

**FINAL**  
**Quality Control Plan**

**Stabilization, Excavation and Disposal of Contaminated Soil  
Plum Brook Ordnance Works**

**Sandusky, Ohio**

**Contract No. DACW69-00-D-0021**

**Work Order No. 020**

**Prepared for:**

**Department of the Army  
Huntington District, Corps of Engineers  
Huntington, WV**

**Prepared by:**

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**September 2002  
WasteTron Project # WT5393**

# Quality Control Plan

## Stabilization, Excavation and Disposal of Contaminated Soil Plum Brook Ordnance Works

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## **Definitions and Acronyms**

CFR	Code of Federal Regulations
COC	Constituents of Concern
CPR	Cardiopulmonary Resuscitation
DNT	Dinitrotoluene
EPA	United States Environmental Protection Agency
GSA	General Service Administration
HAZWOPER	Hazardous Waste Operations and Emergency Response
HTF	Hypersonic Tunnel Facility
HTRW	Hazardous, Toxic, and Radioactive Waste
IDW	Investigation Derived Waste
IQCT	Independent Quality Control Team
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety & Health Administration
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PBOW	Plum Brook Ordnance Works
PBS	Plum Brook Station
POC	Point of Contact – technical point of contact for the U.S. Army Corps of Engineers
PPE	Personal Protective Equipment
PRGs	Preliminary Remediation Goals

QAP	Quality Assurance Plan
QC	Quality Control
QCR	Quality Control Reports
SOW	Scope of Work
SSHO	Site Safety and Health Officer
SSHP	Site-Specific Safety and Health Plan
TCLP	Toxicity Characteristic Leaching Procedure
TNT	Trinitrotoluene
USACE	United States Army Corps of Engineers

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**1.0 Purpose**

This WasteTron Quality Control Plan (QCP) is based on the professional competence of the employees performing the project tasks and consists of checklists and documentation to ensure that all project activities are of high standards. WasteTron has high standards for its employees and subcontractors involved in all projects. Project tasks are assigned in accordance with clearly demonstrated capabilities. Quality Control (QC) is implemented within the project framework by a distinct QC organization functioning under established guidelines. This QCP ensures the development of a high quality technical product that requires little revision prior to the Final Quality Assurance Review.

**2.0 Scope of QC Services**

The general QC program is designed to ensure quality performance, traceable results, and confidence in the documents prepared for all projects completed by the firm. This project will adhere to the following guidelines established by the Department of the Army, Corps of Engineers:

EM-200-1-3, "*Requirements for the Preparation of Sampling and Analysis Plans*," U.S. Army Corps of Engineers, February 2001

EM-200-1-6, "*Chemical Quality Assurance for Hazardous, Toxic and Radioactive Waste Projects (HTRW)*," U.S. Army Corps of Engineers, October 1997

ER-1110-1-263, "*Chemical Data Quality Management for Hazardous Waste Remedial Activities*," U.S. Army Corps of Engineers, April 1998

CELRHR 5-2-7, "*Quality Management Plan*," U.S. Army Corps of Engineers, May, 1999

ER 385-1-92, "*Safety and Health Document Requirements*," U.S. Army Corps of Engineers, March 1994

EM 385-1-1, "*Safety and Health Requirements Manual*," U.S. Army Corps of Engineers, September 1996

EM 200-1-2, "*Technical Project Planning Process*," U.S. Army Corps of Engineers, August 1998

EM 200-1-1, "*Validation of Analytical Chemistry Labs*," U.S. Army Corps of Engineers, July 1994

ER 1165-2-132, "*HTRW Guidance for Civil Works Projects*," U.S. Army Corps of Engineers, June 1992

All field procedures and reporting requirements as identified in the Scope of Work are monitored and reviewed as shown in the attached checklists. Draft and final documents are subject to internal peer review and senior review. All project deliverables are subject to review by the United States Army Corps of Engineers (USACE).

## **2.1 Training**

All field personnel performing intrusive work and soil treatment on this project have received forty- (40) hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training. All field personnel performing intrusive work and soil treatment meet the training requirements as cited in 29 Code of Federal Regulations (CFR) 1910.120. At least two personnel on-site have received first aid and cardiopulmonary resuscitation (CPR) training. Appendix B of the Site Specific Safety and Health Plan (SSHP) contains copies of all training certifications and dates of refresher training for employees who may work on this project.

## **2.2 Project Planning**

Project planning encompasses the preparation of a series of procedures that specify the manner in which project activities will be conducted. The purpose of these procedures is to provide step-by-step control on how and when tasks will be completed. In general, the following procedures are followed for USACE projects:

- The project is assigned to a Project Manager experienced in the type of work to be completed.
- The Project Manager reviews the Scope of Work (SOW) to determine the extent of work required and to determine the best personnel to be assigned to the project.

- The Project Manager discusses their personnel requirements with an Administrator who authorizes the use of those personnel.
- The Project Manager then notifies the field coordinator that a project is in the planning status and informs the field coordinator what personnel he/she would like to use for the project.
- An initial project team will be formed consisting of the Project Manager, an administrative assistant, and a technical support person.
- The project team will discuss the project objectives, data requirements, and identify the possible regulatory requirements associated with all aspects of the project.
- The project team will gather and evaluate site information. This would include a site reconnaissance and review of any available background data including previous site assessments.
- After plan preparation, an internal Independent Quality Control Team (IQCT) will review the plans and make comments, which will be resolved or incorporated into the plans.
- Draft Plans will be submitted to the USACE.
- During the IQCT and USACE reviews, the Project Manager tentatively schedules equipment, personnel for the project, and subcontractors.
- Upon receipt of comments from the USACE, the technical support person will review comments with the Project Manager.
- Comments from the USACE will be incorporated in the plans or resolved prior to beginning work.
- The Project Manager notifies all appropriate parties of concern (utilities, property owners, and so forth) of the intended project schedule. Coordination with the USACE POC and the NASA POC will be very important to the performance of this project.
- The Project Manager has the utilities marked prior to performing any intrusive activities. A digging permit from NASA PBS is required for this project. Intrusive activities can not be performed without approval from NASA PBS.
- The Project Manager confirms the scheduling of equipment and personnel for the project and then performs the project.
- The Project Manager supplies copies of all field documentation and gives a narrative of field activities to the technical support person who will prepare the report.
- After the report is prepared, an internal Independent Quality Control Team (IQCT) will review the report and make comments, which will be resolved or incorporated into the report.
- A Draft Report will be submitted to the USACE.
- Upon receipt of comments from the USACE, the comments will be resolved or incorporated into the report and the final report will be issued.

### **2.3 Technical Reviews**

This includes issuance of all project-related documents controlled by a technical review system. Plans and reports will be reviewed by the Project Manager and by qualified, independent reviewers to ensure proper documentation. All project submittals will independently be reviewed

by at least two WasteTron personnel (one senior reviewer and one peer reviewer). Reviews will be performed by personnel who are knowledgeable concerning regulatory requirements and who are experienced in performing field related procedures associated with this project. All comments resulting from the technical reviews are resolved and/or incorporated in the project submittals.

A Senior Project Manager will serve as the senior reviewer and shall review all project submittals. The Senior Reviewer will perform a review of all plans for precision, accuracy, representativeness, comparability, completeness, and verification that the work has been conducted in accordance with the SOW, policies, and guidelines. A Peer Review of the plans and reports is performed to determine their adequacy, completeness, and verification that the work was conducted in accordance with the scope of work, policies and guidelines.

## **2.4 Document Control**

Project technical and administrative files will be maintained at WasteTron's office in Poca, West Virginia.

## **2.5 Quality Evaluation/Audit Surveillance**

Qualified personnel who are independent of project activities will perform quality evaluation at predetermined intervals. The purpose of evaluations and audits is to ensure compliance with technical procedures and to document quality control. The Senior Project Manager performing technical reviews will perform quality evaluations of technical procedures and paperwork documentation during the course of the project. The quality evaluations may take the form of site visits to evaluate personnel's field procedures and/or review of field documents. Additionally, an administrative review is performed to ensure that project submittals are performed in a timely manner.

## **2.6 Project Management**

The Project Manager will oversee the project and ensure that all details are followed and that project activities are on track. Any project problems will be directed to the client for quick resolution.

## **2.7 Analytical Laboratory**

The overall QC objective is to ensure that data of known and acceptable quality is generated from both field and laboratory activities. WasteTron Inc. will use REIC Laboratory to perform laboratory analysis for this project. REIC Laboratory is an USACE certified laboratory. Pursuant to the Scope of Work (SOW), no quality assurance samples will be collected. The

laboratory will be responsible for ensuring that their personnel adhere to their laboratory's Quality Assurance Plans (QAP). The number and types of internal quality control checks for each analytical method is defined in the laboratory's QAP.

The Contract Laboratory shall follow EPA guidelines for reporting as outlined in Level 2, QA/QC Levels of Reporting. The Level 2 report shall include the following:

- Case Narrative (information should include the number and type of samples received, analysis of those samples, any problems that occurred, whether quality control was within acceptable limits, etc.)
- Analytical Report (summary of all sample analysis information including surrogates for organic methods.) Detection limits/reporting limits shall be included.
- Chains-of-Custody
- Summary of Quality Control (a summary shall be included of all quality control specific to the project.) This may include method reagent blanks, midlevel calibration checks, spike and spike duplicates, and sample duplicates. All QC shall include acceptance criteria and relative percent data where applicable.

Any sample failing the method or laboratory quality control limit may be reanalyzed. The analytical laboratory, WasteTron, and the USACE will jointly make the decision regarding re-analysis.

## **2.8 Field Quality Control**

### **2.8.1 Field Quality Control (QC) for Chemical Data Measurement**

Field quality control is as vital to a project as is quality control within the laboratory. Proper execution of each project task is needed in order to yield consistent, reliable information that is representative of the media and conditions being measured. The overall quality assurance objective is to ensure that data of known quality is generated which will be useful in meeting the intended project objectives. The On-site Supervisor will be responsible for seeing that field personnel adhere to the QCP. Quality Control Field Oversight Checklists to be used for field activities are provided in Appendix B. The field oversight checklists will be completed for each project area. More detailed information concerning QC for the general field activities and sampling procedures is contained in the Plan of Operations developed for this project.

### **2.8.2 QC for Field Activities**

Field quality control for site activities is important to the proper completion of a project. The Project Manger, and/or the On-site Supervisor is responsible for ensuring that personnel and subcontractor's perform work in accordance with the specifications of the SOW and the

approved plans. The Quality Control Officer will be responsible for performing quality control oversight and reporting findings to the On-site Supervisor and the Project Manager. Quality Control Field Oversight Checklists to be used for field activities are provided in Appendix B.

The Project Manager or the On-site Supervisor will be responsible for overseeing the work performed by WasteTron personnel and WasteTron's subcontractors. The Quality Control Officer will be responsible for ensuring that Quality Control measures are followed to ensure proper completion of the project. The Quality Control Officer may stop work at any time that the quality of work being performed or any materials being used are found to be of inferior quality. Materials will not be accepted for delivery at the site if they do not meet contract specifications. Written records will be kept of all materials brought on-site, their condition at time of delivery, storage methods, and condition of the material at time of use. The work performed by subcontractors will be inspected to ensure that it meets contract requirements. Work not meeting contract specifications will be immediately stopped and remedied.

### **2.8.3 Daily Quality Control Reports (QCR)**

During the field investigation and excavation activities, daily Quality Control Reports (QCR) will be prepared daily, dated, and signed by the On-site Supervisor or the QC Officer. WasteTron will utilize the USACE QCR Report Form (see Appendix B). The following information will be recorded on the QCR:

- Weather information
- Field instrument measurements
- Departures from the approved plans (any deviation that may affect data quality objectives must be conveyed to the USACE immediately)
- Personnel on-site and their job activities
- Any problems encountered
- Instructions from government personnel
- A copy of the chain-of-custody and any other project forms generated on-site should be attached to the daily report

### **2.9 Corrective Action**

Corrective action procedures may be required in the event a discrepancy is discovered in the field, during an audit, and/or by the laboratory. Laboratory discrepancies that are unrelated to field procedures will be addressed by the laboratory's personnel and will be corrected in accordance with their QAP. The WasteTron Project Manager will address discrepancies relating to field procedures. Any deviations from approved plans shall be fully documented. The USACE POC shall be notified if deviations to the approved plans are necessary. No deviations to approved plans shall be made without the prior approval of the USACE POC. No deviations from the approved plans that compromise data quality or personnel safety shall be allowed.

## **2.10 Site Security**

NASA Plum Brook Station (PBS) is responsible for overall security at the site. Pursuant to the Scope of Work, coordination with PBS personnel will be conducted by USACE to ensure that WasteTron is allowed access to/from the site to perform all activities during this removal action. WasteTron and its subcontractors shall be required to enter/exit through the PBS security gate. WasteTron is responsible for ensuring that WasteTron employees and subcontractors follow all rules set forth by the PBS security. Security requirements, as set forth by PBS, shall not be compromised. WasteTron personnel and subcontractors are required by NASA to review a safety video prior to performing any on-site activities.

The On-site Supervisor or QC Officer will be responsible for checking all equipment, storage containers, excavated areas, and so forth prior to leaving the site each day. Caution tape or fence shall be constructed around excavation pits and storage areas. Work materials shall be picked up and properly stored each day.

## **3.0 General Project Information**

### **3.1 Project Type**

Stabilization, Excavation and Disposal of Nitroaromatic and Lead Contaminated Soil

### **3.2 Project Location**

TNT Area B of the Plum Brook Ordnance Works located in Sandusky, Ohio

### **3.3 Customer/Sponsor**

U.S. Army Corps of Engineers (USACE), Huntington District (Contract No. DACW69-00-D-0021, Work Order No. 0020)

### **3.4 Project Description**

#### **3.4.1 Introduction and Site History**

The site of the former Plum Brook Ordnance Works (PBOW) is located approximately 4 miles south of Sandusky, Ohio and 59 miles west of Cleveland, Ohio. Although primarily in Perkins and Oxford Townships, the eastern edge of the site extends into Huron and Milan Townships. PBOW is bounded on the north by Bogart Road, on the south by Mason Road, on the west by County Road 43, and on the east by U.S. Highway 250. The surrounding area is mostly agricultural and residential.

The 9,009-acre PBOW site was built in early 1941 as a manufacturing plant for 2,4,6-trinitrotoluene (TNT), dinitrotoluene (DNT), and pentolite. Production of explosives at PBOW began in December 1941 and continued until 1945. It is estimated that more than 1 billion pounds of nitroaromatic explosives were manufactured during the 4-year operating period. The three explosive manufacturing areas were designated TNT Area A (TNTA), TNT Area B (TNTB), and TNT area C (TNTC). Twelve process lines were used in the manufacture of TNT, four lines at TNTA, three lines at TNTB, and five lines at TNTC. The work to be performed under this project deals primarily with the TNTB area.

The TNTB manufacturing site consisted of widely scattered buildings of wood frame construction with asbestos and sheet metal coverings. It also included a series of buried and/or overhead flumes and pipes used to transport various liquids associated with the manufacturing process. After plant operations ceased, TNT B's manufacturing lines were decontaminated by the War Department in late 1945. During decontamination, all structures, equipment, and manufacturing debris were either removed and salvaged or removed and burned by the War Department in 1945. The property was initially transferred to the Ordnance Department, then to the War Assets Administration after it was certified by the U.S. Army to be decontaminated. In 1949, PBOW was transferred to the General Services Administration (GSA). In 1955, the GSA completed further decontamination of TNTB. This effort supposedly focused on surface contamination detected by visual inspection. It is unknown whether the underground flumes were addressed by this decontamination effort.

The National Aeronautics and Space Administration (NASA) acquired the property on March 15, 1963 and currently utilizes the site. GSA performed further decontamination efforts during the 1963 transfer. The decontamination process included removing contaminated surface soils above the drain tiles, flumes, etc., destruction of all buildings by fire, the removal of all soil debris, sumps, and concrete foundations. All materials, including the soil in those areas, were flashed. The area was then rough graded. The decontamination process also included the burning of excavated nitroaromatic filled flumes.

NASA currently operates the Plum Brook Station (PBS) of the John Glenn Research Center at Lewis Field. Most of the aerospace testing facilities built in the 1960's at the site are in standby or inactive status. On April 18, 1978, NASA declared approximately 2,152 acres of PBOW as excess. The Perkins Township Board of Education acquired 46 acres of the excess acreage and uses this area as a bus transportation area. GSA retains ownership of the remaining of the excess acreage and currently has a use agreement with Ohio National Guard for 604 acres of the land. NASA presently controls approximately 6,400 acres and is using the site to conduct space research as a satellite operation of the John Glenn Research Center at Lewis Field.

TNTB consists of an area of approximately 55 acres at the south-central portion of PBOW immediately north of West Sheid Road. Significant evidence of former PBOW facilities exists at TNTB in form of roads, hydrants, and ditches. All the buildings that had been present during the TNT manufacturing were demolished and removed. Two NASA facilities are present at the site and are currently active, the Hypersonic Tunnel Facility (HTF) and Nitrogen Dewar Tanks. The HTF is located in the northwest portion of TNTB and consists of a single building, above and below-ground piping and utilities, and paved parking areas. The Nitrogen Dewar Tanks are located in the center of TNTB with aboveground piping and underground utilities leading to the northwest towards the HTF and to the northeast offsite.

### **3.4.2 Proposed Action Description**

Remedial Investigation (RI) fieldwork was conducted in 1998 in order to provide a basis for taking an action at this site. As part of the RI, 391 soil samples were collected and field screened for nitroaromatics. Additionally, 40 confirmation soil samples were collected to supplement the on-site screening analysis for standard laboratory analysis using SW-846 Method 8330 with second column confirmation. A human health risk assessment was conducted for TNTB. Thirteen constituents of concern (COC) were identified in surface and subsurface soil. Six of the COCs are nitroaromatics {2-amino-4,6-dinitrotoluene (DNT); 4-amino-2,6-DNT; 2,6-DNT; 2,4-DNT; 2-nitrotoluene; and 2,4,6-trinitrotoluene (TNT)}. The remaining seven COCs are polychlorinated biphenyls (PCBs) and polynuclear aromatic hydrocarbons (PAHs). The PCBs detected on-site are Aroclor 1254 and Aroclor 1260. The PAHs detected on-site are benzo (a) anthracene, benzo (a) pyrene, benzo (a) fluoranthene, dibenzo (a,h) anthracene, and indeno (1,2,3-cd) pyrene. Lead, which was not listed as one of the COCs, was also found at various levels, and if encountered at values exceeding regulatory levels, it will need to be disposed of in accordance with applicable state and federal regulations. Soil with lead levels equal to or greater than 5 mg/l as determined by the toxicity characteristic leaching procedure (TCLP) is defined by the Resource Conservation and Recovery Act as hazardous waste. MAECTITE® will be used to treat hazardous lead contaminated soil to reduce the lead levels below 5 mg/l prior to disposal in a non-hazardous landfill. Excavation areas where lead is known to be present will have the soil from the walls and floor analyzed for total lead. Acceptable levels of total lead in the excavation pits will be 400 mg/kg or less.

The proposed approach for this removal action is to excavate all the areas in which the concentration of the COCs in soil exceeds the preliminary remediation goals (PRGs). Refer to the Table below for the PRGs for this site.

**Table 1--Chemicals of Concern**

<b>Chemical of Concern</b>	<b>PRGs (mg/kg)</b>
<b>Nitroaromatics</b>	
2-amino-4,6-DNT	0.40
4-amino-2,6-DNT	0.40
2,4-DNT	7.50
2,6-DNT	2.75
2-nitrotoluene	74
2,4,6-TNT	3.36
<b>PCBs</b>	
Aroclor 1254	0.16
Aroclor 1260	2.87
<b>PAHs</b>	
Benzo (a) anthracene	5.43
Benzo (a) pyrene	0.54
Benzo (a) fluoranthene	5.43
Dibenz (a,h) anthracene	0.65
Indeno (1,2,3-cd) pyrene	5.43

The estimated volume of contaminated soil from all areas (30) of the TNTB is 3,300 cubic yards. Pursuant to the Scope of Work, representative soil samples from each excavated area will be analyzed for toxicity characteristic leaching procedure (TCLP) volatiles, semi-volatiles, and metals. Using existing soil data, the estimated volume of excavated soil that may be classified, as hazardous waste based on 2,4-DNT concentrations is approximately 560 cubic yards. An additional 400 cubic yards of material might be identified as a hazardous waste due to the high levels of lead. Any soil identified as hazardous waste shall be treated (i.e. stabilized) to achieve non-hazardous waste classification prior to land disposal in a non-hazardous waste landfill.

### **3.4.3 Tasks**

The following tasks are required to be performed under this Scope of Work:

- Task 1** Preparation and submission of a Site Specific Safety and Health Plan.
- Task 2** Preparation and submission of a Quality Control Plan.
- Task 3** Preparation and submission of a Plan of Operations, which shall include information on the disposal of Investigation Derived Waste, Erosion Control Plan, Spill Containment Plan, Sampling and Analysis Plan, Environmental Protection Plan and a Materials Handling Plan.
- Task 4** Notification/ scheduling of field activities and coordination of utility marking with NASA officials prior to site mobilization.

- Task 5** Site surveying is necessary for identifying limits of excavation.
- Task 6** Excavation of Contaminated Material (removal of approximately 3,300 cubic yards of contaminated material from 30 areas in the vicinity of the former TNT Area B site).
- Task 7** Chemical stabilization of excavated soils classified as hazardous waste and subsequent testing of mixed soils prior to disposal.
- Task 8** Disposal of Investigation Derived Waste (IDW).
- Task 9** Confirmation sampling of each of the excavation pits.
- Task 10** Preparation and submission of the Draft and Final Remedial Action Report.
- Task 11** Public meeting support will be provided to the USACE for the work defined by this delivery order.

#### **3.4.4 Summary of Field Activities**

In accordance with contract requirements, WasteTron will notify the USACE POC and provide a schedule of events prior to beginning field activities. WasteTron has retained Mountain State Company to perform surveying of the 30 areas to be excavated. After Mountain State performs the surveys, WasteTron will submit the survey information with digging permit forms to the NASA Plum Brook Station (PBS) Point of Contact (POC). WasteTron will not perform excavation activities until NASA issues digging permits. WasteTron will mobilize to the site and perform clearing and grubbing operations as necessary. Cleared and grubbed material will be placed in windrows on the site for wildlife habitats. Only a small amount of clearing and grubbing is expected to be necessary.

Personnel will prepare a staging area/storage area utilizing 3 layers of 6-mill plastic and concrete barriers. WasteTron intends to have clean backfill material brought to the site and stored until needed for backfilling the excavations. Excavated materials will be taken to a central location for sampling and treatment, if necessary, prior to disposal. WasteTron will ensure that the excavated materials remain segregated into soil piles containing nitroaromatics and soil piles containing nitroaromatics and lead. It should be noted that low levels of polychlorinated biphenyls (PCBs) were detected in some areas of the site; however, pursuant to the SOW, PCBs are not considered a concern during confirmation sampling and disposal due to their low concentrations in the soil. The walls and the floor of each excavation will be field tested to determine if excavation has been sufficient to remove the contaminated nitroaromatics and lead prior to sending confirmation samples to the laboratory. A mixing pad constructed of 3 layers of

6-mil plastic surrounded with concrete barriers will be prepared for the treatment of the lead containing soil using the MAECTITE® process. Lead contaminated soil will be treated with MAECTITE® to chemically fixate the lead. Each excavated area will have confirmation soil samples collected and sent to the laboratory in accordance with the Scope of Work and the Plan of Operations. Excavated areas will be backfilled with clean soil after confirmation sampling indicates that the contaminants were detected at levels less than the PRGs. Backfilled areas will be seeded and mulched in accordance with the Plan of Operations. Soil samples will be collected of all stockpiled soils for waste characterization purposes (full TCLP analysis). Non-hazardous waste from the site will be transported to the Erie County Landfill for subsequent disposal. Hazardous waste, if present, will be transported to Environmental Quality's (EQ) Wayne Disposal Landfill in Michigan for subsequent disposal.

### 3.4.5 Project Personnel

The collection of quality data and the completion of any given project are strongly affected by the project organization. A project that is properly organized with personnel responsibilities well-delineated results in a successful project conclusion. A listing of functional areas and qualified personnel are given for this project.

- A. **Government Technical POC** —This is the technical point of contact (POC) representing the USACE who will serve as a liaison between the USACE and the contractor.

<u>USACE POC</u>	<u>Phone Number</u>
Lisa Humphreys	(304) 529-5953

- B. **NASA POC**— This is the technical point of contact (POC) representing NASA.

<u>NASA POC</u>	<u>Phone Number</u>
Robert Lallier	(419) 621-3234

- C. **Contractor's Project Manager** – WasteTron's Project Manager provides technical insight and provides supervision for the project. The Project Manager has overall responsibility to see that the project is completed in accordance with the Scope of Work.

<u>WasteTron Inc. Project Manager</u>	<u>Phone Number</u>
Steve Arbogast	(304) 755-8448
Cellular phone	(304) 389-9580

- D. On-Site Supervisor**—The On-Site Supervisor will be in charge of field activities when the Project Manager is away from the site. It is anticipated that the Project Manager will be on-site for the majority of the project.

<u>On-Site Supervisor</u>	<u>Phone Number</u>
Malcolm Slone	(304) 755-8448
Cellular phone	(304) 633-2373

- E. Site Safety and Health Officer (SSHO)** – This person is responsible for safety on site. A resume for the SSHO is included in Appendix B with the training certificates. The SSHO is an employee of Pinnacle Environmental, a company specializing in safety and health issues.

<u>SSHO</u>	<u>Phone Number</u>
Andrea Thomas	(304) 757-5204

- F. QC Officer**—This person is responsible for quality control (QC) at the site. This person has the authority to stop the work if QC is not being met. The QC Officer shall be responsible for sampling activities and field screening of samples.

<u>WasteTron QC Officer</u>	<u>Phone Number</u>
Senah Gussler	(304) 755-8448

- G. Field Personnel** – These personnel are responsible for assisting the Project Manager in completing the tasks required under this contract.

<u>WasteTron Field Personnel</u>	<u>Phone Number</u>
Rick Boggs	(304) 755-8448
Travis Engle	
Gary Henry	
Lynn Moles	
Chester Porter	
Malcolm Slone	
Dwayne James	

- H. WasteTron’s Independent Quality Control Team**-- An internal quality control team will independently review the work plans and reports to ensure that they meet requirements of the Scope of Work.

<u>WasteTron Independent Quality Control Team</u>	<u>Phone Number</u>
David Beam	(740) 574-6144
Chris Burke	

- I. **REIC Laboratory**—Samples will be sent to the following USACE certified laboratory. REIC Laboratory is located in Beaver, West Virginia.

<u>REIC Contact</u>	<u>Phone Number</u>
Grant Wilton	(800) 999-0105

- J. **Disposal Facility for Contaminated Soil**— Non-hazardous soil removed from the site will be disposed of at the Erie County Landfill.

<u>Erie County Landfill</u>	<u>Phone Number</u>
Fred Dobbert	(419) 433-3624

- K. **Barnes Nursery**—This company may be used for the transportation of any non-hazardous materials removed from the site and may be used to transport clean backfill material to the site.

<u>Barnes Nursery Contact</u>	<u>Phone Number</u>
Leslie Morgan	(800) 421-8722

- L. **Mountain State**—Personnel from Mountain State will perform a survey of the 30 areas to be excavated.

<u>Mountain State Contact</u>	<u>Phone Number</u>
Jim Young	(304) 949-4762

- M. **Dart Trucking**— In the event that some of the soil does not pass the TCLP test for disposal at the Erie County Landfill then Dart Trucking will be responsible for the transportation of material to EQ Environmental located in Michigan.

<u>Dart Trucking Contact</u>	<u>Phone Number</u>
Bill McCluskey	(800) 541-8206 Extension 192

- N. **EQ Environmental**—The hazardous disposal facility for the contaminated soil is EQ Environmental located in Michigan.

<u>EQ Environmental Contact</u>	<u>Phone Number</u>
Debbie Chamberlain	(800) 592-5489

- O. **Enviro-Clean Inc.**—Non-hazardous investigation derived waste (IDW) containing liquids will be transported to Enviro-Clean Inc. located in Wooster, Ohio for ultimate disposal.

<u>Enviro-Clean Inc.</u>	<u>Phone Number</u>
Robert Jarrett	(330) 264-8080

- P. Severson**—Personnel from Severson will perform the soil treatment of the lead impacted soils. The Severson Contact is Chuck McPheeters. Mr. McPheeters is not expected to be on-site; however, one or more of the other personnel listed from Severson will be on-site.

<u>Severson Contact</u>	<u>Phone Number</u>
Chuck McPheeters	(812) 988-9930
Rance Sundquist	
William Schilling	
Kurt McAllister	

- Q. Eco First**—This company will be responsible for the transportation of any hazardous liquid IDW to EQ Environmental for disposal.

<u>Eco First Contact</u>	<u>Phone Number</u>
Dana Tomes	(304) 736-7303

#### **4.0 Internal Quality Control**

The project will be conducted under the guidance of a Project Manager. The Project Manager will be responsible for ensuring a quality product in the functional area through internal checks and reviews. An internal quality control team will independently review the work plans and reports. This work will be conducted with full communication between team members. Review of problems shall be in writing. Comments from the independent quality control team will be resolved or incorporated in the work plans and reports generated for this project. Only quality products will be released from the review team after signoffs.

##### **4.1 Independent Quality Control Team (IQCT)**

In addition to the review of the plans/report by the Project Manager, two independent reviewers (1 senior reviewer and 1 peer reviewer) shall review all project submittals. The Senior Reviewer will perform a review of all plans for precision, accuracy, representativeness, comparability, completeness, and verification that the work has been conducted in accordance with the SOW, policies, and guidelines. All comments resulting from the various reviews will be resolved and/or incorporated in the project submittals. The Senior Reviewer for this project is:

<u>Senior Review</u>	<u>Phone Number</u>
David Beam	(740) 574-6144

A Peer Review of the plans will be performed to determine their adequacy, completeness, and verification that the work was conducted in accordance with the scope of work, policies and guidelines.

Peer Review  
Chris Burke

Phone Number  
(740) 574-6144

Appendix A contains resumes for members of the IQCT team, the Project Manager, and the SSHO.

## **5.0 Project Schedule**

The proposed project schedule is as follows:

Submission of 10 copies of the Draft Site-Specific Safety and Health Plan (SSHP), the Draft Quality Control Plan (QCP), and the Draft Plan of Operations	July 29, 2002
Submission of six copies of the Final SSHP, QCP, and Plan of Operations	5 days after receipt of comments but prior to beginning intrusive fieldwork
Submission of Draft Remedial Action Summary Report	120 days after notice to proceed
Submission of Final Remedial Action Summary Report	150 days after notice to proceed

**APPENDIX A. Resumes**

Rt. 1, Box 33-B  
Poca, WV 25159

**David F. Beam, Jr.**  
PROJECT MANAGER

(304) 755-8448  
dbeam@wastetron.com

### General Qualifications

Mr. Beam has more than 24 years of environmental experience. He established WasteTron's Wheelersburg, OH office and serves as project manager for the company. Mr. Beam provides consultation for industrial, municipal and commercial clients regarding industrial and hazardous waste management, environmental permitting, assessment, remediation and negotiation with regulatory agencies.

Before joining WasteTron, Mr. Beam served in several roles within the environmental industry. Previous positions include: Chemical Analyst with Mallinckrodt Chemicals, Research and Development Chemist with DataBeam Corp., Analyst and Environmental Consultant with Loss Control Industrial Hygiene, Environmental Chemist with Commonwealth Technology, Pre-Treatment Coordinator-Chemist with Frankfort Municipal Sewer Board, and Industrial Pre-Treatment Administrator with the City of Ashland, KY.

### Experience Highlights

**- United State Army Corps of Engineers**

Served as Senior Project Manager on several ASTM Phase I Environmental Site Assessments for the USACE. Under the 202 Program, Congress mandated that these properties be either flood-proofed or acquired by the USACE. Prior to purchase or invasive work on the properties, the USACE needed to assess the environmental condition of each property. These properties are located within the floodplain of various rivers and streams in Mingo, McDowell, and Greenbrier County West Virginia as well as Martin County Kentucky.

**- Heiners Bakery**

Performed a Phase I Environmental Site Assessment on each facility for Heiners Bakery according to ASTM standards. This assessment consisted of an investigation to determine if there were any recognized environmental conditions on any of the properties. Included a thorough inspection of each facility, a review of all standard environmental record sources, producing a site sketch of each facility, investigation of all current and past uses of the properties and adjoining properties, and conducting interviews. All of this information was organized and presented in a final report.

**- Town of Wytheville, Virginia**

Served as Lead Consultant for the Town of Wytheville, Virginia, to develop and implement an industrial pretreatment program. The program consisted of several elements, including a wastewater user survey, calculation of WWTP headworks loadings and local discharge limits, development of inspection and documentation procedures, development and negotiation of industrial user discharge permits, sampling and analysis of all potentially permitted industries, and final submission of the program to VDEQ. Ten industrial users were identified and permitted. Most of the users were permitted with requiring installation of additional treatment equipment. The project was considered a great success by the Town, and Virginia DEQ.

**- Logan Corporation**

Served as Lead Consultant for Logan Corporation to obtain stormwater permits for each of its facilities. Included sampling and analysis, site inspections, and producing applicable Stormwater Pollution Prevention Plans and Groundwater Protection Plans for each facility.

# **CHRISTOPHER W. BURKE**

2790 Swauger Valley Rd.  
Sciotoville, OH 45662  
(614) 776-4136

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## **EDUCATION:**

**Shawnee State University in Portsmouth, OH**  
**Bachelor of Science, Natural Science, 1995**

**Hocking Technical College in Nelsonville, OH**  
**Associate in Forestry 1975/1976**

## **EXPERIENCE:**

April 1995-Present

**WasteTron, Inc.**  
Wheelersburg, OH  
**Project Manager**

Responsible for managing all of the various phases of a broad range of environmental projects. Typical responsibilities include: working with clients and regulatory agencies; coordinating and supervising field activities; Environmental consulting and; writing technical reports. Some of the types of projects that I am responsible for include: Site assessments; sampling and analysis; Transportation and disposal of hazardous and non-hazardous wastes; UST removals and installations; Soil and groundwater remediation; Waste management Plans', ground- water Protection Plans, and various other consulting projects. I was instrumental in developing the "Comprehensive Waste Management Program" for Waste-Tron, Inc. This program was designed to help hazardous waste generators to comply with state and federal hazardous waste regulations.

Sept.1993-April 1994

**Shawnee State University**  
Portsmouth, OH  
**Lab Assistant**

Coordinated and maintained chemical laboratories which included setting up experiments, preparing chemical solutions, and maintaining laboratory equipment. I also assisted faculty with chemistry research projects.

## **REFERENCES:**

Available upon request.

# **STEVEN S. ARBOGAST**

250 Blue Creek Road  
Elkview, West Virginia 25071  
(304) 965-0473

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## **EDUCATION:**

**Ben Franklin Career Center in Dunbar, WV**  
**Underground Mining, 80 hours, 1977**

**Carver Career Center in Belle, WV**  
**Mine Maintenance, 1975-76**

**Coal Miner's Certificate (Surface)**  
**Surface Construction Supervisor**  
**Class A Drivers License**

**Herbert Hoover High School in Clendenin, WV**  
**1976 Graduate**

## **EXPERIENCE:**

Mar. 1997-Present

**WasteTron, Inc.**  
Poca, West Virginia  
**Environmental Project Manager**

Market, direct, and manage excavation and reclamation projects including, pond and drainage construction, highwall, spoil, and refuse reclamation at active and inactive coal mines.

Dec. 1996-Mar. 1977

**Knuck Clearing Company**  
South Charleston, West Virginia  
**Heavy Equipment Operator**

Clean water treatment ponds, construction ponds, roads, and evaporation cells at active coal mines. Operated various sizes of equipment including dozers and excavators.

Feb. 1993-Dec. 1996

**Kimberly Construction Company**  
Marmet, West Virginia  
**General Superintendent**

Market, bids, and supervise construction work for various coal

companies. New construction of ponds, roads, drainage, and face up of deep mines. Reclamation of highwalls, ponds, spoil piles, refuse dumps, slips, and slides.

**June 1991-Feb. 1993**

**Knuck Clearing Company**  
Belle, WV  
**Heavy Equipment Operator**

Clearing and grubbing land for strip mines and regrading slopes at various mine sites. Operated various sizes of equipment including dozer and excavators.

**Jan.1990-June 1991**

**WasteTron, Inc.**  
Charleston, West Virginia  
**Environmental Technician**

Certified for underground storage tank testing. Completed 40 hour OSHA Hazwopper training. Duties included waste removal and disposal.

**Feb. 1988-Jan. 1990**

**Fetsko Forestry**  
West Middlesex, PA  
**Dozer Operator**

Operated 650-G John Deere Dozer .

**June 1986-Feb. 1988**

**Christopher Construction**  
Columbus, OH  
**Truck Driver**

Heavy hauler, drove Mac Superliner tractor and Western Star Tractor .

***REFERENCES:***

Available upon request.

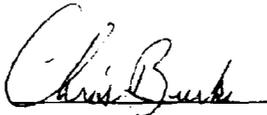
**APPENDIX B**

**QC Documentation**

### Quality Control Certification

## Stabilization, Excavation and Disposal of Contaminated Soil Plum Brook Ordnance Works Sandusky, Ohio

This document is provided to certify that the Project Manager and the Independent Quality Control Team (IQCT) have reviewed the Quality Control Plan. All comments resulting from the various reviews have been resolved and/or incorporated.

<u>Assignment</u>	<u>Name</u>	<u>Signature</u>	<u>Date</u>
<u>Senior Review</u>	David Beam		<u>7-17-02</u>
<u>Eng. Review</u>	Chris Burke		<u>7-17-02</u>
<u>Project Manager Review</u>	Steve Arbogast	_____	_____

# Quality Control Certification

## Stabilization, Excavation and Disposal of Contaminated Soil Plum Brook Ordnance Works Sandusky, Ohio

This document is provided to certify that the Project Manager and the Independent Quality Control Team (IQCT) have reviewed the Quality Control Plan. All comments resulting from the various reviews have been resolved and/or incorporated.

Assignment

Name

Signature

Date

**Senior Review**

David Beam

\_\_\_\_\_

\_\_\_\_\_

**Peer Review**

Chris Burke

\_\_\_\_\_

\_\_\_\_\_

**Project Manager Review**

Steve Arbogast



7-22-02

## QUALITY CONTROL REVIEW CHECKLIST

The following checklist is provided for QC review of the QCP for this project.

1. Purpose \_\_\_\_\_
2. Scope of QA/QC Services \_\_\_\_\_
3. General Project Information \_\_\_\_\_
4. Internal Quality Control \_\_\_\_\_
5. Project Schedule \_\_\_\_\_

### APPENDICES

- |            |                     |       |
|------------|---------------------|-------|
| APPENDIX A | Resumes of the IQCT | _____ |
| APPENDIX B | QC Documentation    | _____ |

## Quality Control Field Oversight Checklist General Procedures

The following checklist is provided for use in the field to assure that general QC procedures are followed. The Project Manager or his designee should complete and sign a checklist for the project site.

Project Site \_\_\_\_\_

Date: \_\_\_\_\_

Personnel on-site: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_

		Yes	No	N/A
1.	Did the Field Supervisor or Project Manager discuss the following items with the field crew prior to beginning field activities?			
	Site Security issues	_____	_____	_____
	Contents of the Plan of Operations	_____	_____	_____
	Contents of Site-Specific Safety and Health Plan	_____	_____	_____
	Contents of Quality Control Plan	_____	_____	_____
2.	Was the USACE notified in writing 2 weeks prior to mobilizing to the site?	_____	_____	_____
3.	Was the USACE provided a time schedule for field work?	_____	_____	_____
4.	Were digging permits obtained from NASA prior to mobilizing to the site for excavation activities?	_____	_____	_____
5.	Did WasteTron personnel and subcontractors view the safety/orientation video prior to beginning work?	_____	_____	_____

	Yes	No	N/A
6. Were digging permits limits strictly adhered to?	_____	_____	_____
7. Were excavation limits survey by a qualified surveyor prior to performing excavation activities?	_____	_____	_____
8. Were all drawings done in English units and of engineering quality with sufficient detail to show interrelations of major features on the site map (i.e. north arrows, keys, scales, etc.)?	_____	_____	_____
9. Were all drawings done in Microstation 95 (or the newest version) and in conformance with the current USACE CADD standards?	_____	_____	_____
10. If drawings are larger than 8.5" by 11" were they folded to 8.5" x 11" size?	_____	_____	_____
11. At a minimum, photos shall be taken of the following site activities.			
A. Surveying	_____	_____	_____
B. Sites prior to excavation (including Borrow Area)	_____	_____	_____
C. Excavation	_____	_____	_____
D. Stabilization of soil	_____	_____	_____
E. Loading of soil for transportation	_____	_____	_____
F. Sampling activities	_____	_____	_____
G. Decontamination activities	_____	_____	_____
H. Storage/handling of IDW	_____	_____	_____
I. Backfilling of the excavation pits	_____	_____	_____
J. Seed and mulching of all disturbed areas	_____	_____	_____
12. If water was generated during excavation, was it properly containerized, sampled, analyzed, and disposed in accordance with state and federal regulations?	_____	_____	_____
13. Prior to disposal, were excavated and stabilized soils properly stored until analytical results were available?	_____	_____	_____
14. Was clean fill material placed in the excavation pits? (Note: Borrow materials must be tested prior to use as fill)	_____	_____	_____
15. Were excavation areas rough graded as necessary to achieve proper drainage and reseeded/mulched?	_____	_____	_____
16. Was all IDW containerized and sampled?	_____	_____	_____

	Yes	No	N/A
17. Were all IDW drums labeled as to project name, contents, date of collection, and generator? (Note: waste from different sites shall not be mixed)	_____	_____	_____
18. Were the IDW drums secured with tarps, ropes and placed on pallets?	_____	_____	_____
19. Was the USACE POC notified prior to the disposal of the IDW?	_____	_____	_____
20. Did all Contractor personnel document all correspondence, phone conversations and meetings with the USACE?	_____	_____	_____
21. Was water used at the site to control dust during excavation activities?	_____	_____	_____
22. Were flagmen or temporary signage used when working near roads?	_____	_____	_____

## Quality Control Field Oversight Checklist HTRW Sampling Procedures

The following checklist is provided for use in the field to assure that general QC procedures are followed. The Project Manager should complete and sign a checklist for the project site.

Project Site \_\_\_\_\_

Date: \_\_\_\_\_

Personnel on-site: \_\_\_\_\_

Signature: \_\_\_\_\_

What type and how many samples were collected? \_\_\_\_\_  
\_\_\_\_\_

Describe the sampling procedure. \_\_\_\_\_

		Yes	No	N/A
1.	Were representative samples collected?	_____	_____	_____
2.	Were samples properly placed into sample containers?	_____	_____	_____
3.	Was the following information recorded on the sample labels?			
	Site location	_____	_____	_____
	Project number	_____	_____	_____
	Sample Identification number assigned in field	_____	_____	_____
	Description of the sample	_____	_____	_____
	Time and date sample was taken	_____	_____	_____
	Notation of whether preservatives were added to the sample	_____	_____	_____
	Type of preservative	_____	_____	_____
	Type of analysis requested	_____	_____	_____

**Quality Control Field Oversight Checklist**  
**HTRW Sampling Procedures**  
 Continued

	Yes	No	N/A
4. Were samples chilled with ice immediately after collection?	_____	_____	_____
5. Was a COC form filled out on-site?	_____	_____	_____
6. Was the following information recorded on the COC form?			
Project number	_____	_____	_____
Project manager	_____	_____	_____
Site location	_____	_____	_____
Client contact	_____	_____	_____
Description of the sample	_____	_____	_____
Time and date sample was taken	_____	_____	_____
Notation of whether preservatives were added to the sample	_____	_____	_____
Type of preservative	_____	_____	_____
Type of sample such as a grab or composite	_____	_____	_____
Matrix of sample	_____	_____	_____
Amount of sample being transported to the laboratory	_____	_____	_____
Sample number or ID assigned in the field	_____	_____	_____
The appropriate analytical parameters to be tested	_____	_____	_____
7. Were COC seals placed on each sample container (except samples for volatiles analysis)?	_____	_____	_____
8. Was the COC form signed and dated?	_____	_____	_____

**Quality Control Field Oversight Checklist**  
**HTRW Sampling Procedures**  
 Continued

		Yes	No	N/A
9.	Were the following packing and shipping procedures performed?			
	All containers, except the volatile organic analysis (VOA) vials, are to be taped shut.	_____	_____	_____
	Was the drain plug taped shut on the picnic cooler from the inside and outside, and a large plastic bag used as a liner for the cooler?	_____	_____	_____
	Was inert packing material placed in the bottom of the liner?	_____	_____	_____
	Were the sample containers placed upright in the lined picnic cooler in such a way that they do not touch and will not touch during shipping?	_____	_____	_____
	Were plastic ice packs or ice placed in double plastic bags placed around, among, and on top of the sample bottles?	_____	_____	_____
	Was the paperwork going to the laboratory placed inside a sealed plastic bag, which was taped to the inside lid of the cooler?	_____	_____	_____
	Was the cooler taped shut with strapping tape?	_____	_____	_____
	Was at least two signed custody seals placed on the cooler (one in front, the other on the side)?	_____	_____	_____
10.	Was the proper sampling procedure followed as outlined in the Sampling and Analysis Section of the Plan of Operations?	_____	_____	_____
11.	Was sampling equipment properly decontaminated between samples?	_____	_____	_____
12.	Was a decontamination area located where the cleaning activities would not cross-contaminate clean and/or drying equipment?	_____	_____	_____

**Quality Control Field Oversight Checklist**  
**HTRW Sampling Procedures**  
 Continued

		Yes	No	N/A
13.	Was cleaned equipment properly stored?	_____	_____	_____
14.	Were the cleaning and decontamination procedures conducted in accordance with the project plans?	_____	_____	_____
15.	Were sampling locations properly selected?	_____	_____	_____
16.	Were photographs taken of sampling/decon activities?	_____	_____	_____
17.	Was sampling equipment constructed of Teflon, polyethylene, glass, or stainless steel?	_____	_____	_____
18.	Were samples collected in proper order? (least suspected contamination to most contaminated?)	_____	_____	_____
19.	Were clean disposable latex or vinyl gloves worn during sampling and field screening tests?	_____	_____	_____
20.	Were gloves changed between sampling events and screening tests?	_____	_____	_____
21.	Were equipment rinse blanks collected after field cleaning?	_____	_____	_____
22.	Were proper sample containers used for samples?	_____	_____	_____
23.	Were duplicate and split samples collected?	_____	_____	_____
24.	Were samples properly field preserved?	_____	_____	_____
25.	Were field and/or trip blanks utilized?	_____	_____	_____
26.	Were field screening tests utilized for nitroaromatics and lead (where appropriate) prior to collection of the excavation pit confirmation samples?	_____	_____	_____
27.	Were the procedures for the field test kits, as described in the Plan of Operations followed?	_____	_____	_____
28.	Was all information generated during the field screening activities recorded in accordance with the Plan of Operations requirements?	_____	_____	_____

CONTRACTOR'S QUALITY CONTROL REPORT (QCR) (ER 1180-1-6)		DATE:	REPORT NO.
CONTRACT NUMBER AND NAME OF CONTRACTOR  <i>WasteTron Poca, WV</i>		DESCRIPTION AND LOCATION OF THE WORK: Tracts:  <i>SEE BOTTOM OF PAGE</i>	
WEATHER CLASSIFICATION: CLASS A No interruptions of any kind from weather conditions occurring on this or previous shifts. CLASS B Weather occurred during this shift that caused a complete stoppage of all work. CLASS C Weather occurred during this shift that caused a partial stoppage of work. CLASS D Weather overhead excellent or suitable during shift. Work completely stopped due to results of previous adverse weather. CLASS E Weather overhead excellent or suitable during shift but work partially stopped due to previous adverse manner. OTHER Explain.			CLASSIFICATION: CLASS _____ TEMPERATURE: MAX ___ MIN ___ PRECIPITATION: INCHES _____
CONTRACTOR/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY: ( <i>Attach list of items of equipment either idle or working as appropriate.</i> ) a. <u><i>Pickup truck, trailer, riding lawn mower, weed eater, tractor with brush hog</i></u> b. _____ c. _____ d. _____ e. _____ f. _____ g. _____			
1. WORK PERFORMED TODAY: ( <i>Indicate location and description of work performed. Refer to work performed by prime and /or subcontractors by letter in Table above.</i> )  <i>Performed general lawn mowing</i>			
2. TYPE AND RESULTS OF INSPECTION: ( <i>Indicate whether: P-Preparatory, I-Initial, or F-Follow-up and include satisfactory work completed or deficiencies with action to be taken.</i> )  <i>N/A</i>			
3. TESTS REQUIRED BY PLANS AND/OR SPECIFICATIONS PERFORMED AND RESULTS OF TESTS:  <i>N/A</i>			

4. VERBAL INSTRUCTIONS RECEIVED: (List any instructions given by Government personnel on construction deficiencies, retesting required, etc., with action to be taken.)

NONE

5. REMARKS: (Cover any conflicts in plans, specifications or instructions: acceptability of incoming materials; offsite surveillance activities; progress of work, delays, causes and extent thereof; days of no work with reasons for same.)

N/A

6. SAFETY: (Include any infractions of approved safety plan, safety manual or instructions from Government personnel. Specify corrective actions taken.)

ALL SAFETY EQUIPMENT WORN

INSPECTOR

CONTRACTOR'S CERTIFICATION: I certify that the above report is complete and correct and that all material and equipment used, work performed and tests conducted during this reporting period were in strict compliance with the contract plans and specifications except as noted above.

CONTRACTOR'S APPROVED AUTHORIZED REPRESENTATIVE

## Comments on Quality Control Plan

### Stabilization, Excavation and Disposal of Contaminated Soil Plum Brook Ordnance Works Sandusky, Ohio

The following comments were provided by the WasteTron Project Manager and the Independent Quality Control Team (IQCT). All comments resulting from this review have been resolved and/or incorporated.

1. Section 2.10; first paragraph; third sentence: This sentence does not appear to be right justified. Please change.

Response: Concur, change made

2. Section 3.1: Should PAHs be mentioned in this description? If so, please add.

Response: PAH's do not need to mention in this description

3. Section 3.4.1; third paragraph; first sentence: Should "building of wood" be "buildings of wood"? If so, please change. Also in third sentence is the word "liens" the correct word? If not please change. Also, please end that sentence with "Department in late 1945.", and begin the next sentence with "During decontamination...". In the fourth sentence (as currently worded), is "...decontamination of the proper..." correct? Should "proper" be "property"? If so, please change.

Response: Concur, changes made

4. Section 3.4.1; last paragraph; first sentence: Insert "of" between "TNTB consists" and "an area...".

Response: Concur, change made

5. Section 3.4.2; first paragraph; fifth sentence: The use of "COC" for "constituents of concern" conflicts with "COC" for "chain-of-custody". Please resolve.

Response: Concur, COC will refer to "constituents of concern". No references will be made to chain-of-custody using COC.

6. Section 3.4.2; first paragraph; seventh sentence: Please change "... (PCBs), polynuclear aromatic..." to "... (PCBs) and polynuclear aromatic...".

Response: Concur, change made

7. Page 9: The Table 1 title line appears on the bottom of this page. Please push down to top of next page.

Response: Concur, change made

8. Section 3.4.3; Task 3: Is "...on the disposal Investigation Derived Waste" correct? If not, please change. Also, should "...Material Handling Plan" be "Materials Handling Plan"? If so, please change.

Response: Concur, Changes made

9. Page 12 (top of page); Building 452 Bi-Tri House: There are two periods at the end of the second sentence.

Response: Concur, one period was removed

10. Page 12; Building 453 Fortifier House: Remove "The" in front of "WasteTron".

Response: Concur, change made

11. Appendix B: Some of the lines on the Quality Control Field Oversight Checklist do not line up properly. Please make sure these lines are justified.

Response: Concur, change made

12. Add Mesenburg Brothers as a possible source for borrow and for transportation.

Response: Concur, change made

13. Check section 2.8, it seems to be repetitive

Response: Concur, change made

14. Section 2.8.2 -2<sup>nd</sup> paragraph change use or "used"

Response: Concur, changed made

## Comments on Quality Control Plan

### Stabilization, Excavation and Disposal of Contaminated Soil Plum Brook Ordnance Works Sandusky, Ohio

The following comments were provided by the Huntington District of the USCAE. All comments resulting from this review have been resolved and/or incorporated.

1. Comment: Section 2.8.1. It is stated that field oversight checklists are provided in Appendix B and that more detailed QC information is contained in the Plan of Operations. Would the Sampling and Analysis Plan also have additional QC information regarding QC of the chemical data, or is the SAP actually part of the Plan of Operations?

Response: The field oversight checklists in Appendix B are identical to the ones in the Plan of Operations. Pursuant to the SOW, the Sampling and analysis Plan is to be made part of the plan of operations.

2. Comment: Section 2.10. NASA also requires that contractors review a safety video prior to any on-site activities. Please include a short discussion in this section.

Response: Concur, a statement was added to this section indicating that WasteTron personnel and subcontractors are required to view a safety/orientation video prior to beginning work.

3. Comment: Section 3.4.1, 3<sup>rd</sup> paragraph, 5<sup>th</sup> sentence. The words "*After decontamination of...*" could be deleted and the sentence could be revised to "*The property was...*" since *decontamination* is mentioned at the end of the sentence.

Response: Concur, *After decontamination of...* was deleted and the sentence was revised to "*The property was...*"

4. Section 3.4.2, 1<sup>st</sup> paragraph, last sentence. It is stated that if lead is found at levels exceeding regulatory levels it will need to be disposed. Although lead was not listed as a COC, it is recommended that the regulatory level be stated in this section. There should be two levels for lead; the cleanup level and the level that is to be disposed of at off-site facility.

Response: Concur, several sentences were added indicating that the RCRA level for lead is 5 mg/l based on TCLP lead analysis and that the confirmation sampling would be compared to a total lead value of 400 mg/kg

5. Section 3.4.3, *Task 6*. For brevity, please consider if re-stating all the areas to be remediated is actually necessary in the QCP. This may be better for the Plan of Operations, and just briefly state that Task 6 involves the excavation of contaminated material (soil). It is noted; however, that excavation and disposal of PCB-contaminated soil is not mentioned.

Response: Concur, the 30 areas where excavation to be performed was omitted. As for PCB contaminated soil, nothing was added to this section concerning it. Refer to response for comment 6 concerning PCBs.

6. Section 3.4.4

- a. 2<sup>nd</sup> paragraph, 4<sup>th</sup> and 5<sup>th</sup> sentences. There is no mention of PCB-contaminated soil.
- b. 6<sup>th</sup> and 7<sup>th</sup> sentences. *Maectite* should be revised to *Maectite*<sup>®</sup>.

Response: Text was added indicating that low level PCBs were detected at some of the excavation; however, pursuant to the SOW, PCBs were considered a non-issue and no sampling was being performed for them on the confirmation or disposal sampling. The registered trademark symbol was added after MAECTITE.

7. Section 3.4.5, P. It is noted that personnel handling the disposal of hazardous IDW containing liquids has not been mentioned.

Response: Concur, please note that Echo-first, a hazardous waste transportation company has been added to the list

8. Section 4.1. It is noted that a resume for Chris Burke was not included in Appendix A.

Response: Concur, Chris Burke's resume has been added

9. Appendix B, QC Checklist, General Procedures. It is recommended that the site safety/orientation that is presented by PBOW personnel be noted; all new contractors must view this video presentation prior to performing any work on site.

Response: Concur, this was added as #5 to the general checklist