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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.

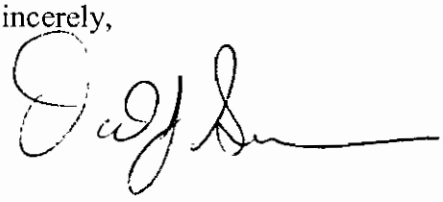
Once this soil and sediment removal is completed, residual PCB concentrations in the remaining soils in Haley's Ditch and adjacent areas will be less than 1 milligram per kilogram (mg/kg) and the stream channel will be restored using clean fill with PCB concentrations less than 0.5 mg/kg.

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

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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

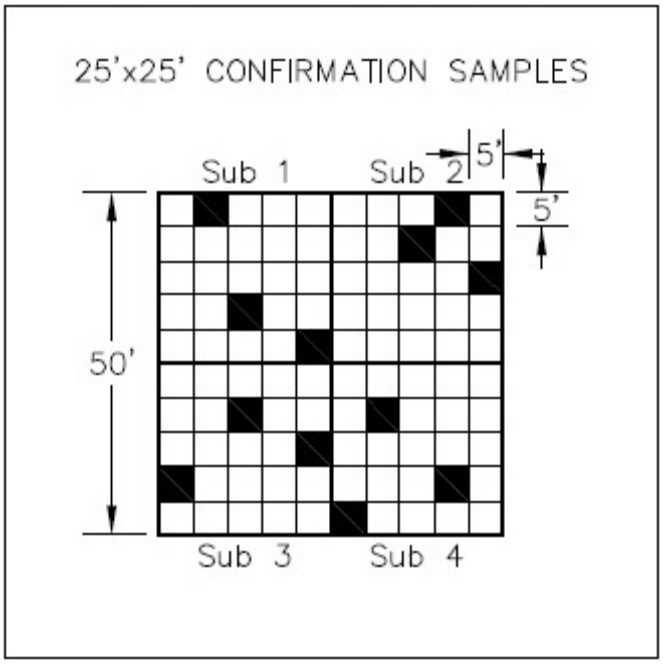
An on-site water treatment system will be used to treat water generated by remediation activities including water from dewatering, if needed, and water pumped directly from active excavations, if necessary and will not treat water moved through bypass pumping. The water treatment system will consist 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.

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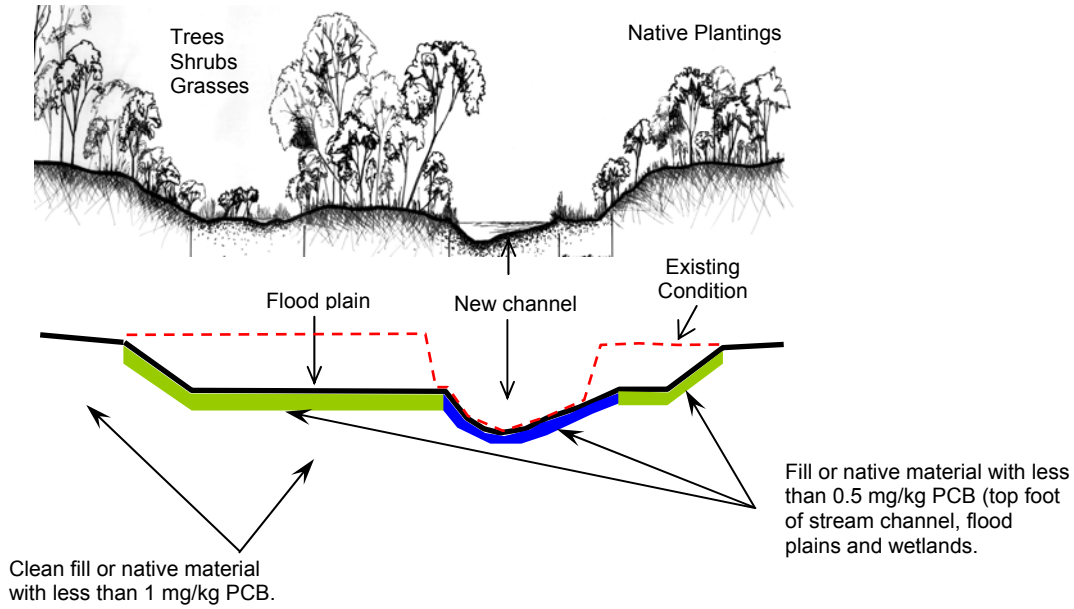


Conceptual Restored Channel

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

CITY: CARY DIV/GROUP: 141 DB: LEE GMS LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=REF
G:\ENVCAD\SYRACUSE\ACTIVE\003806390000\000021\DWG\HALEYS38063B01.dwg LAYOUT: 1SAVED: 10/8/2008 9:37 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2008 11:19 AM BY: POSENAUER, LISA
XREFS: IMAGES: 38063X01.jpg PROJECTNAME: ---

CITY: SYRACUSE DIV/GROUP: 141/ENV DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: L.PHILLIPS LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0000\00002\DWG\HALEYS\38063B03.dwg LAYOUT: 2 SAVED: 10/30/2008 2:33 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2008 11:01 AM BY: POSENAUER, LISA

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

LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- LM-S0136 — SURFACE SOIL SAMPLE LOCATION
- LM-SD07 — SEDIMENT SAMPLE LOCATION
- T-1 — TRANSECT LOCATION
- APPROXIMATE EXCAVATION LIMITS
- APPROXIMATE SOIL/SEDIMENT REMOVAL AREA
- APPROXIMATE AREA CONTAINING > 50 MG/KG TOTAL PCBs

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

ARCHWOOD AVE.
STORM SEWER PIPE
HALEY'S DITCH
HEADWALL
LM-SD22
GOODYEAR PROPERTY
HALEY'S DITCH NORTH AREA
HOBART AVE.
WILDON AVE.
SEIBERLING ST.
CANADIEN AVE.
GOODYEAR PROPERTY
CITY OF AKRON PROPERTY
SALEM AVE.
LOCKHEED MARTIN CORPORATION PROPERTY LINE
LANDON STREET
TRIPLETT BLVD.
CHAIN LINK FENCE
APPROXIMATE LOCATION CORRUGATED METAL WALL
60" OUTFALL

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

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

ARCADIS

FIGURE 2

CITY: SYRACUSE DIV/GROUP: 141/ENV DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: L.PHILLIPS LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0000\00002\DWG\HALEYS\38063G01.dwg LAYOUT: 3 SAVED: 10/30/2008 2:33 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2008 11:00 AM BY: POSENAUER, LISA

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

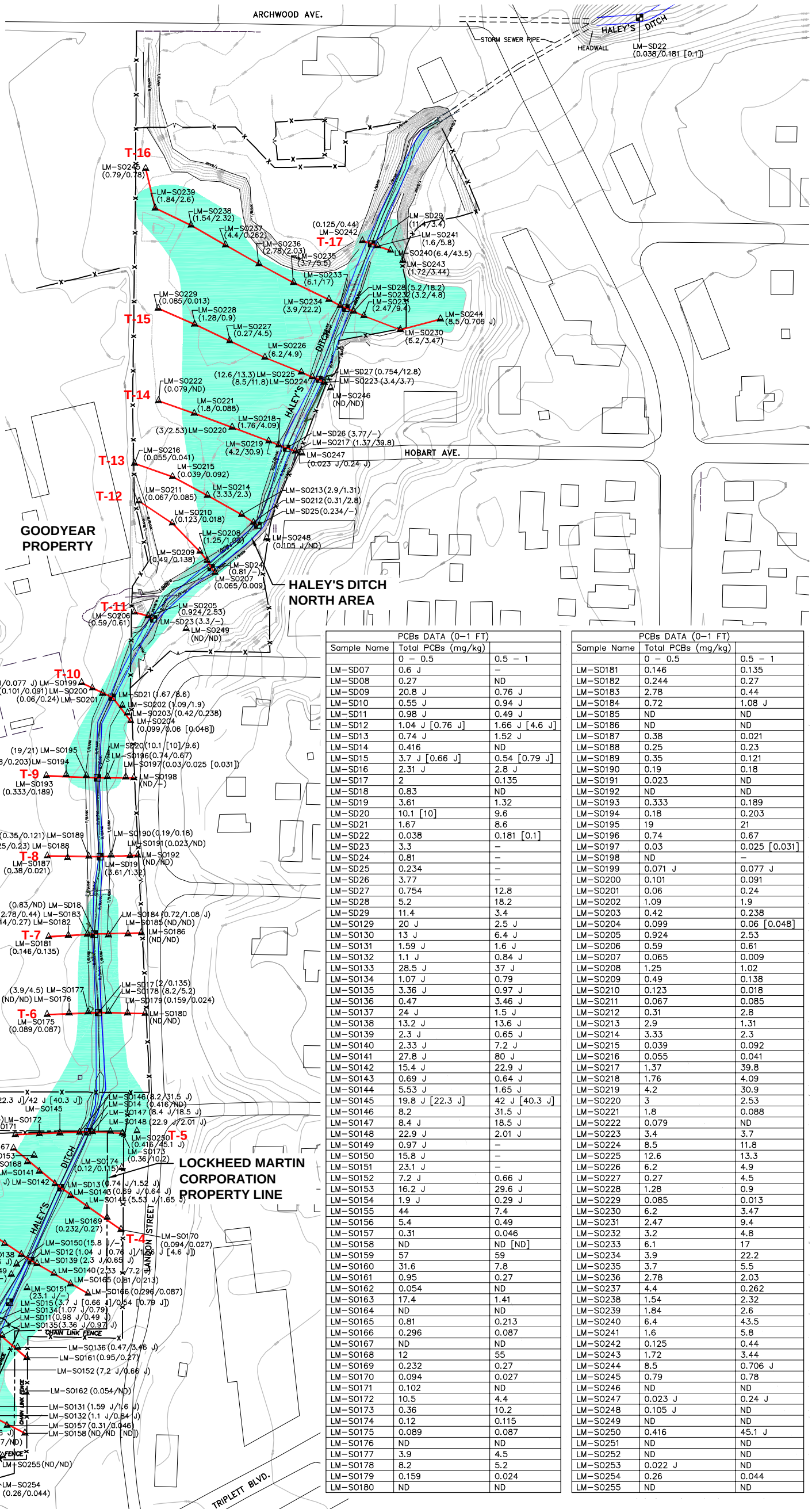
LEGEND:

- APPROXIMATE LOCKHEED MARTIN CORPORATION PROPERTY LINE
- CHAIN LINK FENCE
- CORRUGATED METAL WALL
- LM-SO136 — 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



PCBs DATA (0–1 FT)		
Sample Name	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 [0.66 J]	0.54 [0.79 J]
LM-SD16	2.31 J	2.8 J
LM-SD17	2	0.135
LM-SD18	0.83	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-SO129	20 J	2.5 J
LM-SO130	13 J	6.4 J
LM-SO131	1.59 J	1.6 J
LM-SO132	1.1 J	0.84 J
LM-SO133	28.5 J	37 J
LM-SO134	1.07 J	0.79
LM-SO135	3.36 J	0.97 J
LM-SO136	0.47	3.46 J
LM-SO137	24 J	1.5 J
LM-SO138	13.2 J	13.6 J
LM-SO139	2.3 J	0.65 J
LM-SO140	2.33 J	7.2 J
LM-SO141	27.8 J	80 J
LM-SO142	15.4 J	22.9 J
LM-SO143	0.69 J	0.64 J
LM-SO144	5.53 J	1.65 J
LM-SO145	19.8 J [22.3 J]	42 J [40.3 J]
LM-SO146	8.2	31.5 J
LM-SO147	8.4 J	18.5 J
LM-SO148	22.9 J	2.01 J
LM-SO149	0.97 J	–
LM-SO150	15.8 J	–
LM-SO151	23.1 J	–
LM-SO152	7.2 J	0.66 J
LM-SO153	16.2 J	29.6 J
LM-SO154	1.9 J	0.29 J
LM-SO155	44	7.4
LM-SO156	5.4	0.49
LM-SO157	0.31	0.046
LM-SO158	ND	ND [ND]
LM-SO159	57	59
LM-SO160	31.6	7.8
LM-SO161	0.95	0.27
LM-SO162	0.054	ND
LM-SO163	17.4	1.41
LM-SO164	ND	ND
LM-SO165	0.81	0.213
LM-SO166	0.296	0.087
LM-SO167	ND	ND
LM-SO168	12	55
LM-SO169	0.232	0.27
LM-SO170	0.094	0.027
LM-SO171	0.102	ND
LM-SO172	10.5	4.4
LM-SO173	0.36	10.2
LM-SO174	0.12	0.115
LM-SO175	0.089	0.087
LM-SO176	ND	ND
LM-SO177	3.9	4.5
LM-SO178	8.2	5.2
LM-SO179	0.159	0.024
LM-SO180	ND	ND

PCBs DATA (0–1 FT)		
Sample Name	Total PCBs (mg/kg)	
	0 – 0.5	0.5 – 1
LM-SO181	0.146	0.135
LM-SO182	0.244	0.27
LM-SO183	2.78	0.44
LM-SO184	0.72	1.08 J
LM-SO185	ND	ND
LM-SO186	ND	ND
LM-SO187	0.38	0.021
LM-SO188	0.25	0.23
LM-SO189	0.35	0.121
LM-SO190	0.19	0.18
LM-SO191	0.023	ND
LM-SO192	ND	ND
LM-SO193	0.333	0.189
LM-SO194	0.18	0.203
LM-SO195	19	21
LM-SO196	0.74	0.67
LM-SO197	0.03	0.025 [0.031]
LM-SO198	ND	–
LM-SO199	0.071 J	0.077 J
LM-SO200	0.101	0.091
LM-SO201	0.06	0.24
LM-SO202	1.09	1.9
LM-SO203	0.42	0.238
LM-SO204	0.099	0.06 [0.048]
LM-SO205	0.924	2.53
LM-SO206	0.59	0.61
LM-SO207	0.065	0.009
LM-SO208	1.25	1.02
LM-SO209	0.49	0.138
LM-SO210	0.123	0.018
LM-SO211	0.067	0.085
LM-SO212	0.31	2.8
LM-SO213	2.9	1.31
LM-SO214	3.33	2.3
LM-SO215	0.039	0.092
LM-SO216	0.055	0.041
LM-SO217	1.37	39.8
LM-SO218	1.76	4.09
LM-SO219	4.2	30.9
LM-SO220	3	2.53
LM-SO221	1.8	0.088
LM-SO222	0.079	ND
LM-SO223	3.4	3.7
LM-SO224	8.5	11.8
LM-SO225	12.6	13.3
LM-SO226	6.2	4.9
LM-SO227	0.27	4.5
LM-SO228	1.28	0.9
LM-SO229	0.085	0.013
LM-SO230	6.2	3.47
LM-SO231	2.47	9.4
LM-SO232	3.2	4.8
LM-SO233	6.1	17
LM-SO234	3.9	22.2
LM-SO235	3.7	5.5
LM-SO236	2.78	2.03
LM-SO237	4.4	0.262
LM-SO238	1.54	2.32
LM-SO239	1.84	2.6
LM-SO240	6.4	43.5
LM-SO241	1.6	5.8
LM-SO242	0.125	0.44
LM-SO243	1.72	3.44
LM-SO244	8.5	0.706 J
LM-SO245	0.79	0.78
LM-SO246	ND	ND
LM-SO247	0.023 J	0.24 J
LM-SO248	0.105 J	ND
LM-SO249	ND	ND
LM-SO250	0.416	45.1 J
LM-SO251	ND	ND
LM-SO252	ND	ND
LM-SO253	0.022 J	ND
LM-SO254	0.26	0.044
LM-SO255	ND	ND

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

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

ARCADIS

FIGURE 3

CITY: SYRACUSE DIV/GROUP: 141/ENV DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: L.PHILLIPS LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0000\00002\DWG\HALEYS\38063G02.dwg LAYOUT: 4 SAVED: 10/30/2008 2:33 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2008 11:00 AM BY: POSENAUER, LISA

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

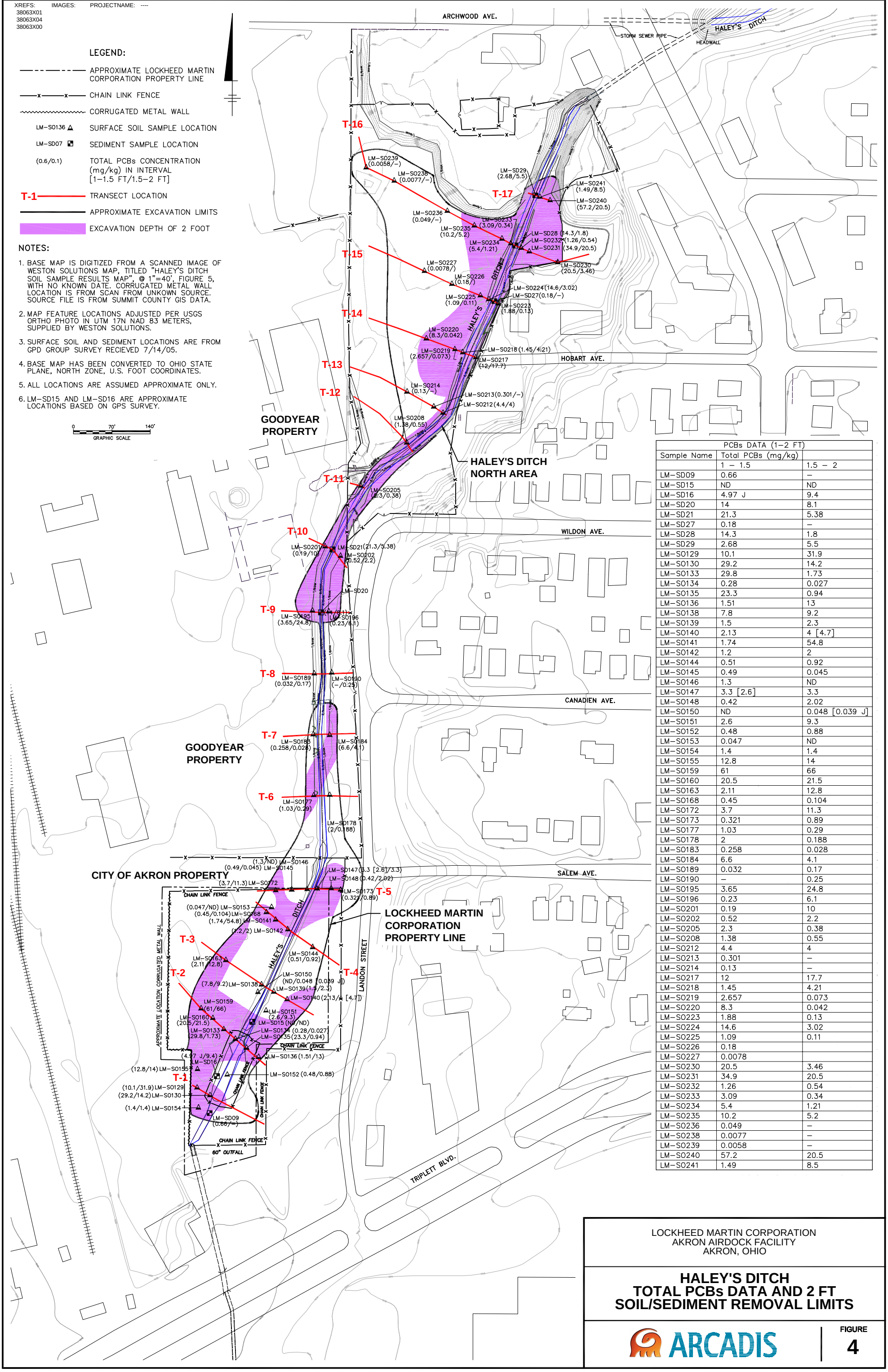
LEGEND:

- 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.

0 70' 140'
GRAPHIC SCALE



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

ARCADIS

FIGURE 4

CITY: SYRACUSE DIV/GROUP: 141/ENV DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: L.PHILLIPS LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0000\00002\DWG\HALEYS\38063G03.dwg LAYOUT: 5 SAVED: 10/30/2008 2:34 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2008 11:00 AM BY: POSENAUER, LISA

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

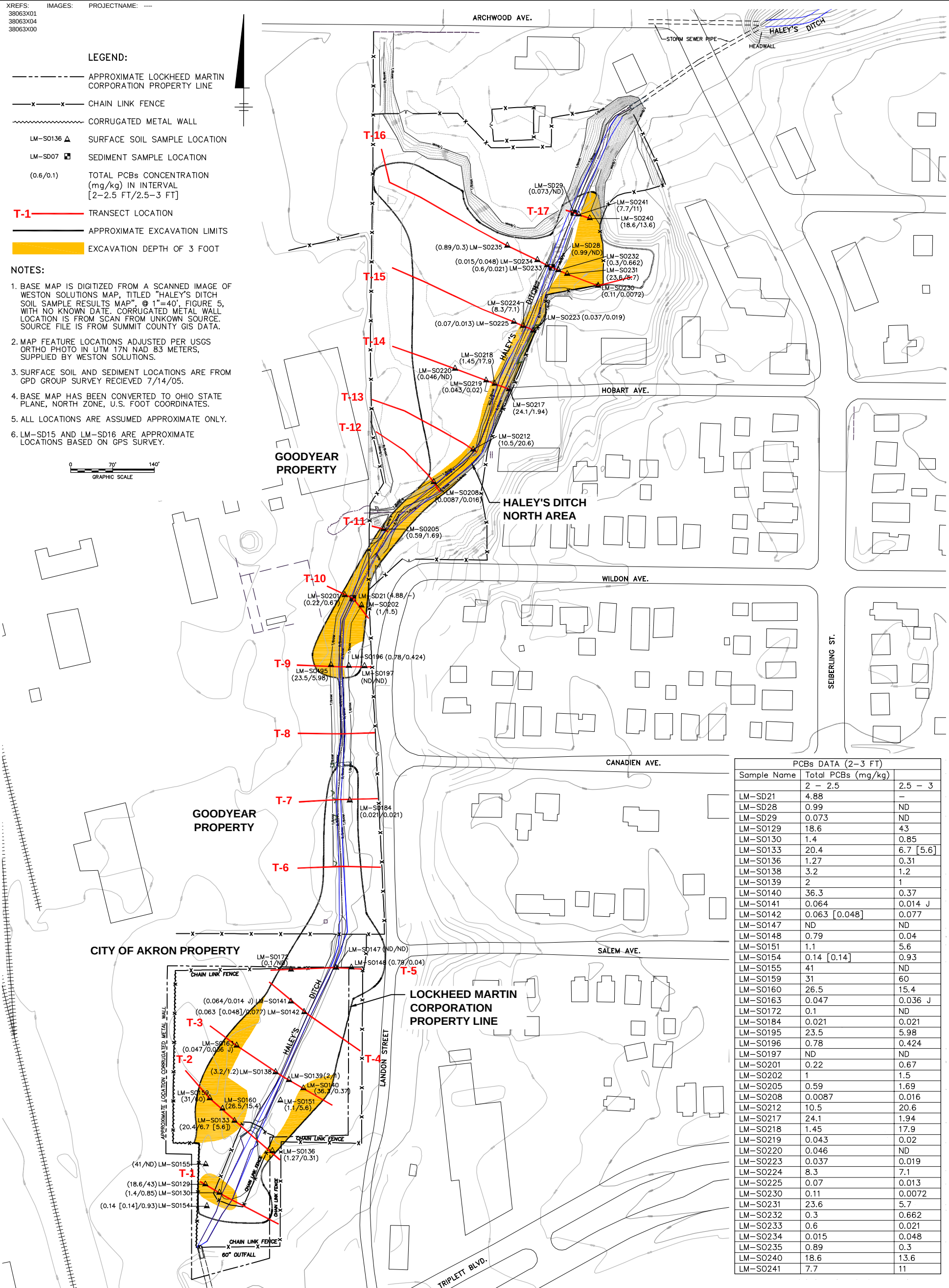
LEGEND:

- 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.
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



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

ARCADIS

FIGURE 5

CITY: SYRACUSE DIV/GROUP: 141/ENV DB: LJP LD: LJP PIC: L.MCBURNEY PM: M.HURBAN TM: L.PHILLIPS LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B0038063\0000\00002\DWG\HALEYS\38063P01.dwg LAYOUT: 6 SAVED: 12/5/2008 10:58 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/5/2008 11:01 AM BY: POSENAUER, LISA

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

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:

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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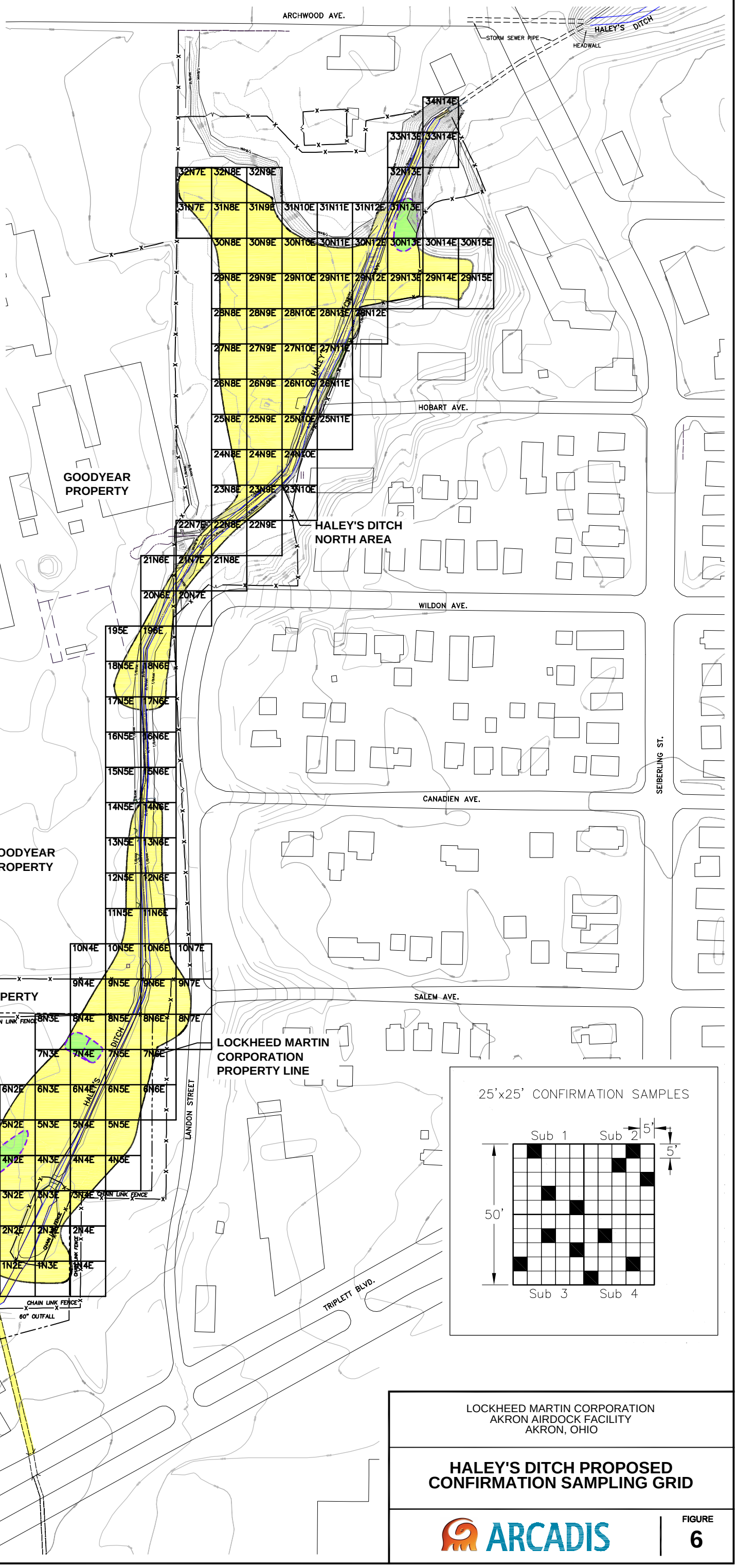

LOCKHEED MARTIN CORPORATION
AKRON AIRDOCK FACILITY
AKRON, OHIO

HALEY'S DITCH PROPOSED CONFIRMATION SAMPLING GRID

ARCADIS

FIGURE 6