC
LM-SO254	0.26	0.04	NC	NC	NC	NC
LM-SO255	ND	ND	NC	NC	NC	NC
SEDIMENT						
LM-SD07	0.6 J	NC	NC	NC	NC	NC

Sample ID	Total PCB Concentration (mg/kg)					
	Sample Depth (ft bgs)					
	0.0 - 0.5	**0.5 - 1.0**	**1.0 - 1.5**	**1.5 - 2.0**	**2.0 - 2.5**	**2.5 - 3.0**
LM-SD08	0.27	ND	NC	NC	NC	NC
LM-SD09	**20.8 J**	0.76 J	0.66	NC	NC	NC
LM-SD10	0.55 J	0.94 J	NC	NC	NC	NC
LM-SD11	0.98 J	0.49 J	NC	NC	NC	NC
LM-SD12	**1.04 J [0.76 J]**	**1.66 J [4.6 J]**	NC	NC	NC	NC
LM-SD13	0.74 J	**1.52 J**	NC	NC	NC	NC
LM-SD14	0.42	ND	NC	NC	NC	NC
LM-SD15	**3.7 J [0.66 J]**	0.54 [0.79 J]	ND	ND	NA	NA
LM-SD16	**2.31 J**	**2.8 J**	**4.97 J**	**9.40**	NC	NC
LM-SD17	**2**	0.135	NA	NA	NA	NC
LM-SD18	0.83	ND	NA	NA	NC	NC
LM-SD19	**3.61**	**1.32**	NC	NC	NC	NC
LM-SD20	**10.1 [10]**	**9.6**	**14**	**8.1**	NC	NC
LM-SD21	**1.67**	**8.6**	**21.3**	**5.38**	**4.88**	NC
LM-SD22	0.038	0.181 [0.1]	NC	NC	NC	NC
LM-SD23	**3.3**	NC	NC	NC	NC	NC
LM-SD24	0.81	NC	NC	NC	NC	NC
LM-SD25	0.23	NC	NC	NC	NC	NC
LM-SD26	**3.8**	NC	NC	NC	NC	NC
LM-SD27	0.75	**12.8**	0.18	NA	NC	NC
LM-SD28	**5.2**	**18.2**	**14.3**	**1.8**	0.99	ND
LM-SD29	**11.4**	**3.4**	**2.7**	**5.5**	0.073	ND

Notes:
ND - Non-detect
J - Estimated concentration
mg/kg - milligrams per kilogram
ft bgs - feet below ground surface
Bold values exceed the site action level of 1ppm.
NA - Not Analyzed
NC - sample Not Collected from this interval

Figures

LEGEND:

STORM SEWER

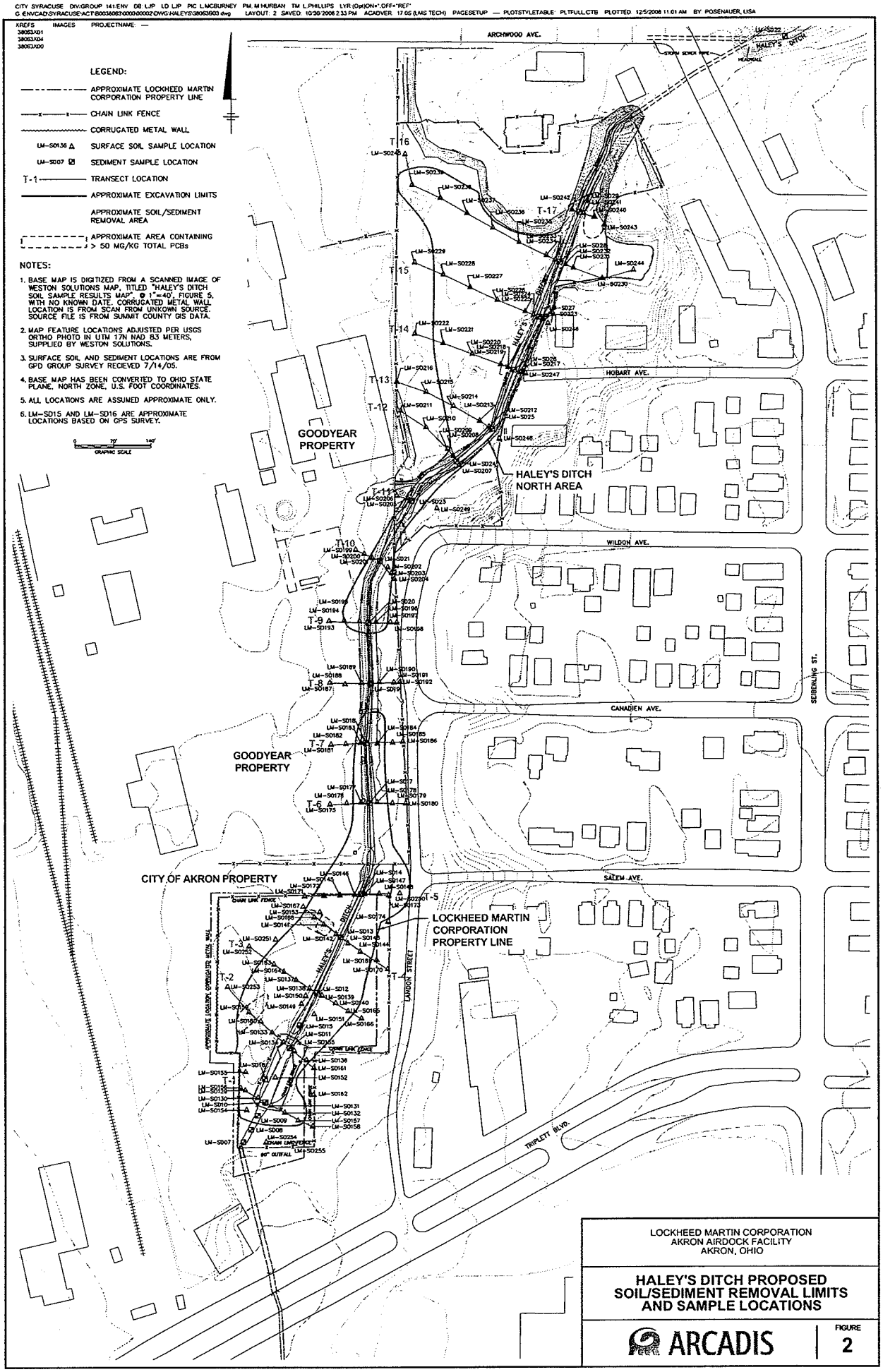
0 600' 1200'
GRAPHIC SCALE

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

SITE AERIAL PHOTOGRAPH

ARCADIS

FIGURE
1



LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

HALEY'S DITCH PROPOSED SOIL/SEDIMENT REMOVAL LIMITS AND SAMPLE LOCATIONS

ARCADIS

FIGURE 2

XREFS. IMAGES. PROJECTNAME —
38083X01
38083X04
38083X00

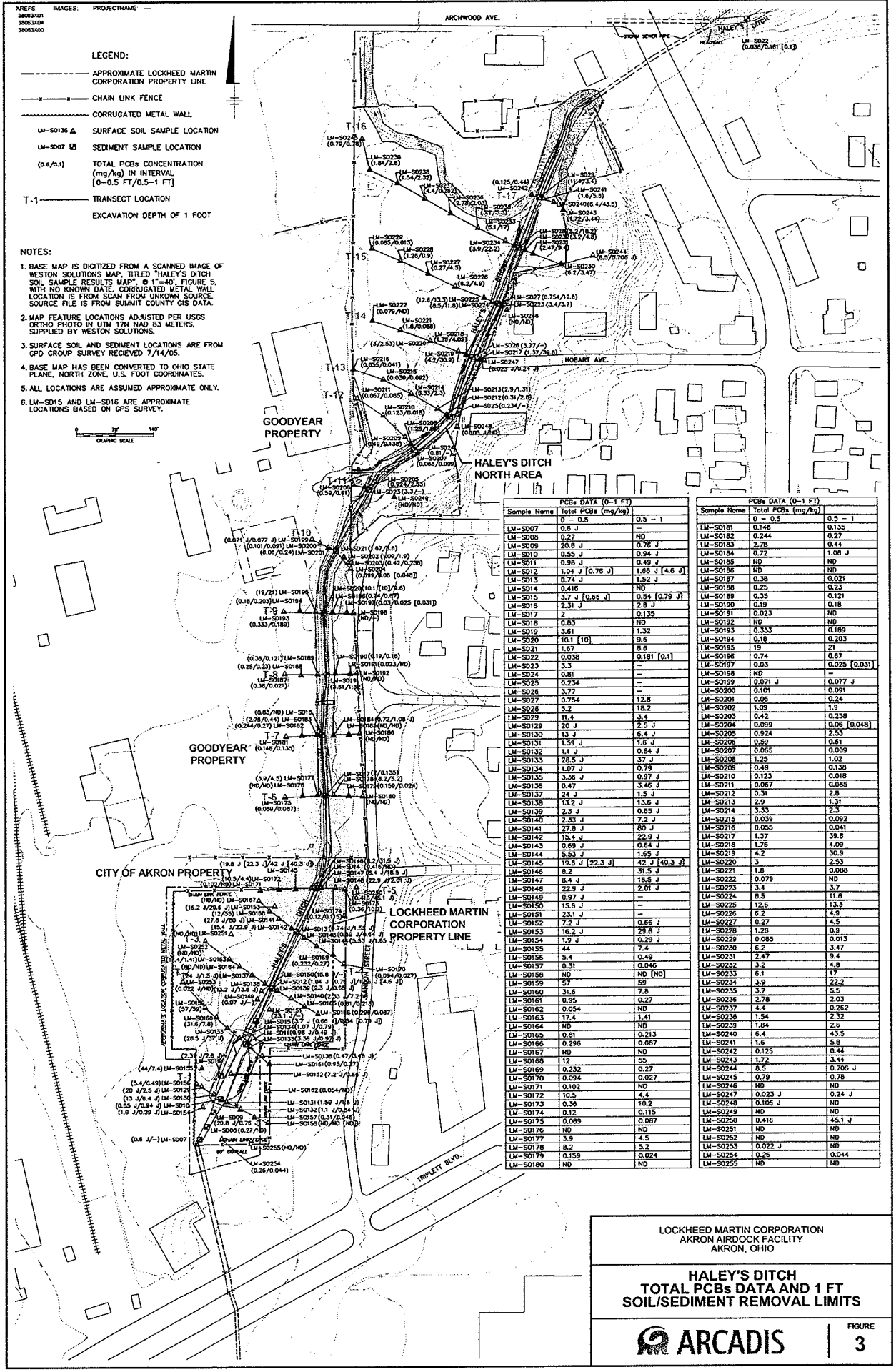
LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- LM-S0136 △ SURFACE SOIL SAMPLE LOCATION
- LM-SD07 ☒ SEDIMENT SAMPLE LOCATION
- (0.6/0.1) TOTAL PCBs CONCENTRATION (mg/kg) IN INTERVAL [0–0.5 FT/0.5–1 FT]
- T-1 TRANSECT LOCATION
- EXCAVATION DEPTH OF 1 FOOT

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5. WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
2. MAP FEATURE LOCATIONS ADJUSTED PER USGS ORTHO PHOTO IN UTM 17N NAD 83 METERS, SUPPLIED BY WESTON SOLUTIONS.
3. SURFACE SOIL AND SEDIMENT LOCATIONS ARE FROM GPD GROUP SURVEY RECIEVED 7/14/05.
4. BASE MAP HAS BEEN CONVERTED TO OHIO STATE PLANE, NORTH ZONE, U.S. FOOT COORDINATES.
5. ALL LOCATIONS ARE ASSUMED APPROXIMATE ONLY.
6. LM-SD15 AND LM-SD16 ARE APPROXIMATE LOCATIONS BASED ON GPS SURVEY.

0 70' 140'
GRAPHIC SCALE



Sample Name	PCBs DATA (0–1 FT) Total PCBs (mg/kg)	
	0 – 0.5	0.5 – 1
LM-SD07	0.6 J	–
LM-SD08	0.27	ND
LM-SD09	20.8 J	0.76 J
LM-SD10	0.55 J	0.94 J
LM-SD11	0.98 J	0.49 J
LM-SD12	1.04 J [0.76 J]	1.66 J [4.6 J]
LM-SD13	0.74 J	1.52 J
LM-SD14	0.416	ND
LM-SD15	3.7 J [0.65 J]	0.54 [0.79 J]
LM-SD16	2.31 J	2.8 J
LM-SD17	2	0.135
LM-SD18	0.63	ND
LM-SD19	3.61	1.32
LM-SD20	10.1 [10]	9.6
LM-SD21	1.67	8.6
LM-SD22	0.038	0.181 [0.1]
LM-SD23	3.3	–
LM-SD24	0.81	–
LM-SD25	0.234	–
LM-SD26	3.77	–
LM-SD27	0.754	12.8
LM-SD28	5.2	18.2
LM-SD29	11.4	3.4
LM-SD129	20 J	2.5 J
LM-SD130	13 J	6.4 J
LM-SD131	1.59 J	1.8 J
LM-SD132	1.1 J	0.84 J
LM-SD133	28.5 J	37 J
LM-SD134	1.07 J	0.79
LM-SD135	3.36 J	0.97 J
LM-SD136	0.47	3.46 J
LM-SD137	24 J	1.5 J
LM-SD138	13.2 J	13.6 J
LM-SD139	2.3 J	0.65 J
LM-SD140	2.33 J	7.2 J
LM-SD141	27.8 J	80 J
LM-SD142	15.4 J	22.9 J
LM-SD143	0.69 J	0.64 J
LM-SD144	5.53 J	1.65 J
LM-SD145	19.8 J [22.3 J]	42 J [40.3 J]
LM-SD146	8.2	31.5 J
LM-SD147	8.4 J	18.5 J
LM-SD148	22.9 J	2.01 J
LM-SD149	0.97 J	–
LM-SD150	15.8 J	–
LM-SD151	23.1 J	–
LM-SD152	7.2 J	0.66 J
LM-SD153	16.2 J	29.6 J
LM-SD154	1.9 J	0.29 J
LM-SD155	44	7.4
LM-SD156	5.4	0.49
LM-SD157	0.31	0.046
LM-SD158	ND	ND [ND]
LM-SD159	57	59
LM-SD160	31.6	7.8
LM-SD161	0.95	0.27
LM-SD162	0.054	ND
LM-SD163	17.4	1.41
LM-SD164	ND	ND
LM-SD165	0.81	0.213
LM-SD166	0.296	0.087
LM-SD167	ND	ND
LM-SD168	12	55
LM-SD169	0.232	0.27
LM-SD170	0.094	0.027
LM-SD171	0.102	ND
LM-SD172	10.5	4.4
LM-SD173	0.36	10.2
LM-SD174	0.12	0.115
LM-SD175	0.089	0.087
LM-SD176	ND	ND
LM-SD177	3.9	4.5
LM-SD178	8.2	5.2
LM-SD179	0.159	0.024
LM-SD180	ND	ND

Sample Name	PCBs DATA (0–1 FT) Total PCBs (mg/kg)	
	0 – 0.5	0.5 – 1
LM-S0181	0.146	0.135
LM-S0182	0.244	0.27
LM-S0183	2.76	0.44
LM-S0184	0.72	1.08 J
LM-S0185	ND	ND
LM-S0186	ND	ND
LM-S0187	0.38	0.021
LM-S0188	0.25	0.23
LM-S0189	0.35	0.121
LM-S0190	0.19	0.18
LM-S0191	0.023	ND
LM-S0192	ND	ND
LM-S0193	0.333	0.189
LM-S0194	0.18	0.203
LM-S0195	19	21
LM-S0196	0.74	0.67
LM-S0197	0.03	0.025 [0.031]
LM-S0198	ND	–
LM-S0199	0.071 J	0.077 J
LM-S0200	0.101	0.091
LM-S0201	0.06	0.24
LM-S0202	1.09	1.9
LM-S0203	0.42	0.238
LM-S0204	0.099	0.06 [0.048]
LM-S0205	0.924	2.53
LM-S0206	0.59	0.61
LM-S0207	0.065	0.009
LM-S0208	1.25	1.02
LM-S0209	0.49	0.138
LM-S0210	0.123	0.018
LM-S0211	0.067	0.085
LM-S0212	0.31	2.8
LM-S0213	2.9	1.31
LM-S0214	3.33	2.3
LM-S0215	0.039	0.092
LM-S0216	0.055	0.041
LM-S0217	1.37	39.8
LM-S0218	1.76	4.09
LM-S0219	4.2	30.9
LM-S0220	3	2.53
LM-S0221	1.8	0.088
LM-S0222	0.079	ND
LM-S0223	3.4	3.7
LM-S0224	8.5	11.8
LM-S0225	12.6	13.3
LM-S0226	5.2	4.9
LM-S0227	0.27	4.5
LM-S0228	1.28	0.9
LM-S0229	0.085	0.013
LM-S0230	6.2	3.47
LM-S0231	2.47	9.4
LM-S0232	3.2	4.8
LM-S0233	6.1	17
LM-S0234	3.9	22.2
LM-S0235	3.7	5.5
LM-S0236	2.78	2.03
LM-S0237	4.4	0.262
LM-S0238	1.54	2.32
LM-S0239	1.84	2.6
LM-S0240	6.4	43.5
LM-S0241	1.6	5.8
LM-S0242	0.125	0.44
LM-S0243	1.72	3.44
LM-S0244	8.5	0.706 J
LM-S0245	0.79	0.78
LM-S0246	ND	ND
LM-S0247	0.023 J	0.24 J
LM-S0248	0.105 J	ND
LM-S0249	ND	ND
LM-S0250	0.416	45.1 J
LM-S0251	ND	ND
LM-S0252	ND	ND
LM-S0253	0.022 J	ND
LM-S0254	0.26	0.044
LM-S0255	ND	ND

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

HALEY'S DITCH
TOTAL PCBs DATA AND 1 FT SOIL/SEDIMENT REMOVAL LIMITS

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FIGURE 3

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- LM-S0136 △ SURFACE SOIL SAMPLE LOCATION
- LM-SD07 ⊠ SEDIMENT SAMPLE LOCATION
- (0.6/0.1) TOTAL PCBs CONCENTRATION (mg/kg) IN INTERVAL [1-1.5 FT/1.5-2 FT]
- T-1 TRANSECT LOCATION
- APPROXIMATE EXCAVATION LIMITS
- EXCAVATION DEPTH OF 2 FOOT

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5, WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
2. MAP FEATURE LOCATIONS ADJUSTED PER USGS ORTHO PHOTO IN UTM 17N NAD 83 METERS, SUPPLIED BY WESTON SOLUTIONS.
3. SURFACE SOIL AND SEDIMENT LOCATIONS ARE FROM GPD GROUP SURVEY RECIEVED 7/14/05.
4. BASE MAP HAS BEEN CONVERTED TO OHIO STATE PLANE, NORTH ZONE, U.S. FOOT COORDINATES.
5. ALL LOCATIONS ARE ASSUMED APPROXIMATE ONLY.
6. LM-SD15 AND LM-SD16 ARE APPROXIMATE LOCATIONS BASED ON GPS SURVEY.

GRAPHIC SCALE 0 70' 140'

ARCHWOOD AVE.
HOBART AVE.
WILDON AVE.
CANADIEN AVE.
SALEM AVE.
TRIPLETT BLVD.
LANDON STREET
HALEY'S DITCH
STORM SEWER PIPE
HEADWALL
GOODYEAR PROPERTY
GOODYEAR PROPERTY
HALEY'S DITCH NORTH AREA
CITY OF AKRON PROPERTY
LOCKHEED MARTIN CORPORATION PROPERTY LINE
CHAIN LINK FENCE
CORRUGATED METAL WALL
60" OUTFALL
T-1 T-2 T-3 T-4 T-5 T-6 T-7 T-8 T-9 T-10 T-11 T-12 T-13 T-14 T-15 T-16 T-17

PCBs DATA (1-2 FT)		
Sample Name	Total PCBs (mg/kg)	
	1 - 1.5	1.5 - 2
LM-SD09	0.66	--
LM-SD15	ND	ND
LM-SD16	4.97 J	9.4
LM-SD20	14	8.1
LM-SD21	21.3	5.38
LM-SD27	0.18	--
LM-SD28	14.3	1.8
LM-SD29	2.68	5.5
LM-S0129	10.1	31.9
LM-S0130	29.2	14.2
LM-S0133	29.8	1.73
LM-S0134	0.28	0.027
LM-S0135	23.3	0.94
LM-S0136	1.51	13
LM-S0138	7.8	9.2
LM-S0139	1.5	2.3
LM-S0140	2.13	4 [4.7]
LM-S0141	1.74	54.8
LM-S0142	1.2	2
LM-S0144	0.51	0.92
LM-S0145	0.49	0.045
LM-S0146	1.3	ND
LM-S0147	3.3 [2.6]	3.3
LM-S0148	0.42	2.02
LM-S0150	ND	0.048 [0.039 J]
LM-S0151	2.6	9.3
LM-S0152	0.48	0.88
LM-S0153	0.047	ND
LM-S0154	1.4	1.4
LM-S0155	12.8	14
LM-S0159	61	66
LM-S0160	20.5	21.5
LM-S0163	2.11	12.8
LM-S0168	0.45	0.104
LM-S0172	3.7	11.3
LM-S0173	0.321	0.89
LM-S0177	1.03	0.29
LM-S0178	2	0.188
LM-S0183	0.258	0.028
LM-S0184	6.6	4.1
LM-S0189	0.032	0.17
LM-S0190	--	0.25
LM-S0195	3.65	24.8
LM-S0196	0.23	6.1
LM-S0201	0.19	10
LM-S0202	0.52	2.2
LM-S0205	2.3	0.38
LM-S0208	1.38	0.55
LM-S0212	4.4	4
LM-S0213	0.301	--
LM-S0214	0.13	--
LM-S0217	12	17.7
LM-S0218	1.45	4.21
LM-S0219	2.657	0.073
LM-S0220	8.3	0.042
LM-S0223	1.88	0.13
LM-S0224	14.6	3.02
LM-S0225	1.09	0.11
LM-S0226	0.18	
LM-S0227	0.0078	
LM-S0230	20.5	3.46
LM-S0231	34.9	20.5
LM-S0232	1.26	0.54
LM-S0233	3.09	0.34
LM-S0234	5.4	1.21
LM-S0235	10.2	5.2
LM-S0236	0.049	--
LM-S0238	0.0077	--
LM-S0239	0.0058	--
LM-S0240	57.2	20.5
LM-S0241	1.49	8.5

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

HALEY'S DITCH TOTAL PCBs DATA AND 2 FT SOIL/SEDIMENT REMOVAL LIMITS

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FIGURE 4

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- LM-S0136 △ SURFACE SOIL SAMPLE LOCATION
- LM-SD07 ☒ SEDIMENT SAMPLE LOCATION
- (0.6/0.1) TOTAL PCBs CONCENTRATION (mg/kg) IN INTERVAL [2-2.5 FT/2.5-3 FT]
- T-1 TRANSECT LOCATION
- APPROXIMATE EXCAVATION LIMITS
- EXCAVATION DEPTH OF 3 FOOT

NOTES:

1. BASE MAP IS DIGITIZED FROM A SCANNED IMAGE OF WESTON SOLUTIONS MAP, TITLED "HALEY'S DITCH SOIL SAMPLE RESULTS MAP", @ 1"=40', FIGURE 5, WITH NO KNOWN DATE. CORRUGATED METAL WALL LOCATION IS FROM SCAN FROM UNKOWN SOURCE. SOURCE FILE IS FROM SUMMIT COUNTY GIS DATA.
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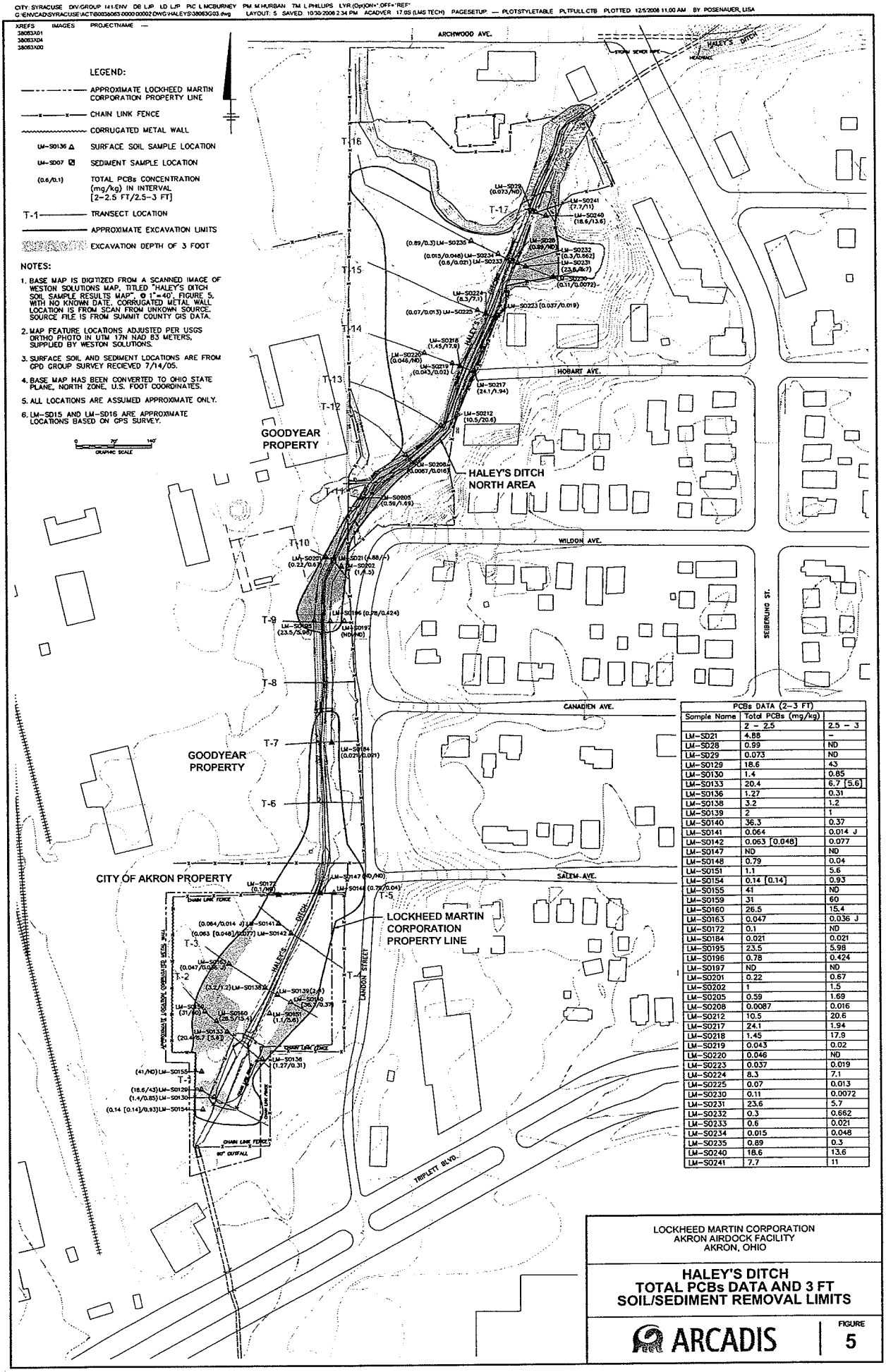
6. LM-SD15 AND LM-SD16 ARE APPROXIMATE LOCATIONS BASED ON GPS SURVEY.

0 70' 140'
GRAPHIC SCALE



PCBs DATA (2-3 FT)		
Sample Name	Total PCBs (mg/kg)	
	2 - 2.5	2.5 - 3
LM-SD21	4.88	-
LM-SD28	0.99	ND
LM-SD29	0.073	ND
LM-S0129	18.6	43
LM-S0130	1.4	0.85
LM-S0133	20.4	6.7 [5.6]
LM-S0136	1.27	0.31
LM-S0138	3.2	1.2
LM-S0139	2	1
LM-S0140	36.3	0.37
LM-S0141	0.064	0.014 J
LM-S0142	0.063 [0.048]	0.077
LM-S0147	ND	ND
LM-S0148	0.79	0.04
LM-S0151	1.1	5.6
LM-S0154	0.14 [0.14]	0.93
LM-S0155	41	ND
LM-S0159	31	60
LM-S0160	26.5	15.4
LM-S0163	0.047	0.036 J
LM-S0172	0.1	ND
LM-S0184	0.021	0.021
LM-S0195	23.5	5.98
LM-S0196	0.78	0.424
LM-S0197	ND	ND
LM-S0201	0.22	0.67
LM-S0202	1	1.5
LM-S0205	0.59	1.69
LM-S0208	0.0087	0.016
LM-S0212	10.5	20.6
LM-S0217	24.1	1.94
LM-S0218	1.45	17.9
LM-S0219	0.043	0.02
LM-S0220	0.046	ND
LM-S0223	0.037	0.019
LM-S0224	8.3	7.1
LM-S0225	0.07	0.013
LM-S0230	0.11	0.0072
LM-S0231	23.6	5.7
LM-S0232	0.3	0.662
LM-S0233	0.6	0.021
LM-S0234	0.015	0.048
LM-S0235	0.89	0.3
LM-S0240	18.6	13.6
LM-S0241	7.7	11

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

HALEY'S DITCH
TOTAL PCBs DATA AND 3 FT SOIL/SEDIMENT REMOVAL LIMITS

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FIGURE 5

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- APPROXIMATE EXCAVATION LIMITS
- APPROXIMATE SOIL/SEDIMENT REMOVAL AREA
- APPROXIMATE AREA CONTAINING > 50 MG/KG TOTAL PCBs

NOTES:

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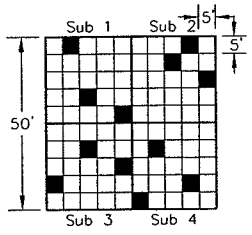
0 70' 140'
GRAPHIC SCALE

ARCHWOOD AVE.
HALEY'S DITCH
STORM SEWER PIPE
HEADWALL
HOBART AVE.
WILDON AVE.
CANADIEN AVE.
SALEM AVE.
SEIBERLING ST.
LANDON STREET
TRIPLETT BLVD.
GOODYEAR PROPERTY
HALEY'S DITCH NORTH AREA
GOODYEAR PROPERTY
CITY OF AKRON PROPERTY
LOCKHEED MARTIN CORPORATION PROPERTY LINE
CHAIN LINK FENCE
APPROXIMATE LOCATION CORRUGATED METAL WALL
DITCH
60" OUTFALL

25'x25' CONFIRMATION SAMPLES



LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

HALEY'S DITCH PROPOSED CONFIRMATION SAMPLING GRID

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FIGURE 6

Appendix A

OEPA Notice of Intent

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

6/24/2009

ARCADIS US INC
FRANK ZAMISKA
600 WATERFRONT DR
PITTSBURGH PA 15222-

RE: Approval for coverage under Ohio EPA General Permit
STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY.

Dear Applicant:
The Ohio Environmental Protection Agency has received your application for coverage under the above referenced general permit you submitted for:

Notice of Intent (NOI) submitted by: LOCKHEED MARTIN MS2
Co-Permittee NOI submitted by: ARCADIS US INC
Facility Name: HALEYS DITCH
Facility Street / Location: BETWEEN ARCHWOOD BLVD & TRIPLETT A **COUNTY:** Summit
Ohio EPA Facility Permit Number: 3GC04442*AG **TOWNSHI** SPRINGFIELD

You are approved as a co-permittee for coverage under the above referenced Ohio EPA Construction general permit (CGP). Please use the Ohio EPA facility permit number above in all future correspondence.

Please familiarize yourself with your general permit. The permit contains requirements and prohibitions with which you must comply. Coverage remains in effect until a renewal general permit is issued and Ohio EPA has contacted you in writing instructing you to request continuing permit coverage.

Co-Permittees are covered under the same facility permit number as the applicant that submitted the initial NOI. There is no fee associated with the Co-permittee NOI form.
You may obtain current forms and instructions from our web site at **http://www.epa.state.oh.us/dsw/storm**

If you have any further questions, you should contact one of the following:

OHC000003 (Statewide CGP)
Mike Joseph (614) 752-0782 michael.joseph@epa.state.oh.us

OHCD00001 (Big Darby CGP) and OHCO00001 (Olentangy Permit)
Jason Fyffe (614) 728-1793 jason.fyffe@epa.state.oh.us

Or by calling (614) 644-2001 and asking to speak with a member of the Storm Water Unit.

Sincerely,

Chris Korleski
Director

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Appendix A

SWP 3 Approval

Summit Soil & Water Conservation District
2795 Front Street, Suite D , Cuyahoga Falls, Ohio 44221
phone: 330.929.2871 fax: 330.929.2872
email: staff@summitswcd.org web: summitswcd.org

May 22, 2009

Mr. Matt Lascola, PE
GPD Associates
520 South Main Street
Akron, OH 44311

Subject: *Revised* Storm Water Pollution Prevention Plan (SWPPP) review for Haley's Ditch Remediation/ Restoration – Akron, Ohio

Dear Mr. Lascola,

Cindy Fink and Joan Hug-Anderson, from the Summit SWCD office, reviewed the *revised* SWPPP for the above referenced project. The revised plan meets with our approval.

Please note that a pre-construction meeting with the Summit SWCD staff is required prior to the start of earthmoving activities.

If you have any questions, please contact this office at (330) 929-2871.

Sincerely,

Brian James

Brian James, Supervisor
Summit SWCD

Pc: Jamie Krejsa, Riverworks 3781 Darrow Road, Stow, OH 44224
Mark Pirie, City of Akron Engineering
Pat Gsellman, City of Akron Engineering
Daniel Joseph, Akron Public Utilities Bureau
Joe Schiavone, Summit County Building Standards
Steve Vardavas, Lockheed Martin
Mark Hurban, Arcadis - BBLES
File

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Appendix A

City of Akron Discharge Authorization

Richard A. Merolla
Service Director

Michael L. McGlinchy, P.E.
Public Utilities Bureau Manager

Brian M. Gresser, P.E.
Water Pollution Control Administrator

DONALD L. PLUSQUELLIC
Mayor

July 24, 2008

Mr. Rocco J. Maffei, General Council
Lockheed Martin MS2 – DSS
1210 Massillon Road
Akron, Ohio 44315-0001

Subject: Lockheed Martin
Temporary Groundwater Discharge
Discharge Authorization

Dear Sir:

Lockheed Martin has proposed the discharge of wastewaters at the site of the soil clean-up project at Haley's Ditch. The soil and sediment are contaminated with PCBs laden dust eroded from the Airdock's fire-retardant roof and siding material. Incidental water accumulated for the duration of the project would be filtered to eliminate the discharge of any PCB laden dust. Testing conducted by Lockheed Martin was sufficient to determine that the filtered discharge is non-detect for PCBs and therefore acceptable as a discharge to the sanitary sewer. The discharge would commence immediately at a rate not to exceed 30 gallons per minute.

The Environmental Compliance Team reviewed the discharge request and it is the intention of the City of Akron, Industrial Pretreatment Program to accept the discharge subject to the following conditions:

1. This authorization is effective immediately and until the conclusion of the project, but you are required to notify the Industrial Pretreatment Engineer at (330) 928-1164 x487, within 1 hour of the initial discharge.

2. The discharge shall be automatically discontinued during any rain event that is sufficient to cause run-off of stormwater off parking lot or road surfaces. The discharge shall not be resumed within 24 hours after the conclusion of the rain event. Violation of this provision shall subject the discharger to Enforcement Actions including fines of $500 for each violation.

3. Lockheed Martin shall log the metered discharge volumes, dates and times when the discharge commences, and when the discharge ceases. If the discharge is suspended during a rain event, as required in condition 2, log records shall be kept to document when the discharge is suspended and when it is resumed. The discharge log will be used to verify that the discharge was properly suspended during wet weather events.

4. Within seven (7) days of the conclusion of the discharge the discharger shall submit a final report to include:

- A summary of the discharge indicating the starting and ending date and time of the discharge, the total volume discharge and any problems encountered during the discharge, with respect to wet weather required shut-downs.

- A copy of the discharge log

5. The system shall be monitored on site at all times during the discharge.

6. All records collected in compliance with this authorization shall be retained for a minimum of three years, and shall be made available to the City of Akron, upon request.

7. The City shall be copied on any other regulatory reporting required by this discharge.

8. Any changes to any of the details as cited by this authorization shall require a renewal of this authorization.

The City may seek to recover the cost of disposal of the discharge based on the total volume reported and billed at the standard industrial discharge rate.

Lockheed Martin is required to meet all federal, state, and local pretreatment standards or regulations. Title 5, Chapter 50 of the Code of Ordinances of the City of Akron shall be met at all times. Failure to comply with all terms of this authorization may subject Lockheed Martin to Enforcement Actions as prescribed in the Enforcement Response Guideline.

If you have any questions or comments, please contact me at (330) 928-1164 x 487.

Sincerely,

Frederick A. Neugebauer

Frederick Neugebauer, P.E.
Industrial Pretreatment Engineer
Water Pollution Control Division

FAN/jmn

c: Brian Gresser
Ken Lot
Steve Vardavas, Lockheed Martin
Mark Hurban, ARCADIS
File: Discharge Requests

ARCADIS

Appendix B

Project Photographs

Photo #1: South Zone (along Landon St.) prior to clearing

Photo #2: Middle Zone prior to clearing

Client:	Lockheed Martin Corporation
Project Name:	Haley's Run Remediation
Project Location:	Akron, OH
Page Number 1	

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Photo #3: North Zone prior to clearing

Photo #4: South Zone partially cleared

Client:	Lockheed Martin Corporation
Project Name:	Haley's Run Remediation
Project Location:	Akron, OH
Page Number 2	

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Photo #5: South Staging Area

Photo #6: North Staging Area and lined soil stockpile construction

Photo #7: Perimeter fence for access control

Photo #8: Construction of lined truck loading area in the South Zone

Photo #9: South Zone construction entrance

Photo #10: Project signage with Community Relations material

Photo #11: Installation of silt fence prior to excavation activities

Photo #12: Installed silt fence and caution tape for access control within excavation footprint

Photo #13: Stone check dam with hay bales installed within channel

Photo #14: Temporary bridge used for stream crossing

Photo #15: North Staging Area and temporary stone access road

Photo #16: Bypass pump and stone lined collection sump

Photo #17: Bypass pump discharge with energy dissipation

Photo #18: Lined bypass channel constructed in the South Zone

Photo #19: Water filtration system (under construction): Water storage tanks, bag filters (2) and carbon filter (1 of 2 shown)

Photo #20: South Zone soil excavation and loading

Photo #21: South Zone channel excavation

Photo #22: South Zone truck loading operations

Photo #23: South Zone soil stockpile secured with plastic sheeting

Photo #24: Using GPS to locate verification samples within an excavated grid

Photo #25: South Zone excavated grids with verification sample locations staked

Photo #26: Middle Zone excavation with verification sample locations staked

Photo #27: North Zone excavation with verification sample locations staked

Photo #28: North Zone channel excavation

Photo #29: North Staging Area truck loading operations

Photo #30: Restored South Zone

Photo #31: Middle Zone undergoing restoration

Photo #32: North Zone undergoing restoration

ARCADIS

Appendix C

URS Backfill Sampling and Selection Memorandum

URS **Memorandum**

To: David Gunnarson, Lockheed Martin

From: Jennifer Krueger – URS

Copy: Pat Farr, ARCADIS
Joel Bingham, EnviroScience
Shannon Carneal, RiverReach Construction

Date: **December 15, 2009**

Subject: **Imported Backfill Sampling and Selection Process for Haley's Run Remediation and Restoration Project, Akron, OH**

This memo describes the imported material selection process used by ARCADIS, the prime remediation contractor, and RiverWorks, the prime restoration contractor, for the Haley's Run project located in Akron, Ohio. Information was provided from the *Haley's Ditch Remediation Plan* (ARCADIS 2009), *Haley's Ditch Stream and Wetland Restoration Plan* (RiverWorks 2009), and from various project team members. RiverWorks imported clean fill materials to meet planned subgrades prior to restoration activities, and to restore the channel, floodplain and wetlands at the site. ARCADIS was involved with sampling candidate backfill materials but did not import material as part of the remediation scope of work as originally planned. Lockheed Martin changed the responsibility for importing materials from ARCADIS to RiverWorks during the course of the project.

Two primary criteria were established for imported material selection:

1) The material meets the functional specifications (e.g. textural properties, drainage capacity, soil chemistry and if applicable, nutrient content to support vegetation), and

2) The material is uncontaminated, specifically with a total PCB concentration less than 0.1 mg/Kg. In addition, acceptable clean imported fill is defined for this project by non-naturally occurring constituents below risk screening levels or by naturally occurring constituents (e.g. metals) within the range of local or regional background levels. A variety of literature sources is used to compare the data to local and regional background levels.

ARCADIS and RiverWorks collected candidate backfill samples for testing in August 2009. The following table summarizes the sample IDs and source areas along with the testing performed on each sample.

Source/Location	Sample ID	Testing
Sober Sand & Gravel 2898 Tallmadge Road Ravenna, OH 44266 330-325-7013	Backfill 1	TestAmerica - analytical
R.P. Motors (Stockpile) 1282 Starlight Drive Akron, OH 44306 330-785-0777	Backfill 2[(1)]	TestAmerica - analytical
Suffield Aggregate LLC 725 Highway 224 Mogadore, OH 44260 330-697-0694	Suffield Agg Peat Suffield Agg Loam Suffield Agg Bank Run	TestAmerica - analytical Timmerman – soil texture and general soil chemistry

Note: [(1)] The stockpile is reportedly from a residential development (Windam Ridge) in Northfield Center Township.

Testing by Timmerman included:

- Organic Content by ASTM D2974
- Gradation by ASTM D422
- pH by ASTM D4972
- USDA Classification
- Topsoil specifications by ASTM D5268

This memo does not address the suitability of the candidate fill materials based on soil texture and general chemistry.

Analytical testing by TestAmerica included:

- Herbicides by EPA Method 8151A
- Pesticides by EPA Method 8081A
- Volatile Organic Compounds by EPA Method 8260B
- Semivolatile Organic Compounds by EPA Method 8270C
- PCBs by EPA Method 8082
- Metals by EPA Method 6020
- Mercury by EPA Method 7471A

ARCADIS screened the analytical data from the five samples against residential risk-based screening levels (RSLs) (USEPA, Region 9 Preliminary Remediation Goals 2009) and Ohio Voluntary Action Program (VAP) generic direct contact soil standards. Ohio background sediment reference values for metals are also shown for comparison (Ohio EPA 2008). The screening tables are attached (Tables 1 – 5).

All five samples passed the criterion for PCBs below 0.1 mg/Kg. No PCBs were detected above the analytical reporting limit range of 0.096 to 0.080 mg/Kg.

With the exception of arsenic, the remaining detected analytes were below both or at least one of the residential risk-based screening levels.

Arsenic levels in all five samples were above the residential risk-based screening level of 0.39 mg/Kg and the VAP direct contact standard of 6.7 mg/Kg. The results were also compared to the Ohio sediment reference value for arsenic, 25 mg/Kg, which represents background sediment concentrations for lotic (flowing) water bodies in the Erie-Ontario Lake Plain. Two of the five candidate fill samples, Backfill 1 and Backfill 2, have arsenic levels below the sediment reference value. The three Suffield Aggregate samples have arsenic levels above (within 25 percent) of the sediment reference value.

The reported arsenic values, ranging from 12.2 mg/Kg (Backfill 1) to 32.1 mg/Kg(Suffield Agg Loam), were also screened against available background data for arsenic in soil from a variety of sources (Table 6). The Suffield Aggregate samples are below or within 15 percent of the upper 95 percent confidence interval of the mean cited by ENSR (2008) of 27.9 mg/Kg. All candidate samples are well within the background range of arsenic of 4 to 61.9 mg/Kg for surface soil and 1.6 to 71.3 mg/Kg for subsurface (>2 feet) soil.

Arsenic concentrations in the five candidate samples appear to represent background levels based on the following factors:

1. The reported concentrations are well within the range of literature values for eastern Ohio.
2. Levels of naturally occurring arsenic are cited to be the highest in the Eric-Huron Lake Plain eco region in comparison to other eco regions in Ohio (Ohio EPA 2008).
3. The candidate sources are from non-industrial sites.
4. Levels of other metals in the samples appear to fall within background ranges.

In summary, based upon the information provided, the five candidate imported fill materials meet the project criterion set forth for uncontaminated fill.

Attachments: Tables 1 - 6

REFERENCES

ARCADIS 2009. Haley's Ditch Remediation Plan, Lockheed Martin Corporation. Project B0038063. May 15.

Cox-Colvin & Associates, Inc. 1996. Evaluation of Background Metals Concentrations in Ohio Soils. Submitted to Ohio Environmental Protection Agency. June 21.

Ohio Environmental Protection Agency (Ohio EPA) 2009. RCRA Closure Plan Review Guidance, Appendix B Development of Alternate Metals Standards. October.

Ohio EPA 2008. Ecological Risk Assessment Guidance, Ohio EPA Division of Emergency and Remedial Response. Attachment H: Ohio Specific Sediment Reference Values. October.

RiverWorks 2009. Haley's Ditch Stream and Wetland Restoration Plan. Prepared for Lockheed Martin. May 18.

Venteris, Erik R., Ph.D. 2009. Preliminary research data from Summit County. Senior Geologist with Ohio Department of Natural Resources, Division of Geological Survey, Geologic Mapping & Industrial Metals Group. August 18.

Vosnakis, Kelly A.S., and Perry, Elizabeth. 2009. *Background Versus Risk-Based Screening Levels – An Examination of Arsenic Background Soil Concentrations in Seven States*. International Journal of Soil, Sediment, and Water. Article 2, Vol 2, Issue 2.

Table 1
Screening Criteria for Sample Backfill 1

Constituent	RSLs (1)	VAP (2)	Backfill Sample	OEPA
	Residential Soil	Residential Direct Contact	Backfill 1	Sediment Ref. Values (3)
Analyte	mg/kg	mg/kg	mg/kg	mg/kg
Acetophenone	7.8E+03	6.3E+03	0.076 U	
Aluminum	7.7E+04	NA	8500	2.90E+04
Antimony (metallic)	3.1E+01	3.0E+01	0.099 B	1.30E+00
Arsenic, Inorganic	3.9E-01	6.7E+00	12.2	2.50E+01
Atrazine	2.1E+00	NA	0.38 U	NA
Barium	1.5E+04	1.5E+04	41.3 J	1.90E+02
Benzaldehyde	7.8E+03	NA	0.38 U	NA
Beryllium and compounds	1.6E+02	1.5E+02	0.44	8.00E-01
Biphenyl, 1,1'-	3.9E+03	NA	0.38 U	NA
Bis(2-chloroethoxy)methane	1.8E+02	NA	0.38 U	NA
Bis(2-chloroethyl)ether	1.9E-01	NA	0.38 U	NA
Bis(2-ethylhexyl)phthalate	3.5E+01	6.2E+02	0.38 U	NA
Butyl Benzyl Phthlate	2.6E+02	6.2E+02	0.38 U	NA
Cadmium (Diet)	7.0E+01	7.2E+01	0.11	7.90E-01
Calcium	NA	NA	6410 J	2.10E+04
Caprolactam	3.1E+04	NA	0.38 U	NA
Carbazole	NA	4.3E+02	0.38 U	NA
Chloro-3-methylphenol, 4-	NA	NA	0.38 U	NA
Chloroaniline, p-	2.4E+00	NA	0.38 U	NA
Chloronaphthalene, Beta-	6.3E+03	NA	0.38 U	NA
Chlorophenol, 2-	3.9E+02	NA	0.38 U	NA
4-Chlorophenyl phenyl ether	NA	NA	0.38 U	NA
Chromium (III) (Insoluble Salts)	1.2E+05	1.1 E+05	Not analyzed	NA
Chromium VI (particulates)	2.3E+02	2.3 E+02	Not analyzed	NA
Chromium, Total (1:6 ratio Cr VI : Cr III)	2.8E+02	NA	13.5 J	2.90E+01
Cobalt	2.3E+01	1.4 E+03	10.1	1.20E+01
Copper	3.1E+03	NA	16.9 J	3.20E+01
Dibenzofuran	NA	NA	0.38 U	NA
Dichlorobenzidine, 3,3'-	1.1E+00	1.9E+01	1.8 U	NA
Dichlorophenol, 2,4-	1.8E+02	NA	0.38 U	NA
Diethyl Phthalate	4.9E+04	5.0E+04	0.38 U	NA
Di-n-butyl phthalate	NA	6.3E+03	0.038 U	NA
Dinitro-2-methylphenol, 4,6-	NA	NA	1.8 U	NA
Dinitrophenol, 2,4-	1.2E+02	NA	1.8 U	NA
Dinitrotoluene, 2,4-	1.6E+00	1.3E+01	0.38 U	NA
Dinitrotoluene, 2,6-	6.1E+01	1.3E+00	0.38 U	NA
Di-n-octyl phthalate	NA	2.5E+03	0.38 U	NA
Hexachlorobenzene	3.0E-01	5.2E+00	0.38 U	NA
Hexachlorobutadiene	6.2E+00	1.3E+01	0.38 U	NA
Hexachlorocyclopentadiene	3.7E+02	NA	1.8 U	NA
Hexachloroethane	3.5E+01	6.3E+01	0.38 U	NA
Iron	5.5E+04	NA	25,100 J	4.10E+04
Isophorone	5.1E+02	9.1E+03	0.38 U	NA
~Lead and Compounds	4.0E+02	NA	12.4 J	4.70E+01
Magnesium	NA	NA	4,280 J	7.10E+03
Manganese (Diet)	NA	NA	360 J	1.50E+03
~Mercury (elemental)	4.3E+00	7.6E+00	0.020 B	NA
Methylphenol, 2-	NA	NA	0.38 U	NA
Methylphenol, 4-	NA	NA	0.38 U	NA
Molybdenum	3.9E+02	NA	1	NA
Nickel Soluble Salts	1.5E+03	1.5 E+03	22.4 J	3.30E+01
Nitroaniline, 2-	1.8E+02	NA	1.8 U	NA
Nitroaniline, 3-	NA	NA	1.8 U	NA
Nitroaniline, 4-	2.4E+01	NA	1.8 U	NA
Nitrobenzene	4.4E+00	1.3E+03	0.38 U	NA
Nitrophenol, 2-	NA	NA	0.38 U	NA
Nitrophenol, 4-	NA	NA	1.8 U	NA
Nitroso-di-N-propylamine, N-	6.9E-02	NA	0.38 U	NA
Nitrosodiphenylamine, N-	9.9E+01	NA	0.38 U	NA
Oxybis, 2,2-	NA	NA	0.38 U	NA
Pentachlorophenol	3.0E+00	5.5E+01	0.38 U	NA
Phenanthrene	NA	1.8E+04	0.38 U	NA
Phenol	1.8E+04	1.5E+04	0.38 U	NA

Table 1
Screening Criteria for Sample Backfill 1

Constituent	RSLs (1)	VAP (2)	Backfill Sample	OEPA
	Residential Soil	Residential Direct Contact	Backfill 1	Sediment Ref. Values (3)
Analyte	mg/kg	mg/kg	mg/kg	mg/kg
Polychlorinated Biphenyls (PCBs)				
~Aroclor 1016	3.9E+00	NA	0.08 U	NA
~Aroclor 1221	1.7E-01	NA	0.08 U	NA
~Aroclor 1232	1.7E-01	NA	0.08 U	NA
~Aroclor 1242	2.2E-01	NA	0.08 U	NA
~Aroclor 1248	2.2E-01	NA	0.08 U	NA
~Aroclor 1254	2.2E-01	NA	0.08 U	NA
~Aroclor 1260	2.2E-01	NA	0.08 U	NA
~Total	NA	1.2E+00		
Polynuclear Aromatic Hydrocarbons (PAHs)				
~Acenaphthene	3.4E+03	3.5E+03	0.38 U	NA
~Anthracene	1.7E+04	1.8E+04	0.38 U	NA
~Benz[a]anthracene	1.5E-01	1.1E+01	0.38 U	NA
~Benzo[a]pyrene	1.5E-02	1.1E+00	0.38 U	NA
~Benzo[b]fluoranthene	1.5E-01	1.1E+01	0.38 U	NA
~Benzo[ghi] perylene	NA	1.8E+03	0.38 U	NA
~Benzo[k]fluoranthene	1.5E+00	1.1E+02	0.38 U	NA
~Chrysene	1.5E+01	1.1E+03	0.38 U	NA
~Dibenz[a,h]anthracene	1.5E-02	1.1E+00	0.38 U	NA
~Fluoranthene	2.3E+03	2.4E+03	0.38 U	NA
~Fluorene	2.3E+03	2.4E+03	0.38 U	NA
~Indeno[1,2,3-cd]pyrene	1.5E-01	1.1E+01	0.38 U	NA
~Methylnaphthalene, 2-	3.1E+02	4.1E+03	0.38 U	NA
~Naphthalene	3.9E+00	6.9E+01	0.38 U	NA
~Pyrene	1.7E+03	1.8E+03	0.38 U	NA
Potassium	NA	NA	1,370 J	6.80E+03
Selenium	3.9E+02	3.8 E+02	0.57	1.70E+00
Silver	3.9E+02	3.8 E+02	0.043 B	4.30E-01
Sodium	NA	NA	55.5 B	
Thallium (Soluble Salts)	5.1E+00	6.1E+00	0.15	4.70E+00
Trichlorophenol, 2,4,5-	6.1E+03	6.3E+03	0.38 U	NA
Trichlorophenol, 2,4,6-	4.4E+01	7.0E+02	0.38 U	NA
Vanadium and Compounds	3.9E+02	7.7E+02	15.3	4.00E+01
Zinc (Metallic)	2.3E+04	2.3E+04	54.6 J	1.60E+02

Notes:
NA = Not available
J and B are data qualifiers that vary depending upon the analyses. See individual lab reports for explanations.
U = Constituent was not detected above the reporting limit.
(1) = Regional Screening Levels from US EPA Region 9 Preliminary Remediation Goals, April 2009.
(2) = Ohio EPA Voluntary Action Program Generic Numerical Standards OAC 3745-300-08.
(3) = Ohio EPA Division of Emergency & Remedial Response, Ecological Risk Assessment Guidance, April 2008.

Table 2
Screening Criteria for Sample Backfill 2

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Backfill 2 mg/kg	Sediment Ref. Values (3) mg/kg
Acetone	6.1E+04	6.40 E+04	1.0E-01	NA
Benzene	1.1E+00	6.40 E+01	9.8E-04 J	NA
Bromodichloromethane	2.8E-01	NA	3.4E-03 U	NA
Bromoform	6.1E+01	NA	3.4E-03 U	NA
Bromomethane	7.9E+00	NA	3.4E-03 U	NA
Carbon Disulfide	6.7E+02	1.40E+03	4.5E-03	NA
Carbon Tetrachloride	2.5E-01	5.5	3.4E-03 U	NA
Chlorobenzene	3.1E+02	4.10E+02	3.4E-03 U	NA
Chloroethane	NA	3.7 E+03	3.4E-03 U	NA
Chloroform	3.0E-01	6.6	3.4E-03 U	NA
Chloromethane	1.2E+02	NA	3.4E-03 U	NA
Cyclohexane	7.2E+03	NA	7.6E-04 J	NA
Dibromo-3-chloropropane, 1,2-	5.6E-03	NA	6.8E-03 U	NA
Dibromochloromethane	7.0E-01	1.30E+02	3.4E-03 U	NA
Dibromoethane, 1,2-	3.4E-02	NA	3.4E-03 U	NA
Dichlorobenzene, 1,2-	2.0E+03	2.30E+03	3.4E-03 U	NA
Dichlorobenzene, 1,3-	NA	NA	3.4E-03 U	NA
Dichlorobenzene, 1,4-	2.6E+00	6.00E+00	3.4E-03 U	NA
Dichlorodifluoromethane	1.9E+02	3.80E+02	3.4E-03 U	NA
Dichloroethane, 1,1-	3.4E+00	2.00E+03	3.4E-03 U	NA
Dichloroethane, 1,2-	4.5E-01	8.70E+00	3.4E-03 U	NA
Dichloroethylene, 1,1-	2.5E+02	4.10E+02	3.4E-03 U	NA
Dichloroethylene, 1,2-cis-	7.8E+02	7.60E+02	3.4E-03 U	NA
Dichloroethylene, 1,2-trans-	1.1E+02	1.80E+02	3.4E-03 U	NA
Dichloropropane, 1,2-	9.3E-01	1.90E+01	3.4E-03 U	NA
Dichloropropene, 1,3-cis-	NA	NA	3.4E-03 U	NA
Dichloropropene, 1,3-trans-	NA	NA	3.4E-03 U	NA
Ethylbenzene	5.7E+00	3.6 E+03	3.4E-03 U	NA
2-Hexanone	NA	NA	1.4E-02 U	NA
Isopropylbenzene	NA	2.70E+03	3.4E-03 U	NA
Methyl Acetate	7.8E+04	NA	6.8E-03 U	NA
Methylcyclohexane	NA	NA	1.0E-03 J	NA
Methyl Ethyl Ketone (2-Butanone)	2.8E+04	3.30E+04	8.6E-03 J	NA
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	5.3E+03	3.70E+04	1.4E-02 U	NA
Methyl tert-Butyl Ether (MTBE)	3.9E+01	8.50E+02	1.4E-02 U	NA
Methylene Chloride	1.1E+01	2.50E+02	3.4E-03 U	NA
Styrene	6.5E+03	9.50E+03	3.4E-03 U	NA
Tetrachloroethane, 1,1,2,2-	5.9E-01	1.10E+01	3.4E-03 U	NA
Tetrachloroethylene	5.7E-01	1.70E+01	3.4E-03 U	NA
Toluene	5.0E+03	5.1 E+03	1.7E-03 J	NA
Trichloro-1,2,2-trifluoroethane, 1,1,2-	4.3E+04	NA	3.4E-03 U	NA
Trichlorobenzene, 1,2,4-	8.7E+01	NA	3.4E-03 U	NA
Trichloroethane, 1,1,1-	9.0E+03	6.10E+03	3.4E-03 U	NA
Trichloroethane, 1,1,2-	1.1E+00	2.50E+01	3.4E-03 U	NA
Trichloroethylene	2.8E+00	6.50E+01	3.4E-03 U	NA
Trichlorofluoromethane	8.0E+02	1.20E+03	3.4E-03 U	NA
Vinyl Chloride	6.0E-02	4.60E+00	3.4E-03 U	NA
Xylenes, Total	NA	1.00 E+03	1.1E-03 J	NA
Acenaphthylene	NA	3500	3.7E-01 U	NA
Acetophenone	7.8E+03	6.3E+03	7.4E-02 U	NA
Aluminum	7.7E+04	NA	5.8E+03 J	2.90E+04
Antimony (metallic)	3.1E+01	3.0E+01	2.1E-01 B	1.30E+00
Arsenic, Inorganic	3.9E-01	6.7E+00	1.3E+01	2.50E+01

Table 2
Screening Criteria for Sample Backfill 2

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Backfill 2 mg/kg	Sediment Ref. Values (3) mg/kg
Atrazine	2.1E+00	NA	3.7E-01 U	NA
Barium	1.5E+04	1.5E+04	4.8E+01 J	1.90E+02
Benzaldehyde	7.8E+03	NA	3.7E-01 U	NA
Beryllium and compounds	1.6E+02	1.5E+02	3.0E-01	8.00E-01
Biphenyl, 1,1'-	3.9E+03	NA	3.7E-01 U	NA
Bis(2-chloroethoxy)methane	1.8E+02	NA	3.7E-01 U	NA
Bis(2-chloroethyl)ether	1.9E-01	NA	3.7E-01 U	NA
Bis(2-ethylhexyl)phthalate	3.5E+01	6.2E+02	2.0E-02 J	NA
4-Bromophenyl phenyl ether	NA	NA	3.7E-01 U	NA
Butyl Benzyl Phthlate	2.6E+02	6.2E+02	3.7E-01 U	NA
Cadmium (Diet)	7.0E+01	7.2E+01	3.1E-01	7.90E-01
Calcium	NA	NA	5.6E+03 J	2.10E+04
Caprolactam	3.1E+04	NA	3.7E-01 U	NA
Carbazole	NA	4.3E+02	3.7E-01 U	NA
Chloro-3-methylphenol, 4-	NA	NA	3.7E-01 U	NA
Chloroaniline, p-	2.4E+00	NA	3.7E-01 U	NA
Chloronaphthalene, Beta-	6.3E+03	NA	3.7E-01 U	NA
Chlorophenol, 2-	3.9E+02	NA	3.7E-01 U	NA
4-Chlorophenyl phenyl ether	NA	NA	3.7E-01 U	NA
Chromium, Total (1:6 ratio Cr VI : Cr III)	2.8E+02	NA	9.0E+00 J	2.90E+01
Cobalt	2.3E+01	1.4 E+03	6.3E+00	1.20E+01
Copper	3.1E+03	NA	2.2E+01 J	3.20E+01
Dibenzofuran	NA	NA	3.7E-01 U	NA
Dichlorobenzidine, 3,3'-	1.1E+00	1.9E+01	1.8E+00 U	NA
Dichlorophenol, 2,4-	1.8E+02	NA	3.7E-01 U	NA
Diethyl Phthalate	4.9E+04	5.0E+04	3.7E-01 U	NA
Dimethylphenol, 2,4-	1.2E+03	1.3E+03	3.7E-01 U	NA
Dimethyl phthalate	NA	3.0E+03	3.7E-01 U	NA
Di-n-butyl phthalate	NA	6.3E+03	3.7E-01 U	NA
Dinitro-2-methylphenol, 4,6-	NA	NA	1.8E+00 U	NA
Dinitrophenol, 2,4-	1.2E+02	NA	1.8E+00 U	NA
Dinitrotoluene, 2,4-	1.6E+00	1.3E+01	3.7E-01 U	NA
Dinitrotoluene, 2,6-	6.1E+01	1.3E+00	3.7E-01 U	NA
Di-n-octyl phthalate	NA	2.5E+03	3.7E-01 U	NA
Hexachlorobenzene	3.0E-01	5.2E+00	3.7E-01 U	NA
Hexachlorobutadiene	6.2E+00	1.3E+01	3.7E-01 U	NA
Hexachlorocyclopentadiene	3.7E+02	NA	3.7E-01 U	NA
Hexachloroethane	3.5E+01	6.3E+01	1.8E+00 U	NA
Iron	5.5E+04	NA	1.8E+04 J	4.10E+04
Isophorone	5.1E+02	9.1E+03	3.7E-01 U	NA
~Lead and Compounds	4.0E+02	NA	3.6E+01 J	4.70E+01
Magnesium	NA	NA	2.9E+03 J	7.10E+03
Manganese (Water)	1.8E+03	NA	6.4E+02 J	1.50E+03
~Mercury (elemental)	4.3E+00	7.6E+00	2.9E-02 B	1.20E-01
Methylphenol, 2-	NA	NA	3.7E-01 U	NA
Methylphenol, 4-	NA	NA	3.7E-01 U	NA
Molybdenum	3.9E+02	NA	1.4E+00	NA
Nickel Soluble Salts	1.5E+03	1.5 E+03	1.4E+01	3.30E+01
Nitroaniline, 2-	1.8E+02	NA	1.8E+00 U	NA
Nitroaniline, 3-	NA	NA	1.8E+00 U	NA
Nitroaniline, 4-	2.4E+01	NA	1.8E+00 U	NA
Nitrobenzene	4.4E+00	1.3E+03	3.7E-01 U	NA
Nitrophenol, 2-	NA	NA	3.7E-01 U	NA

Table 2
Screening Criteria for Sample Backfill 2

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Backfill 2 mg/kg	Sediment Ref. Values (3) mg/kg
Nitrophenol, 4-	NA	NA	1.8E+00 U	NA
Nitroso-di-N-propylamine, N-	6.9E-02	NA	3.7E-01 U	NA
Nitrosodiphenylamine, N-	9.9E+01	NA	3.7E-01 U	NA
Oxybis, 2,2-	NA	NA	3.7E-01 U	NA
Pentachlorophenol	3.0E+00	5.5E+01	3.7E-01 U	NA
Phenanthrene	NA	1.8E+04	1.3E-01 J, B	NA
Phenol	1.8E+04	1.5E+04	3.7E-01 U	NA
Polychlorinated Biphenyls (PCBs)				NA
~Aroclor 1016	3.9E+00	NA	7.8E-02 U	NA
~Aroclor 1221	1.7E-01	NA	7.8E-02 U	NA
~Aroclor 1232	1.7E-01	NA	7.8E-02 U	NA
~Aroclor 1242	2.2E-01	NA	7.8E-02 U	NA
~Aroclor 1248	2.2E-01	NA	7.8E-02 U	NA
~Aroclor 1254	2.2E-01	NA	7.8E-02 U	NA
~Aroclor 1260	2.2E-01	NA	7.8E-02 U	NA
~Aroclor 1268	NA	NA	7.8E-02 U	NA
~Total	NA	1.2E+00		NA
Polynuclear Aromatic Hydrocarbons (PAHs)				NA
~Acenaphthene	3.4E+03	3.5E+03	8.1E-03 J	NA
~Anthracene	1.7E+04	1.8E+04	3.2E-02 J, B	NA
~Benz[a]anthracene	1.5E-01	1.1E+01	1.5E-01 J, B	NA
~Benzo[a]pyrene	1.5E-02	1.1E+00	1.5E-01 J, B	NA
~Benzo[b]fluoranthene	1.5E-01	1.1E+01	2.0E-01 J, B	NA
~Benzo[ghi] perylene	NA	1.8E+03	1.0E-01 J, B	NA
~Benzo[k]fluoranthene	1.5E+00	1.1E+02	9.2E-02 J B	NA
~Chrysene	1.5E+01	1.1E+03	1.7E-01 J, B	NA
~Dibenz[a,h]anthracene	1.5E-02	1.1E+00	2.2E-02 J, B	NA
~Fluoranthene	2.3E+03	2.4E+03	3.0E-01 J, B	NA
~Fluorene	2.3E+03	2.4E+03	9.8E-03 J, B	NA
~Indeno[1,2,3-cd]pyrene	1.5E-01	1.1E+01	9.1E-02 J, B	NA
~Methylnaphthalene, 2-	3.1E+02	4.1E+03	3.7E-01 U	NA
~Naphthalene	3.9E+00	6.9E+01	3.7E-01 U	NA
~Pyrene	1.7E+03	1.8E+03	2.7E-01 J, B	NA
Potassium	NA	NA	5.3E+02 J	6.80E+03
Selenium	3.9E+02	3.8 E+02	6.2E-01	1.70E+00
Silver	3.9E+02	3.8 E+02	4.2E-02 B	4.30E-01
Sodium	NA	NA	3.6E+01 B,J	NA
Thallium (Soluble Salts)	5.1E+00	6.1E+00	1.7E-01	4.70E+00
Trichlorophenol, 2,4,5-	6.1E+03	6.3E+03	3.7E-01 U	NA
Trichlorophenol, 2,4,6-	4.4E+01	7.0E+02	3.7E-01 U	NA
Vanadium and Compounds	3.9E+02	7.7E+02	1.2E+01	4.00E+01
Zinc (Metallic)	2.3E+04	2.3E+04	9.0E+01 J	1.60E+02
alpha-BHC	7.7E-02	NA	3.8E-03 U	NA
beta-BHC	2.7E-01	NA	3.8E-03 U	NA
delta-BHC	NA	NA	3.8E-03 U	NA
gamma-BHC (Lindane)	5.2E-01	8.7E+00	3.8E-03 U	NA
Heptachlor	1.1E-01	1.8E+00	3.8E-03 U	NA
Aldrin	2.9E-02	NA	3.8E-03 U	NA
Heptachlor epoxide	5.3E-02	8.1E-01	3.8E-03 U	NA
Endosulfan I	3.7E+02	NA	3.8E-03 U	NA
Dieldrin	3.0E-02	NA	3.8E-03 U	NA
4,4'-DDE	1.4E+00	3.0E+01	3.7E-03 J	NA
Endrin	1.8E+01	1.9E+01	3.8E-03 U	NA

Table 2
Screening Criteria for Sample Backfill 2

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Backfill 2 mg/kg	Sediment Ref. Values (3) mg/kg
Endosulfan II	NA	NA	3.8E-03 U	NA
4,4'-DDD	2.0E+00	4.2E+01	3.8E-03 U	NA
Endosulfan sulfate	NA	NA	3.8E-03 U	NA
4,4'-DDT	1.7E+00	3.0E+01	2.5E-03 J	NA
Methoxychlor	3.1E+02	3.1E+02	7.3E-03 U	NA
Endrin ketone	NA	NA	3.8E-03 U	NA
Endrin aldehyde	NA	NA	3.8E-03 U	NA
alpha-chlordane	NA	NA	3.8E-03 U	NA
gamma-chlordane	NA	NA	3.8E-03 U	NA
Toxaphene	4.4E-01	7.8E+00	1.5E-01 U	NA
2,4-D	NA	NA	8.9E-02 U	NA
2,4-DB	NA	NA	8.9E-02 U	NA
2,4,5-TP (Silvex)	NA	5.0E+02	2.2E-02 U	NA
2,4,5-T	NA	NA	2.2E-02 U	NA
Dalapon	1.8E+03	NA	2.3E-02 J, B	NA
Dicamba	1.8E+03	NA	4.5E-02 U	NA
Dichlorprop	NA	NA	8.9E-02 U	NA
Dinoseb	6.1E+01	NA	1.3E-02 U	NA
MCPA	3.1E+01	NA	8.9E+00 U	NA
MCPP	6.1E+01	NA	8.9E+00 U	NA

Notes:
NA = Not available
J and B are data qualifiers that vary depending upon the analyses. See individual lab reports for explanations.
U = Constituent was not detected above the reporting limit.
(1) = Regional Screening Levels from US EPA Region 9 Preliminary Remediation Goals, April 2009.
(2) = Ohio EPA Voluntary Action Program Generic Numerical Standards OAC 3745-300-08.
(3) = Ohio EPA Division of Emergency & Remedial Response, Ecological Risk Assessment Guidance, April 2008.

Table 3
Screening Criteria for Sample Suffield Agg Loam

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Loam mg/kg	Sediment Ref. Values (3) mg/kg
Acetone	6.1E+04	6.40 E+04	8.8E-02	NA
Benzene	1.1E+00	6.40 E+01	5.4E-04 J	NA
Bromodichloromethane	2.8E-01	NA	5.4E-03 U	NA
Bromoform	6.1E+01	NA	5.4E-03 U	NA
Bromomethane	7.9E+00	NA	5.4E-03 U	NA
Carbon Disulfide	6.7E+02	1.40E+03	5.4E-03 U	NA
Carbon Tetrachloride	2.5E-01	5.5	5.4E-03 U	NA
Chlorobenzene	3.1E+02	4.10E+02	5.4E-03 U	NA
Chloroethane	NA	3.7 E+03	5.4E-03 U	NA
Chloroform	3.0E-01	6.6	5.4E-03 U	NA
Chloromethane	1.2E+02	NA	5.4E-03 U	NA
Cyclohexane	7.2E+03	NA	1.1E-02 U	NA
Dibromo-3-chloropropane, 1,2-	5.6E-03	NA	1.1E-02 U	NA
Dibromochloromethane	7.0E-01	1.30E+02	5.4E-03 U	NA
Dibromoethane, 1,2-	3.4E-02	NA	5.4E-03 U	NA
Dichlorobenzene, 1,2-	2.0E+03	2.30E+03	5.4E-03 U	NA
Dichlorobenzene, 1,3-	NA	NA	5.4E-03 U	NA
Dichlorobenzene, 1,4-	2.6E+00	6.00E+00	5.4E-03 U	NA
Dichlorodifluoromethane	1.9E+02	3.80E+02	5.4E-03 U	NA
Dichloroethane, 1,1-	3.4E+00	2.00E+03	5.4E-03 U	NA
Dichloroethane, 1,2-	4.5E-01	8.70E+00	5.4E-03 U	NA
Dichloroethylene, 1,1-	2.5E+02	4.10E+02	5.4E-03 U	NA
Dichloroethylene, 1,2-cis-	7.8E+02	7.60E+02	5.4E-03 U	NA
Dichloroethylene, 1,2-trans-	1.1E+02	1.80E+02	5.4E-03 U	NA
Dichloropropane, 1,2-	9.3E-01	1.90E+01	5.4E-03 U	NA
Dichloropropene, 1,3-cis-	NA	NA	5.4E-03 U	NA
Dichloropropene, 1,3-trans-	NA	NA	5.4E-03 U	NA
Ethylbenzene	5.7E+00	3.6 E+03	5.4E-03 U	NA
2-Hexanone	NA	NA	2.2E-02 U	NA
Isopropylbenzene	NA	2.70E+03	5.4E-03 U	NA
Methyl Acetate	7.8E+04	NA	1.1E-02 U	NA
Methylcyclohexane	NA	NA	1.1E-02 U	NA
Methyl Ethyl Ketone (2-Butanone)	2.8E+04	3.30E+04	7.4E-03 J	NA
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	5.3E+03	3.70E+04	2.2E-02 U	NA
Methyl tert-Butyl Ether (MTBE)	3.9E+01	8.50E+02	2.2E-02 U	NA
Methylene Chloride	1.1E+01	2.50E+02	5.4E-03 U	NA
Styrene	6.5E+03	9.50E+03	5.4E-03 U	NA
Tetrachloroethane, 1,1,2,2-	5.9E-01	1.10E+01	5.4E-03 U	NA
Tetrachloroethylene	5.7E-01	1.70E+01	5.4E-03 U	NA
Toluene	5.0E+03	5.1 E+03	8.1E-04 J	NA
Trichloro-1,2,2-trifluoroethane, 1,1,2-	4.3E+04	NA	5.4E-03 U	NA
Trichlorobenzene, 1,2,4-	8.7E+01	NA	5.4E-03 U	NA
Trichloroethane, 1,1,1-	9.0E+03	6.10E+03	5.4E-03 U	NA
Trichloroethane, 1,1,2-	1.1E+00	2.50E+01	5.4E-03 U	NA
Trichloroethylene	2.8E+00	6.50E+01	5.4E-03 U	NA
Trichlorofluoromethane	8.0E+02	1.20E+03	5.4E-03 U	NA
Vinyl Chloride	6.0E-02	4.60E+00	5.4E-03 U	NA
Xylenes, Total	NA	1.00 E+03	1.1E-02 U	NA
Acenaphthylene	NA	3500	4.5E-01 U	NA
Acetophenone	7.8E+03	6.3E+03	9.1E-02 U	NA
Aluminum	7.7E+04	NA	7.7E+03 J	2.90E+04
Antimony (metallic)	3.1E+01	3.0E+01	1.7E-01 B	1.30E+00
Arsenic, Inorganic	3.9E-01	6.7E+00	3.21E+01	2.50E+01

Table 3
Screening Criteria for Sample Suffield Agg Loam

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Loam mg/kg	Sediment Ref. Values (3) mg/kg
Atrazine	2.1E+00	NA	4.5E-01 U	NA
Barium	1.5E+04	1.5E+04	1.6E+02 J	1.90E+02
Benzaldehyde	7.8E+03	NA	4.5E-01 U	NA
Beryllium and compounds	1.6E+02	1.5E+02	5.4E-01	8.00E-01
Biphenyl, 1,1'-	3.9E+03	NA	4.5E-01 U	NA
Bis(2-chloroethoxy)methane	1.8E+02	NA	4.5E-01 U	NA
Bis(2-chloroethyl)ether	1.9E-01	NA	4.5E-01 U	NA
Bis(2-ethylhexyl)phthalate	3.5E+01	6.2E+02	4.5E-01 U	NA
4-Bromophenyl phenyl ether	NA	NA	4.5E-01 U	NA
Butyl Benzyl Phthlate	2.6E+02	6.2E+02	4.5E-01 U	NA
Cadmium (Diet)	7.0E+01	7.2E+01	3.8E-01	7.90E-01
Calcium	NA	NA	5.1E+03 J	2.10E+04
Caprolactam	3.1E+04	NA	4.5E-01 U	NA
Carbazole	NA	4.3E+02	4.5E-01 U	NA
Chloro-3-methylphenol, 4-	NA	NA	4.5E-01 U	NA
Chloroaniline, p-	2.4E+00	NA	4.5E-01 U	NA
Chloronaphthalene, Beta-	6.3E+03	NA	4.5E-01 U	NA
Chlorophenol, 2-	3.9E+02	NA	4.5E-01 U	NA
4-Chlorophenyl phenyl ether	NA	NA	4.5E-01 U	NA
Chromium, Total (1:6 ratio Cr VI : Cr III)	2.8E+02	NA	1.1E+01 J	2.90E+01
Cobalt	2.3E+01	1.4 E+03	3.9E+00	1.20E+01
Copper	3.1E+03	NA	3.0E+01 J	3.20E+01
Dibenzofuran	NA	NA	4.5E-01 U	NA
Dichlorobenzidine, 3,3'-	1.1E+00	1.9E+01	2.2E+00 U	NA
Dichlorophenol, 2,4-	1.8E+02	NA	4.5E-01 U	NA
Diethyl Phthalate	4.9E+04	5.0E+04	4.5E-01 U	NA
Dimethylphenol, 2,4-	1.2E+03	1.3E+03	4.5E-01 U	NA
Dimethyl phthalate	NA	3.0E+03	4.5E-01 U	NA
Di-n-butyl phthalate	NA	6.3E+03	4.5E-01 U	NA
Dinitro-2-methylphenol, 4,6-	NA	NA	2.2E+00 U	NA
Dinitrophenol, 2,4-	1.2E+02	NA	2.2E+00 U	NA
Dinitrotoluene, 2,4-	1.6E+00	1.3E+01	4.5E-01 U	NA
Dinitrotoluene, 2,6-	6.1E+01	1.3E+00	4.5E-01 U	NA
Di-n-octyl phthalate	NA	2.5E+03	4.5E-01 U	NA
Hexachlorobenzene	3.0E-01	5.2E+00	4.5E-01 U	NA
Hexachlorobutadiene	6.2E+00	1.3E+01	4.5E-01 U	NA
Hexachlorocyclopentadiene	3.7E+02	NA	2.2E+00 U	NA
Hexachloroethane	3.5E+01	6.3E+01	4.5E-01 U	NA
Iron	5.5E+04	NA	2.4E+04 J	4.10E+04
Isophorone	5.1E+02	9.1E+03	4.5E-01 U	NA
~Lead and Compounds	4.0E+02	NA	1.7E+01 J	4.70E+01
Magnesium	NA	NA	1.6E+03 J	7.10E+03
Manganese (Water)	1.8E+03	NA	3.6E+02 J	1.50E+03
~Mercury (elemental)	4.3E+00	7.6E+00	9.1E-02 B	1.20E-01
Methylphenol, 2-	NA	NA	4.5E-01 U	NA
Methylphenol, 4-	NA	NA	4.5E-01 U	NA
Molybdenum	3.9E+02	NA	3.3E+00	NA
Nickel Soluble Salts	1.5E+03	1.5 E+03	1.1E+01	3.30E+01
Nitroaniline, 2-	1.8E+02	NA	2.2E+00 U	NA
Nitroaniline, 3-	NA	NA	2.2E+00 U	NA
Nitroaniline, 4-	2.4E+01	NA	2.2E+00 U	NA
Nitrobenzene	4.4E+00	1.3E+03	4.5E-01 U	NA
Nitrophenol, 2-	NA	NA	4.5E-01 U	NA

Table 3
Screening Criteria for Sample Suffield Agg Loam

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Loam mg/kg	Sediment Ref. Values (3) mg/kg
Nitrophenol, 4-	NA	NA	2.2E+00 U	NA
Nitroso-di-N-propylamine, N-	6.9E-02	NA	4.5E-01 U	NA
Nitrosodiphenylamine, N-	9.9E+01	NA	4.5E-01 U	NA
Oxybis, 2,2-	NA	NA	4.5E-01 U	NA
Pentachlorophenol	3.0E+00	5.5E+01	4.5E-01 U	NA
Phenanthrene	NA	1.8E+04	9.5E-03 J, B	NA
Phenol	1.8E+04	1.5E+04	4.5E-01 U	NA
Polychlorinated Biphenyls (PCBs)				NA
~Aroclor 1016	3.9E+00	NA	9.6E-02 U	NA
~Aroclor 1221	1.7E-01	NA	9.6E-02 U	NA
~Aroclor 1232	1.7E-01	NA	9.6E-02 U	NA
~Aroclor 1242	2.2E-01	NA	9.6E-02 U	NA
~Aroclor 1248	2.2E-01	NA	9.6E-02 U	NA
~Aroclor 1254	2.2E-01	NA	9.6E-02 U	NA
~Aroclor 1260	2.2E-01	NA	9.6E-02 U	NA
~Aroclor 1268	NA	NA	9.6E-02 U	NA
~Total	NA	1.2E+00		NA
Polynuclear Aromatic Hydrocarbons (PAHs)				NA
~Acenaphthene	3.4E+03	3.5E+03	4.5E-01 U	NA
~Anthracene	1.7E+04	1.8E+04	4.5E-01 U	NA
~Benz[a]anthracene	1.5E-01	1.1E+01	1.7E-02 J, B	NA
~Benzo[a]pyrene	1.5E-02	1.1E+00	1.5E-02 J, B	NA
~Benzo[b]fluoranthene	1.5E-01	1.1E+01	4.5E-01 U	NA
~Benzo[ghi] perylene	NA	1.8E+03	4.5E-01 U	NA
~Benzo[k]fluoranthene	1.5E+00	1.1E+02	4.5E-01 U	NA
~Chrysene	1.5E+01	1.1E+03	1.9E-02 J, B	NA
~Dibenz[a,h]anthracene	1.5E-02	1.1E+00	4.5E-01 U	NA
~Fluoranthene	2.3E+03	2.4E+03	2.8E-02 J, B	NA
~Fluorene	2.3E+03	2.4E+03	4.5E-01 U	NA
~Indeno[1,2,3-cd]pyrene	1.5E-01	1.1E+01	4.5E-01 U	NA
~Methylnaphthalene, 2-	3.1E+02	4.1E+03	4.5E-01 U	NA
~Naphthalene	3.9E+00	6.9E+01	4.5E-01 U	NA
~Pyrene	1.7E+03	1.8E+03	2.5E-02 J, B	NA
Potassium	NA	NA	5.9E+02 J	6.80E+03
Selenium	3.9E+02	3.8 E+02	1.1E+00	1.70E+00
Silver	3.9E+02	3.8 E+02	1.3E-01 B	4.30E-01
Sodium	NA	NA	6.1E+01 B,J	NA
Thallium (Soluble Salts)	5.1E+00	6.1E+00	1.5E-01	4.70E+00
Trichlorophenol, 2,4,5-	6.1E+03	6.3E+03	4.5E-01 U	NA
Trichlorophenol, 2,4,6-	4.4E+01	7.0E+02	4.5E-01 U	NA
Vanadium and Compounds	3.9E+02	7.7E+02	1.6E+01	4.00E+01
Zinc (Metallic)	2.3E+04	2.3E+04	5.7E+01 J	1.60E+02
alpha-BHC	7.7E-02	NA	1.2E-01 U	NA
beta-BHC	2.7E-01	NA	1.2E-01 U	NA
delta-BHC	NA	NA	1.2E-01 U	NA
gamma-BHC (Lindane)	5.2E-01	8.7E+00	1.2E-01 U	NA
Heptachlor	1.1E-01	1.8E+00	1.2E-01 U	NA
Aldrin	2.9E-02	NA	1.2E-01 U	NA
Heptachlor epoxide	5.3E-02	8.1E-01	1.2E-01 U	NA
Endosulfan I	3.7E+02	NA	1.2E-01 U	NA
Dieldrin	3.0E-02	NA	1.2E-01 U	NA
4,4'-DDE	1.4E+00	3.0E+01	2.3E-01	NA
Endrin	1.8E+01	1.9E+01	1.2E-01 U	NA

Table 3
Screening Criteria for Sample Suffield Agg Loam

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Loam mg/kg	Sediment Ref. Values (3) mg/kg
Endosulfan II	NA	NA	1.2E-01 U	NA
4,4'-DDD	2.0E+00	4.2E+01	1.2E-01 U	NA
Endosulfan sulfate	NA	NA	1.2E-01 U	NA
4,4'-DDT	1.7E+00	3.0E+01	9.3E-02 J	NA
Methoxychlor	3.1E+02	3.1E+02	2.3E-01 U	NA
Endrin ketone	NA	NA	1.2E-01 U	NA
Endrin aldehyde	NA	NA	1.2E-01 U	NA
alpha-chlordane	NA	NA	1.2E-01 U	NA
gamma-chlordane	NA	NA	1.2E-01 U	NA
Toxaphene	4.4E-01	7.8E+00	4.6E+00 U	NA
2,4-D	NA	NA	1.1E-01 U	NA
2,4-DB	NA	NA	1.1E-01 U	NA
2,4,5-TP (Silvex)	NA	5.0E+02	2.7E-02 U	NA
2,4,5-T	NA	NA	2.7E-02 U	NA
Dalapon	1.8E+03	NA	3.3E-02 J,B	NA
Dicamba	1.8E+03	NA	5.5E-02 U	NA
Dichlorprop	NA	NA	1.1E-01 U	NA
Dinoseb	6.1E+01	NA	1.6E-02 U	NA
MCPA	3.1E+01	NA	1.1E+01 U	NA
MCPP	6.1E+01	NA	1.1E+01 U	NA

Notes:
NA = Not available
J and B are data qualifiers that vary depending upon the analyses. See individual lab reports for explanations.
U = Constituent was not detected above the reporting limit.
(1) = Regional Screening Levels from US EPA Region 9 Preliminary Remediation Goals, April 2009.
(2) = Ohio EPA Voluntary Action Program Generic Numerical Standards OAC 3745-300-08.
(3) = Ohio EPA Division of Emergency & Remedial Response, Ecological Risk Assessment Guidance, April 2008.

TABLE 4
Screening Criteria for Sample Suffield Agg Peat

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Peat mg/kg	Sediment Ref. Values (3) mg/kg
Acetone	6.1E+04	6.40 E+04	5.0E-02	NA
Benzene	1.1E+00	6.40 E+01	2.7E-03 J	NA
Bromodichloromethane	2.8E-01	NA	7.1E-03 U	NA
Bromoform	6.1E+01	NA	7.1E-03 U	NA
Bromomethane	7.9E+00	NA	7.1E-03 U	NA
Carbon Disulfide	6.7E+02	1.40E+03	5.7E-02	NA
Carbon Tetrachloride	2.5E-01	5.5	7.1E-03 U	NA
Chlorobenzene	3.1E+02	4.10E+02	7.1E-03 U	NA
Chloroethane	NA	3.7 E+03	7.1E-03 U	NA
Chloroform	3.0E-01	6.6	7.1E-03 U	NA
Chloromethane	1.2E+02	NA	7.1E-03 U	NA
Cyclohexane	7.2E+03	NA	2.2E-03 J	NA
Dibromo-3-chloropropane, 1,2-	5.6E-03	NA	7.1E-03 U	NA
Dibromochloromethane	7.0E-01	1.30E+02	1.4E-02 U	NA
Dibromoethane, 1,2-	3.4E-02	NA	7.1E-03 U	NA
Dichlorobenzene, 1,2-	2.0E+03	2.30E+03	7.1E-03 U	NA
Dichlorobenzene, 1,3-	NA	NA	7.1E-03 U	NA
Dichlorobenzene, 1,4-	2.6E+00	6.00E+00	7.1E-03 U	NA
Dichlorodifluoromethane	1.9E+02	3.80E+02	7.1E-03 U	NA
Dichloroethane, 1,1-	3.4E+00	2.00E+03	7.1E-03 U	NA
Dichloroethane, 1,2-	4.5E-01	8.70E+00	7.1E-03 U	NA
Dichloroethylene, 1,1-	2.5E+02	4.10E+02	7.1E-03 U	NA
Dichloroethylene, 1,2-cis-	7.8E+02	7.60E+02	7.1E-03 U	NA
Dichloroethylene, 1,2-trans-	1.1E+02	1.80E+02	7.1E-03 U	NA
Dichloropropane, 1,2-	9.3E-01	1.90E+01	7.1E-03 U	NA
Dichloropropene, 1,3-cis-	NA	NA	7.1E-03 U	NA
Dichloropropene, 1,3-trans-	NA	NA	7.1E-03 U	NA
Ethylbenzene	5.7E+00	3.6 E+03	1.6E-03 J	NA
2-Hexanone	NA	NA	2.8E-02 U	NA
Isopropylbenzene	NA	2.70E+03	7.1E-03 U	NA
Methyl Acetate	7.8E+04	NA	1.4E-02 U	NA
Methylcyclohexane	NA	NA	3.1E-03 J	NA
Methyl Ethyl Ketone (2-Butanone)	2.8E+04	3.30E+04	8.8E-03 J	NA
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	5.3E+03	3.70E+04	2.8E-02 U	NA
Methyl tert-Butyl Ether (MTBE)	3.9E+01	8.50E+02	2.8E-02 U	NA
Methylene Chloride	1.1E+01	2.50E+02	7.1E-03 U	NA
Styrene	6.5E+03	9.50E+03	7.1E-03 U	NA
Tetrachloroethane, 1,1,2,2-	5.9E-01	1.10E+01	7.1E-03 U	NA
Tetrachloroethylene	5.7E-01	1.70E+01	7.1E-03 U	NA
Toluene	5.0E+03	5.1 E+03	9.8E-03	NA
Trichloro-1,2,2-trifluoroethane, 1,1,2-	4.3E+04	NA	7.1E-03 U	NA
Trichlorobenzene, 1,2,4-	8.7E+01	NA	7.1E-03 U	NA
Trichloroethane, 1,1,1-	9.0E+03	6.10E+03	7.1E-03 U	NA
Trichloroethane, 1,1,2-	1.1E+00	2.50E+01	7.1E-03 U	NA
Trichloroethylene	2.8E+00	6.50E+01	7.1E-03 U	NA
Trichlorofluoromethane	8.0E+02	1.20E+03	7.1E-03 U	NA
Vinyl Chloride	6.0E-02	4.60E+00	7.1E-03 U	NA
Xylenes, Total	NA	1.00 E+03	4.3E-03 J	NA
Acenaphthylene	NA	3500	7.0E-01 U	NA
Acetophenone	7.8E+03	6.3E+03	1.4E-01 U	NA
Aluminum	7.7E+04	NA	7.4E+03 J	2.90E+04

TABLE 4
Screening Criteria for Sample Suffield Agg Peat

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Peat mg/kg	Sediment Ref. Values (3) mg/kg
Antimony (metallic)	3.1E+01	3.0E+01	1.2E-01 B	1.30E+00
Arsenic, Inorganic	3.9E-01	6.7E+00	2.6E+01	2.50E+01
Atrazine	2.1E+00	NA	7.0E-01 U	NA
Barium	1.5E+04	1.5E+04	2.1E+02 J	1.90E+02
Benzaldehyde	7.8E+03	NA	7.0E-01 U	NA
Beryllium and compounds	1.6E+02	1.5E+02	4.8E-01	8.00E-01
Biphenyl, 1,1'-	3.9E+03	NA	7.0E-01 U	NA
Bis(2-chloroethoxy)methane	1.8E+02	NA	7.0E-01 U	NA
Bis(2-chloroethyl)ether	1.9E-01	NA	7.0E-01 U	NA
Bis(2-ethylhexyl)phthalate	3.5E+01	6.2E+02	7.0E-01 U	NA
4-Bromophenyl phenyl ether	NA	NA	7.0E-01 U	NA
Butyl Benzyl Phthlate	2.6E+02	6.2E+02	7.0E-01 U	NA
Cadmium (Diet)	7.0E+01	7.2E+01	4.9E-01	7.90E-01
Calcium	NA	NA	2.9E+05 J	2.10E+04
Caprolactam	3.1E+04	NA	7.0E-01 U	NA
Carbazole	NA	4.3E+02	7.0E-01 U	NA
Chloro-3-methylphenol, 4-	NA	NA	7.0E-01 U	NA
Chloroaniline, p-	2.4E+00	NA	7.0E-01 U	NA
Chloronaphthalene, Beta-	6.3E+03	NA	7.0E-01 U	NA
Chlorophenol, 2-	3.9E+02	NA	7.0E-01 U	NA
4-Chlorophenyl phenyl ether	NA	NA	7.0E-01 U	NA
Chromium, Total (1:6 ratio Cr VI : Cr III)	2.8E+02	NA	1.3E+01 J	2.90E+01
Cobalt	2.3E+01	1.4 E+03	9.2E+00	1.20E+01
Copper	3.1E+03	NA	2.5E+01 J	3.20E+01
Dibenzofuran	NA	NA	7.0E-01 U	NA
Dichlorobenzidine, 3,3'-	1.1E+00	1.9E+01	3.4E+00 U	NA
Dichlorophenol, 2,4-	1.8E+02	NA	7.0E-01 U	NA
Diethyl Phthalate	4.9E+04	5.0E+04	7.0E-01 U	NA
Dimethylphenol, 2,4-	1.2E+03	1.3E+03	7.0E-01 U	NA
Dimethyl phthalate	NA	3.0E+03	7.0E-01 U	NA
Di-n-butyl phthalate	NA	6.3E+03	7.0E-01 U	NA
Dinitro-2-methylphenol, 4,6-	NA	NA	3.4E+00 U	NA
Dinitrophenol, 2,4-	1.2E+02	NA	3.4E+00 U	NA
Dinitrotoluene, 2,4-	1.6E+00	1.3E+01	7.0E-01 U	NA
Dinitrotoluene, 2,6-	6.1E+01	1.3E+00	7.0E-01 U	NA
Di-n-octyl phthalate	NA	2.5E+03	7.0E-01 U	NA
Hexachlorobenzene	3.0E-01	5.2E+00	7.0E-01 U	NA
Hexachlorobutadiene	6.2E+00	1.3E+01	7.0E-01 U	NA
Hexachlorocyclopentadiene	3.7E+02	NA	3.4E+00 U	NA
Hexachloroethane	3.5E+01	6.3E+01	7.0E-01 U	NA
Iron	5.5E+04	NA	4.33E+04 J	4.10E+04
Isophorone	5.1E+02	9.1E+03	7.00E-01 U	NA
~Lead and Compounds	4.0E+02	NA	1.43E+01 J	4.70E+01
Magnesium	NA	NA	2.98E+04 J	7.10E+03
Manganese (Water)	1.8E+03	NA	1.63E+03 J	1.50E+03
~Mercury (elemental)	4.3E+00	7.6E+00	1.50E-01 B	1.20E-01
Methylphenol, 2-	NA	NA	7.0E-01 U	NA
Methylphenol, 4-	NA	NA	7.0E-01 U	NA
Molybdenum	3.9E+02	NA	1.2E+01	NA
Nickel Soluble Salts	1.5E+03	1.5 E+03	2.0E+01	3.30E+01
Nitroaniline, 2-	1.8E+02	NA	3.4E+00 U	NA

TABLE 4
Screening Criteria for Sample Suffield Agg Peat

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Peat mg/kg	Sediment Ref. Values (3) mg/kg
Nitroaniline, 3-	NA	NA	3.4E+00 U	NA
Nitroaniline, 4-	2.4E+01	NA	3.4E+00 U	NA
Nitrobenzene	4.4E+00	1.3E+03	7.0E-01 U	NA
Nitrophenol, 2-	NA	NA	7.0E-01 U	NA
Nitrophenol, 4-	NA	NA	3.4E+00 U	NA
Nitroso-di-N-propylamine, N-	6.9E-02	NA	7.0E-01 U	NA
Nitrosodiphenylamine, N-	9.9E+01	NA	7.0E-01 U	NA
Oxybis, 2,2-	NA	NA	7.0E-01 U	NA
Pentachlorophenol	3.0E+00	5.5E+01	7.0E-01 U	NA
Phenanthrene	NA	1.8E+04	7.0E-01 U	NA
Phenol	1.8E+04	1.5E+04	7.0E-01 U	NA
Polychlorinated Biphenyls (PCBs)				
~Aroclor 1016	3.9E+00	NA	1.5E-01 U	NA
~Aroclor 1221	1.7E-01	NA	1.5E-01 U	NA
~Aroclor 1232	1.7E-01	NA	1.5E-01 U	NA
~Aroclor 1242	2.2E-01	NA	1.5E-01 U	NA
~Aroclor 1248	2.2E-01	NA	1.5E-01 U	NA
~Aroclor 1254	2.2E-01	NA	1.5E-01 U	NA
~Aroclor 1260	2.2E-01	NA	1.5E-01 U	NA
~Aroclor 1268	NA	NA	1.5E-01 U	NA
~Total	NA	1.2E+00		NA
Polynuclear Aromatic Hydrocarbons (PAHs)				
~Acenaphthene	3.4E+03	3.5E+03	7.0E-01 U	NA
~Anthracene	1.7E+04	1.8E+04	7.0E-01 U	NA
~Benz[a]anthracene	1.5E-01	1.1E+01	7.0E-01 U	NA
~Benzo[a]pyrene	1.5E-02	1.1E+00	7.0E-01 U	NA
~Benzo[b]fluoranthene	1.5E-01	1.1E+01	7.0E-01 U	NA
~Benzo[ghi] perylene	NA	1.8E+03	7.0E-01 U	NA
~Benzo[k]fluoranthene	1.5E+00	1.1E+02	7.0E-01 U	NA
~Chrysene	1.5E+01	1.1E+03	7.0E-01 U	NA
~Dibenz[a,h]anthracene	1.5E-02	1.1E+00	7.0E-01 U	NA
~Fluoranthene	2.3E+03	2.4E+03	7.0E-01 U	NA
~Fluorene	2.3E+03	2.4E+03	7.0E-01 U	NA
~Indeno[1,2,3-cd]pyrene	1.5E-01	1.1E+01	7.0E-01 U	NA
~Methylnaphthalene, 2-	3.1E+02	4.1E+03	7.0E-01 U	NA
~Naphthalene	3.9E+00	6.9E+01	7.0E-01 U	NA
~Pyrene	1.7E+03	1.8E+03	7.0E-01 U	NA
Potassium	NA	NA	1.1E+03 J	NA
Selenium	3.9E+02	3.8 E+02	1.6E+00	NA
Silver	3.9E+02	3.8 E+02	8.2E-02 B	NA
Sodium	NA	NA	1.3E+02 B, J	NA
Thallium (Soluble Salts)	5.1E+00	6.1E+00	3.5E-01	NA
Trichlorophenol, 2,4,5-	6.1E+03	6.3E+03	7.0E-01 U	NA
Trichlorophenol, 2,4,6-	4.4E+01	7.0E+02	7.0E-01 U	NA
Vanadium and Compounds	3.9E+02	7.7E+02	2.0E+01	NA
Zinc (Metallic)	2.3E+04	2.3E+04	6.0E+01 J	NA
alpha-BHC	7.7E-02	NA	1.8E-01 U	NA
beta-BHC	2.7E-01	NA	1.8E-01 U	NA
delta-BHC	NA	NA	1.8E-01 U	NA
gamma-BHC (Lindane)	5.2E-01	8.7E+00	1.8E-01 U	NA
Heptachlor	1.1E-01	1.8E+00	1.8E-01 U	NA

TABLE 4
Screening Criteria for Sample Suffield Agg Peat

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Peat mg/kg	Sediment Ref. Values (3) mg/kg
Aldrin	2.9E-02	NA	1.8E-01 U	NA
Heptachlor epoxide	5.3E-02	8.1E-01	1.8E-01 U	NA
Endosulfan I	3.7E+02	NA	1.8E-01 U	NA
Dieldrin	3.0E-02	NA	1.8E-01 U	NA
4,4'-DDE	1.4E+00	3.0E+01	3.4E-01	NA
Endrin	1.8E+01	1.9E+01	1.8E-01 U	NA
Endosulfan II	NA	NA	1.8E-01 U	NA
4,4'-DDD	2.0E+00	4.2E+01	1.1E-01 J	NA
Endosulfan sulfate	NA	NA	1.8E-01 U	NA
4,4'-DDT	1.7E+00	3.0E+01	2.3E-01	NA
Methoxychlor	3.1E+02	3.1E+02	3.5E-01 U	NA
Endrin ketone	NA	NA	1.8E-01 U	NA
Endrin aldehyde	NA	NA	1.8E-01 U	NA
alpha-chlordane	NA	NA	1.8E-01 U	NA
gamma-chlordane	NA	NA	1.8E-01 U	NA
Toxaphene	4.4E-01	7.8E+00	7.1E+00	NA
2,4-D	NA	NA	1.7E-01 U	NA
2,4-DB	NA	NA	1.7E-01 U	NA
2,4,5-TP (Silvex)	NA	5.0E+02	4.2E-02 U	NA
2,4,5-T	NA	NA	4.2E-02 U	NA
Dalapon	1.8E+03	NA	6.4E-02 J, B	NA
Dicamba	1.8E+03	NA	8.5E-02 U	NA
Dichlorprop	NA	NA	1.7E-01 U	NA
Dinoseb	6.1E+01	NA	2.5E-02 U	NA
MCPA	3.1E+01	NA	1.7E+01 U	NA
MCPP	6.1E+01	NA	1.7E+01 U	NA

Notes:
NA = Not available
J and B are data qualifiers that vary depending upon the analyses. See individual lab reports for explanations.
U = Constituent was not detected above the reporting limit.
(1) = Regional Screening Levels from US EPA Region 9 Preliminary Remediation Goals, April 2009.
(2) = Ohio EPA Voluntary Action Program Generic Numerical Standards OAC 3745-300-08.
(3) = Ohio EPA Division of Emergency & Remedial Response, Ecological Risk Assessment Guidance, April 2008.

Table 5
Screening Criteria for Sample Suffield Agg Bank Run

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Bank Run mg/kg	Sediment Ref. Values (3) mg/kg
Acetone	6.1E+04	6.40 E+04	4.2E-02	NA
Benzene	1.1E+00	6.40 E+01	5.7E-04 J	NA
Bromodichloromethane	2.8E-01	NA	4.3E-03 U	NA
Bromoform	6.1E+01	NA	4.3E-03 U	NA
Bromomethane	7.9E+00	NA	4.3E-03 U	NA
Carbon Disulfide	6.7E+02	1.40E+03	1.1E-01	NA
Carbon Tetrachloride	2.5E-01	5.5	4.3E-03 U	NA
Chlorobenzene	3.1E+02	4.10E+02	4.3E-03 U	NA
Chloroethane	NA	3.7 E+03	4.3E-03 U	NA
Chloroform	3.0E-01	6.6	4.3E-03 U	NA
Chloromethane	1.2E+02	NA	4.3E-03 U	NA
Cyclohexane	7.2E+03	NA	4.9E-04 J	NA
Dibromo-3-chloropropane, 1,2-	5.6E-03	NA	8.5E-03 U	NA
Dibromochloromethane	7.0E-01	1.30E+02	4.3E-03 U	NA
Dibromoethane, 1,2-	3.4E-02	NA	4.3E-03 U	NA
Dichlorobenzene, 1,2-	2.0E+03	2.30E+03	4.3E-03 U	NA
Dichlorobenzene, 1,3-	NA	NA	4.3E-03 U	NA
Dichlorobenzene, 1,4-	2.6E+00	6.00E+00	4.3E-03 U	NA
Dichlorodifluoromethane	1.9E+02	3.80E+02	4.3E-03 U	NA
Dichloroethane, 1,1-	3.4E+00	2.00E+03	4.3E-03 U	NA
Dichloroethane, 1,2-	4.5E-01	8.70E+00	4.3E-03 U	NA
Dichloroethylene, 1,1-	2.5E+02	4.10E+02	4.3E-03 U	NA
Dichloroethylene, 1,2-cis-	7.8E+02	7.60E+02	4.3E-03 U	NA
Dichloroethylene, 1,2-trans-	1.1E+02	1.80E+02	4.3E-03 U	NA
Dichloropropane, 1,2-	9.3E-01	1.90E+01	4.3E-03 U	NA
Dichloropropene, 1,3-cis-	NA	NA	4.3E-03 U	NA
Dichloropropene, 1,3-trans-	NA	NA	4.3E-03 U	NA
Ethylbenzene	5.7E+00	3.6 E+03	4.3E-03 U	NA
2-Hexanone	NA	NA	1.7E-02 U	NA
Isopropylbenzene	NA	2.70E+03	4.3E-03 U	NA
Methyl Acetate	7.8E+04	NA	8.5E-03 U	NA
Methylcyclohexane	NA	NA	6.4E-04 J	NA
Methyl Ethyl Ketone (2-Butanone)	2.8E+04	3.30E+04	3.7E-03 J	NA
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	5.3E+03	3.70E+04	1.7E-02 U	NA
Methyl tert-Butyl Ether (MTBE)	3.9E+01	8.50E+02	1.7E-02 U	NA
Methylene Chloride	1.1E+01	2.50E+02	4.3E-03 U	NA
Styrene	6.5E+03	9.50E+03	4.3E-03 U	NA
Tetrachloroethane, 1,1,2,2-	5.9E-01	1.10E+01	4.3E-03 U	NA
Tetrachloroethylene	5.7E-01	1.70E+01	4.3E-03 U	NA
Toluene	5.0E+03	5.1 E+03	3.3E-03 J	NA
Trichloro-1,2,2-trifluoroethane, 1,1,2-	4.3E+04	NA	4.3E-03 U	NA
Trichlorobenzene, 1,2,4-	8.7E+01	NA	4.3E-03 U	NA
Trichloroethane, 1,1,1-	9.0E+03	6.10E+03	4.3E-03 U	NA
Trichloroethane, 1,1,2-	1.1E+00	2.50E+01	4.3E-03 U	NA
Trichloroethylene	2.8E+00	6.50E+01	4.3E-03 U	NA
Trichlorofluoromethane	8.0E+02	1.20E+03	4.3E-03 U	NA
Vinyl Chloride	6.0E-02	4.60E+00	4.3E-03 U	NA
Xylenes, Total	NA	1.00 E+03	1.0E-03 J	NA
Acenaphthylene	NA	3500	3.8E-01 U	NA
Acetophenone	7.8E+03	6.3E+03	7.8E-02 U	NA
Aluminum	7.7E+04	NA	4.1E+03	2.90E+04
Antimony (metallic)	3.1E+01	3.0E+01	1.2E-01 B	1.30E+00

Table 5
Screening Criteria for Sample Suffield Agg Bank Run

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Bank Run mg/kg	Sediment Ref. Values (3) mg/kg
Arsenic, Inorganic	3.9E-01	6.7E+00	2.74E+01	2.50E+01
Atrazine	2.1E+00	NA	3.8E-01 U	NA
Barium	1.5E+04	1.5E+04	6.1E+01 J	1.90E+02
Benzaldehyde	7.8E+03	NA	3.8E-01 U	NA
Beryllium and compounds	1.6E+02	1.5E+02	3.5E-01	8.00E-01
Biphenyl, 1,1'-	3.9E+03	NA	3.8E-01 U	NA
Bis(2-chloroethoxy)methane	1.8E+02	NA	3.8E-01 U	NA
Bis(2-chloroethyl)ether	1.9E-01	NA	3.8E-01 U	NA
Bis(2-ethylhexyl)phthalate	3.5E+01	6.2E+02	3.8E-01 U	NA
4-Bromophenyl phenyl ether	NA	NA	3.8E-01 U	NA
Butyl Benzyl Phthlate	2.6E+02	6.2E+02	3.8E-01 U	NA
Cadmium (Diet)	7.0E+01	7.2E+01	2.7E-01	7.90E-01
Calcium	NA	NA	7.7E+03 J	2.10E+04
Caprolactam	3.1E+04	NA	3.8E-01 U	NA
Carbazole	NA	4.3E+02	3.8E-01 U	NA
Chloro-3-methylphenol, 4-	NA	NA	3.8E-01 U	NA
Chloroaniline, p-	2.4E+00	NA	3.8E-01 U	NA
Chloronaphthalene, Beta-	6.3E+03	NA	3.8E-01 U	NA
Chlorophenol, 2-	3.9E+02	NA	3.8E-01 U	NA
4-Chlorophenyl phenyl ether	NA	NA	3.8E-01 U	NA
Chromium, Total (1:6 ratio Cr VI : Cr III)	2.8E+02	NA	6.5E+00	2.90E+01
Cobalt	2.3E+01	1.4 E+03	7.3E+00	1.20E+01
Copper	3.1E+03	NA	1.5E+01 J	3.20E+01
Dibenzofuran	NA	NA	3.8E-01 U	NA
Dichlorobenzidine, 3,3'-	1.1E+00	1.9E+01	1.9E+00 U	NA
Dichlorophenol, 2,4-	1.8E+02	NA	3.8E-01 U	NA
Diethyl Phthalate	4.9E+04	5.0E+04	3.8E-01 U	NA
Dimethylphenol, 2,4-	1.2E+03	1.3E+03	3.8E-01 U	NA
Dimethyl phthalate	NA	3.0E+03	3.8E-01 U	NA
Di-n-butyl phthalate	NA	6.3E+03	3.8E-01 U	NA
Dinitro-2-methylphenol, 4,6-	NA	NA	1.9E+00 U	NA
Dinitrophenol, 2,4-	1.2E+02	NA	1.9E+00 U	NA
Dinitrotoluene, 2,4-	1.6E+00	1.3E+01	3.8E-01 U	NA
Dinitrotoluene, 2,6-	6.1E+01	1.3E+00	3.8E-01 U	NA
Di-n-octyl phthalate	NA	2.5E+03	3.8E-01 U	NA
Hexachlorobenzene	3.0E-01	5.2E+00	3.8E-01 U	NA
Hexachlorobutadiene	6.2E+00	1.3E+01	3.8E-01 U	NA
Hexachlorocyclopentadiene	3.7E+02	NA	1.9E+00 U	NA
Hexachloroethane	3.5E+01	6.3E+01	3.8E-01 U	NA
Iron	5.5E+04	NA	1.9E+04 J	4.10E+04
Isophorone	5.1E+02	9.1E+03	3.8E-01 U	NA
~Lead and Compounds	4.0E+02	NA	9.3E+00 J	4.70E+01
Magnesium	NA	NA	2.2E+03 J	7.10E+03
Manganese (Water)	1.8E+03	NA	8.3E+01 J	1.50E+03
~Mercury (elemental)	4.3E+00	7.6E+00	1.2E-01 U	1.20E-01
Methylphenol, 2-	NA	NA	3.8E-01 U	NA
Methylphenol, 4-	NA	NA	3.8E-01 U	NA
Molybdenum	3.9E+02	NA	7.0E+00	NA
Nickel Soluble Salts	1.5E+03	1.5 E+03	1.7E+01 J	3.30E+01
Nitroaniline, 2-	1.8E+02	NA	1.9E+00 U	NA
Nitroaniline, 3-	NA	NA	1.9E+00 U	NA
Nitroaniline, 4-	2.4E+01	NA	1.9E+00 U	NA

Table 5
Screening Criteria for Sample Suffield Agg Bank Run

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Bank Run mg/kg	Sediment Ref. Values (3) mg/kg
Nitrobenzene	4.4E+00	1.3E+03	3.8E-01 U	NA
Nitrophenol, 2-	NA	NA	3.8E-01 U	NA
Nitrophenol, 4-	NA	NA	1.9E+00 U	NA
Nitroso-di-N-propylamine, N-	6.9E-02	NA	3.8E-01 U	NA
Nitrosodiphenylamine, N-	9.9E+01	NA	3.8E-01 U	NA
Oxybis, 2,2-	NA	NA	3.8E-01 U	NA
Pentachlorophenol	3.0E+00	5.5E+01	3.8E-01 U	NA
Phenanthrene	NA	1.8E+04	3.8E-01 U	NA
Phenol	1.8E+04	1.5E+04	3.8E-01 U	NA
Polychlorinated Biphenyls (PCBs)				NA
~Aroclor 1016	3.9E+00	NA	8.2E-02 U	NA
~Aroclor 1221	1.7E-01	NA	8.2E-02 U	NA
~Aroclor 1232	1.7E-01	NA	8.2E-02 U	NA
~Aroclor 1242	2.2E-01	NA	8.2E-02 U	NA
~Aroclor 1248	2.2E-01	NA	8.2E-02 U	NA
~Aroclor 1254	2.2E-01	NA	8.2E-02 U	NA
~Aroclor 1260	2.2E-01	NA	8.2E-02 U	NA
~Aroclor 1268	NA	NA	8.2E-02 U	NA
~Total	NA	1.2E+00	NA	NA
Polynuclear Aromatic Hydrocarbons (PAHs)				NA
~Acenaphthene	3.4E+03	3.5E+03	3.8E-01 U	NA
~Anthracene	1.7E+04	1.8E+04	3.8E-01 U	NA
~Benz[a]anthracene	1.5E-01	1.1E+01	3.8E-01 U	NA
~Benzo[a]pyrene	1.5E-02	1.1E+00	3.8E-01 U	NA
~Benzo[b]fluoranthene	1.5E-01	1.1E+01	3.8E-01 U	NA
~Benzo[ghi] perylene	NA	1.8E+03	3.8E-01 U	NA
~Benzo[k]fluoranthene	1.5E+00	1.1E+02	3.8E-01 U	NA
~Chrysene	1.5E+01	1.1E+03	3.8E-01 U	NA
~Dibenz[a,h]anthracene	1.5E-02	1.1E+00	3.8E-01 U	NA
~Fluoranthene	2.3E+03	2.4E+03	3.8E-01 U	NA
~Fluorene	2.3E+03	2.4E+03	3.8E-01 U	NA
~Indeno[1,2,3-cd]pyrene	1.5E-01	1.1E+01	3.8E-01 U	NA
~Methylnaphthalene, 2-	3.1E+02	4.1E+03	3.8E-01 U	NA
~Naphthalene	3.9E+00	6.9E+01	3.8E-01 U	NA
~Pyrene	1.7E+03	1.8E+03	3.8E-01 U	NA
Potassium	NA	NA	4.8E+02 J	6.80E+03
Selenium	3.9E+02	3.8 E+02	5.1E-01 B	1.70E+00
Silver	3.9E+02	3.8 E+02	4.3E-02 B	4.30E-01
Sodium	NA	NA	5.4E+01 B,J	NA
Thallium (Soluble Salts)	5.1E+00	6.1E+00	1.4E-01	4.70E+00
Trichlorophenol, 2,4,5-	6.1E+03	6.3E+03	3.8E-01 U	NA
Trichlorophenol, 2,4,6-	4.4E+01	7.0E+02	3.8E-01 U	NA
Vanadium and Compounds	3.9E+02	7.7E+02	1.2E+01	4.00E+01
Zinc (Metallic)	2.3E+04	2.3E+04	5.1E+01 J	1.60E+02
alpha-BHC	7.7E-02	NA	9.9E-03 U	NA
beta-BHC	2.7E-01	NA	9.9E-03 U	NA
delta-BHC	NA	NA	9.9E-03 U	NA
gamma-BHC (Lindane)	5.2E-01	8.7E+00	9.9E-03 U	NA
Heptachlor	1.1E-01	1.8E+00	9.9E-03 U	NA
Aldrin	2.9E-02	NA	9.9E-03 U	NA
Heptachlor epoxide	5.3E-02	8.1E-01	9.9E-03 U	NA
Endosulfan I	3.7E+02	NA	9.9E-03 U	NA

Table 5
Screening Criteria for Sample Suffield Agg Bank Run

Constituent	RSLs (1)	VAP (2)	Backfill	OEPA
Analyte	Residential Soil mg/kg	Residential Direct Contact Soil mg/kg	Suffield Agg Bank Run mg/kg	Sediment Ref. Values (3) mg/kg
Dieldrin	3.0E-02	NA	9.9E-03 U	NA
4,4'-DDE	1.4E+00	3.0E+01	9.7E-03 J	NA
Endrin	1.8E+01	1.9E+01	9.9E-03 U	NA
Endosulfan II	NA	NA	9.9E-03 U	NA
4,4'-DDD	2.0E+00	4.2E+01	8.5E-03 J	NA
Endosulfan sulfate	NA	NA	9.9E-03 U	NA
4,4'-DDT	1.7E+00	3.0E+01	9.9E-03 U	NA
Methoxychlor	3.1E+02	3.1E+02	1.9E-02 U	NA
Endrin ketone	NA	NA	9.9E-03 U	NA
Endrin aldehyde	NA	NA	9.9E-03 U	NA
alpha-chlordane	NA	NA	9.9E-03 U	NA
gamma-chlordane	NA	NA	9.9E-03 U	NA
Toxaphene	4.4E-01	7.8E+00	3.9E-01 U	NA
2,4-D	NA	NA	4.7E-01 U	NA
2,4-DB	NA	NA	4.7E-01 U	NA
2,4,5-TP (Silvex)	NA	5.0E+02	1.2E-01 U	NA
2,4,5-T	NA	NA	1.2E-01 U	NA
Dalapon	1.8E+03	NA	2.3E-01 U	NA
Dicamba	1.8E+03	NA	2.3E-01 U	NA
Dichlorprop	NA	NA	4.7E-01 U	NA
Dinoseb	6.1E+01	NA	7.0E-02 U	NA
MCPA	3.1E+01	NA	4.7E+01 U	NA
MCPP	6.1E+01	NA	4.7E+01 U	NA

Notes:
NA = Not available
J and B are data qualifiers that vary depending upon the analyses. See individual lab reports for explanations.
U = Constituent was not detected above the reporting limit.
(1) = Regional Screening Levels from US EPA Region 9 Preliminary Remediation Goals, April 2009.
(2) = Ohio EPA Voluntary Action Program Generic Numerical Standards OAC 3745-300-08.
(3) = Ohio EPA Division of Emergency & Remedial Response, Ecological Risk Assessment Guidance, April 2008.

TABLE 6
COMPARISON OF ARSENIC IN OHIO BACKGROUND SOIL AND CANDIDATE BACKFILL SAMPLES

BACKGROUND ARSENIC IN OHIO SOIL FROM VARIOUS SOURCES					
Arsenic (mg/Kg)	13 (upper default threshold)	12 (mean)	5.72 (geometric mean)	21.7 (95 UCL)	27.9 (95 UCL)
n, number of samples	Not provided	6	686	143	170
Range	Not provided	2.3 - 30	0.5 - 56	4 - 61.9	1.6 - 71.3
Sample Source Locations	Statewide	Summit County	Statewide	Eastern half	Eastern half
Source	Ohio Div. Haz Waste Management (1)	Ohio Geologic Survey (2)	Cox-Colvin 1996 (3)	ENSR 2008 (4)	ENSR 2008 (4)
Depth, if noted	Not specified	"Sub-soil"	Varies	Surface Soil (0-2 ft)	Subsurface Soil (>2 ft)

ARSENIC IN CANDIDATE BACKFILL SAMPLES					
Backfill Sample	Backfill 1	Backfill 2	Suffield Agg Peat	Suffield Agg Loam	Suffield Agg Bank Run
Lab Report	A9H040259	A9H040259	A9H040261	A9H040261	A9H050310
Arsenic (mg/Kg)	12.2	13.0	26.0	32.1	27.4

Sources:

(1) Ohio EPA Division of Hazardous Waste Management Closure Plan Review Guidance Document (March 2008), Appendix B Alternate Metals Standards.

(2) Erik Venteris, Ph.D., Ohio Division of Geological Survey, preliminary data from ongoing research.

(3) Evaluation of Background Metal Concentrations in Ohio Soils, Cox-Colvin & Associates, Inc. Prepared for Ohio EPA, 1996.

(4) Background Versus Risk-Based Screening Levels - An Examination of Arsenic Background Soil Concentrations in Seven States, Vosnakis, Kelly A.S., Elizabeth Perry, Karen Madsen, and Lisa Bradley, 2008.

95 UCL = upper 95 percent confidence interval of the mean.

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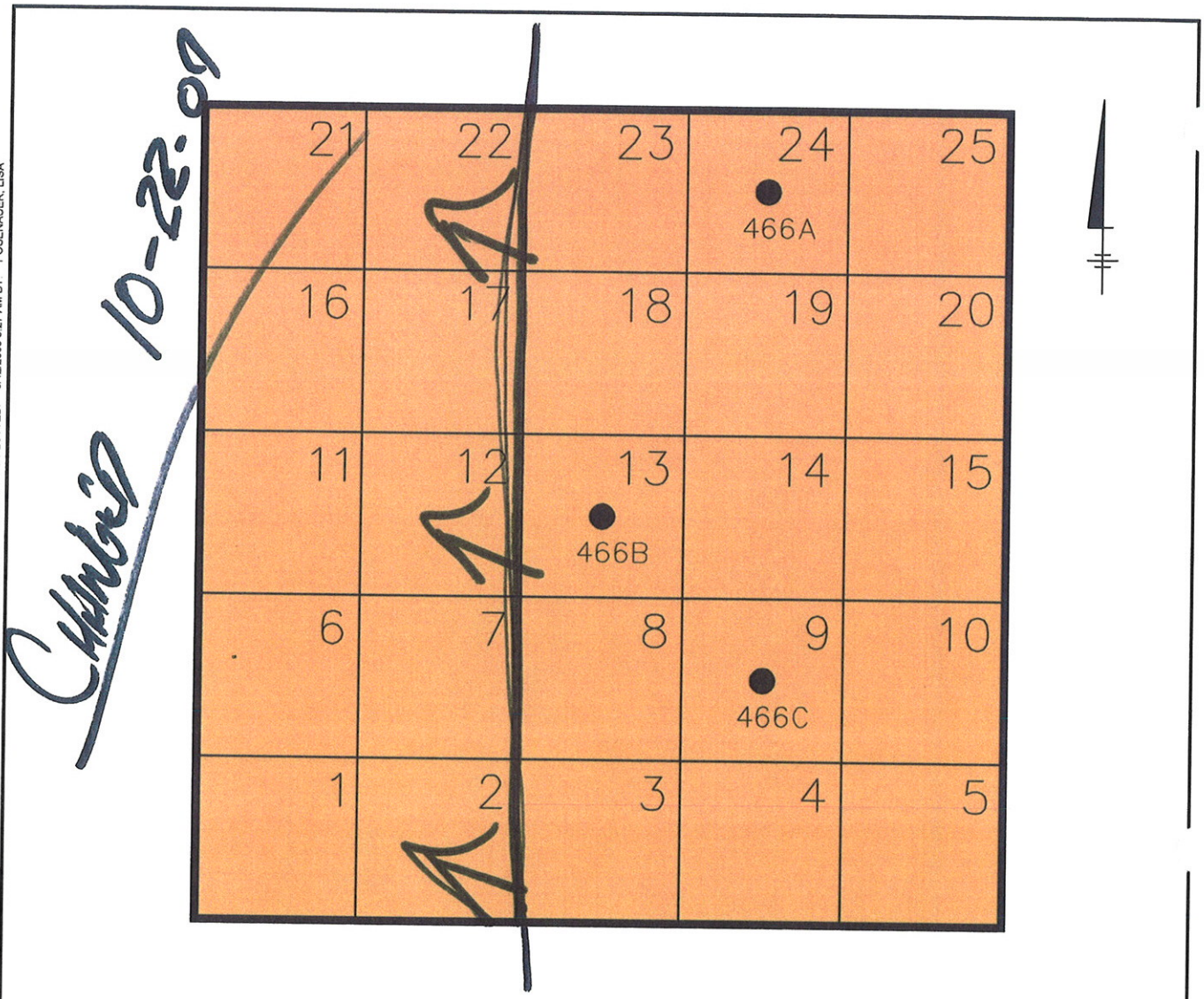
Appendix D

Sample As-Remediated
Excavation Grid



LEGEND:

466A ● CONFIRMATION SAMPLE ALIQUOT

1 SUBGRID NUMBER

EXCAVATION DEPTH OF 1 FOOT

EXCAVATION DEPTH OF 2 FOOT

EXCAVATION DEPTH OF 3 FOOT

GRID 466		
ALIQUOT ID	EASTING	NORTHING
466A	2252296.797	504638.2207
466B	2252291.797	504628.2207
466C	2252296.797	504623.2207

0 5' 10'

GRAPHIC SCALE

NOTES:

1. CONFIRMATION SOIL SAMPLE ID FOR GRID 466 IS LM-SO-C-466.
2. CONFIRMATION SOIL SAMPLE COLLECTED AS A COMPOSITE OF ALIQUOTS A, B, AND C AS SHOWN. ALIQUOTS COLLECTED FROM DEPTH OF 0 TO 3 INCHES BELOW BASE OF EXCAVATION.
3. CONFIRMATION SAMPLE ALIQUOTS WILL BE COLLECTED FROM THE CENTER OF EACH SUBGRID BOX SELECTED VIA RANDOM NUMBER GENERATOR, OR FROM THE CENTER OF EXCAVATION AREAS WITHIN SUBGRID BOXES, AS NEEDED.

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AKRON, OHIO

EXCAVATION/CONFIRMATION SAMPLE GRID 466

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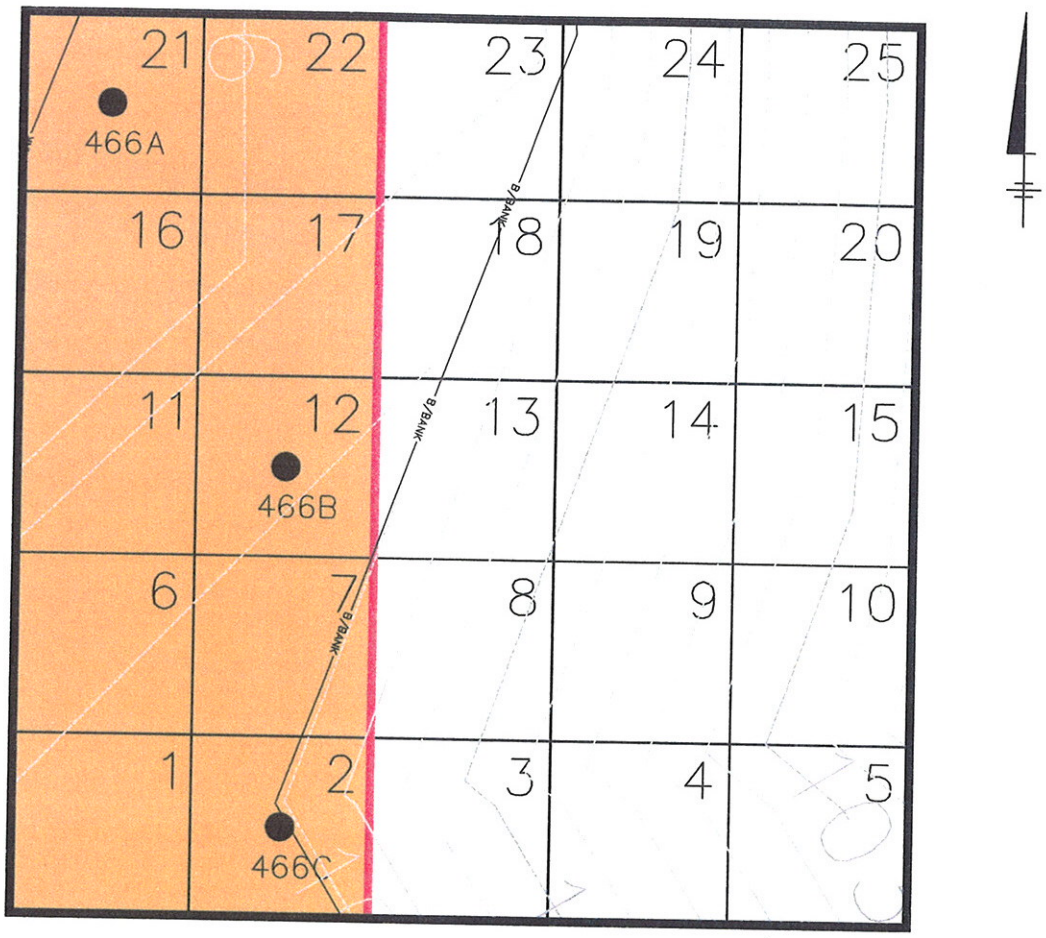
FIGURE 466



UPDATED 10/22/09

LEGEND:

466A ● CONFIRMATION SAMPLE ALIQUOT

1 SUBGRID NUMBER

EXCAVATION DEPTH OF 1 FOOT

EXCAVATION DEPTH OF 2 FOOT

EXCAVATION DEPTH OF 3 FOOT

GRID 466		
ALIQUOT ID	EASTING	NORTHING
466A	2252281.797	504638.2207
466B	2252286.797	504628.2207
466C	2252286.797	504618.2207

0 5' 10'

GRAPHIC SCALE

NOTES:

1. CONFIRMATION SOIL SAMPLE ID FOR GRID 466 IS LM-SO-C-466.
2. CONFIRMATION SOIL SAMPLE COLLECTED AS A COMPOSITE OF ALIQUOTS A, B, AND C AS SHOWN. ALIQUOTS COLLECTED FROM DEPTH OF 0 TO 3 INCHES BELOW BASE OF EXCAVATION.
3. CONFIRMATION SAMPLE ALIQUOTS WILL BE COLLECTED FROM THE CENTER OF EACH SUBGRID BOX SELECTED VIA RANDOM NUMBER GENERATOR, OR FROM THE CENTER OF EXCAVATION AREAS WITHIN SUBGRID BOXES, AS NEEDED.

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EXCAVATION/CONFIRMATION SAMPLE GRID 466

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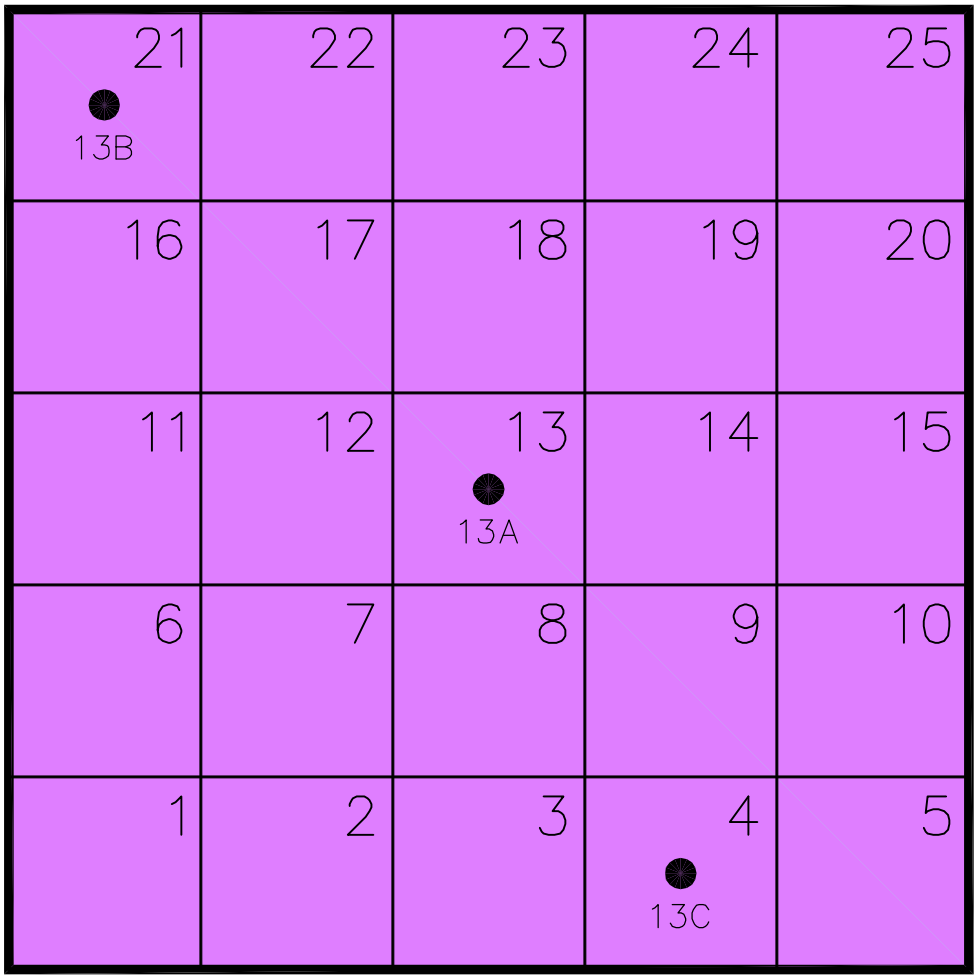
FIGURE **466**



LEGEND:

13A ● CONFIRMATION SAMPLE ALIQUOT

1 SUBGRID NUMBER

EXCAVATION DEPTH OF 1 FOOT

EXCAVATION DEPTH OF 2 FOOT

EXCAVATION DEPTH OF 3 FOOT

GRID 13		
ALIQUOT ID	EASTING	NORTHING
13A	2251716.797	503128.2207
13B	2251706.797	503138.2207
13C	2251721.797	503118.2207

0 5' 10'

GRAPHIC SCALE

NOTES:

1. CONFIRMATION SOIL SAMPLE ID FOR GRID 13 IS LM-SO-C-13.
2. CONFIRMATION SOIL SAMPLE COLLECTED AS A COMPOSITE OF ALIQUOTS A, B, AND C AS SHOWN. ALIQUOTS COLLECTED FROM DEPTH OF 0 TO 3 INCHES BELOW BASE OF EXCAVATION.
3. CONFIRMATION SAMPLE ALIQUOTS WILL BE COLLECTED FROM THE CENTER OF EACH SUBGRID BOX SELECTED VIA RANDOM NUMBER GENERATOR, OR FROM THE CENTER OF EXCAVATION AREAS WITHIN SUBGRID BOXES, AS NEEDED.

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AKRON, OHIO

EXCAVATION/CONFIRMATION SAMPLE GRID 13

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FIGURE 13

CITY: SYRACUSE, NY DIV/GROUP: 141/ENVCAD DB: LJP LD: LJP PIC: LMCBURNEY PM: M.HURBAN TM: M.PELTON LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVITY\00380630000\000002\DWG\HALEY'S\DATA\38063C01.dwg LAYOUT: 13SAVED: 5/14/2009 4:40 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 5/14/2009 4:47 PM BY: POSENAUER, LISA
XREFS: IMAGES: PROJECTNAME: ---
38063X0A
38063X06

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Appendix E

Waste Manifest Logs

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/17/2009

Waste Shipped to: EQ - Wayne Disposal, Inc.
Transporter: Clean Harbors / U.S. Bulk
Profile: I084054WDI-OTS

Load Number	Manifest Number	Date Shipped	Date Received	Date Manifest Returned	Weight (tons)	Weight (kg)	Amount > 22 Tons
1	002654926	7/28/2009	7/28/2009	8/4/2009	28.00	25455	6.00
2	002654927	7/28/2009	7/28/2009	8/4/2009	26.70	24273	4.70
3	002654928	7/28/2009	7/28/2009	8/4/2009	24.38	22164	2.38
4	002654929	7/28/2009	7/29/2009	8/4/2009	26.14	23764	4.14
5	002654930	7/28/2009	7/29/2009	8/4/2009	23.30	21182	1.30
6	002654931	7/28/2009	7/29/2009	8/4/2009	23.71	21555	1.71
7	002654932	7/29/2009	7/29/2009	8/4/2009	27.36	24873	5.36
8	002654933	7/29/2009	7/29/2009	8/4/2009	27.04	24582	5.04
9	002654934	7/29/2009	7/29/2009	8/4/2009	24.15	21955	2.15
10	002654935	7/29/2009	7/29/2009	8/4/2009	23.17	21064	1.17
11	002654936	7/29/2009	7/29/2009	8/4/2009	24.61	22373	2.61
12	002654937	7/29/2009	7/29/2009	8/10/2009	21.96	19964	0.00
13	002654938	7/29/2009	7/29/2009	8/4/2009	23.60	21455	1.60
14	002654939	7/29/2009	7/29/2009	8/10/2009	24.22	22018	2.22
15	002654940	7/29/2009	7/29/2009	8/10/2009	23.55	21409	1.55
16	002654941	7/29/2009	7/29/2009	8/10/2009	24.95	22682	2.95
17	002654942	7/29/2009	7/29/2009	8/10/2009	23.13	21027	1.13
18	002654943	7/29/2009	7/29/2009	8/10/2009	21.69	19718	0.00
19	002654944	7/29/2009	7/30/2009	8/10/2009	29.15	26500	7.15
20	002654945	7/29/2009	7/30/2009	8/10/2009	24.25	22045	2.25
21	002654946	7/29/2009	7/30/2009	8/10/2009	21.88	19891	0.00
22	002654947	7/30/2009	7/30/2009	8/10/2009	27.08	24618	5.08
23	002654948	7/30/2009	7/30/2009	8/10/2009	27.14	24673	5.14
24	002654949	7/30/2009	7/30/2009	8/10/2009	24.22	22018	2.22
25	002654950	7/30/2009	7/30/2009	8/10/2009	24.14	21945	2.14
26	002654951	7/30/2009	7/30/2009	8/10/2009	23.15	21045	1.15
27	002654952	7/30/2009	7/30/2009	8/10/2009	25.76	23418	3.76
28	002654953	7/30/2009	7/30/2009	8/10/2009	25.49	23173	3.49
29	002654954	7/30/2009	7/30/2009	8/10/2009	25.24	22945	3.24
30	002654955	7/30/2009	7/30/2009	8/10/2009	23.66	21509	1.66
31	002654956	7/30/2009	7/30/2009	8/10/2009	26.07	23700	4.07
32	002654957	7/30/2009	7/30/2009	8/10/2009	22.19	20173	0.19
33	002654958	7/30/2009	7/30/2009	8/10/2009	25.13	22845	3.13
34	002654959	7/30/2009	7/30/2009	8/10/2009	29.88	27164	7.88
35	002654960	7/30/2009	7/30/2009	8/10/2009	25.01	22736	3.01
36	002654961	7/30/2009	7/31/2009	8/10/2009	22.63	20573	0.63
37	002654962	7/30/2009	7/31/2009	8/10/2009	23.66	21509	1.66

Haley's Ditch Manifest Log Updated: 11/17/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: EQ - Wayne Disposal, Inc.
Transporter: Clean Harbors / U.S. Bulk
Profile: I084054WDI-OTS

Load Number	Manifest Number	Date Shipped	Date Received	Date Manifest Returned	Weight (tons)	Weight (kg)	Amount > 22 Tons
38	002654963	7/31/2009	7/31/2009	8/10/2009	26.01	23645	4.01
39	002654983	7/31/2009	7/31/2009	8/10/2009	24.15	21955	2.15
40	002654984	7/31/2009	7/31/2009	8/10/2009	24.67	22427	2.67
41	002654985	7/31/2009	7/31/2009	8/10/2009	25.58	23255	3.58
42	002654986	7/31/2009	7/31/2009	8/10/2009	25.42	23109	3.42
43	002654987	7/31/2009	7/31/2009	8/10/2009	25.97	23609	3.97
44	002654988	7/31/2009	7/31/2009	8/10/2009	24.80	22545	2.80
45	002654989	7/31/2009	7/31/2009	8/10/2009	24.64	22400	2.64
46	002654990	7/31/2009	7/31/2009	8/10/2009	28.02	25473	6.02
47	002654991	7/31/2009	7/31/2009	8/10/2009	24.21	22009	2.21
48	002654992	7/31/2009	7/31/2009	8/10/2009	26.68	24255	4.68
49	002654993	8/4/2009	8/4/2009	8/10/2009	26.68	24255	4.68
50	002654994	8/4/2009	8/4/2009	9/18/2009	26.91	24464	4.91
51	002654995	8/7/2009	8/7/2009	9/18/2009	25.77	23427	3.77
52	002654996	8/11/2009	8/11/2009	9/18/2009	25.87	23518	3.87
53	002654997	8/11/2009	8/11/2009	9/18/2009	27.13	24664	5.13
54	002654999	8/11/2009	8/11/2009	9/18/2009	25.51	23191	3.51
55	002655000	8/11/2009	8/11/2009	9/18/2009	24.86	22600	2.86
56	002655024	8/11/2009	8/11/2009	9/18/2009	27.91	25373	5.91
57	002655025	8/11/2009	8/11/2009	9/18/2009	25.97	23609	3.97
58	002655026	8/12/2009	8/12/2009	9/18/2009	29.63	26936	7.63
59	002655027	8/12/2009	8/12/2009	9/18/2009	20.45	18591	0.00
60	002655028	8/12/2009	8/12/2009	9/18/2009	27.21	24736	5.21
61	002655029	8/12/2009	8/12/2009	9/18/2009	25.56	23236	3.56
62	002655030	8/12/2009	8/12/2009	9/18/2009	28.08	25527	6.08
63	002655031	8/12/2009	8/12/2009	9/18/2009	25.74	23400	3.74
64	002655032	8/12/2009	8/12/2009	9/18/2009	24.89	22627	2.89
65	002655033	8/12/2009	8/12/2009	9/18/2009	23.36	21236	1.36
66	002655034	8/12/2009	8/12/2009	9/18/2009	23.88	21709	1.88
67	002655035	8/12/2009	8/12/2009	9/18/2009	25.71	23373	3.71
68	002655036	8/13/2009	8/13/2009	9/18/2009	25.41	23100	3.41
69	002655037	8/13/2009	8/13/2009	9/18/2009	23.86	21691	1.86
70	002655038	8/13/2009	8/13/2009	9/18/2009	23.33	21209	1.33
71	002655039	8/13/2009	8/13/2009	9/18/2009	30.07	27336	8.07
72	002655040	8/17/2009	8/17/2009	9/18/2009	26.36	23964	4.36
73	002655119	8/17/2009	8/17/2009	9/18/2009	23.43	21300	1.43
74	002655120	8/17/2009	8/17/2009	9/18/2009	26.90	24455	4.90

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/17/2009

Waste Shipped to: EQ - Wayne Disposal, Inc.
Transporter: Clean Harbors / U.S. Bulk
Profile: I084054WDI-OTS

Load Number	Manifest Number	Date Shipped	Date Received	Date Manifest Returned	Weight (tons)	Weight (kg)	Amount > 22 Tons
75	002655121	8/18/2009	8/18/2009	9/18/2009	25.55	23227	3.55
76	002655122	8/21/2009	8/21/2009	9/18/2009	23.35	21227	1.35
77	002655123	8/21/2009	8/21/2009	9/18/2009	21.85	19864	0.00
78	002655124	8/24/2009	8/24/2009	9/18/2009	23.04	20945	1.04
79	002655125	8/24/2009	8/24/2009	9/18/2009	23.75	21591	1.75
80	002655126	8/24/2009	8/24/2009	9/18/2009	25.73	23391	3.73
81	002655127	9/4/2009	9/4/2009	9/18/2009	30.23	27482	8.23
82	002655128	9/4/2009	9/4/2009	9/18/2009	22.02	20018	0.02
83	002655129	9/4/2009	9/4/2009	9/18/2009	27.40	24909	5.40
84	002655130	9/4/2009	9/4/2009	9/18/2009	28.29	25718	6.29
85	002655131	9/4/2009	9/4/2009	9/18/2009	25.10	22818	3.10
86	002655132	9/4/2009	9/4/2009	9/18/2009	26.78	24345	4.78
87	002655133	9/4/2009	9/4/2009	9/18/2009	23.35	21227	1.35
88	002655134	9/14/2009	9/14/2009	10/6/2009	21.76	19782	0.00
89	002655135	9/14/2009	9/14/2009	10/6/2009	22.76	20691	0.76
90	002655136	9/15/2009	9/15/2009	10/6/2009	25.95	23591	3.95
91	002655137	9/15/2009	9/15/2009	10/6/2009	23.19	21082	1.19
92	002655138	9/15/2009	9/15/2009	10/6/2009	25.01	22736	3.01
93	002655139	9/15/2009	9/15/2009	10/6/2009	28.52	25927	6.52
94	002655140	9/15/2009	9/15/2009	10/6/2009	25.04	22764	3.04
95	002655141	9/15/2009	9/15/2009	10/6/2009	22.83	20755	0.83
96	002655142	9/15/2009	9/15/2009	10/6/2009	23.30	21182	1.30
97	002655143	9/15/2009	9/15/2009	10/6/2009	25.18	22891	3.18
98	002655144	9/15/2009	9/15/2009	10/6/2009	21.04	19127	0.00
99	002655145	9/28/2009	9/28/2009	10/6/2009	24.25	22045	2.25
100	002655329	9/28/2009	9/28/2009	10/6/2009	25.64	23309	3.64
101	002655330	9/28/2009	9/28/2009	10/6/2009	25.30	23000	3.30
102	002655331	9/28/2009	9/28/2009	10/6/2009	23.60	21455	1.60
103	002655332	9/28/2009	9/28/2009	10/6/2009	24.31	22100	2.31
104	002655333	9/28/2009	9/28/2009	10/6/2009	23.24	21127	1.24
105	002655334	9/28/2009	9/28/2009	10/6/2009	23.84	21673	1.84
106	002655335	9/28/2009	9/28/2009	10/6/2009	22.58	20527	0.58
107	002655336	9/28/2009	9/28/2009	10/6/2009	23.33	21209	1.33
108	002655337	9/28/2009	9/28/2009	10/6/2009	24.90	22636	2.90
109	002655338	9/28/2009	9/28/2009	10/6/2009	25.38	23073	3.38
110	002655339	9/29/2009	9/29/2009	10/6/2009	25.04	22764	3.04
111	002655340	9/29/2009	9/29/2009	10/6/2009	22.54	20491	0.54

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/17/2009

Waste Shipped to: EQ - Wayne Disposal, Inc.
Transporter: Clean Harbors / U.S. Bulk
Profile: I084054WDI-OTS

Load Number	Manifest Number	Date Shipped	Date Received	Date Manifest Returned	Weight (tons)	Weight (kg)	Amount > 22 Tons
112	002655341	9/29/2009	9/29/2009	10/6/2009	22.08	20073	0.08
113	002655342	9/30/2009	9/30/2009	10/6/2009	24.23	22027	2.23
114	002655343	9/30/2009	9/30/2009	10/6/2009	21.52	19564	0.00
115	002655344	10/14/2009	10/14/2009	10/23/2009	21.73	19755	0.00
116	002655345	10/14/2009	10/14/2009	10/23/2009	21.73	19755	0.00
117	002655346	10/14/2009	10/14/2009	10/23/2009	25.01	22736	3.01
118	002655347	10/14/2009	10/14/2009	10/23/2009	24.10	21909	2.10
119	002655348	10/14/2009	10/14/2009	10/23/2009	25.48	23164	3.48
120	002655349	10/14/2009	10/14/2009	10/23/2009	25.86	23509	3.86
121	002655350	10/14/2009	10/14/2009	10/23/2009	25.47	23155	3.47
122	002655351	10/14/2009	10/14/2009	10/23/2009	23.23	21118	1.23
123	002952569	10/15/2009	10/15/2009	10/23/2009	22.59	20536	0.59
124	002952570	10/15/2009	10/15/2009	10/23/2009	22.86	20782	0.86
125	002952571	10/15/2009	10/15/2009	10/23/2009	21.39	19445	0.00
126	002952572	10/15/2009	10/15/2009	10/23/2009	23.39	21264	1.39
127	002952573	10/15/2009	10/15/2009	10/23/2009	26.78	24345	4.78
128	002952574	10/15/2009	10/15/2009	10/23/2009	27.39	24900	5.39
129	002952575	10/15/2009	10/15/2009	10/23/2009	28.01	25464	6.01
130	002952576	10/15/2009	10/15/2009	10/23/2009	25.52	23200	3.52
131	002952577	10/15/2009	10/15/2009	10/23/2009	22.66	20600	0.66
132	002952578	10/15/2009	10/15/2009	10/23/2009	23.66	21509	1.66
133	002952579	10/15/2009	10/15/2009	10/23/2009	23.70	21545	1.70
134	002952580	10/15/2009	10/15/2009	10/23/2009	23.52	21382	1.52
135	002952581	10/15/2009	10/15/2009	10/23/2009	22.53	20482	0.53
136	002952582	10/15/2009	10/15/2009	10/23/2009	26.79	24355	4.79
137	002952585	10/15/2009	10/15/2009	10/23/2009	23.13	21027	1.13
138	002952586	10/15/2009	10/15/2009	10/23/2009	20.32	18473	0.00
139	002952587	10/16/2009	10/16/2009	10/23/2009	23.09	20991	1.09
140	002952588	10/16/2009	10/16/2009	10/23/2009	22.85	20773	0.85
141	002952589	10/16/2009	10/16/2009	10/23/2009	24.00	21818	2.00
142	002952590	10/16/2009	10/16/2009	10/23/2009	24.15	21955	2.15
143	002952594	10/16/2009	10/16/2009	10/23/2009	22.24	20218	0.24
144	002952604	10/16/2009	10/16/2009	10/23/2009	24.37	22155	2.37
Totals					3558.37	3234882	397.05

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1	327435	8/5/2009	8/5/2009	Soil	10.47	9518
2	327434	8/5/2009	8/5/2009	Soil	17.73	16118
3	327433	8/5/2009	8/5/2009	Soil	17.75	16136
4	327436	8/5/2009	8/5/2009	Soil	17.76	16145
5	327437	8/5/2009	8/5/2009	Soil	25.34	23036
6	327438	8/5/2009	8/5/2009	Soil	22.39	20355
7	327439	8/5/2009	8/5/2009	Soil	22.75	20682
8	327440	8/5/2009	8/5/2009	Soil	21.49	19536
9	327442	8/6/2009	8/6/2009	Soil	27.66	25145
10	327441	8/6/2009	8/6/2009	Soil	21.80	19818
11	327444	8/6/2009	8/6/2009	Soil	20.71	18827
12	327443	8/6/2009	8/6/2009	Soil	25.82	23473
13	327445	8/6/2009	8/6/2009	Soil	22.21	20191
14	327446	8/6/2009	8/6/2009	Soil	23.07	20973
15	327447	8/6/2009	8/6/2009	Soil	18.97	17245
16	327448	8/6/2009	8/6/2009	Soil	16.91	15373
17	327449	8/6/2009	8/6/2009	Soil	23.06	20964
18	327451	8/6/2009	8/6/2009	Soil	25.74	23400
19	327450	8/6/2009	8/6/2009	Soil	19.72	17927
20	327452	8/6/2009	8/6/2009	Soil	20.26	18418
21	330913	8/6/2009	8/6/2009	Soil	26.57	24155
22	330886	8/6/2009	8/6/2009	Soil	24.03	21845
23	330887	8/6/2009	8/6/2009	Soil	21.76	19782
24	330915	8/6/2009	8/6/2009	Soil	24.37	22155
25	330914	8/6/2009	8/6/2009	Soil	19.51	17736
26	330888	8/7/2009	8/7/2009	Soil	24.75	22500
27	330889	8/7/2009	8/7/2009	Soil	24.05	21864
28	330891	8/7/2009	8/7/2009	Soil	25.27	22973
29	330894?	8/7/2009	8/7/2009	Soil	19.44	17673
30	330893	8/7/2009	8/7/2009	Soil	21.20	19273
31	330896?	8/7/2009	8/7/2009	Soil	22.30	20273
32	330892	8/7/2009	8/7/2009	Soil	23.73	21573
33	330895	8/7/2009	8/7/2009	Soil	19.98	18164
34	330897?	8/7/2009	8/7/2009	Soil	22.80	20727

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
35	330898	8/7/2009	8/7/2009	Soil	17.57	15973
36	330899?	8/7/2009	8/7/2009	Soil	26.64	24218
37	330900	8/7/2009	8/7/2009	Soil	27.02	24564
38	330901	8/7/2009	8/7/2009	Stumps	6.65	6045
39	330902	8/7/2009	8/7/2009	Soil	22.29	20264
40	330903	8/7/2009	8/7/2009	Soil	25.69	23355
41	330904	8/7/2009?	8/7/2009	Soil	21.61	19645
42	330905	8/7/2009	8/7/2009	Soil	21.38	19436
43	330906	8/7/2009	8/7/2009	Soil	29.05	26409
44	330907	8/7/2009	8/7/2009	Soil	26.17	23791
45	330908	8/7/2009	8/7/2009	Soil	31.61	28736
46	330909	8/7/2009	8/7/2009	Soil	22.20	20182
47	330910?	8/7/2009	8/7/2009	Soil	23.38	21255
48	330911	8/7/2009	8/7/2009	Soil	24.38	22164
49	330912	8/7/2009	8/7/2009	Soil	28.71	26100
50	327463	8/7/2009	8/7/2009	Soil	18.85	17136
51	327473	8/10/2009	8/10/2009	Stumps	6.30	5727
52	327474	8/10/2009	8/10/2009	Soil	31.50	28636
53	327464	8/10/2009	8/10/2009	Soil	18.49	16809
54	327472	8/10/2009	8/10/2009	Soil	23.51	21373
55	327471	8/10/2009	8/10/2009	Soil	23.44	21309
56	327470	8/10/2009	8/10/2009	Soil	22.80	20727
57	327469	8/10/2009	8/10/2009	Soil	27.93	25391
58	327468	8/10/2009	8/10/2009	Soil	18.60	16909
59	327467	8/10/2009	8/10/2009	Stumps	6.15	5591
60	320504	8/14/2009	8/14/2009	Soil	23.46	21327
61	320505	8/14/2009	8/14/2009	Soil	26.74	24309
62	320506	8/14/2009	8/14/2009	Soil	22.97	20882
63	320507	8/14/2009	8/14/2009	Soil	26.06	23691
64	320509	8/14/2009	8/14/2009	Soil	20.28	18436
65	320510	8/14/2009	8/14/2009	Soil	23.20	21091
66	320511	8/14/2009	8/14/2009	Soil	26.75	24318
67	320508	8/14/2009	8/14/2009	Soil	22.53	20482
68	320515	8/14/2009	8/14/2009	Soil	26.03	23664

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
69	320514	8/14/2009	8/14/2009	Soil	20.19	18355
70	320513	8/14/2009	8/14/2009	Soil	21.49	19536
71	320512	8/14/2009	8/14/2009	Soil	25.07	22791
72	320503	8/17/2009	8/17/2009	Soil	29.17	26518
73	320502	8/17/2009	8/17/2009	Soil	18.62	16927
74	320501	8/17/2009	8/17/2009	Soil	28.18	25618
75	320500	8/17/2009	8/17/2009	Soil	24.26	22055
76	320499	8/17/2009	8/17/2009	Soil	22.50	20455
77	320498	8/17/2009	8/21/2009	Soil	25.56	23236
78	320497	8/17/2009	8/17/2009	Soil	27.25	24773
79	320496	8/17/2009	8/17/2009	Soil	21.00	19091
80	320495	8/17/2009	8/17/2009	Soil	25.68	23345
81	320482	8/18/2009	8/18/2009	Soil	26.62	24200
82	320483	8/18/2009	8/18/2009	Soil	29.43	26755
83	320484	8/18/2009	8/18/2009	Soil	27.13	24664
84	320485	8/18/2009	8/18/2009	Soil	23.23	21118
85	320486	8/20/2009	8/20/2009	Soil	19.35	17591
86	320487	8/20/2009	8/20/2009	Soil	24.51	22282
87	320488	8/20/2009	8/20/2009	Soil	18.74	17036
88	320489	8/20/2009	8/20/2009	Soil	21.44	19491
89	320490	8/20/2009	8/20/2009	Soil	24.49	22264
90	320491	8/20/2009	8/20/2009	Soil	16.51	15009
91	320492	8/20/2009	8/20/2009	Soil	18.47	16791
92	320493	8/20/2009	8/20/2009	Soil	20.49	18627
93	320494	8/20/2009	8/20/2009	Soil	20.72	18836
94	320516	8/20/2009	8/20/2009	Soil	17.26	15691
95	320517	8/20/2009	8/20/2009	Soil	20.24	18400
96	320518	8/20/2009	8/20/2009	Soil	22.03	20027
97	320519	8/20/2009	8/20/2009	Soil	20.85	18955
98	320521	8/21/2009	8/21/2009	Stumps	7.36	6691
99	320522	8/21/2009	8/21/2009	Stumps	6.71	6100
100	320523	8/21/2009	8/21/2009	Stumps	7.62	6927
101	320524	9/2/2009	9/2/2009	Soil	18.80	17091
102	320525	9/2/2009	9/2/2009	Soil	17.36	15782

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
103	320526	9/2/2009	9/2/2009	Soil	22.34	20309
104	320527	9/2/2009	9/2/2009	Soil	16.88	15345
105	320528	9/2/2009	9/2/2009	Soil	17.04	15491
106	320529	9/2/2009	9/2/2009	Soil	16.64	15127
107	320530	9/2/2009	9/2/2009	Soil	22.66	20600
108	320531	9/2/2009	9/2/2009	Soil	18.45	16773
109	320532	9/2/2009	9/2/2009	Soil	18.42	16745
110	320533	9/2/2009	9/3/2009	Soil	16.90	15364
111	320534	9/2/2009	9/2/2009	Soil	21.87	19882
112	320535	9/2/2009	9/2/2009	Soil	15.52	14109
113	320536	9/3/2009	9/3/2009	Soil	18.15	16500
114	320537	9/3/2009	9/3/2009	Soil	18.56	16873
115	320538	9/3/2009	9/3/2009	Soil	23.37	21245
116	320539	9/3/2009	9/3/2009	Soil	16.84	15309
117	320540	9/3/2009	9/3/2009	Soil	16.75	15227
118	320541	9/3/2009	9/3/2009	Soil	19.26	17509
119	320542	9/3/2009	9/3/2009	Soil	15.73	14300
120	320543	9/3/2009	9/3/2009	Soil	21.75	19773
121	320544	9/3/2009	9/3/2009	Soil	14.71	13373
122	320545	9/3/2009	9/4/2009	Soil	24.79	22536
123	320546	9/3/2009	9/3/2009	Soil	15.83	14391
124	320547	9/3/2009	9/3/2009	Soil	17.35	15773
125	320548	9/4/2009	9/4/2009	Soil	29.21	26555
126	320549	9/4/2009	9/4/2009	Soil	20.80	18909
127	320550	9/4/2009	9/4/2009	Soil	18.92	17200
128	320551	9/4/2009	9/4/2009	Soil	22.09	20082
129	320552	9/4/2009	9/4/2009	Soil	31.08	28255
130	320553	9/4/2009	9/4/2009	Soil	26.00	23636
131	320554	9/4/2009	9/4/2009	Soil	28.41	25827
132	320555	9/4/2009	9/4/2009	Soil	22.50	20455
133	320556	9/4/2009	9/4/2009	Soil	18.97	17245
134	320557	9/4/2009	9/4/2009	Soil	22.06	20055
135	320558	9/4/2009	9/4/2009	Soil	21.43	19482
136	320559	9/4/2009	9/4/2009	Soil	25.51	23191

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
137	320560	9/4/2009	9/4/2009	Soil	21.26	19327
138	320561	9/4/2009	9/4/2009	Soil	29.65	26955
139	320562	9/4/2009	9/4/2009	Soil	14.96	13600
140	320563	9/4/2009	9/4/2009	Soil	15.25	13864
141	320564	9/4/2009	9/4/2009	Soil	19.84	18036
142	320565	9/4/2009	9/4/2009	Soil	22.99	20900
143	320566	9/8/2009	9/8/2009	Soil	27.71	25191
144	320567	9/8/2009	9/8/2009	Soil	22.96	20873
145	320568	9/8/2009	9/8/2009	Soil	23.48	21345
146	320569	9/8/2009	9/8/2009	Soil	22.44	20400
147	320570	9/8/2009	9/8/2009	Soil	21.30	19364
148	320571	9/8/2009	9/8/2009	Soil	28.20	25636
149	320572	9/8/2009	9/8/2009	Soil	17.12	15564
150	320573	9/8/2009	9/8/2009	Soil	15.91	14464
151	320574	9/8/2009	9/8/2009	Soil	19.02	17291
152	320575	9/8/2009	9/8/2009	Soil	19.7	17909
153	320576	9/8/2009	9/8/2009	Soil	26.62	24200
154	320577	9/8/2009	9/8/2009	Soil	18.89	17173
155	320578	9/8/2009	9/8/2009	Soil	20.26	18418
156	320579	9/8/2009	9/8/2009	Soil	13.83	12573
157	320580	9/8/2009	9/8/2009	Soil	19.44	17673
158	320581	9/8/2009	9/8/2009	Soil	25.61	23282
159	320582	9/8/2009	9/8/2009	Soil	30.08	27345
160	320583	9/8/2009	9/8/2009	Soil	22.22	20200
161	320584	9/8/2009	9/8/2009	Soil	20.79	18900
162	320585	9/8/2009	9/8/2009	Soil	26.66	24236
163	320586	9/8/2009	9/8/2009	Soil	16.97	15427
164	320587	9/8/2009	9/8/2009	Soil	15.57	14155
165	320588	9/8/2009	9/8/2009	Soil	18.59	16900
166	320589	9/8/2009	9/8/2009	Soil	20.17	18336
167	320590	9/8/2009	9/8/2009	Soil	20.97	19064
168	320591	9/9/2009	9/9/2009	Soil	20.65	18773
169	320592	9/9/2009	9/9/2009	Soil	26.47	24064
170	320593	9/9/2009	9/9/2009	Soil	17.97	16336

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
171	320594	9/9/2009	9/9/2009	Soil	28.14	25582
172	320595	9/9/2009	9/9/2009	Soil	22.4	20364
173	320596	9/9/2009	9/9/2009	Soil	24.35	22136
174	320597	9/9/2009	9/9/2009	Soil	20.7	18818
175	320598	9/9/2009	9/9/2009	Soil	16.47	14973
176	320599	9/9/2009	9/9/2009	Soil	20.2	18364
177	320600	9/9/2009	9/9/2009	Soil	15.18	13800
178	320601	9/9/2009	9/9/2009	Soil	21.97	19973
179	320602	9/9/2009	9/9/2009	Soil	17.09	15536
180	320603	9/9/2009	9/9/2009	Soil	19.85	18045
181	320604	9/9/2009	9/9/2009	Soil	21	19091
182	320605	9/9/2009	9/9/2009	Soil	25.74	23400
183	320606	9/9/2009	9/9/2009	Soil	15.17	13791
184	320607	9/9/2009	9/9/2009	Soil	14.55	13227
185	320608	9/9/2009	9/9/2009	Soil	20.55	18682
186	320609	9/9/2009	9/9/2009	Soil	18.8	17091
187	320610	9/9/2009	9/9/2009	Soil	17.59	15991
188	320611	9/9/2009	9/9/2009	Soil	20.05	18227
189	320612	9/9/2009	9/9/2009	Soil	23.87	21700
190	320613	9/9/2009	9/9/2009	Soil	15.09	13718
191	320408	9/9/2009	9/9/2009	Soil	17.58	15982
192	320409	9/9/2009	9/9/2009	Soil	19.76	17964
193	320410	9/9/2009	9/9/2009	Soil	19.59	17809
194	320411	9/9/2009	9/9/2009	Soil	21.88	19891
195	320412	9/10/2009	9/10/2009	Soil	23.65	21500
196	320413	9/10/2009	9/10/2009	Soil	19.27	17518
197	320414	9/10/2009	9/10/2009	Soil	15.96	14509
198	320415	9/10/2009	9/10/2009	Soil	14.61	13282
199	320416	9/10/2009	9/10/2009	Soil	13.5	12273
200	320417	9/10/2009	9/10/2009	Soil	16.35	14864
201	320418	9/10/2009	9/10/2009	Soil	20.53	18664
202	320419	9/10/2009	9/10/2009	Soil	25.92	23564
203	320420	9/10/2009	9/10/2009	Soil	17.42	15836
204	320421	9/10/2009	9/10/2009	Soil	23.46	21327

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
205	320422	9/10/2009	9/10/2009	Soil	25.32	23018
206	320423	9/10/2009	9/10/2009	Soil	18.66	16964
207	320424	9/10/2009	9/10/2009	Soil	22.59	20536
208	320425	9/10/2009	9/10/2009	Soil	16.49	14991
209	320426	9/10/2009	9/10/2009	Soil	24.08	21891
210	320427	9/10/2009	9/10/2009	Soil	17.52	15927
211	320428	9/10/2009	9/10/2009	Soil	22.21	20191
212	320429	9/10/2009	9/10/2009	Soil	23.95	21773
213	320430	9/10/2009	9/10/2009	Soil	14	12727
214	320431	9/10/2009	9/10/2009	Soil	24.53	22300
215	320432	9/10/2009	9/10/2009	Soil	19.96	18145
216	320433	9/10/2009	9/10/2009	Soil	18.81	17100
217	320434	9/10/2009	9/10/2009	Soil	15.3	13909
218	320435	9/10/2009	9/10/2009	Soil	24.98	22709
219	320436	9/10/2009	9/10/2009	Soil	22.71	20645
220	320437	9/10/2009	9/10/2009	Soil	22.81	20736
221	320438	9/10/2009	9/10/2009	Soil	27.78	25255
222	320439	9/10/2009	9/10/2009	Soil	17.2	15636
223	320440	9/10/2009	9/10/2009	Soil	17.01	15464
224	320441	9/10/2009	9/10/2009	Soil	18.86	17145
225	320442	9/10/2009	9/10/2009	Soil	19.78	17982
226	320443	9/10/2009	9/10/2009	Soil	18.74	17036
227	320444	9/10/2009	9/10/2009	Soil	16.05	14591
228	320445	9/10/2009	9/10/2009	Soil	25.83	23482
229	320446	9/10/2009	9/10/2009	Soil	21.33	19391
230	320447	9/10/2009	9/10/2009	Soil	21.08	19164
231	320448	9/10/2009	9/10/2009	Soil	25.01	22736
232	320449	9/10/2009	9/10/2009	Soil	18.78	17073
233	320450	9/10/2009	9/10/2009	Soil	17.4	15818
234	320451	9/10/2009	9/10/2009	Soil	18.43	16755
235	320452	9/10/2009	9/10/2009	Soil	20.34	18491
236	320453	9/10/2009	9/10/2009	Soil	19.42	17655
237	320454	9/10/2009	9/10/2009	Soil	18.68	16982
238	320455	9/11/2009	9/11/2009	Soil	22.49	20445

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
239	320456	9/11/2009	9/11/2009	Soil	20.27	18427
240	320457	9/11/2009	9/11/2009	Soil	19.89	18082
241	320458	9/11/2009	9/11/2009	Soil	16.73	15209
242	320459	9/11/2009	9/11/2009	Soil	18.68	16982
243	320460	9/11/2009	9/11/2009	Soil	18.05	16409
244	320461	9/11/2009	9/11/2009	Soil	18.34	16673
245	320462	9/11/2009	9/11/2009	Soil	19.29	17536
246	320463	9/11/2009	9/11/2009	Soil	21.13	19209
247	320464	9/11/2009	9/11/2009	Soil	24.2	22000
248	320465	9/11/2009	9/11/2009	Soil	18.71	17009
249	320466	9/11/2009	9/11/2009	Soil	17.84	16218
250	320467	9/11/2009	9/11/2009	Soil	20.17	18336
251	320468	9/11/2009	9/11/2009	Soil	15.82	14382
252	320469	9/11/2009	9/11/2009	Soil	18.43	16755
253	320470	9/11/2009	9/11/2009	Soil	22.8	20727
254	320471	9/11/2009	9/11/2009	Soil	14.6	13273
255	320472	9/11/2009	9/11/2009	Soil	22.64	20582
256	320473	9/11/2009	9/11/2009	Soil	17.54	15945
257	320474	9/11/2009	9/11/2009	Soil	15.43	14027
258	320475	9/11/2009	9/11/2009	Soil	19.67	17882
259	320476	9/11/2009	9/11/2009	Soil	18.58	16891
260	320477	9/11/2009	9/11/2009	Soil	14.37	13064
261	320478	9/11/2009	9/11/2009	Soil	12.78	11618
262	320479	9/11/2009	9/11/2009	Soil	17.73	16118
263	320480	9/11/2009	9/11/2009	Soil	21.62	19655
264	320481A	9/11/2009	9/11/2009	Soil	15.97	14518
265	320481B	9/11/2009	9/11/2009	Soil	14.49	13173
266	320481C	9/11/2009	9/11/2009	Soil	17.34	15764
267	320481D	9/11/2009	9/11/2009	Soil	13.2	12000
268	320480E	9/11/2009	9/11/2009	Soil	19.4	17636
269	320481F	9/11/2009	9/11/2009	Soil	16.16	14691
270	320481G	9/11/2009	9/11/2009	Soil	15.95	14500
271	320481H	9/11/2009	9/11/2009	Soil	16.49	14991
272	342803	9/16/2009	9/16/2009	Soil	21.02	19109

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
273	342804	9/16/2009	9/16/2009	Soil	24.58	22345
274	342805	9/16/2009	9/16/2009	Soil	29.47	26791
275	342806	9/16/2009	9/16/2009	Soil	23.96	21782
276	342807	9/16/2009	9/16/2009	Soil	16.45	14955
277	342808	9/16/2009	9/16/2009	Soil	14.4	13091
278	342809	9/16/2009	9/16/2009	Soil	16.33	14845
279	342810	9/16/2009	9/16/2009	Soil	17.16	15600
280	342811	9/16/2009	9/16/2009	Soil	23.28	21164
281	342812	9/16/2009	9/16/2009	Soil	15.39	13991
282	342813	9/16/2009	9/16/2009	Soil	21.41	19464
283	342814	9/16/2009	9/16/2009	Soil	15.89	14445
284	342815	9/16/2009	9/16/2009	Soil	18.87	17155
285	342816	9/16/2009	9/16/2009	Soil	18.81	17100
286	342817	9/16/2009	9/16/2009	Soil	14.15	12864
287	342818	9/16/2009	9/16/2009	Soil	16.41	14918
288	342819	9/16/2009	9/16/2009	Soil	16.77	15245
289	342820	9/16/2009	9/16/2009	Soil	23.14	21036
290	342821	9/16/2009	9/16/2009	Soil	18.21	16555
291	342822	9/16/2009	9/16/2009	Soil	16.98	15436
292	342823	9/16/2009	9/16/2009	Soil	20.1	18273
293	342824	9/16/2009	9/16/2009	Soil	23.13	21027
294	342825	9/16/2009	9/16/2009	Soil	16.99	15445
295	342826	9/16/2009	9/16/2009	Soil	25.44	23127
296	342827	9/16/2009	9/16/2009	Soil	23.37	21245
297	342828	9/16/2009	9/16/2009	Soil	25.58	23255
298	342829	9/16/2009	9/16/2009	Soil	17.43	15845
299	342830	9/16/2009	9/16/2009	Soil	20.17	18336
300	342831	9/16/2009	9/16/2009	Soil	20.35	18500
301	342832	9/16/2009	9/16/2009	Soil	23.14	21036
302	342833	9/16/2009	9/16/2009	Soil	16.91	15373
303	342834	9/17/2009	9/17/2009	Soil	22.33	20300
304	342835	9/17/2009	9/17/2009	Soil	22.69	20627
305	342836	9/17/2009	9/17/2009	Soil	23.06	20964
306	342837	9/17/2009	9/17/2009	Soil	23.93	21755

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
307	342839	9/17/2009	9/17/2009	Soil	14.98	13618
308	342840	9/17/2009	9/17/2009	Soil	16.67	15155
309	342841	9/17/2009	9/17/2009	Soil	18.66	16964
310	342842	9/17/2009	9/17/2009	Soil	16.18	14709
311	342843	9/17/2009	9/17/2009	Soil	24.51	22282
312	342844	9/17/2009	9/17/2009	Soil	24.82	22564
313	342845	9/17/2009	9/17/2009	Soil	16.71	15191
314	342846	9/17/2009	9/17/2009	Soil	25.8	23455
315	342847	9/17/2009	9/17/2009	Soil	15.71	14282
316	342848	9/17/2009	9/17/2009	Soil	22.51	20464
317	342849	9/17/2009	9/17/2009	Soil	16.1	14636
318	342850	9/17/2009	9/17/2009	Soil	17.89	16264
319	342851	9/17/2009	9/17/2009	Soil	24.06	21873
320	342852	9/17/2009	9/17/2009	Soil	16.7	15182
321	342853	9/17/2009	9/17/2009	Soil	23.41	21282
322	342854	9/17/2009	9/17/2009	Soil	17.29	15718
323	342855	9/17/2009	9/17/2009	Soil	23.28	21164
324	342856	9/17/2009	9/23/2009	Soil	21.18	19255
325	342857	9/17/2009	9/17/2009	Soil	19.25	17500
326	342858	9/17/2009	9/17/2009	Soil	17.67	16064
327	342859	9/17/2009	9/17/2009	Soil	16.49	14991
328	342860	9/17/2009	9/17/2009	Soil	25.06	22782
329	342861	9/17/2009	9/17/2009	Soil	23.75	21591
330	342862	9/17/2009	9/17/2009	Soil	23.66	21509
331	342863	9/17/2009	9/17/2009	Soil	21.52	19564
332	342864	9/17/2009	9/17/2009	Soil	18.19	16536
333	342865	9/17/2009	9/17/2009	Soil	15.37	13973
334	342866	9/18/2009	9/18/2009	Soil	21.8	19818
335	342867	9/18/2009	9/18/2009	Soil	17.78	16164
336	342868	9/18/2009	9/18/2009	Soil	24.11	21918
337	342869	9/18/2009	9/18/2009	Soil	20.01	18191
338	342870	9/18/2009	9/18/2009	Soil	23.94	21764
339	342871	9/18/2009	9/18/2009	Soil	23.2	21091
340	342872	9/18/2009	9/18/2009	Soil	23.04	20945

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
341	342873	9/18/2009	9/18/2009	Soil	15.06	13691
342	342874	9/18/2009	9/18/2009	Soil	17.2	15636
343	342875	9/18/2009	9/18/2009	Soil	16.72	15200
344	342876	9/18/2009	9/18/2009	Soil	22.36	20327
345	342877	9/18/2009	9/18/2009	Soil	21.52	19564
346	342878	9/18/2009	9/18/2009	Soil	24.38	22164
347	342879	9/18/2009	9/18/2009	Soil	17.78	16164
348	342880	9/18/2009	9/18/2009	Soil	19.73	17936
349	342881	9/18/2009	9/18/2009	Soil	27.89	25355
350	342882	9/18/2009	9/18/2009	Soil	25.38	23073
351	342883	9/18/2009	9/18/2009	Soil	25.05	22773
352	342884	9/18/2009	9/18/2009	Soil	25.87	23518
353	342885	9/18/2009	9/18/2009	Soil	16.12	14655
354	342886	9/18/2009	9/18/2009	Soil	16.24	14764
355	342887	9/18/2009	9/18/2009	Soil	17.75	16136
356	342888	9/18/2009	9/18/2009	Soil	24.22	22018
357	342889	9/18/2009	9/18/2009	Soil	23.02	20927
358	342890	9/18/2009	9/18/2009	Soil	29.51	26827
359	342891	9/18/2009	9/18/2009	Soil	21.72	19745
360	342892	9/18/2009	9/18/2009	Soil	26.79	24355
361	342893	9/18/2009	9/18/2009	Soil	21.91	19918
362	342894	9/18/2009	9/18/2009	Soil	25.6	23273
363	342895	9/18/2009	9/18/2009	Soil	18.22	16564
364	342896	9/18/2009	9/18/2009	Soil	17.19	15627
365	342897	9/18/2009	9/18/2009	Soil	16.74	15218
366	342898	9/18/2009	9/18/2009	Soil	19.7	17909
367	342899	9/18/2009	9/18/2009	Soil	18.33	16664
368	342900	9/18/2009	9/18/2009	Soil	17.77	16155
369	342901	9/18/2009	9/18/2009	Soil	17.91	16282
370	342902	9/18/2009	9/18/2009	Soil	24.45	22227
371	342903	9/18/2009	9/18/2009	Soil	18.93	17209
372	342904	9/18/2009	9/18/2009	Soil	22.72	20655
373	342905	9/18/2009	9/18/2009	Soil	17.05	15500
374	342911	9/18/2009	9/18/2009	Soil	15.27	13882

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
375	342912	9/18/2009	9/18/2009	Soil	17.46	15873
376	342913	9/18/2009	9/18/2009	Soil	20.67	18791
377	342914	9/18/2009	9/18/2009	Soil	17.35	15773
378	342915	9/18/2009	9/18/2009	Soil	19.09	17355
379	342916	9/18/2009	9/18/2009	Soil	20.86	18964
380	342917	9/21/2009	9/21/2009	Soil	25.7	23364
381	342918	9/21/2009	9/21/2009	Soil	18.53	16845
382	342919	9/21/2009	9/21/2009	Soil	18.5	16818
383	342920	9/21/2009	9/21/2009	Soil	23.68	21527
384	342921	9/21/2009	9/21/2009	Soil	17.49	15900
385	342922	9/21/2009	9/21/2009	Soil	17.25	15682
386	342923	9/21/2009	9/21/2009	Soil	17.24	15673
387	342924	9/21/2009	9/21/2009	Soil	20.74	18855
388	342925	9/21/2009	9/21/2009	Soil	25.53	23209
389	342926	9/21/2009	9/21/2009	Soil	17.96	16327
390	342927	9/21/2009	9/21/2009	Soil	21.02	19109
391	342928	9/21/2009	9/21/2009	Soil	17.24	15673
392	342929	9/21/2009	9/21/2009	Soil	21	19091
393	342930	9/21/2009	9/21/2009	Soil	21.28	19345
394	342931	9/21/2009	9/21/2009	Soil	24.23	22027
395	342932	9/21/2009	9/21/2009	Soil	18.49	16809
396	342933	9/21/2009	9/21/2009	Soil	16.86	15327
397	342934	9/21/2009	9/21/2009	Soil	24.11	21918
398	342935	9/21/2009	9/21/2009	Soil	22.22	20200
399	342936	9/21/2009	9/21/2009	Soil	26.2	23818
400	342937	9/21/2009	9/21/2009	Soil	24.11	21918
401	342938	9/21/2009	9/21/2009	Soil	19.45	17682
402	342939	9/21/2009	9/21/2009	Soil	18.74	17036
403	342940	9/21/2009	9/21/2009	Soil	19.78	17982
404	342941	9/21/2009	9/21/2009	Soil	15.97	14518
405	342942	9/21/2009	9/21/2009	Soil	24.79	22536
406	342943	9/21/2009	9/21/2009	Soil	16.65	15136
407	342944	9/21/2009	9/21/2009	Soil	23.78	21618
408	342945	9/21/2009	9/21/2009	Soil	19.2	17455

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
409	342946	9/21/2009	9/21/2009	Soil	18.59	16900
410	342947	9/21/2009	9/21/2009	Soil	24.02	21836
411	342948	9/21/2009	9/21/2009	Soil	22.65	20591
412	342949	9/21/2009	9/21/2009	Soil	18.67	16973
413	342950	9/21/2009	9/21/2009	Soil	19.41	17645
414	342951	9/21/2009	9/21/2009	Soil	22.29	20264
415	342952	9/21/2009	9/21/2009	Soil	18.17	16518
416	342953	9/22/2009	9/22/2009	Soil	26.66	24236
417	342954	9/22/2009	9/22/2009	Soil	22.58	20527
418	342955	9/22/2009	9/22/2009	Soil	17.44	15855
419	342956	9/22/2009	9/22/2009	Soil	18.66	16964
420	342957	9/22/2009	9/22/2009	Soil	14.69	13355
421	342958	9/22/2009	9/22/2009	Soil	17.36	15782
422	342959	9/22/2009	9/22/2009	Soil	15.4	14000
423	342960	9/22/2009	9/22/2009	Soil	16.42	14927
424	342961	9/22/2009	9/22/2009	Soil	16.8	15273
425	342962	9/22/2009	9/22/2009	Soil	15.79	14355
426	342963	9/22/2009	9/22/2009	Soil	25.44	23127
427	342964	9/22/2009	9/22/2009	Soil	14.73	13391
428	342965	9/22/2009	9/22/2009	Soil	23.8	21636
429	342966	9/22/2009	9/22/2009	Soil	14.66	13327
430	342967	9/22/2009	9/22/2009	Soil	18.46	16782
431	342968	9/22/2009	9/22/2009	Soil	16.42	14927
432	342969	9/22/2009	9/22/2009	Soil	19.19	17445
433	342970	9/22/2009	9/22/2009	Soil	16.46	14964
434	342971	9/22/2009	9/22/2009	Soil	17.97	16336
435	342972	9/22/2009	9/22/2009	Soil	18.64	16945
436	342973	9/22/2009	9/22/2009	Soil	26.87	24427
437	342974	9/22/2009	9/22/2009	Soil	17.08	15527
438	342982	9/22/2009	9/22/2009	Soil	21.24	19309
439	342983	9/22/2009	9/22/2009	Soil	21.01	19100
440	342984	9/22/2009	9/22/2009	Soil	20.64	18764
441	342985	9/22/2009	9/22/2009	Soil	23.58	21436
442	342986	9/22/2009	9/22/2009	Soil	19.68	17891

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
443	342987	9/22/2009	9/22/2009	Soil	18.39	16718
444	342988	9/22/2009	9/22/2009	Soil	17.64	16036
445	342989	9/22/2009	9/22/2009	Soil	22.4	20364
446	342990	9/22/2009	9/22/2009	Soil	20.05	18227
447	342991	9/22/2009	9/22/2009	Soil	24.82	22564
448	342992	9/22/2009	9/22/2009	Soil	16.92	15382
449	342993	9/22/2009	9/22/2009	Soil	19.07	17336
450	342994	9/22/2009	9/22/2009	Soil	24.72	22473
451	342995	9/22/2009	9/22/2009	Soil	15.85	14409
452	342996	9/22/2009	9/22/2009	Soil	18.4	16727
453	342997	9/22/2009	9/22/2009	Soil	18.52	16836
454	342998	9/22/2009	9/22/2009	Soil	15.56	14145
455	342999	9/22/2009	9/22/2009	Soil	19.56	17782
456	343000	9/22/2009	9/22/2009	Soil	17.33	15755
457	343001	9/23/2009	9/23/2009	Soil	26.56	24145
458	343002	9/23/2009	9/23/2009	Soil	25.61	23282
459	343003	9/23/2009	9/23/2009	Soil	19.87	18064
460	343004	9/23/2009	9/23/2009	Soil	22.72	20655
461	343005	9/23/2009	9/23/2009	Soil	18.35	16682
462	343006	9/23/2009	9/23/2009	Soil	26.37	23973
463	343007	9/23/2009	9/23/2009	Soil	20.14	18309
464	343008	9/23/2009	9/23/2009	Soil	15.76	14327
465	343009	9/23/2009	9/23/2009	Soil	15.58	14164
466	343010	9/23/2009	9/23/2009	Soil	19.92	18109
467	343011	9/23/2009	9/23/2009	Soil	20.13	18300
468	343012	9/23/2009	9/23/2009	Soil	15.31	13918
469	343013	9/23/2009	9/23/2009	Soil	16.52	15018
470	343014	9/23/2009	9/23/2009	Soil	15.12	13745
471	343015	9/23/2009	9/23/2009	Soil	21.77	19791
472	343016	9/23/2009	9/23/2009	Soil	16.92	15382
473	343017	9/23/2009	9/23/2009	Soil	16.76	15236
474	343018	9/23/2009	9/23/2009	Soil	18.31	16645
475	343019	9/23/2009	9/23/2009	Soil	24.32	22109
476	343020	9/23/2009	9/23/2009	Soil	20.44	18582

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
477	343021	9/23/2009	9/23/2009	Soil	15.7	14273
478	343022	9/23/2009	9/23/2009	Soil	18.53	16845
479	343023	9/23/2009	9/23/2009	Soil	23.41	21282
480	343024	9/23/2009	9/23/2009	Soil	19.4	17636
481	343025	9/23/2009	9/23/2009	Soil	17.51	15918
482	343026	9/23/2009	9/23/2009	Soil	27.9	25364
483	343027	9/23/2009	9/23/2009	Soil	17.57	15973
484	343028	9/23/2009	9/23/2009	Soil	20.74	18855
485	343029	9/23/2009	9/23/2009	Soil	22.78	20709
486	343030	9/23/2009	9/23/2009	Soil	28.12	25564
487	343031	9/23/2009	9/23/2009	Soil	20.33	18482
488	343032	9/23/2009	9/23/2009	Soil	17.26	15691
489	343033	9/24/2009	9/24/2009	Soil	25.77	23427
490	343034	9/24/2009	9/24/2009	Soil	21.52	19564
491	343035	9/24/2009	9/24/2009	Soil	15.82	14382
492	343036	9/24/2009	9/24/2009	Soil	23.52	21382
493	343037	9/24/2009	9/24/2009	Soil	18.75	17045
494	343038	9/24/2009	9/24/2009	Soil	16.04	14582
495	343039	9/24/2009	9/24/2009	Soil	15.04	13673
496	343040	9/24/2009	9/24/2009	Soil	16.62	15109
497	343041	9/24/2009	9/24/2009	Soil	25.73	23391
498	343042	9/24/2009	9/24/2009	Soil	19.52	17745
499	343043	9/24/2009	9/24/2009	Soil	18.64	16945
500	343044	9/24/2009	9/24/2009	Soil	23.6	21455
501	343045	9/24/2009	9/24/2009	Soil	24.78	22527
502	343046	9/24/2009	9/24/2009	Soil	17.7	16091
503	343047	9/24/2009	9/24/2009	Soil	15.95	14500
504	343048	9/24/2009	9/24/2009	Soil	16.89	15355
505	343049	9/24/2009	9/24/2009	Soil	16.25	14773
506	343050	9/24/2009	9/24/2009	Soil	26.33	23936
507	343051	9/24/2009	9/24/2009	Soil	18.62	16927
508	343052	9/24/2009	9/24/2009	Soil	15.38	13982
509	343053	9/24/2009	9/24/2009	Soil	27.66	25145
510	343054	9/24/2009	9/24/2009	Soil	25.07	22791

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
511	343055	9/24/2009	9/24/2009	Soil	17.22	15655
512	343056	9/24/2009	9/24/2009	Soil	16.76	15236
513	343057	9/24/2009	9/24/2009	Soil	18.45	16773
514	343058	9/24/2009	9/24/2009	Soil	17.75	16136
515	343059	9/24/2009	9/24/2009	Soil	26.19	23809
516	343060	9/24/2009	9/24/2009	Soil	22.48	20436
517	343061	9/24/2009	9/24/2009	Soil	15.98	14527
518	343062	9/24/2009	9/24/2009	Soil	21.47	19518
519	343063	9/24/2009	9/24/2009	Soil	22.49	20445
520	343064	9/24/2009	9/24/2009	Soil	12.52	11382
521	343065	9/24/2009	9/24/2009	Soil	16.06	14600
522	343066	9/24/2009	9/24/2009	Soil	15.25	13864
523	343067	9/24/2009	9/24/2009	Soil	14.82	13473
524	343068	9/24/2009	9/24/2009	Soil	18.51	16827
525	343069	9/24/2009	9/24/2009	Soil	14.82	13473
526	343070	9/25/2009	9/25/2009	Soil	26.38	23982
527	343071	9/25/2009	9/25/2009	Soil	20.93	19027
528	343072	9/25/2009	9/25/2009	Soil	17.34	15764
529	343073	9/25/2009	9/25/2009	Soil	21.25	19318
530	343074	9/25/2009	9/25/2009	Soil	15.01	13645
531	343075	9/25/2009	9/25/2009	Soil	17.58	15982
532	343076	9/25/2009	9/25/2009	Soil	20.72	18836
533	343077	9/25/2009	9/25/2009	Soil	15.39	13991
534	343078	9/25/2009	9/25/2009	Soil	15.16	13782
535	343079	9/25/2009	9/25/2009	Soil	16.81	15282
536	343080	9/25/2009	9/25/2009	Soil	16.08	14618
537	343081	9/25/2009	9/25/2009	Soil	16.12	14655
538	343082	9/25/2009	9/25/2009	Soil	25.96	23600
539	343083	9/25/2009	9/25/2009	Soil	26.54	24127
540	343084	9/25/2009	9/25/2009	Soil	23.65	21500
541	343085	9/25/2009	9/25/2009	Soil	18.04	16400
542	343086	9/25/2009	9/25/2009	Soil	15.19	13809
543	343087	9/25/2009	9/25/2009	Soil	18.86	17145
544	343088	9/25/2009	9/25/2009	Soil	16.64	15127

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
545	343089	9/25/2009	9/25/2009	Soil	26.53	24118
546	343090	9/25/2009	9/25/2009	Soil	15.34	13945
547	343091	9/25/2009	9/25/2009	Soil	17.41	15827
548	343122	9/25/2009	9/25/2009	Soil	14.92	13564
549	343123	9/25/2009	9/25/2009	Soil	16.17	14700
550	343124	9/25/2009	9/25/2009	Soil	24.89	22627
551	343125	9/25/2009	9/25/2009	Soil	21.61	19645
552	343126	9/25/2009	9/25/2009	Soil	21.89	19900
553	343127	9/25/2009	9/25/2009	Soil	16.35	14864
554	343128	9/25/2009	9/25/2009	Soil	14.33	13027
555	343130	9/25/2009	9/25/2009	Soil	17.12	15564
556	343131	9/25/2009	9/25/2009	Soil	23.16	21055
557	343132	9/25/2009	9/25/2009	Soil	17.31	15736
558	343133	9/25/2009	9/25/2009	Soil	14.02	12745
559	343134	9/25/2009	9/25/2009	Soil	18.36	16691
560	343135	9/25/2009	9/25/2009	Soil	16	14545
561	343136	9/25/2009	9/25/2009	Soil	25.82	23473
562	343137	9/25/2009	9/25/2009	Soil	22.32	20291
563	343138	9/25/2009	9/25/2009	Soil	18.8	17091
564	343139	9/25/2009	9/25/2009	Soil	17.13	15573
565	343140	9/25/2009	9/25/2009	Soil	17.45	15864
566	343141	9/25/2009	9/25/2009	Soil	18.54	16855
567	343142	9/25/2009	9/25/2009	Soil	22.88	20800
568	343143	9/25/2009	9/25/2009	Soil	16.41	14918
569	343144	9/25/2009	9/25/2009	Soil	13.47	12245
570	343145	9/25/2009	9/25/2009	Soil	20.06	18236
571	343146	9/25/2009	9/25/2009	Soil	21.36	19418
572	343147	9/29/2009	9/29/2009	Soil	25.36	23055
573	343148	9/29/2009	9/29/2009	Soil	18.51	16827
574	343149	9/29/2009	9/29/2009	Soil	26.95	24500
575	343150	9/29/2009	9/29/2009	Soil	21.1	19182
576	343151	9/29/2009	9/29/2009	Soil	20.4	18545
577	343152	9/29/2009	9/29/2009	Soil	24.23	22027
578	343153	9/29/2009	9/29/2009	Soil	23.95	21773

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
579	343154	9/29/2009	9/29/2009	Soil	16.82	15291
580	343155	9/29/2009	9/29/2009	Soil	16.24	14764
581	343156	9/29/2009	9/29/2009	Soil	17.87	16245
582	343157	9/29/2009	9/29/2009	Soil	20.67	18791
583	343158	9/29/2009	9/29/2009	Soil	26.03	23664
584	343159	9/29/2009	9/29/2009	Soil	21.25	19318
585	343160	9/29/2009	9/29/2009	Soil	15.2	13818
586	343161	9/29/2009	9/29/2009	Soil	24.97	22700
587	343162	9/29/2009	9/29/2009	Soil	24.59	22355
588	343163	9/29/2009	9/29/2009	Soil	16.83	15300
589	343164	9/29/2009	9/29/2009	Soil	19.28	17527
590	343165	9/29/2009	9/29/2009	Soil	14.7	13364
591	343166	9/29/2009	9/29/2009	Soil	17.85	16227
592	343171	9/29/2009	9/29/2009	Soil	18.9	17182
593	343172	9/29/2009	9/29/2009	Soil	26.01	23645
594	343173	9/29/2009	9/29/2009	Soil	19.96	18145
595	343174	9/29/2009	9/29/2009	Soil	17.32	15745
596	343175	9/29/2009	9/29/2009	Soil	17.18	15618
597	343176	9/29/2009	9/29/2009	Soil	19.55	17773
598	343177	9/29/2009	9/29/2009	Soil	15.35	13955
599	343178	9/29/2009	9/29/2009	Soil	15.76	14327
600	343179	9/29/2009	9/29/2009	Soil	15.97	14518
601	343180	9/29/2009	9/29/2009	Soil	15.86	14418
602	343181	9/29/2009	9/29/2009	Soil	21.66	19691
603	343182	9/29/2009	9/29/2009	Soil	26.61	24191
604	343183	9/29/2009	9/29/2009	Soil	24.28	22073
605	343184	9/29/2009	9/29/2009	Soil	21.56	19600
606	343185	9/29/2009	9/29/2009	Soil	17.32	15745
607	343186	9/29/2009	9/29/2009	Soil	16.46	14964
608	343187	9/29/2009	9/29/2009	Soil	26.25	23864
609	343188	9/29/2009	9/29/2009	Soil	20.46	18600
610	343189	9/29/2009	9/29/2009	Soil	17.91	16282
611	343190	9/30/2009	9/30/2009	Soil	24.64	22400
612	343191	9/30/2009	9/30/2009	Soil	26.03	23664

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
613	343192	9/30/2009	9/30/2009	Soil	15.59	14173
614	343193	9/30/2009	9/30/2009	Soil	16.48	14982
615	343194	9/30/2009	9/30/2009	Soil	17.37	15791
616	343195	9/30/2009	9/30/2009	Soil	24.25	22045
617	343196	9/30/2009	9/30/2009	Soil	17.53	15936
618	343197	9/30/2009	9/30/2009	Soil	13.03	11845
619	343198	9/30/2009	9/30/2009	Soil	19.94	18127
620	343199	9/30/2009	9/30/2009	Soil	18.36	16691
621	343200	9/30/2009	9/30/2009	Soil	25.43	23118
622	343201	9/30/2009	9/30/2009	Soil	18.52	16836
623	343202	9/30/2009	9/30/2009	Soil	19.63	17845
624	343203	9/30/2009	9/30/2009	Soil	15.87	14427
625	343204	9/30/2009	9/30/2009	Soil	16.61	15100
626	343205	9/30/2009	9/30/2009	Soil	21.87	19882
627	343206	9/30/2009	9/30/2009	Soil	16	14545
628	343207	9/30/2009	9/30/2009	Soil	16	14545
629	343208	9/30/2009	9/30/2009	Soil	16.48	14982
630	343209	9/30/2009	9/30/2009	Soil	17.31	15736
631	343210	9/30/2009	9/30/2009	Soil	24.28	22073
632	343211	9/30/2009	9/30/2009	Soil	18.34	16673
633	343212	9/30/2009	9/30/2009	Soil	16.55	15045
634	343213	9/30/2009	9/30/2009	Soil	15.85	14409
635	343214	9/30/2009	9/30/2009	Soil	19.45	17682
636	343215	9/30/2009	9/30/2009	Soil	21.66	19691
637	343216	9/30/2009	9/30/2009	Soil	14.51	13191
638	343217	9/30/2009	9/30/2009	Soil	13.87	12609
639	343218	9/30/2009	9/30/2009	Soil	20.57	18700
640	343219	9/30/2009	9/30/2009	Soil	18.52	16836
641	343220	9/30/2009	9/30/2009	Soil	18.98	17255
642	343221	9/30/2009	9/30/2009	Soil	19.31	17555
643	343222	9/30/2009	9/30/2009	Soil	27.02	24564
644	343223	9/30/2009	9/30/2009	Soil	20.09	18264
645	343224	9/30/2009	9/30/2009	Soil	21.1	19182
646	343225	9/30/2009	9/30/2009	Soil	22.01	20009

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
647	343226	9/30/2009	9/30/2009	Soil	15.26	13873
648	343227	10/1/2009	10/1/2009	Soil	26.71	24282
649	343228	10/1/2009	10/1/2009	Soil	24.26	22055
650	343229	10/1/2009	10/1/2009	Soil	21.68	19709
651	343230	10/1/2009	10/1/2009	Soil	20.99	19082
652	343231	10/1/2009	10/1/2009	Soil	17.23	15664
653	343232	10/1/2009	10/1/2009	Soil	19.39	17627
654	343233	10/1/2009	10/1/2009	Soil	24.63	22391
655	343239	10/1/2009	10/1/2009	Soil	16.85	15318
656	343240	10/1/2009	10/1/2009	Soil	17.75	16136
657	343241	10/1/2009	10/1/2009	Soil	16.32	14836
658	343242	10/1/2009	10/1/2009	Soil	27.05	24591
659	343243	10/1/2009	10/1/2009	Soil	23.68	21527
660	343244	10/1/2009	10/1/2009	Soil	17.11	15555
661	343245	10/1/2009	10/1/2009	Soil	21.64	19673
662	343246	10/1/2009	10/1/2009	Soil	12.12	11018
663	343247	10/1/2009	10/1/2009	Soil	25.13	22845
664	343248	10/1/2009	10/1/2009	Soil	18.91	17191
665	343249	10/1/2009	10/1/2009	Soil	20.49	18627
666	343250	10/1/2009	10/1/2009	Soil	21.51	19555
667	343251	10/1/2009	10/1/2009	Soil	17.13	15573
668	343252	10/1/2009	10/1/2009	Soil	16.96	15418
669	343253	10/1/2009	10/1/2009	Soil	25.31	23009
670	343254	10/1/2009	10/1/2009	Soil	16.25	14773
671	343255	10/1/2009	10/1/2009	Soil	20.54	18673
672	343256	10/1/2009	10/1/2009	Soil	17.47	15882
673	343257	10/1/2009	10/1/2009	Soil	19.54	17764
674	343258	10/1/2009	10/1/2009	Soil	18.43	16755
675	343259	10/1/2009	10/1/2009	Soil	25.76	23418
676	343260	10/1/2009	10/1/2009	Soil	18.83	17118
677	343261	10/1/2009	10/1/2009	Soil	15.13	13755
678	343262	10/1/2009	10/1/2009	Soil	16.6	15091
679	343263	10/1/2009	10/1/2009	Soil	15.5	14091
680	343264	10/5/2009	10/5/2009	Stumps	8.05	7318

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
681	343265	10/5/2009	10/5/2009	Stumps	9.32	8473
682	343266	10/5/2009	10/5/2009	Stumps	10.75	9773
683	343267	10/6/2009	10/6/2009	Stumps	10.39	9445
684	343268	10/6/2009	10/6/2009	Stumps	11.98	10891
685	343269	10/6/2009	10/6/2009	Stumps	9.04	8218
686	343270	10/6/2009	10/6/2009	Stumps	12.2	11091
687	343271	10/7/2009	10/7/2009	Stumps	10.21	9282
688	343272	10/7/2009	10/7/2009	Stumps	14.09	12809
689	343273	10/7/2009	10/7/2009	Stumps	13.69	12445
690	343274	10/9/2009	10/9/2009	Soil	20.07	18245
691	343275	10/9/2009	10/9/2009	Soil	17.29	15718
692	343276	10/9/2009	10/9/2009	Soil	16.65	15136
693	343277	10/9/2009	10/9/2009	Soil	18.84	17127
694	343278	10/9/2009	10/9/2009	Soil	11.38	10345
695	343279	10/9/2009	10/9/2009	Soil	18.28	16618
696	343280	10/9/2009	10/9/2009	Soil	12.02	10927
697	343281	10/9/2009	10/9/2009	Soil	20.91	19009
698	343282	10/9/2009	10/9/2009	Soil	18.11	16464
699	343283	10/9/2009	10/9/2009	Soil	18.57	16882
700	343284	10/9/2009	10/9/2009	Soil	21.5	19545
701	343285	10/9/2009	10/9/2009	Soil	21.16	19236
702	343286	10/9/2009	10/9/2009	Soil	22.58	20527
703	343287	10/9/2009	10/9/2009	Soil	14.26	12964
704	343288	10/9/2009	10/9/2009	Soil	16.1	14636
705	343289	10/9/2009	10/9/2009	Soil	21	19091
706	343290	10/9/2009	10/9/2009	Soil	17.95	16318
707	343291	10/9/2009	10/9/2009	Soil	22.81	20736
708	343292	10/9/2009	10/9/2009	Soil	17.18	15618
709	343293	10/9/2009	10/9/2009	Soil	25.36	23055
710	343294	10/9/2009	10/9/2009	Soil	25.2	22909
711	343295	10/9/2009	10/9/2009	Soil	21.35	19409
712	343296	10/12/2009	10/12/2009	Soil	20.17	18336
713	343297	10/12/2009	10/12/2009	Soil	19.79	17991
714	343298	10/12/2009	10/12/2009	Soil	23.48	21345

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
715	343299	10/12/2009	10/12/2009	Soil	15.89	14445
716	343300	10/12/2009	10/12/2009	Soil	18.25	16591
717	343301	10/12/2009	10/12/2009	Soil	24.94	22673
718	343302	10/12/2009	10/12/2009	Soil	19.33	17573
719	343303	10/12/2009	10/12/2009	Soil	23.41	21282
720	343304	10/12/2009	10/12/2009	Soil	22.19	20173
721	343305	10/12/2009	10/12/2009	Soil	20.14	18309
722	343306	10/12/2009	10/12/2009	Soil	30.99	28173
723	343307	10/12/2009	10/12/2009	Soil	20.59	18718
724	343308	10/12/2009	10/12/2009	Soil	20.58	18709
725	343309	10/12/2009	10/12/2009	Soil	23.19	21082
726	343310	10/12/2009	10/12/2009	Soil	24.92	22655
727	343311	10/12/2009	10/12/2009	Soil	25.66	23327
728	343312	10/12/2009	10/12/2009	Soil	16.38	14891
729	343313	10/12/2009	10/12/2009	Soil	18.23	16573
730	343314	10/12/2009	10/12/2009	Soil	22.73	20664
731	343315	10/12/2009	10/12/2009	Soil	13.43	12209
732	343316	10/12/2009	10/12/2009	Soil	17.6	16000
733	343317	10/12/2009	10/12/2009	Soil	16.35	14864
734	343318	10/12/2009	10/12/2009	Soil	17.58	15982
735	343319	10/12/2009	10/12/2009	Soil	18.93	17209
736	343320	10/12/2009	10/12/2009	Soil	20.39	18536
737	343321	10/12/2009	10/12/2009	Soil	17.58	15982
738	343322	10/12/2009	10/12/2009	Soil	18.34	16673
739	343323	10/12/2009	10/12/2009	Soil	19.94	18127
740	343324	10/12/2009	10/12/2009	Soil	20.04	18218
741	343325	10/12/2009	10/12/2009	Soil	25.62	23291
742	343326	10/12/2009	10/12/2009	Soil	20.83	18936
743	343328	10/12/2009	10/12/2009	Soil	19.07	17336
744	343329	10/12/2009	10/12/2009	Soil	25.84	23491
745	343330	10/12/2009	10/12/2009	Soil	17.95	16318
746	343331	10/12/2009	10/12/2009	Soil	15.01	13645
747	343332	10/12/2009	10/12/2009	Soil	18.16	16509
748	343333	10/12/2009	10/12/2009	Soil	21.84	19855

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
749	343334	10/12/2009	10/12/2009	Soil	17.27	15700
750	343335	10/12/2009	10/12/2009	Soil	20.69	18809
751	343336	10/12/2009	10/12/2009	Soil	24.41	22191
752	343337	10/12/2009	10/12/2009	Soil	20.73	18845
753	343338	10/12/2009	10/12/2009	Soil	20.7	18818
754	343339	10/12/2009	10/12/2009	Soil	18.39	16718
755	343340	10/12/2009	10/12/2009	Soil	27.75	25227
756	343341	10/12/2009	10/12/2009	Soil	13.78	12527
757	343342	10/12/2009	10/12/2009	Soil	16.41	14918
758	343343	10/12/2009	10/12/2009	Soil	18.53	16845
759	343344	10/12/2009	10/12/2009	Soil	13.16	11964
760	343345	10/12/2009	10/12/2009	Soil	15.02	13655
761	343346	10/12/2009	10/12/2009	Soil	18.03	16391
762	343347	10/13/2009	10/13/2009	Soil	25.49	23173
763	343348	10/13/2009	10/13/2009	Soil	21.37	19427
764	343349	10/13/2009	10/13/2009	Soil	23.06	20964
765	343350	10/13/2009	10/13/2009	Soil	23.91	21736
766	343353	10/13/2009	10/13/2009	Soil	21.64	19673
767	343354	10/13/2009	10/13/2009	Soil	14.96	13600
768	343355	10/13/2009	10/13/2009	Soil	22.53	20482
769	343356	10/13/2009	10/13/2009	Soil	18.43	16755
770	343357	10/13/2009	10/13/2009	Soil	21.78	19800
771	343358	10/13/2009	10/13/2009	Soil	25.12	22836
772	343359	10/13/2009	10/13/2009	Soil	21.36	19418
773	343360	10/13/2009	10/13/2009	Soil	19.54	17764
774	343361	10/13/2009	10/13/2009	Soil	21.81	19827
775	343362	10/13/2009	10/13/2009	Soil	27.65	25136
776	343363	10/13/2009	10/13/2009	Soil	17.35	15773
777	343364	10/13/2009	10/13/2009	Soil	26.85	24409
778	343365	10/13/2009	10/13/2009	Soil	16.7	15182
779	343366	10/13/2009	10/13/2009	Soil	16.11	14645
780	343367	10/13/2009	10/13/2009	Soil	27.12	24655
781	343368	10/13/2009	10/13/2009	Soil	24.39	22173
782	343369	10/13/2009	10/13/2009	Soil	17.84	16218

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
783	343370	10/13/2009	10/13/2009	Soil	27.24	24764
784	343371	10/13/2009	10/13/2009	Soil	24	21818
785	343372	10/13/2009	10/13/2009	Soil	19.11	17373
786	343373	10/13/2009	10/13/2009	Soil	21.94	19945
787	343374	10/13/2009	10/13/2009	Soil	21.21	19282
788	343375	10/13/2009	10/13/2009	Soil	18.23	16573
789	343376	10/13/2009	10/13/2009	Soil	26.15	23773
790	343377	10/13/2009	10/13/2009	Soil	26.47	24064
791	343378	10/13/2009	10/13/2009	Soil	24.43	22209
792	343379	10/13/2009	10/13/2009	Soil	20.63	18755
793	343380	10/13/2009	10/13/2009	Soil	18.82	17109
794	343381	10/13/2009	10/13/2009	Soil	22.92	20836
795	343382	10/13/2009	10/13/2009	Soil	27.13	24664
796	343383	10/13/2009	10/13/2009	Soil	23.88	21709
797	343384	10/13/2009	10/13/2009	Soil	21.92	19927
798	343385	10/19/2009	10/19/2009	Soil	24.18	21982
799	343386	10/19/2009	10/19/2009	Soil	24.81	22555
800	343387	10/19/2009	10/19/2009	Soil	25.17	22882
801	343388	10/19/2009	10/19/2009	Soil	17.47	15882
802	343389	10/19/2009	10/19/2009	Soil	20.84	18945
803	343390	10/19/2009	10/19/2009	Soil	24.42	22200
804	343391	10/19/2009	10/19/2009	Soil	15.38	13982
805	343392	10/19/2009	10/19/2009	Soil	19.29	17536
806	343393	10/19/2009	10/19/2009	Soil	20.4	18545
807	343394	10/19/2009	10/19/2009	Soil	18.43	16755
808	343395	10/19/2009	10/19/2009	Soil	19.25	17500
809	343396	10/19/2009	10/19/2009	Soil	25.91	23555
810	343397	10/19/2009	10/19/2009	Soil	20.35	18500
811	343398	10/19/2009	10/19/2009	Soil	16.09	14627
812	343399	10/19/2009	10/19/2009	Soil	17.07	15518
813	343400	10/19/2009	10/19/2009	Soil	18.82	17109
814	343401	10/19/2009	10/19/2009	Soil	23.24	21127
815	343402	10/19/2009	10/19/2009	Soil	25.26	22964
816	343403	10/19/2009	10/19/2009	Soil	24.02	21836

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
817	343549	10/19/2009	10/19/2009	Soil	25.46	23145
818	343550	10/19/2009	10/19/2009	Soil	18.71	17009
819	343551	10/19/2009	10/19/2009	Soil	24.07	21882
820	343552	10/19/2009	10/19/2009	Soil	21	19091
821	343553	10/19/2009	10/19/2009	Soil	14.7	13364
822	343554	10/19/2009	10/19/2009	Soil	18.45	16773
823	343555	10/19/2009	10/19/2009	Soil	26.11	23736
824	343556	10/19/2009	10/19/2009	Soil	22.23	20209
825	343557	10/19/2009	10/19/2009	Soil	18	16364
826	343558	10/19/2009	10/19/2009	Soil	14.85	13500
827	343559	10/19/2009	10/19/2009	Soil	21.86	19873
828	343560	10/19/2009	10/19/2009	Soil	24.38	22164
829	343561	10/20/2009	10/20/2009	Soil	26.49	24082
830	343562	10/20/2009	10/20/2009	Soil	18.58	16891
831	343563	10/20/2009	10/20/2009	Soil	22.42	20382
832	343564	10/20/2009	10/20/2009	Soil	18.82	17109
833	343565	10/20/2009	10/20/2009	Soil	20.74	18855
834	343566	10/20/2009	10/20/2009	Soil	21.75	19773
835	343567	10/20/2009	10/20/2009	Soil	21.9	19909
836	343568	10/20/2009	10/20/2009	Soil	18.68	16982
837	343569	10/20/2009	10/20/2009	Soil	17.6	16000
838	343404	10/20/2009	10/20/2009	Soil	24.99	22718
839	343405	10/20/2009	10/20/2009	Soil	21.8	19818
840	343406	10/20/2009	10/20/2009	Soil	20.86	18964
841	343407	10/20/2009	10/20/2009	Soil	18.25	16591
842	343408	10/20/2009	10/20/2009	Soil	25.26	22964
843	343409	10/20/2009	10/20/2009	Soil	21.89	19900
844	343410	10/20/2009	10/20/2009	Soil	24.91	22645
845	343411	10/20/2009	10/20/2009	Soil	16.2	14727
846	343412	10/20/2009	10/20/2009	Soil	17.12	15564
847	343413	10/20/2009	10/20/2009	Soil	27	24545
848	343414	10/20/2009	10/20/2009	Soil	23.3	21182
849	343415	10/20/2009	10/20/2009	Soil	27.88	25345
850	343416	10/20/2009	10/20/2009	Soil	25.9	23545

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
851	343417	10/20/2009	10/20/2009	Soil	20.35	18500
852	343418	10/20/2009	10/20/2009	Soil	25.15	22864
853	343419	10/20/2009	10/20/2009	Soil	16.89	15355
854	343420	10/20/2009	10/20/2009	Soil	16.02	14564
855	343421	10/20/2009	10/20/2009	Soil	26.53	24118
856	343422	10/20/2009	10/20/2009	Soil	23.53	21391
857	343423	10/20/2009	10/20/2009	Soil	22.84	20764
858	343424	10/20/2009	10/20/2009	Soil	20.69	18809
859	343425	10/20/2009	10/20/2009	Soil	25.68	23345
860	343426	10/20/2009	10/20/2009	Soil	29.17	26518
861	343427	10/21/2009	10/21/2009	Soil	26.23	23845
862	343428	10/21/2009	10/21/2009	Soil	23.93	21755
863	343429	10/21/2009	10/21/2009	Soil	17.56	15964
864	343430	10/21/2009	10/21/2009	Soil	24.52	22291
865	343431	10/21/2009	10/21/2009	Soil	14.51	13191
866	343432	10/21/2009	10/21/2009	Soil	12.29	11173
867	343433	10/21/2009	10/21/2009	Soil	13.66	12418
868	343434	10/21/2009	10/21/2009	Soil	24.07	21882
869	343435	10/21/2009	10/21/2009	Soil	25.66	23327
870	343436	10/21/2009	10/21/2009	Soil	20.78	18891
871	343437	10/21/2009	10/21/2009	Soil	18.35	16682
872	343438	10/21/2009	10/21/2009	Soil	22.09	20082
873	343439	10/21/2009	10/21/2009	Soil	20.01	18191
874	343440	10/21/2009	10/21/2009	Soil	15.27	13882
875	343441	10/21/2009	10/21/2009	Soil	18.25	16591
876	343442	10/21/2009	10/21/2009	Soil	27.48	24982
877	343443	10/21/2009	10/21/2009	Soil	30.63	27845
878	343444	10/21/2009	10/21/2009	Soil	23.36	21236
879	343445	10/21/2009	10/21/2009	Soil	29.64	26945
880	343446	10/21/2009	10/21/2009	Soil	22.88	20800
881	343447	10/21/2009	10/21/2009	Soil	18.5	16818
882	343448	10/21/2009	10/21/2009	Soil	19.47	17700
883	343449	10/21/2009	10/21/2009	Soil	23.41	21282
884	343450	10/21/2009	10/21/2009	Soil	27.45	24955

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
885	343451	10/21/2009	10/21/2009	Soil	24.1	21909
886	343452	10/21/2009	10/21/2009	Soil	24.67	22427
887	343453	10/21/2009	10/21/2009	Soil	23.99	21809
888	343454	10/21/2009	10/21/2009	Soil	16.64	15127
889	343455	10/21/2009	10/21/2009	Soil	14.57	13245
890	343456	10/21/2009	10/21/2009	Soil	18.57	16882
891	343457	10/22/2009	10/22/2009	Soil	17.34	15764
892	343458	10/22/2009	10/22/2009	Soil	22.39	20355
893	343459	10/22/2009	10/22/2009	Soil	20.23	18391
894	343460	10/22/2009	10/22/2009	Soil	23.41	21282
895	343461	10/22/2009	10/22/2009	Soil	17.71	16100
896	343462	10/22/2009	10/22/2009	Soil	26.55	24136
897	343463	10/22/2009	10/22/2009	Soil	22.58	20527
898	343464	10/22/2009	10/22/2009	Soil	22.82	20745
899	343465	10/22/2009	10/22/2009	Soil	25.71	23373
900	343466	10/22/2009	10/22/2009	Soil	17.72	16109
901	343467	10/22/2009	10/22/2009	Soil	23.51	21373
902	343468	10/22/2009	10/22/2009	Soil	26.02	23655
903	343469	10/22/2009	10/22/2009	Soil	24.2	22000
904	343470	10/22/2009	10/22/2009	Soil	23.74	21582
905	343471	10/22/2009	10/22/2009	Soil	17.31	15736
906	343472	10/22/2009	10/22/2009	Soil	27.22	24745
907	343473	10/22/2009	10/22/2009	Soil	23.73	21573
908	343474	10/22/2009	10/22/2009	Soil	16.69	15173
909	343475	10/22/2009	10/22/2009	Soil	28.15	25591
910	343476	10/22/2009	10/22/2009	Soil	27.78	25255
911	343477	10/22/2009	10/22/2009	Soil	27.11	24645
912	343478	10/22/2009	10/22/2009	Soil	20.7	18818
913	343479	10/22/2009	10/22/2009	Soil	19.91	18100
914	343480	10/22/2009	10/22/2009	Soil	28.13	25573
915	343481	10/22/2009	10/22/2009	Soil	23.35	21227
916	343482	10/22/2009	10/22/2009	Soil	21.21	19282
917	343483	10/22/2009	10/22/2009	Soil	25.45	23136
918	343484	10/22/2009	10/22/2009	Soil	25.08	22800

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
919	343485	10/22/2009	10/22/2009	Soil	27.3	24818
920	343486	10/23/2009	10/23/2009	Soil	25.48	23164
921	343487	10/23/2009	10/23/2009	Soil	19.07	17336
922	343488	10/23/2009	10/23/2009	Soil	21.96	19964
923	343489	10/23/2009	10/23/2009	Soil	23.09	20991
924	343490	10/23/2009	10/23/2009	Soil	17.67	16064
925	343491	10/23/2009	10/23/2009	Soil	20.33	18482
926	343492	10/23/2009	10/23/2009	Soil	25.48	23164
927	343493	10/23/2009	10/23/2009	Soil	21.83	19845
928	343494	10/23/2009	10/23/2009	Soil	19.84	18036
929	343495	10/23/2009	10/23/2009	Soil	16.82	15291
930	343496	10/23/2009	10/23/2009	Soil	18.57	16882
931	343497	10/23/2009	10/23/2009	Soil	26.72	24291
932	343498	10/23/2009	10/23/2009	Soil	21.66	19691
933	343500	10/23/2009	10/23/2009	Soil	21.15	19227
934	343501	10/23/2009	10/23/2009	Soil	18.23	16573
935	343502	10/23/2009	10/23/2009	Soil	18.61	16918
936	343503	10/23/2009	10/23/2009	Soil	22.64	20582
937	343504	10/23/2009	10/23/2009	Soil	25.38	23073
938	343505	10/23/2009	10/23/2009	Soil	21.26	19327
939	343506	10/23/2009	10/23/2009	Soil	23.07	20973
940	343507	10/23/2009	10/23/2009	Soil	23.94	21764
941	343508	10/23/2009	10/23/2009	Soil	16.14	14673
942	343509	10/23/2009	10/23/2009	Soil	25.53	23209
943	343510	10/23/2009	10/23/2009	Soil	20.93	19027
944	343511	10/23/2009	10/23/2009	Soil	21.35	19409
945	343512	10/23/2009	10/23/2009	Soil	17.05	15500
946	343513	10/23/2009	10/23/2009	Soil	18.81	17100
947	343514	10/23/2009	10/23/2009	Soil	22.19	20173
948	343515	10/23/2009	10/23/2009	Soil	21.64	19673
949	343516	10/23/2009	10/23/2009	Soil	26.65	24227
950	343517	10/23/2009	10/23/2009	Soil	21.48	19527
951	343518	10/23/2009	10/23/2009	Soil	16.74	15218
952	343519	10/23/2009	10/23/2009	Soil	17.29	15718

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
953	343520	10/23/2009	10/23/2009	Soil	22.84	20764
954	343521	10/23/2009	10/23/2009	Soil	25.06	22782
955	343522	10/23/2009	10/23/2009	Soil	20.18	18345
956	343523	10/23/2009	10/23/2009	Soil	18.35	16682
957	343524	10/26/2009	10/26/2009	Soil	25.95	23591
958	343525	10/26/2009	10/26/2009	Soil	19.71	17918
959	343526	10/26/2009	10/26/2009	Soil	25.96	23600
960	343527	10/26/2009	10/26/2009	Soil	23.22	21109
961	343528	10/26/2009	10/26/2009	Soil	23.06	20964
962	343529	10/26/2009	10/26/2009	Soil	19.64	17855
963	343530	10/26/2009	10/26/2009	Soil	23.74	21582
964	343531	10/26/2009	10/26/2009	Soil	15.63	14209
965	343532	10/26/2009	10/26/2009	Soil	17.34	15764
966	343533	10/26/2009	10/26/2009	Soil	19.05	17318
967	343534	10/26/2009	10/26/2009	Soil	25.73	23391
968	343535	10/26/2009	10/26/2009	Soil	22.95	20864
969	343536	10/26/2009	10/26/2009	Soil	20.88	18982
970	343537	10/26/2009	10/26/2009	Soil	22.96	20873
971	343538	10/26/2009	10/26/2009	Soil	25.49	23173
972	343539	10/26/2009	10/26/2009	Soil	21.71	19736
973	343540	10/26/2009	10/26/2009	Soil	25.49	23173
974	343541	10/26/2009	10/26/2009	Soil	19.2	17455
975	343542	10/26/2009	10/26/2009	Soil	18.49	16809
976	343543	10/26/2009	10/26/2009	Soil	19.47	17700
977	343544	10/26/2009	10/26/2009	Soil	20.24	18400
978	343545	10/26/2009	10/26/2009	Soil	26.43	24027
979	343546	10/26/2009	10/26/2009	Soil	20.24	18400
980	343547	10/26/2009	10/26/2009	Soil	22.92	20836
981	343548	10/26/2009	10/26/2009	Soil	21.61	19645
982	343570	10/26/2009	10/26/2009	Soil	25.11	22827
983	343571	10/26/2009	10/26/2009	Soil	20.24	18400
984	343572	10/26/2009	10/26/2009	Soil	23.43	21300
985	343573	10/26/2009	10/26/2009	Soil	19.92	18109
986	343574	10/26/2009	10/26/2009	Soil	17.25	15682

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
987	343575	10/26/2009	10/26/2009	Soil	16.3	14818
988	343576	10/26/2009	10/26/2009	Soil	20.52	18655
989	343577	10/26/2009	10/26/2009	Soil	17.04	15491
990	343578	10/26/2009	10/26/2009	Soil	27.26	24782
991	343579	10/26/2009	10/26/2009	Soil	21.77	19791
992	343580	10/26/2009	10/26/2009	Soil	19.82	18018
993	343581	10/26/2009	10/26/2009	Soil	22.82	20745
994	343582	10/26/2009	10/26/2009	Soil	19.71	17918
995	343583	10/26/2009	10/26/2009	Soil	23.02	20927
996	343584	10/26/2009	10/26/2009	Soil	22.36	20327
997	343585	10/26/2009	10/26/2009	Soil	15.29	13900
998	343586	10/26/2009	10/26/2009	Soil	19.67	17882
999	346732	10/26/2009	10/26/2009	Soil	19.57	17791
1000	346731	10/26/2009	10/26/2009	Soil	19.35	17591
1001	372558	10/27/2009	10/27/2009	Soil	27.28	24800
1002	372559	10/27/2009	10/27/2009	Soil	24.57	22336
1003	372560	10/27/2009	10/27/2009	Soil	18.49	16809
1004	372561	10/27/2009	10/27/2009	Soil	18.98	17255
1005	372562	10/27/2009	10/27/2009	Soil	22.42	20382
1006	372563	10/27/2009	10/27/2009	Soil	20.09	18264
1007	372564	10/27/2009	10/27/2009	Soil	20.82	18927
1008	372565	10/27/2009	10/27/2009	Soil	18.11	16464
1009	372566	10/27/2009	10/27/2009	Soil	15.28	13891
1010	372567	10/27/2009	10/27/2009	Soil	20.51	18645
1011	372568	10/27/2009	10/27/2009	Soil	17.97	16336
1012	372569	10/27/2009	10/27/2009	Soil	13.24	12036
1013	372570	10/27/2009	10/27/2009	Soil	23.98	21800
1014	372571	10/27/2009	10/27/2009	Soil	20.04	18218
1015	372572	10/27/2009	10/27/2009	Soil	11.51	10464
1016	372573	10/27/2009	10/27/2009	Soil	13.26	12055
1017	372574	10/27/2009	10/27/2009	Soil	21	19091
1018	372575	10/27/2009	10/27/2009	Soil	21.03	19118
1019	372576	10/27/2009	10/27/2009	Soil	23.45	21318
1020	372577	10/27/2009	10/27/2009	Soil	20.41	18555

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1021	372578	10/27/2009	10/27/2009	Soil	20.56	18691
1022	372579	10/27/2009	10/27/2009	Soil	17.58	15982
1023	372580	10/27/2009	10/27/2009	Soil	16.81	15282
1024	372581	10/27/2009	10/27/2009	Soil	12.36	11236
1025	372582	10/27/2009	10/27/2009	Soil	17.95	16318
1026	372583	10/27/2009	10/27/2009	Soil	16.78	15255
1027	372584	10/27/2009	10/27/2009	Soil	17.12	15564
1028	372585	10/27/2009	10/27/2009	Soil	24.42	22200
1029	372586	10/27/2009	10/27/2009	Soil	23.51	21373
1030	372587	10/27/2009	10/27/2009	Soil	18.56	16873
1031	372588	10/27/2009	10/27/2009	Soil	23.35	21227
1032	372589	10/27/2009	10/27/2009	Soil	19.22	17473
1033	372590	10/27/2009	10/27/2009	Soil	20.16	18327
1034	372591	10/27/2009	10/27/2009	Soil	17.72	16109
1035	372592	10/27/2009	10/27/2009	Soil	28.22	25655
1036	372593	10/27/2009	10/27/2009	Soil	21.85	19864
1037	372594	10/27/2009	10/27/2009	Soil	19.65	17864
1038	372595	10/27/2009	10/27/2009	Soil	20.04	18218
1039	372596	10/27/2009	10/27/2009	Soil	24.72	22473
1040	372597	10/27/2009	10/27/2009	Soil	22.92	20836
1041	372598	10/27/2009	10/27/2009	Soil	22.57	20518
1042	372599	10/27/2009	10/27/2009	Soil	20.75	18864
1043	372600	10/28/2009	10/28/2009	Soil	23.01	20918
1044	372601	10/28/2009	10/28/2009	Soil	22.13	20118
1045	372602	10/28/2009	10/28/2009	Soil	20.28	18436
1046	372603	10/28/2009	10/28/2009	Soil	21.65	19682
1047	372604	10/28/2009	10/28/2009	Soil	16.64	15127
1048	372605	10/28/2009	10/28/2009	Soil	16.14	14673
1049	372606	10/28/2009	10/28/2009	Soil	24.66	22418
1050	372607	10/28/2009	10/28/2009	Soil	25.9	23545
1051	372608	10/28/2009	10/28/2009	Soil	18.81	17100
1052	372609	10/28/2009	10/28/2009	Soil	25.03	22755
1053	372610	10/28/2009	10/28/2009	Soil	20.05	18227
1054	372611	10/28/2009	10/28/2009	Soil	20.03	18209

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1055	372612	10/28/2009	10/28/2009	Soil	27.99	25445
1056	372613	10/28/2009	10/28/2009	Soil	20.53	18664
1057	372614	10/28/2009	10/28/2009	Soil	26.01	23645
1058	372615	10/28/2009	10/28/2009	Soil	25.39	23082
1059	372616	10/28/2009	10/28/2009	Soil	20.95	19045
1060	372617	10/28/2009	10/28/2009	Soil	26.12	23745
1061	372618	10/28/2009	10/28/2009	Soil	21.56	19600
1062	372619	10/28/2009	10/28/2009	Soil	18.72	17018
1063	372620	10/28/2009	10/28/2009	Soil	22.9	20818
1064	372621	11/2/2009	11/2/2009	Soil	26.02	23655
1065	372622	11/2/2009	11/2/2009	Soil	24.35	22136
1066	372623	11/2/2009	11/2/2009	Soil	21.99	19991
1067	372624	11/2/2009	11/2/2009	Soil	26.69	24264
1068	372625	11/2/2009	11/2/2009	Soil	21.78	19800
1069	372626	11/2/2009	11/2/2009	Soil	23.48	21345
1070	372627	11/2/2009	11/2/2009	Soil	24.58	22345
1071	372628	11/2/2009	11/2/2009	Soil	19.91	18100
1072	372629	11/2/2009	11/2/2009	Soil	22.71	20645
1073	372630	11/2/2009	11/2/2009	Soil	26.15	23773
1074	372631	11/2/2009	11/2/2009	Soil	26.36	23964
1075	372632	11/2/2009	11/2/2009	Soil	23.94	21764
1076	372633	11/2/2009	11/2/2009	Soil	20.23	18391
1077	372634	11/2/2009	11/2/2009	Soil	17.59	15991
1078	372635	11/2/2009	11/2/2009	Soil	23.35	21227
1079	372636	11/2/2009	11/2/2009	Soil	18.84	17127
1080	372637	11/2/2009	11/2/2009	Soil	22.89	20809
1081	372638	11/2/2009	11/2/2009	Soil	26.27	23882
1082	372639	11/2/2009	11/2/2009	Soil	23.76	21600
1083	372640	11/2/2009	11/2/2009	Soil	19.04	17309
1084	372641	11/2/2009	11/2/2009	Soil	25.9	23545
1085	372642	11/2/2009	11/2/2009	Soil	21.2	19273
1086	372643	11/2/2009	11/2/2009	Soil	27.22	24745
1087	372644	11/2/2009	11/2/2009	Soil	21.69	19718
1088	372645	11/2/2009	11/2/2009	Soil	27.07	24609

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1089	372646	11/2/2009	11/2/2009	Soil	22.93	20845
1090	372647	11/2/2009	11/2/2009	Soil	20.08	18255
1091	372648	11/2/2009	11/2/2009	Soil	17.65	16045
1092	372649	11/2/2009	11/2/2009	Soil	24.78	22527
1093	372650	11/2/2009	11/2/2009	Soil	18.99	17264
1094	372651	11/2/2009	11/2/2009	Soil	22.68	20618
1095	372652	11/3/2009	11/3/2009	Soil	26.32	23927
1096	372653	11/3/2009	11/3/2009	Soil	13.06	11873
1097	372654	11/3/2009	11/3/2009	Soil	21.52	19564
1098	372655	11/3/2009	11/3/2009	Soil	16.54	15036
1099	372656	11/3/2009	11/3/2009	Soil	24.2	22000
1100	372657	11/3/2009	11/3/2009	Soil	16.59	15082
1101	372658	11/3/2009	11/3/2009	Soil	26.88	24436
1102	372659	11/3/2009	11/3/2009	Soil	18.9	17182
1103	372660	11/3/2009	11/3/2009	Soil	27.05	24591
1104	372661	11/3/2009	11/3/2009	Soil	15.43	14027
1105	372662	11/3/2009	11/3/2009	Soil	24.63	22391
1106	372663	11/3/2009	11/3/2009	Soil	16.66	15145
1107	372664	11/3/2009	11/3/2009	Soil	23.32	21200
1108	372665	11/3/2009	11/3/2009	Soil	23.08	20982
1109	372666	11/3/2009	11/3/2009	Soil	23.17	21064
1110	372667	11/3/2009	11/3/2009	Soil	23.46	21327
1111	372668	11/3/2009	11/3/2009	Soil	25.74	23400
1112	372669	11/3/2009	11/3/2009	Soil	13.9	12636
1113	372670	11/3/2009	11/3/2009	Soil	21.63	19664
1114	372671	11/3/2009	11/3/2009	Soil	16.43	14936
1115	372672	11/3/2009	11/3/2009	Soil	20.61	18736
1116	372673	11/3/2009	11/3/2009	Soil	22.55	20500
1117	372674	11/3/2009	11/3/2009	Soil	29.6	26909
1118	372675	11/3/2009	11/3/2009	Soil	23.2	21091
1119	372676	11/3/2009	11/3/2009	Soil	26.52	24109
1120	372677	11/3/2009	11/3/2009	Soil	13.98	12709
1121	372678	11/3/2009	11/3/2009	Soil	22.28	20255
1122	372679	11/3/2009	11/3/2009	Soil	18.81	17100

Haley's Ditch Manifest Log Updated: 11/30/2009
Lockheed Martin - Akron, Ohio

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1123	372680	11/3/2009	11/3/2009	Soil	21.41	19464
1124	372681	11/3/2009	11/3/2009	Soil	25.39	23082
1125	372682	11/3/2009	11/3/2009	Soil	22.9	20818
1126	372683	11/3/2009	11/3/2009	Soil	25.45	23136
1127	372684	11/3/2009	11/3/2009	Soil	28.37	25791
1128	372685	11/4/2009	11/4/2009	Soil	27.82	25291
1129	372686	11/4/2009	11/4/2009	Soil	15.84	14400
1130	372687	11/4/2009	11/4/2009	Soil	21.61	19645
1131	372688	11/4/2009	11/4/2009	Soil	16.09	14627
1132	372689	11/4/2009	11/4/2009	Soil	19.78	17982
1133	372690	11/4/2009	11/4/2009	Soil	25.06	22782
1134	372691	11/4/2009	11/4/2009	Soil	18.79	17082
1135	372692	11/4/2009	11/4/2009	Soil	25.46	23145
1136	372693	11/4/2009	11/4/2009	Soil	16.49	14991
1137	372694	11/4/2009	11/4/2009	Soil	23.19	21082
1138	372695	11/4/2009	11/4/2009	Soil	18.18	16527
1139	372696	11/4/2009	11/4/2009	Soil	22.07	20064
1140	372697	11/4/2009	11/4/2009	Soil	23.52	21382
1141	372698	11/4/2009	11/4/2009	Soil	25.82	23473
1142	372699	11/4/2009	11/4/2009	Soil	20.53	18664
1143	372700	11/4/2009	11/4/2009	Soil	25.85	23500
1144	372701	11/4/2009	11/4/2009	Soil	24.86	22600
1145	372702	11/4/2009	11/4/2009	Soil	16.14	14673
1146	372703	11/4/2009	11/4/2009	Soil	18.08	16436
1147	372704	11/4/2009	11/4/2009	Soil	22.86	20782
1148	372705	11/4/2009	11/4/2009	Soil	17.79	16173
1149	372706	11/4/2009	11/4/2009	Soil	23.94	21764
1150	372707	11/4/2009	11/4/2009	Soil	17.02	15473
1151	372708	11/4/2009	11/4/2009	Soil	25.92	23564
1152	372709	11/4/2009	11/4/2009	Soil	23.44	21309
1153	372710	11/4/2009	11/4/2009	Soil	17.36	15782
1154	372711	11/4/2009	11/4/2009	Soil	20.63	18755
1155	372712	11/4/2009	11/4/2009	Soil	27.48	24982
1156	372714	11/4/2009	11/4/2009	Soil	22.82	20745

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1157	372715	11/4/2009	11/4/2009	Soil	26.86	24418
1158	372716	11/4/2009	11/4/2009	Soil	31.59	28718
1159	372717	11/5/2009	11/5/2009	Soil	26.93	24482
1160	372718	11/5/2009	11/5/2009	Soil	28.03	25482
1161	372719	11/5/2009	11/5/2009	Soil	21.59	19627
1162	372720	11/5/2009	11/5/2009	Soil	22.47	20427
1163	372721	11/5/2009	11/5/2009	Soil	21.81	19827
1164	372722	11/5/2009	11/5/2009	Soil	21.09	19173
1165	372723	11/5/2009	11/5/2009	Soil	18.48	16800
1166	372724	11/5/2009	11/5/2009	Soil	18.81	17100
1167	372725	11/5/2009	11/5/2009	Soil	16.95	15409
1168	372726	11/5/2009	11/5/2009	Soil	23.87	21700
1169	372727	11/5/2009	11/5/2009	Soil	20.29	18445
1170	372728	11/5/2009	11/5/2009	Soil	24.19	21991
1171	372729	11/5/2009	11/5/2009	Soil	22.9	20818
1172	372730	11/5/2009	11/5/2009	Soil	24.18	21982
1173	372731	11/5/2009	11/5/2009	Soil	16.5	15000
1174	372732	11/5/2009	11/5/2009	Soil	31.21	28373
1175	372733	11/6/2009	11/6/2009	Soil	17.5	15909
1176	372734	11/6/2009	11/6/2009	Soil	17.7	16091
1177	372735	11/6/2009	11/6/2009	Soil	26.18	23800
1178	372736	11/6/2009	11/6/2009	Soil	26.45	24045
1179	372737	11/6/2009	11/6/2009	Soil	23.95	21773
1180	372738	11/6/2009	11/6/2009	Soil	26.47	24064
1181	372739	11/6/2009	11/6/2009	Soil	20.87	18973
1182	346695	11/6/2009	11/6/2009	Soil	15.01	13645
1183	346696	11/6/2009	11/6/2009	Soil	16.54	15036
1184	346697	11/6/2009	11/6/2009	Soil	26.91	24464
1185	346698	11/6/2009	11/6/2009	Soil	19.67	17882
1186	346700	11/6/2009	11/6/2009	Soil	19.38	17618
1187	346701	11/6/2009	11/6/2009	Soil	22.49	20445
1188	346702	11/6/2009	11/6/2009	Soil	19.36	17600
1189	346703	11/6/2009	11/6/2009	Soil	16.12	14655
1190	346704	11/6/2009	11/6/2009	Soil	16.93	15391

Haley's Ditch Manifest Log
Lockheed Martin - Akron, Ohio

Updated: 11/30/2009

Waste Shipped to: American Landfill - Waynesburg, OH
Transporter: Bertolini Trucking
Profile: 107260OH

Load Number	Manifest Number	Date Shipped	Date Received	Type of Waste	Weight (tons)	Weight (kg)
1191	346705	11/6/2009	11/6/2009	Soil	26.48	24073
1192	346706	11/6/2009	11/6/2009	Soil	22.18	20164
1193	346708	11/6/2009	11/6/2009	Soil	20.14	18309
1194	346709	11/6/2009	11/6/2009	Soil	23.43	21300
1195	346710	11/6/2009	11/6/2009	Soil	17.64	16036
1196	346711	11/6/2009	11/6/2009	Soil	15.79	14355
1197	346712	11/6/2009	11/6/2009	Soil	15.46	14055
1198	346713	11/6/2009	11/6/2009	Soil	26.77	24336
1199	346714	11/6/2009	11/6/2009	Soil	22.13	20118
1200	372740	11/12/2009	11/12/2009	Soil	20.39	18536
1201	372741	11/12/2009	11/12/2009	Soil	22.62	20564
1202	372742	11/12/2009	11/12/2009	Soil	23.21	21100
1203	372743	11/12/2009	11/12/2009	Soil	21.85	19864
1204	372744	11/12/2009	11/12/2009	Soil	18.65	16955
1205	372745	11/12/2009	11/12/2009	Soil	22.58	20527
1206	372746	11/12/2009	11/12/2009	Soil	16.74	15218
1207	372747	11/12/2009	11/12/2009	Soil	24.65	22409
1208	372748	11/12/2009	11/12/2009	Soil	18.27	16609
1209	372749	11/12/2009	11/12/2009	Soil	15.77	14336
1210	372750	11/12/2009	11/12/2009	Soil	20.85	18955
1211	372751	11/12/2009	11/12/2009	Soil	16.88	15345
1212	372752	11/12/2009	11/12/2009	Soil	19.82	18018
1213	372753	11/12/2009	11/12/2009	Soil	19.71	17918
1214	372754	11/12/2009	11/12/2009	Soil	17.42	15836
1215	346730	11/12/2009	11/13/2009	Soil	22.1	20091
1216	346715	11/12/2009	11/12/2009	Soil	24.02	21836
1217	346716	11/12/2009	11/12/2009	Soil	19.03	17300
1218	346717	11/12/2009	11/12/2009	Soil	26.09	23718
1219	346718	11/12/2009	11/13/2009	Soil	16.91	15373
1220	346719	11/13/2009	11/13/2009	Soil	24.08	21891
	Total all waste:	1220	Truckloads	25156.65	Tons	
	Total Soil:	1204	Truckloads	25006.14	Tons	
	Total Stumps:	16	Truckloads	150.51	Tons	