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**CONSTRUCTION QUALITY ASSURANCE PLAN
AIRCRAFT COMPONENTS, INC.
OPERABLE UNIT #2
BENTON CHARTER TOWNSHIP, MICHIGAN**

April 2004

Prepared for

U.S. EPA Contract No. 68-W7-0026
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604

EPA Region 5 Records Ctr.



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Work Assignment No.
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SECTION 1 INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) signed a Record of Decision (ROD) in September 2002 for the chemical operable unit (OU2) of the Aircraft Components, Inc. (ACI) site, located in Benton Charter Township, Michigan. The selected remedy from the ROD involves excavation and off-site disposal of metals-, pesticides-, and semi-volatile organic constituent (SVOC)-contaminated soils; metals contaminated sediment; the implementation of a reductive dechlorination groundwater treatment program; and the placement of appropriate institutional controls (ICs) on the property to prevent future site uses from being incompatible with cleanup levels. ICs prevent risk of exposure by limiting access to contaminated media. Weston Solutions, Inc. (WESTON) has prepared this Construction Quality Assurance Plan (CQAP) for the U.S. EPA under the Region V Response Action Contract (RAC) Work Assignment No. 157-RARA-050W.

This plan establishes the objectives, organization, and methods of implementation of the quality assurance program that will be implemented during performance of the Remedial Action (RA) at the ACI site.

1.1 OBJECTIVES OF CQAP

The objectives in developing and implementing the CQA Program are to define the management system that will control and document the following:

- The quality of the techniques, materials, and equipment used in the project to ensure that they meet contract specification and applicable standards;
- The timeliness of performance;
- The framework for communicating the quality assurance procedures and requirements to the individuals who will execute the project tasks; and
- The conformity to contract requirements for supplies, services, and materials for each task performed during the project as well as tasks performed by lower-tier subcontractors and vendors.

A central element for controlling quality is to establish a control organization that is independent of those persons performing the work at the site. This organization is responsible for observing, measuring, recording, and documenting the work performed, and to “control” the quality by providing timely feedback to the project team and subcontractors executing the RA tasks at the site. Feedback, in the form of documented inspections, tests, or other evaluations, will be used to provide approval/disapproval of an activity based on the preselected contractual standards. Individual tasks that are disapproved must be corrected or repeated prior to completion of additional tasks.

1.2 BACKGROUND INFORMATION

1.2.1 Site Description

The ACI site, also referred to as the Benton Harbor Warehouse site and/or the D&L Sales, Inc. site, is a 17-acre parcel of property located adjacent to the Paw Paw River at 671 North Shore Drive in Benton Charter Township, Berrien County, Michigan. Lake Michigan is located approximately ¾

mile northwest of the site, and the convergence of the Paw Paw and St. Joseph Rivers is located approximately 1¼ mile southwest of the site. The ACI site is located in Section 18 of Township 4 South and Range 18 West on the Benton Heights Quadrangle.

Historical records for the site date back to 1914, when the site was operated as a metal furniture manufacturing and printing facility owned by the Baker-Vawter Company. From about 1950, the site was operated as a surplus World War II military aircraft component resale business by Aircraft Components, Inc., until the early 1990s. The surplus aircraft parts included gauges with dials marked using paint containing radium-226 (hereafter referred to as “radium gauges”). D&L Sales, Inc. purchased the site in 1994 and is the current property owner.

North Shore Drive marks the western site boundary; the Paw Paw River forms the southern site boundary; a dense wooded area containing wetlands is located at the eastern site boundary; and Ridgeway Road marks the northern boundary of the site. The majority of site topography shows little relief with the exception of the bluff along the northern side of the site and the steep bank leading to the Paw Paw River located along the southern edge of the site. Exposed fill is present along the north (cut) bank of the Paw Paw River, indicating that this area of the site contains potentially contaminated fill.

Ridgeway Road is located along the top of the bluff at a 50-foot north side of the site, and a residential neighborhood with numerous residences is located north of Ridgeway Road. A culvert (outlet pipe) that feeds the on-site wetland is located near the northeast corner of the site. The culvert drains a spring that is located in a depression north of Ridgeway Road.

The most prominent structures on-site include an 150-foot tall smoke stack; a 5,600-square foot (ft²) large Quonset hut; the foundation sidewalls from the former 28,800-ft² Buildings 1 and 2; the foundation sidewalls from the former 18,000-ft² Building 3; the foundation sidewalls from the former 4,800-ft² Building 4; the foundation sidewalls from the former 8,500-ft² Building 5; a 8,500-ft² partially recessed concrete foundation (formerly Auxiliary Building 2); and a 1,000-ft² concrete foundation (formerly small Quonset hut). Additionally, several debris piles are located at the site. The debris piles are mounded and consist of bricks, shingles, wood, and soil. Also present on-site are several unused, concrete intake cribs along the Paw Paw River and an underground piping network, including water lines for supplying the on-site fire hydrants. The eastern half of the site is densely wooded and contains a wetland area. A gravel road winds around the site and a chain link fence partially restricts site access along North Shore Drive. Locations of the prominent site features are indicated on the Site Layout Map, which is included as Figure 1-1.

1.2.2 Previous Remedial and Removal Actions

U.S. EPA inspected the site in 1994 and discovered radiological contamination in and around most site buildings. Radiological contamination on some interior building surfaces is believed to be a result of deposition of radium-containing paint chips and dust from the dials. The health risks posed by the radiological contamination warranted a response under Superfund. The ACI site was placed on the Superfund National Priorities List (NPL) in 1996.

During July 1995, U.S. EPA conducted activities to stabilize and secure portions of the site including installing fencing and a gate at the entrance to the access road on North Shore Drive.

During November and December 1997, the U.S. EPA completed a non-time critical removal action including demolition of Buildings 1 and 2. Various building debris and waste items removed from the buildings (i.e., pallets, boxes, etc.) were shredded, screened for radioactivity, and disposed of so that workers could safely access the radium gauges that were left in the basements. Known radium-contaminated and other hazardous materials were removed from Buildings 1 and 2.

During November 1999, the U.S. EPA began a non-time critical removal action at the site during which the contents of Buildings 3, 4, and 5 were screened and staged on-site or transported off-site for disposal. A building decontamination effort was implemented. Decontamination efforts were implemented on the main floor and loft area in Building 4 and the first and second floors of Building 5. Also in 1999, WESTON began a Remedial Investigation (RI) and Feasibility Study (FS) at the site under RAC. U.S. EPA divided the site into two operable units (OU) for ease of addressing site contamination, the radiation operable unit (OU1) and the chemical operable unit (OU2).

The U.S. EPA signed a Record of Decision (ROD) on 28 September 2000 for OU1 of the ACI Site. The Remedial Action (RA) was initiated in October 2002. At the time of this report the following RA activities have been conducted: demolition of Buildings 3, 4, and 5, Auxiliary Building 2, and the small Quonset hut with off-site disposal of the debris; excavation and off-site disposal of contaminated soil; off-site disposal of debris stored in the buildings; and removal and off-site disposal of the foundations from Building 1, 2, 3, 4, and 5. Remedial Action for OU1 was completed in May 2003.

1.2.3 Current Remedial Action

Soil, sediment, groundwater, and surface water were sampled in three events from 1999 to 2001 during the Remedial Investigation/Feasibility Study (RI/FS) activities. The RI performed at the site revealed areas of chemical contamination at the site. The chemical contamination is the subject of OU2. Analysis of soil boring samples indicated that benzo(a)pyrene, an SVOC; the pesticides α -chlordane, γ -chlordane, and endrin; and heavy metals mercury and selenium were constituents of concern in the soil and concentrations of these chemicals are present in the surface soil in scattered locations above remediation goals. Similarly, several heavy metals were identified as chemicals of concern in wetland and Paw Paw River sediment at concentrations exceeding remediation goals. A chlorinated solvent groundwater plume was also identified at the site as a result of sampling of a monitoring well network at the site.

The Scope of Work for the RA for OU2 involves the following primary components:

- Pre-construction survey of the site, delineation of on-site wetlands, and performance of a tree survey.
- Site preparation, including construction of temporary facilities, access roads, and security fencing. Site preparation also includes installing necessary erosion controls, clearing and grubbing of on-site wetlands and excavation areas, temporarily diverting the culvert (surface water source in wetland), and dewatering of on-site wetland areas.
- Smokestack demolition, if deemed necessary based on its structural integrity as it relates to the soil excavation in the vicinity. This task includes a survey of the base of the stack for asbestos, demolition of the stack to grade level, off-site disposal of demolition debris, and removal of ash from the base of the stack, if needed.

- Excavation of soil from designated areas, backfilling areas with clean imported material, and loading, transport, and off-site disposal of the excavated soil.
- Excavation of Paw Paw River sediment, which includes installation of temporary diversion devices, installation of sediment traps downstream of excavation, operation of a dewatering system for the excavation area, excavation of sediment, mixing of drying agent with the sediment, backfilling excavation area with clean imported sand, and loading, transport, and off-site disposal of the excavated sediment.
- On-site wetland sediment excavation, which includes operating a dewatering system to remove groundwater (as necessary), excavation of sediment, mixing of a drying agent to the wetland sediment (*in situ*), backfilling of excavated area with clean imported material, and loading, transport, and off-site disposal of the excavated sediment.
- Site restoration, including seeding and mulching soil excavation areas, restoration of the riverbank, and restoration of wetland areas.
- Installation of an *in situ* reductive dechlorination groundwater treatment system. This task includes installation of monitoring wells, marking injection locations and GeoProbe injection of bioremediation amendment.

All aspects of the RA are detailed in the Remedial Design for OU2 (including the Design Specifications, the Pollution Control and Mitigation Plan, and the Transportation and Disposal Plan).

SECTION 2

PROJECT PERSONNEL

2.1 ORGANIZATION AND RESPONSIBILITIES

The overall project organization and the key personnel for the work assignment are identified in this section. This section also describes the project management team, the lines of communication, and the roles and responsibilities of key personnel. An organizational chart illustrating the lines of authority and communication is included in Appendix A.

2.1.1 Project Management Responsibilities

U.S. EPA Remedial Project Manager - Mr. Kevin Adler is the U.S. EPA Remedial Project Manager for this project. Mr. Adler has overall responsibility for all phases of the ACI site RA project.

State Project Manager - Mr. Paul Bucholtz of the Michigan Department of Environmental Quality (MDEQ) is the state Project Manager. The state Project Manager will be involved during all phases of this project.

WESTON Program Manager - Mr. James Burton is the WESTON Program Manager. The Program Manager has overall responsibility for the work assignment. The Program Manager is responsible for ensuring that the project meets all U.S. EPA objectives and quality standards. He is also responsible for ensuring that all work is executed in accordance with the U.S. EPA's technical

directives. The WESTON Program Manager is responsible for assigning and monitoring the functions and responsibilities of the WESTON Project Manager. In addition, he will commit the necessary resources and personnel to meet the objectives of this project.

WESTON Project Manager - Mr. Richard H. Mehl, Jr., is the Project Manager. The Project Manager is responsible for implementing the project objectives utilizing the personnel assigned. The Project Manager's primary function is to ensure that the technical, financial, and scheduling objectives are achieved successfully. The WESTON Project Manager will coordinate with the WESTON Program Manager, and Quality Assurance Manager and will be the major point of contact and control for matters concerning the project. His other responsibilities include:

- Coordination and management of project personnel
- Project scheduling
- Coordination and review of required deliverables
- General QA of field activities
- Represent the project team at meetings and public hearings

2.1.2 Quality Assurance Responsibilities

Construction Quality Control Manager - Mr. Matthew C. Crain will serve as the Quality Control Manager. As Quality Control Manager, Mr. Crain will function independently from Mr. Burton and Mr. Mehl to provide periodic oversight of the RA implementation to ensure that the work conducted meets requirements set forth in the RD, ROD, and SOW. Mr. Crain will be responsible for administering and verifying implementation of the CQA program by the project team during

implementation of the RA, approving nonconformance reports and corrective actions, and reviewing and approving any project specific procedures. Additional functions that Mr. Crain will perform include reviews to ensure conformance of materials and equipment in meeting design specifications and conducting periodic inspections of the site during construction.

2.1.3 Field Responsibilities

WESTON Site Superintendent - WESTON will designate a Site Superintendent who will be responsible for on-site management of subcontractors, including implementation of the CQA program to ensure that the RA is properly executed. The Site Superintendent will serve as WESTON's primary on-site point-of-contact for subcontractors and will serve as liaison between subcontractors and the WESTON Site Manager.

WESTON Site Health and Safety Coordinator (SHSC) - WESTON will designate a Site Health and Safety Coordinator (SHSC) who will be responsible for ensuring that all work performed on-site is in accordance with the Health and Safety Plan.

2.2 AUTHORITY TO STOP WORK

The WESTON personnel who have the authority to stop due to noncompliance with the CQAP or contract specifications include the Site Manager, the Construction Quality Control Manager, and the Site Superintendent. The SHSC has the authority to stop work that is noncompliant with WESTON's Health and Safety Plan, or is being performed under unsafe conditions. All WESTON

staff have the authority to stop work that is immediately dangerous to the health and safety of field personnel.

SECTION 3

MECHANISMS FOR IMPLEMENTING CONSTRUCTION QUALITY ASSURANCE

The CQA Program will be implemented on a day-to-day basis using the mechanisms which are described in general in this section. Task-specific descriptions of these mechanisms are discussed in Section 4 – *Task -Specific CQA Activities*.

3.1 INSPECTIONS

Inspections are the on-site observations used to ensure that the fieldwork meets or exceeds all plans and specification requirements. All activities affecting the quality of work performed on this project are to undergo formal inspection. Inspections will be conducted by the Site Superintendent or WESTON field staff appointed by the Site Superintendent. The individuals performing the inspection will ensure that the work complies with the design drawings, construction specifications, applicable standards, or good engineering and construction practices.

3.1.1 Four-Stage Inspection Procedure

An inspection procedure will be implemented for each definable work task. The overall inspection procedure consists of a four-stage inspection process of the following types of inspections:

- Preparatory
- Initial
- Follow-up
- Completion

A description of each type of inspection is given in the following subsections.

3.1.1.1 Preparatory Inspections

Preparatory inspections will be performed prior to beginning any work on any definable feature of the construction work. It will include:

- A review of contract requirements.
- A check to ensure that all materials and/or equipment have been tested or vendor data have been reviewed and approved.
- A check to ensure that provisions have been made to conduct required testing (if any)
- Examination of work area to ascertain that all preliminary work has been completed. This includes examination of safety requirements such as barricades and signs as well as a security check of the site office.
- A physical examination of materials, equipment, and samples, to ensure that all materials and/or equipment are on hand, and all equipment is properly calibrated and in proper working condition.
- A review of safety and quality requirements most relevant to the work.
- A review of proposed task staffing.

3.1.1.2 Initial Inspections

An initial inspection will be performed as soon as a representative portion (approximately 5 to 10%) of the particular feature of work has been completed. This inspection will include: testing, where appropriate; examination of the quality of workmanship; confirmation that the work so far does not include omissions; and confirmation that it meets dimensional requirements.

3.1.1.3 Follow-up Inspections

Follow-up inspections will be performed when approximately 50% of the feature of work has been completed to ensure continuing compliance with contract requirements, including testing, where appropriate, until the completion of the particular feature of work.

3.1.1.4 Completion Inspections

At the completion of definable work elements, a final inspection and development of a "punch list" of items that do not conform to the approved plans and specifications will be completed. A target date to complete punch list items will be established, and a subsequent completion inspection will be conducted. Deficiency correction dates will be consistent with the construction schedule.

3.1.2 Pre-Final Inspection

Near the completion of each subcontractor's scope of work, WESTON will conduct a pre-final inspection with each subcontractor. The Site Manager, Quality Control Manager, and Site Superintendent will conduct the pre-final inspection with each subcontractor and develop a punchlist

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of deficiencies. Subsequent to each pre-final inspection, the Site Manager will prepare and submit a pre-final inspection report that includes the list of deficiencies, completion dates for outstanding items, and the date for a final inspection for each subcontractor. WESTON will address all deficiencies before the final inspection.

3.1.3 Final Inspection

The WESTON Site Manager and Site Superintendent will perform final inspections with each subcontractor. Following completion of each final inspection, WESTON will submit a letter to U.S. EPA certifying that all deficiencies associated with the given subcontractor's scope of work have been addressed.

3.1.4 Inspection Documentation

An example of the inspection form to be used for the four-stage inspections is included as Appendix C. The Pre-Final Inspection and Final Inspection will be documented in written letter form. The inspections will be documented, placed in the master QA file, and submitted to the U.S. EPA Remedial Project Manager as described in Section 3.5 - *Documentation*.

3.2 MONITORING

In addition to performing formal inspections, WESTON's Site Superintendent and SHSC will perform monitoring of all work activities daily to ensure the level of quality described in the contract specifications and CQAP is achieved. WESTON will also monitor on a daily basis erosion control structures, performance of dust control, maintenance of site roads, and activities required to maintain

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site safety. The monitoring of work activities will include informal inspections to evaluate site activities using the same criteria as formal inspections.

The documentation that will be generated as a result of monitoring noncompliant work will include the noncompliance and corrective action documentation described in Section 5 – *Noncompliance and Corrective Action* or will be documented in the Daily Field Report, for noncompliance issues smaller in scope. The documentation generated as a result of monitoring compliant work will be a note of the general condition of the work in the Daily Field Report.

3.3 REVIEW OF SUBCONTRACTOR SAMPLING AND TESTING

Prior to any sampling, surveying, or testing performed by subcontractors, WESTON will review the methodology for each individual task with the subcontractor. The following procedures should be followed for all sampling and testing, as warranted:

- Sampling and testing will be conducted in accordance with a written, approved procedure.
- Sampling and testing will be conducted under appropriate conditions, including cleanliness and orderliness.
- Sampling and testing procedures will be consistent with recognized standards and regulations.
- Sampling and testing that cannot be readily performed in the field will be performed by an industry-recognized and/or certified testing laboratory.
- Sampling and testing will be conducted only by qualified, trained personnel.

- Sampling and testing equipment will be individually identified, calibrated, and maintained at prescribed intervals or as required by the sampling or testing procedures.

The accepted sampling and testing methods will be documented in sampling and testing data sheets, collected by WESTON at the completion of the sampling or testing event. WESTON will also review all sampling and testing results.

3.4 REVIEW OF SUBCONTRACTOR SUBMITTALS

WESTON will review all subcontractor submittals for accuracy, consistency, and adherence to applicable specifications, standards, and regulations. The submittals will be placed in a master QA file and submitted to the U.S. EPA Remedial Project Manager as requested. Following are the subcontractor submittals required by WESTON:

- Subcontractor Work Plans
- Construction materials manufacturer product data (as requested by WESTON or U.S. EPA)
- Daily Subcontractor Field Reports
- Updated construction schedule
- Anticipated monthly totals
- Asbestos survey and sampling results (for smokestack, if necessary)
- Waste disposal facility information
- Non-hazardous waste manifests
- Waste disposal weight tickets
- Post-survey totals

- Moisture and compaction tests

If WESTON or U.S. EPA deems it necessary to review construction material manufacturer product data, WESTON will request the data from the Subcontractor ten working days prior to the installation or use of the material. WESTON will review the product data and notify the subcontractor of the material's approval or disapproval within two days of receipt of the submittal.

3.5 QA DOCUMENTATION

As a result of the implementation of the CQA Program, WESTON will generate, review, and appropriately sign QA documents. The original copies of these documents will be maintained in a master QA file, located in the WESTON field office. All WESTON personnel and regulatory agency representatives have the right to inspect this file at any time. Additionally, copies of these documents will be provided to the U.S. EPA Remedial Project Manager at a frequency convenient to him. All QA documents will be submitted to the U.S. EPA upon completion of the contract. The QA documents to be included in this file include:

- **CQAP**
- **Daily Field Reports** – completed on a daily basis, sample included in Appendix B
- **Preparatory, Initial, Follow-Up, and Final Inspection Reports** – completed for each substantial work activity (see Section 4), sample included as Appendix C
- **Pre-Final and Final Inspection Reports** – each completed once at the end of the RA, to be completed in letter form

- **Noncompliance and Corrective Action Reports** – completed for each substantial noncompliant or deficient work item, sample included as Appendix D

All QA documents will be reviewed and signed by the WESTON Site Superintendent or his/her designated reviewer. Noncompliance and Corrective Action Reports will be reviewed and signed by the Construction Quality Control Manager. The Construction Quality Control Manager will review all QA documents on a monthly basis.

SECTION 4

TASK-SPECIFIC CQAP ACTIVITIES

The tasks for the current Remedial Action (RA) are divided into the following five main categories:

- Pre-Construction Survey
- Wetland Delineation and Tree Survey
- Excavation Tasks
- Demolition Tasks
- HRC Installation Tasks

The tables in the following subsections summarize the main CQA activities WESTON will be performing and the required subcontractor submittals for each of the tasks associated with this project. The activities listed in the tables will be part of WESTON's formal inspection process and/or daily monitoring as outlined in Section 3. The overall purpose of these activities is to ensure that all aspects of the RA proceed as planned and to ensure that the specific task requirements, outlined in the Design Specifications for OU2 as well as the Pollution Control and Mitigation Plan and the Transportation and Disposal Plan, are completed as required.

4.1 PRE-CONSTRUCTION SURVEY

The Pre-Construction site survey will be performed by the Surveyor subcontractor. This task includes performing an aerial survey of the site and the surrounding area (approximately 75 acres), and obtaining the ground control survey points needed to complete the aerial survey and associated drawings. The major activities related to these tasks that will be performed as part of the CQAP are listed in Table 4-1.

4.2 WETLAND DELINEATION AND TREE SURVEY

The Wetland subcontractor will be responsible for redefining the boundaries of the wetlands on site and performing a tree survey to identify good to high quality tree species that could be saved during remediation processes, if possible. The Wetland Subcontractor is also responsible for restoration of soil excavation areas, building footprints, riverbank areas, and wetlands. The major activities related to these tasks that will be performed as part of the CQAP are listed in Table 4-2.

4.3 EXCAVATION TASKS

The RA for the ACI site involves extensive excavation-related activities that are the responsibility of the Excavation subcontractor. The excavation tasks that will be performed for this RA are divided into the following subcategories:

- Site Preparation Tasks
- Wetland Sediment Excavation Tasks
- Soil Excavation Tasks
- Paw Paw River Excavation Tasks
- Foundation Backfilling Tasks
- Water Treatment, Equipment Decontamination, and Demobilization Tasks

The CQAP-related activities falling within these subcategories are outlined in the following subsections.

4.3.1 Site Preparation Tasks

Site preparation includes all tasks necessary to prepare the site for excavation activities such as installing roads, erosion control, clearing and grubbing, etc. The major activities related to site preparation are included in Table 4-3.

4.3.2 Wetland Sediment Excavation Tasks

The major activities related to wetland sediment excavation are included in Table 4-4.

4.3.3 Soil Excavation and Foundation Backfilling Tasks

The major activities related to soil excavation and foundation backfilling tasks are included in Table 4-5.

4.3.4 Paw Paw River Excavation Tasks

The major activities related to Paw Paw River sediment excavation are included in Table 4-6.

4.3.5 Water Treatment, Decontamination, and Demobilization Tasks

The major activities related to water treatment, decontamination, and demobilization tasks are included in Table 4-7.

4.4 SMOKESTACK DEMOLITION TASKS

The structural integrity of the smokestack located at the ACI site will be evaluated by a licensed structural engineer. Based on the finding of the engineer the demolition of the smokestack may be necessary before earthmoving operations can begin. Smokestack demolition, if required, will be performed by the Excavation subcontractor. Included among the tasks are the disposal of all demolition debris and any ash that may be found at the base of the smokestack. The major activities related to these tasks that will be performed are included in Table 4-8.

4.5 HRC INSTALLATION TASKS

The bioremediation of the groundwater slated for the RA is scheduled to be performed after excavation activities are substantially completed. CQA activities associated with the groundwater bioremediation portion will be outlined at a later date.

SECTION 5

NONCOMPLIANCE AND CORRECTIVE ACTION

There are several mechanisms to identify services or activities that do not comply with the contract requirements. These mechanisms include:

- Preparatory, Initial, Follow-Up, and Final Inspections.
- Daily monitoring of work activities.
- Review of subcontractor submittals.
- Review of subcontractor sampling / testing methods and results.
- Notification from the Site Manager, Construction Quality Control Manager, Site Superintendent, Site Health and Safety Coordinator, or U.S. EPA.

In each case, any noncompliance issue will be specifically identified in Noncompliance / Corrective Action Reports (NCR) generated as a result of implementing this CQAP. The Construction Manager will promptly complete an NCR providing a determination of the cause and effect of the noncompliant condition, a review of contract specifications, and other relevant documents. It will be the responsibility of the Construction Manager to notify the relevant parties of the noncompliance issue. At a minimum, the Site Superintendent will notify the Site Manager and Construction Quality Control Manager of the noncompliant condition.

The Site Superintendent may not permit any subsequent work to continue if that work is, or may be, affected by the noncompliant condition until:

- The work is retested and/reinspected and found to be in compliance.
- The work is redone and subsequently retested and/reinspected and found to be in compliance.
- A change order is accepted by the U.S. EPA indicating that the work or condition is acceptable under the terms of the change order.

Upon correction of the noncompliant condition, the corrective actions taken and actions taken to prevent reoccurrence of the noncompliant condition will be noted in the NCR. The NCR will be placed in the master QA file, and submitted to the U.S. EPA Remedial Project Manager when requested. A sample of the NCR is included as Appendix D.

SECTION 6
LOWER-TIER SUBCONTRACTOR COMPLIANCE

All QA documents will be reviewed and signed by the Site Superintendent Construction Manager or her/his designated reviewer. Noncompliance and Corrective Action Reports will be reviewed and signed by the Site Manager or the Construction Quality Control Manager. The Site Manager or the Construction Quality Control Manager will review all QA documents on a monthly basis.

**Table 4-1
 Construction Quality Assurance Tasks
 Pre-Construction Survey
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Pre-Construction Survey	WESTON will: Review site topographic map submittals for completeness and accuracy and compliance with Design Specification Section 01050A. Inspect credentials of surveyor to ensure surveyor is licensed and experienced . Inspect submitted survey instrument calibration certificates . Inspect Ground Survey Field notes to ensure accuracy and instrument function.	Site maps (as required in 01050A) Professional Surveyors Qualification Accuracy Verification (upon Request) Instrument calibration certificates Field Notes and Records

**Table 4-2
 Construction Quality Assurance Tasks
 Wetland Delineation, Tree Survey, and Site Restoration
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Wetland Delineation and Tree Survey	<p>WESTON will:</p> <p>Review submittals (required by Design Specification Section 015050B) for completeness and accuracy.</p> <p>WESTON will inspect the site to ensure that wetland boundaries are properly staked by the Wetlands subcontractor.</p>	<p>Qualifications of surveyor</p> <p>Field Notes and Records</p> <p>Record Drawings</p>

**Table 4-2
 Construction Quality Assurance Tasks
 Wetland Delineation, Tree Survey, and Site Restoration
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Replanting wetland area and Paw Paw River Bank	WESTON will: Review all submittals for completeness and accuracy and monitor and inspect replanting such that all work meets Design Specification Section 02930, including: <ul style="list-style-type: none"> • Heeled-in plants are protected and watered daily. • Tree and shrub density meet specifications (308 trees and 132 shrubs per acre). • Tree and shrub locations are marked and approved before planting. • After plant is placed in pit topsoil is placed incrementally and watered thoroughly, a cupped shaped depression is made around each plant. 	Affidavits from manufacturer or producer certifying that materials meet required specifications Duplicate copies of invoices for all fertilizer Duplicate signed copies of a statement from the seed supplier certifying compliance with Federal Seed Act
Upland and Wetland Seeding	WESTON will: Ensure that seeding is performed at proper rate (pounds per acre) and proper seed mix is used for the specific locations.	Duplicate signed copies of a statement from the seed supplier certifying compliance with Federal Seed Act.

**Table 4-2
 Construction Quality Assurance Tasks
 Wetland Delineation, Tree Survey, and Site Restoration
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Operations and Maintenance	<p>WESTON will:</p> <p>Inspect and monitor progress. Specifically, WESTON will look for the following:</p> <p>For Replanted areas:</p> <ul style="list-style-type: none"> • Trees watered initially and as required to meet survivability rate. • Plantings maintained for 90 days (including weeding, pruning, spraying, etc.) • Trees and shrubs show healthy growth and satisfactory foilage condition before acceptance. • Trees and shrubs meet 80% survivability rate after acceptance. <p>Seeded areas:</p> <ul style="list-style-type: none"> • Surfaces are watered to ensure germination. • Additional topsoil, seed, fertilizer, mulch, or erosion control measured added as needed. • Areas will be inspected to ensure dense vigorous growth at the beginning of the first season after planting. • Seeded areas will then be accepted at the end of this season if no bare spots larger than 3 square feet exist or if not more than 10% of the area has barespots larger than 1 square foot. 	<p>Affidavits from manufacturer or producer certifying that materials meet required specifications.</p> <p>Duplicate copies of invoices for all fertilizer.</p> <p>Duplicate signed copies of a statement from the seed supplier certifying compliance with Federal Seed Act.</p>

**Table 4-3
 Construction Quality Assurance Tasks
 Site Preparation
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Site Plans	<p>WESTON will review all site plans submitted by the subcontractors to ensure that they meet requirements outlined in Design Specification Section 01340. Subcontractors may formally adopt WESTON's plan as their own or they may submit their own plans that contain the required information in WESTON's plans at a minimum.</p>	<ul style="list-style-type: none"> • Work Plan • Subcontractor Site Health and Safety Plan • Transportation and Disposal Plan • Pollution Control and Mitigation Plan • Smokestack Demolition Plan
Permits and Easements	<p>As a CERCLA site, permits are not required to be obtained. However, the subcontractor must comply with the requirements of any permits that would be necessary if not a CERCLA site.</p> <p>Subcontractors are required to contact the permitting agencies to determine the requirements of such permits.</p> <p>WESTON will gain assurances from the subcontractor that they have meet all substantive requirements of such permits.</p>	

**Table 4-3
 Construction Quality Assurance Tasks
 Site Preparation
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
General Site Maintenance	WESTON will monitor the general conditions of the site on a daily basis. This will include, but not limited to, ensuring the following: <ul style="list-style-type: none"> • The entrance gate is locked at the end of each day • Warning signs and labels are posted at the entrance • Work zones are established and marked by the subcontractor with physical barriers • Access to remediation areas is restricted by clearly marked fixed or temporary barriers • North Shore Drive entrance is swept frequently to remove excess mud, dirt, or rock tracked from the site 	
Construct Gravel Access Road	WESTON will monitor the construction of the haul road, including use of proper materials (3/4" gravel and stabilization fabric), correct dimensions (6" depth, approximately 1800 lf), and appropriate location.	Manufacturer product data of haul road gravel and geotextile, if deemed necessary by WESTON
Dust Controls	WESTON will inspect and monitor the proper use of dust controls during all phases of work to verify accordance with the Design Specification Sections 01562 and 0156, and the Pollution Control and Mitigation Plan. Dust control measures include the application of water to areas of excavation, maintaining stabilized construction entrances and access roads, and vacuuming, wet mopping or sweeping, and/or power brooming site entrance roads. Airborne particulates will be visually monitored throughout the day.	

**Table 4-3
 Construction Quality Assurance Tasks
 Site Preparation
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Erosion Controls	<p>WESTON will inspect and monitor on a daily basis (and after rains of more than ½ inch) all aspects of erosion controls implemented as outlined in the Pollution Control and Mitigation Plan and the Design Specification Section 01566.</p> <p>WESTON will ensure that erosion control measures are in place before beginning any earthmoving operations including:</p> <ul style="list-style-type: none"> • Placement of silt fencing • Placement of diversion structures to divert runoff around construction areas • Installation of a sump in the southwest corner of the paved decontamination area (to collect run-off from paved areas) 	Manufacturer data for geotextile for silt fence and stone for sediment traps
Decontamination Pad	<p>WESTON will monitor and inspect the installation of a decontamination pad as required in the Pollution Control and Mitigation Plan at a location designated by WESTON. WESTON will:</p> <ul style="list-style-type: none"> • Ensure pad has required dimensions (20' x 50' x 1') • Ensure proper construction (3" stone placed 12" deep on to 2 layers of 6-mil plastic and framed with railroad ties) • Ensure a sump is built into the structure in order to collect decontamination water. 	Manufacturer data on stone and materials used for construction

**Table 4-3
 Construction Quality Assurance Tasks
 Site Preparation
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Temporary Facilities	<p>WESTON will inspect and monitor the general condition of the support facilities to ensure they meet requirements outlined in Design Specification Section 01500. These inspections will include, but not limited to ensuring that:</p> <ul style="list-style-type: none"> • Adequate sanitary facilities are provided and maintained. • An office space is provided and maintained for WESTON's use which includes utilities and services. • The trailer is provided with proper H&S gear, including fire extinguishers and first-aid kits. 	
Geotechnical Evaluation of Smokestack	<p>WESTON will ensure that the structural integrity evaluation of the smokestack is performed by a licensed structural engineer in the State of Michigan prior to any earthmoving activities.</p> <p>If the smokestack is determined to be unsafe, WESTON will direct subcontractor to remove smokestack prior to earthmoving operations.</p>	<p>Qualifications of Structural Engineer Engineer's assessment of smokestack integrity</p>
Piping	<p>WESTON will monitor installation of culvert diversion piping (including dimensions and function) used to dewater the wetlands and ensure piping is dismantled and removed after completion of wetlands excavations (per Design Specification Section 02200).</p>	

Table 4-3
Construction Quality Assurance Tasks
Site Preparation
Aircraft Components, Inc. Site
Benton Charter Township, Michigan

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Clearing and Grubbing of Wetland	WESTON will inspect and monitor operations as outlined in Design Specification Section 02120 ensuring that: <ul style="list-style-type: none"> • Clearing and grubbing occurs in designated wetland areas. • All trees, logs, brush, boulders, etc are removed. • All stumps are removed from wetlands and roots to a depth of 24". • Proper decontamination of stumps is performed, if required. 	
Clearing of other areas	WESTON will inspect and monitor operations ensuring that: <ul style="list-style-type: none"> • All trees are cut no more than 6" from ground or 12" for large trees. • Stumps are removed where required for traffic. • Large trees along riverbank designated as suitable are allowed to remain (if possible). • Additional locations in Areas A through E are grubbed as deemed necessary by WESTON. 	

**Table 4-3
 Construction Quality Assurance Tasks
 Site Preparation
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Sample Analysis for Woodchips - Disposal Parameters	WESTON will ensure that subcontractor will: <ul style="list-style-type: none"> • Collect samples of woodchips for metals analysis and ensure that woodchips are properly stored on site until metal analysis results are received. WESTON will: <ul style="list-style-type: none"> • Determine if woodchips (based on analytical results) are to be used as mulch or disposed of off-site. • Ensure that chipping is performed during clearing and grubbing and not left to final cleanup period. 	Results of woodchips analysis
Transportation and Disposal of debris in wetland during clearing	WESTON will: <ol style="list-style-type: none"> 1. Inspect and monitor process to ensure that all debris is removed and properly disposed. 2. Check quantity removed. 	Non-Hazardous Waste Manifest or Bills of Lading.

Table 4-4
Construction Quality Assurance Tasks
Wetland Sediment
Aircraft Components, Inc. Site
Benton Charter Township, Michigan

TASK	CQA ACTIVITY	CONTRACTOR SUBMITTALS
Sediment Drying Agent	<p>Ensure that appropriate type and amount of drying agent is added <i>in situ</i> to ensure sediment meets disposal requirements.</p> <p>Monitor the quantities of drying agent and the addition process during excavation</p>	<p>Manufacturer's data on drying agent used.</p>
Sediment Excavation	<p>Ensure that the excavations areas are excavated to the horizontal and vertical as identified in the Remedial Design specifications or as directed by WESTON.</p>	
Backfill Procurement	<p>WESTON will approve imported material obtained by subcontractor to ensure that the excavation area is backfilled with 24" of humus-type soil from an off-site source containing organic material as outlined in Design Specification Section 2200.</p> <p>Weston will monitor trucks delivering fill material to ensure material is covered when necessary to prevent spillage over the roadways.</p>	<p>Results of imported material analysis.</p> <p>Delivery tickets for each load of imported material indicating the name and location of supplier, and type and amount of material delivered.</p>
Backfill Placement	<p>WESTON will inspect and monitor the backfilling process to ensure:</p> <ul style="list-style-type: none"> • Confirmation sampling is performed by WESTON prior to backfilling. • Backfilling is performed when weather conditions are adequate. • Backfill has proper moisture content for satisfactory placement and compaction. • Effective dust control by sprinkling water or other methods is used. • Excavations are kept free of water until backfilling is complete. 	

**Table 4-4
 Construction Quality Assurance Tasks
 Wetland Sediment
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	CONTRACTOR SUBMITTALS
Sample Analysis - Disposal Parameters	WESTON will ensure that: <ul style="list-style-type: none"> • The subcontractor collects two composite sediment samples from the wetland excavation area and submits these sample to an analytical laboratory approved by WESTON. • Sediment is mixed with proper ratio of drying agent prior to sample submittal. • Results are received and reviewed prior to disposal of sediment. 	Results of sediment disposal sample analysis.
Transportation of Sediment to Landfill and Disposal	WESTON will monitor disposal process to ensure operations proceed as outlined in the Transportation and Disposal Plan, including: <ul style="list-style-type: none"> • Sediment placed directly into trucks or roll-offs. • Sumps are installed in roll-off containers to provide continous removal and collection of water . • Trucks or roll-offs are covered with a tarp to prevent off-site spread of soil particles and contaminants. • Sediment is sent to a licensed MDNR Type II landfill. WESTON will monitor loads to ensure that trucks or roll-offs are efficiently filled and track waste totals.	Name and location of disposal site. Waste disposal weight tickets. Non-hazardous Waste Manifest or bills of lading.

**Table 4-5
 Construction Quality Assurance Tasks
 Soil
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Sheeting, shoring, bracing, as necessary	WESTON will monitor and inspect any sheeting, shoring, and bracing operations to ensure that: <ul style="list-style-type: none"> • Sheeting and shoring of all soil excavations greater than 4 ft bgs or where needed. • Safe working conditions are maintained and meet OSHA 29 CFR 1926 requirements. • Sheeting shoring and bracing will not interfere with work and be independent of all footings and structures. 	Professional Engineer Certification.
Soil Excavation	WESTON will inspect and monitor all soil excavations to ensure that: <ul style="list-style-type: none"> • Construction debris located on excavation areas A and B are segregated from soil prior to excavations and that this debris is not disposed of off-site. • Excavation areas are excavated to the horizontal and vertical as identified in the Remedial Design specifications or as directed by WESTON. • Removal (and subsequent backfill) of the 10-ft deep manhole in Excavation area B is performed. 	
Sample Analysis - Disposal Parameters	WESTON will ensure that: <ul style="list-style-type: none"> • The construction subcontractor collects one composite soil sample from each excavation area and submits these sample to an analytical laboratory approved by WESTON. • Results are received and reviewed prior to disposal of soil. 	Results of soil disposal sample analysis

**Table 4-5
 Construction Quality Assurance Tasks
 Soil
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Backfill Procurement	WESTON will approve the source of fill material and will inspect and monitor the procurement and placement of fill material to ensure that: <ul style="list-style-type: none"> • Trucks are suitably tight and covered when necessary to prevent spillage over the roadways. • Backfill is suitably free of organic materials or other objectionable material. • The subcontractor submits two samples for analysis of each source and that specifications outlined in Design Specification Section 02200 are met before giving final approval. • Excavations are kept free of water until backfilling is complete. 	Results of fill material analysis. Delivery tickets for each load of imported material indicating the name and location of supplier, and type and amount of material delivered.

**Table 4-5
 Construction Quality Assurance Tasks
 Soil
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Backfill Placement	<p>WESTON will inspect and monitor the backfilling process to ensure:</p> <ul style="list-style-type: none"> • Confirmatory sampling is performed by WESTON prior to backfilling. • Backfilling is performed when weather conditions are adequate. • Backfill has proper moisture content for satisfactory placement and compaction. • Effective dust control by sprinkling water or other methods is used. • Excavations are kept free of water until backfilling is complete. • Compaction is performed properly, including use of rollers or rubber-tired equipment in layers not to exceed 8" (loose depth). • Subcontractor performs in-place density and moisture tests using WESTON-approved ASTM methods at a minimum frequency of one density/moisture measurement per each 6000 square-foot area with a minimum of one per excavation area. <p>WESTON will review:</p> <ul style="list-style-type: none"> • Subcontractor's methods and procedures for obtaining density/moisture measurements. • Subcontractor's results to ensure compaction to at least 90% maximum dry weight as determined by ASTM D-698. 	<p>Subcontractor methods and procedures for density/moisture measurements.</p> <p>Results of compaction and moisture tests.</p>

**Table 4-5
 Construction Quality Assurance Tasks
 Soil
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Topsoil	<p>WESTON will approve the source of topsoil and will inspect and monitor the procurement and placement of topsoil to ensure that:</p> <ul style="list-style-type: none"> • The top 6" of excavations are backfilled with topsoil. • The topsoil is loose friable loam free from subsoil roots, grass weeds, stones, and foreign matter. • Specifications on topsoil characteristics outlined in Design Specification Section 02200 are met (pH between 5.5 and 7.6, 3-20% organic matter as determined by loss by ignition, no more than 65% passing through No. 200 sieve). 	<p>Delivery tickets for each load of imported material indicating the name and location of supplier, and type and amount of material delivered.</p>
Transportation of Sediment to Landfill and Disposal	<p>WESTON will monitor the disposal process to ensure operations proceed as outlined in the Transportation and Disposal Plan, including:</p> <ul style="list-style-type: none"> • Excavated soil is placed directly into trucks or roll-offs. • Dump trucks or roll-offs will be covered with a tarp to prevent off-site spread of soil particles and contaminants. • Excavated soil is sent to a licensed MDNR Type II landfill. <p>WESTON will monitor loads to ensure that trucks or roll-offs are efficiently filled and track waste totals.</p>	<p>Name and location of disposal site.</p> <p>Waste disposal weight tickets.</p> <p>Non-hazardous waste bills of lading.</p>

**Table 4-5
 Construction Quality Assurance Tasks
 Soil
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
<p>Post-Construction Survey of Excavated Areas</p>	<p>WESTON will ensure that a post-construction survey of the bottoms of the excavation areas is conducted prior to backfilling to ensure adequate removal of contaminated material.</p> <p>WESTON will ensure that:</p> <ul style="list-style-type: none"> • The surveyor is licensed and experienced (Design Specification Section 01050A). • Survey instrument calibration certificates are inspected. • Ground survey field notes are submitted to ensure accuracy and instrument function. • Benchmarks are verified. 	<p>Record Drawings showing the limits of excavation and volume calculations.</p> <p>Professional Surveyors Qualification.</p> <p>Accuracy Verification (upon Request).</p> <p>Instrument calibration certificates.</p> <p>Field Notes and Records.</p>
<p>Building Foundations Backfilling</p>	<p>WESTON will inspect and monitor the backfilling of Foundations 1, 2, 3, 4, and 5 and the large dilapidated building to ensure that the former foundations will be filled to grade with general backfill material.</p> <p>The general fill material used will meet the same criteria as the fill used in the soil excavation areas.</p> <p>Placement and compaction of grading and fill materials will be subject to continuous inspection and monitoring.</p>	<p>Results of fill material analysis.</p> <p>Delivery tickets for each load of imported material indicating the name and location of supplier, and type and amount of material delivered.</p>

Table 4-6
Construction Quality Assurance Tasks
Paw Paw River Sediment
Aircraft Components, Inc. Site
Benton Charter Township, Michigan

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Temporary Dam Structures/Diversion Devices	WESTON will inspect and monitor operations to ensure that: <ul style="list-style-type: none"> • Sediment traps are set up downstream to prevent downstream deposition of sediment particles prior to placement of diversion devices. • Only diversion devices approved by WESTON are used. • No breakthrough of water is occurs while diversion devices are in place. • Weston will perform turbidity monitoring downstream of the excavation area. 	Manufacturer data on materials used for sediment trap and diversion device.
Dewatering System	Ensure that excavation area is dewatered and the water is filtered prior to being pumped back into the river.	
Sediment Excavation	Ensure that area is excavated to the horizontal and vertical extent identified in the remedial design, pre-construction survey, and delineation sampling and as staked out by WESTON.	
Sediment Drying Agent	Ensure that appropriate type and amount of drying agent is added <i>ex situ</i> to ensure sediment meets disposal requirements. WESTON will monitor the quantities and the application method used during excavation.	Manufacturer's data on drying agent used.

Table 4-6
Construction Quality Assurance Tasks
Paw Paw River Sediment
Aircraft Components, Inc. Site
Benton Charter Township, Michigan

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Backfill Procurement and Placement	<p>WESTON will inspect and monitor the backfilling process to ensure that:</p> <ul style="list-style-type: none"> • Backfilling does not occur until WESTON receives results of confirmation samples. • Subcontractor supplies sampling results indicating that the sand used as fill material meets specifications outlined in Design Specification Section 02200. <p>WESTON will collect an estimated 10 surface water samples following completion of sediment excavation and backfilling to verify that site contaminants were not released.</p>	<p>Results of sand analysis.</p> <p>Delivery tickets for each load of imported material indicating the name and location of supplier.</p> <p>Type and amount of material delivered.</p>
Sample Analysis - Disposal Parameters	<p>WESTON will ensure that:</p> <ul style="list-style-type: none"> • The subcontractor collects two representative sediment samples and submits these samples to an analytical laboratory approved by WESTON. • The sediment is mixed with proper ratio of drying agent prior to submittal. • The results are received prior to disposal of sediment. 	<p>Results of sediment disposal sample analysis.</p>

Table 4-6
Construction Quality Assurance Tasks
Paw Paw River Sediment
Aircraft Components, Inc. Site
Benton Charter Township, Michigan

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Transportation of Sediment to Landfill and Disposal	<p>WESTON will monitor the disposal process to ensure operations proceed as outlined in the Transportation and Disposal Plan, including:</p> <ul style="list-style-type: none"> • Excavated sediment is placed directly into trucks or roll-offs. • Trucks or roll-offs will be covered with a tarp to prevent off-site spread of soil particles and contaminants. • Excavated sediment sent to a licensed MDNR Type II landfill. <p>WESTON will monitor loads to ensure that trucks or roll-offs are efficiently filled and track waste totals.</p>	<p>Name and location of disposal site.</p> <p>Waste disposal weight tickets.</p> <p>Non-hazardous Waste Manifest or bills of lading.</p>

**Table 4-7
 Construction Quality Assurance Tasks
 Water Treatment, Decontamination, and Demobilization
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Dewatering System	<p>WESTON will inspect and monitor the dewatering system used by the subcontractor to ensure that the system meets all specifications described in the Pollution Control and Mitigation Plan.</p> <p>WESTON will ensure that:</p> <ul style="list-style-type: none"> • All water contacting potentially contaminated areas is properly filtered, collected and containerized by means of sumps and pumps. • Tanks and drums are properly staged and maintained. • Collected water is properly analyzed prior to disposal. 	
Decontamination	<p>WESTON will inspect and monitor the decontamination procedures employed by the subcontractor to ensure that they meet requirements outlined in the Pollution Control and Mitigation Plan.</p> <p>WESTON will ensure that the subcontractor:</p> <ul style="list-style-type: none"> • Performs decontamination at the decontamination pad. • Scrapes, brushes, or otherwise removes all earthen material from tools and machinery prior to removal from the site. • Pressure wash all surfaces with a portable high-pressure hot water steam cleaner. • Collects and manages rinseate and scrapings into approved containers. • Tests and determines the disposal requirements for rinseate and solids. 	

Table 4-7
Construction Quality Assurance Tasks
Water Treatment, Decontamination, and Demobilization
Aircraft Components, Inc. Site
Benton Charter Township, Michigan

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Demobilization	WESTON will inspect and monitor the demobilization process to ensure that the specifications outlined in Design Specification Section 01701 are met, including: <ul style="list-style-type: none">• Decontamination of all equipment.• Disconnection of temporary utilities.• Removal of temporary facilities, barricades, diversion devices, piping, equipment, and waste.	

**Table 4-8
 Construction Quality Assurance Tasks
 Smokestack Demolition
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Demolition	<p>WESTON will review the subcontractor's demolition plan to ensure compliance with Design Specification Section 02055, the Pollution Control and Mitigation Plan, and the Transportation and Disposal Plan.</p> <p>WESTON will ensure that the subcontractor:</p> <ul style="list-style-type: none"> • Erects and maintains proper barriers. • Disposes of all material off-site. • Uses methods to minimize dust. • Has submitted to WESTON proof of necessary permits, notification, testing and inspections necessary for demolition. • Proceeds only under adequate weather conditions. • Created an adequate safety zone around the smokestack. <p>WESTON will ensure that the subcontractor has the base of the stack inspected for asbestos by a certified licensed asbestos inspector.</p>	<p>Demolition Plan</p> <p>Name and location of disposal sites.</p> <p>Proof of the completeness of all notifications, permits, testing, and inspection requirements.</p>

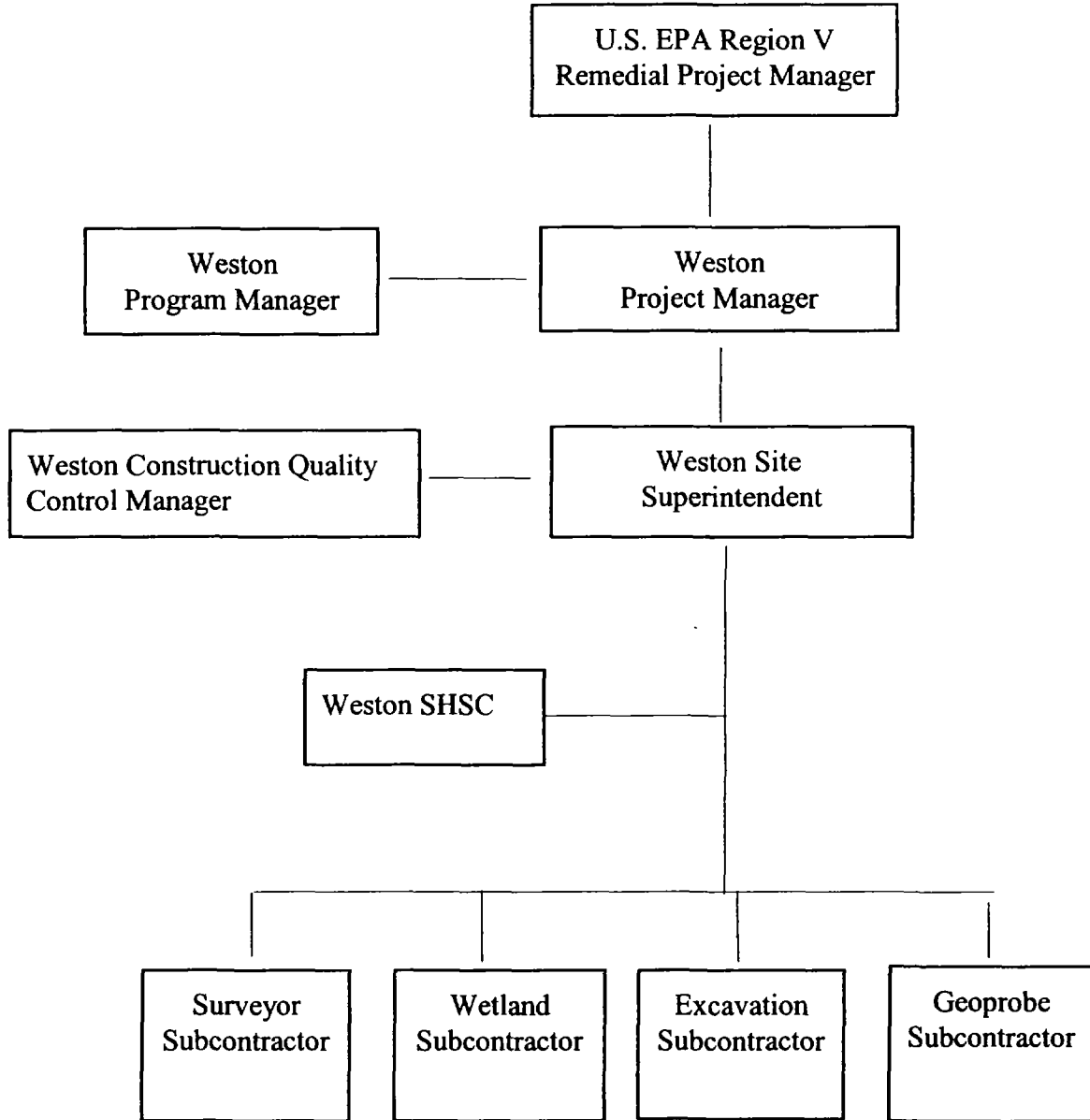
**Table 4-8
 Construction Quality Assurance Tasks
 Smokestack Demolition
 Aircraft Components, Inc. Site
 Benton Charter Township, Michigan**

TASK	CQA ACTIVITY	SUBCONTRACTOR SUBMITTALS
Transportation of Debris to Landfill and Disposal	<p>WESTON will monitor the disposal process to ensure operations proceed as outlined in the submitted Demolition Plan and is consistent with requirements in the Transportation and Disposal Plan.</p> <p>Demolition debris is sent to a licensed MDNR Type II landfill.</p> <p>WESTON will monitor loads to ensure that trucks or roll-offs are efficiently filled and track waste totals.</p>	<p>Name and location of disposal site.</p> <p>Waste disposal weight tickets.</p> <p>Non-hazardous Waste Manifest or bills of lading.</p>
Ash Disposal	<p>WESTON will ensure that any ash remaining within the base is placed in drums and properly disposed of by the subcontractor.</p>	<p>Name and location of disposal site.</p> <p>Hazardous Waste Manifests.</p> <p>Non-Hazardous Waste Manifest.</p>

APPENDIX A

ORGANIZATIONAL CHART

Proposed Project Organization Structure



APPENDIX B

WESTON DAILY FIELD REPORT

Daily Field Report

Weston Solutions, Inc.

CONTRACT NO.	WORK ORDER NO:	DATE:
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WEATHER / TEMPERATURE:

WESTON PERSONNEL:	EQUIPMENT:	VISITORS (Representing):

SUBCONTRACTORS:	TRADE / SERVICE:

AGREEMENTS MADE / PHONE CONVERSATIONS:

MATERIALS DELIVERED / WASTE REMOVED (Amount, Condition, Purpose):

INSPECTION DATA (List items here and results, attach appropriate inspection sheet):

TEST DATA (List items here and results, attach appropriate test data sheet):

WORK COMPLETED BY WESTON:

WORK COMPLETED BY SUBCONTRACTORS:

PROBLEMS / RESOLUTIONS:

OTHER:

PREPARED BY:	SIGNATURE:
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APPENDIX C

CONSTRUCTION QUALITY INSPECTION FORM

CONSTRUCTION QUALITY INSPECTION FORM

Inspector:

Date:

Inspection type:

Preparatory

Initial

Follow-up

Completion

Task Description:

Applicable Design Specifications:

Other Applicable Standards:

Brief Description of Task Requirements:

Brief Description of Observations:

Deficiencies Noted:

Signature:

APPENDIX D

NONCOMPLIANCE AND CORRECTIVE ACTION REPORT

WESTON Noncompliance and Corrective Action Report

Part 1: TO BE COMPLETED BY THE PERSON IDENTIFYING THE NONCONFORMANCE

Originator:

Date:

Customer Name:

Contract/ID#:

Issue:

Part 2: TO BE COMPLETED BY WESTON SITE SUPERINTENDENT

Impact:

(The Impact of the nonconformance)

Root Cause:

(Document the result of investigation regarding what caused the nonconformance)

Corrective Action:

(Document what was done to correct the problem/nonconformance)

Preventive Action:

(Document how the action will prevent recurrence of the issue)

Part 3: TO BE COMPLETED BY THE WESTON CONSTRUCTION QUALITY CONTROL MANAGER

Verification Date:

Closed Date:

Signature: