

**Final
Quality Control Plan**

***Lime Treatment Pilot Study
Plum Brook Ordnance Works –Pentolite Road Red Water Ponds
Sandusky, Ohio***

Contract No. W91237-06-C-0006

Prepared for:

Department of the Army
Huntington District, Corps of Engineers
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DEFINITIONS AND ACRONYMS

BTEX	Benzene, Toluene, Ethylbenzene, Xylene
COC	Contaminant of Concern
COCs	Contaminants of Concern
DERP-FUDS	Defense Environmental Restoration Program for Formerly Used Defense Sites
DNT	Dinitrotoluene
DRO	Diesel Range Organics
EPA	Environmental Protection Agency
GSA	General Services Administration
HAZWOPER	Hazardous Waste Operations and Emergency Response
HI	Hazard Index
HTF	Hypersonic Tunnel Facility
HTRW	Hazardous, Toxic, and Radioactive Waste
HSWA	Hazardous and Solid Waste Amendments
IDW	Investigation Derived Waste
ILCR	Incremental Lifetime Cancer Risk
IQCT	Independent Quality Control Team
ISRA	Interim Soil Removal Action
IT	International Technology Corporation
MCL	Maximum Contaminant Level
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level

DEFINITIONS AND ACRONYMS (continued)

NASA	National Aeronautics and Space Administration
NCP	National Contingency Plan or National Oil and Hazardous Substance Pollution Contingency Plan
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
NTCRA	Non-Time Critical Removal Action
ORO	Oil Range Organics
OSHA	Occupational Safety & Health Administration
PAH	Polynuclear Aromatic Hydrocarbons
PBOW	Plum Brook Ordnance Works
PBS	Plum Brook Station
PCBs	Polychlorinated Biphenyls
POC	Point of Contact
PQL	Practical Quantitation Limit
PPE	Personal Protective Equipment
PRGs	Preliminary Remediation Goals
QA	Quality Assurance
QC	Quality Control
QAP	Quality Assurance Plan
QCP	Quality Control Plan
RAB	Restoration Advisory Board
RBCs	Risk Based Concentrations

DEFINITIONS AND ACRONYMS (continued)

RCRA	Resource Conservation and Recovery Act
RGO	Remedial Goal Objective
RI/FS	Remedial Investigation/Feasibility Study
RPDs	Relative Percent Differences
SARA	Superfund Ammendments and Reauthorization Act
SOW	Scope of Work
SSHO	Site Safety and Health Officer
SSHP	Site-Specific Safety and Health Plan
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
TCLP	Toxicity Characteristic Leaching Procedure
TNB	Trinitrobenzene
TNT	Trinitrotoluene
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons
TSDF	Treatment, Storage, and Disposal Facility
TSS	Total Suspended Solids
UCL	Upper Confidence Limit
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

Final Quality Control Plan

Lime Treatment Pilot Study Plum Brook Ordnance Works –Pentolite Road Red Water Ponds Sandusky, Ohio

Contract No. W91237-06-C-0006

1.0 Purpose

This McTech Corp 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. McTech Corp 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.

The Huntington District of the United States Army Corps of Engineers (USACE) has achieved International Organization for Standardization (ISO) 9000 certification. McTech Corp is dedicated to providing quality services to the USACE in order to assist them in continuing to meet the ISO 9000 standards.

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, November 2003

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

DoD "*Quality Systems Manual for Environmental Laboratories*", Version 3, January 2006

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 USACE.

2.1 Training

All field personnel performing intrusive work and 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 on-site project manager that a project is in the planning status and informs the on-site manager what personnel he/she would like to use for the project.
- An initial project team will be formed consisting of the Project Manager, on-site 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 Point of Contact (POC) and the National Aeronautics and Space Administration (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 Plum Brook Station (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 a minimum, one senior reviewer and one peer reviewer. Reviews will be performed by personnel who are knowledgeable concerning regulatory requirements and/or who are

experienced in performing field work associated with this project. All comments resulting from the technical reviews are resolved and/or incorporated in the project submittals.

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. 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.

2.4 Document Control

Project technical and administrative files will be maintained at McTech Corp's West Virginia Regional office located in St. Albans.

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. A Project Manager 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. McTech Corp will use Research Environmental and Industrial Consultants (REIC) Laboratory to perform laboratory analysis for this project. REIC Laboratory is an USACE certified laboratory. Pursuant 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, McTech Corp, and the USACE will jointly make the decision regarding re-analysis.

2.8 Field Quality Control

2.8.1 Field Quality Control 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 project manager 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 Quality Control for Field Activities

Field quality control for site activities is important to the proper completion of a project. The Project Manager, and/or the On-site project manager is responsible for ensuring that personnel and subcontractors 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 project manager and the Project Manager. General Quality Control Field Oversight Checklists to be used for field activities are provided in Appendix B.

The Project Manager or the On-site project manager will be responsible for overseeing the work performed by McTech Corp personnel and McTech Corp'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

During the field investigation and excavation activities, Quality Control Reports (QCR) will be prepared daily, dated, and signed by the On-site project manager or the QC Officer. McTech Corp will utilize the USACE QCR Report Form (see Appendix A). 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 McTech Corp 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 PBS is responsible for overall security at the site. Pursuant to the SOW, coordination with PBS personnel will be conducted by USACE to ensure that McTech Corp is allowed access to/from the site to perform all activities during this removal action. McTech Corp and its subcontractors shall be required to enter/exit through the PBS security gate. McTech Corp is responsible for ensuring that McTech Corp employees and subcontractors follow all rules set forth by the PBS security. Security requirements, as set forth by PBS, shall not be compromised. McTech Corp personnel and subcontractors are required by NASA to review a safety video prior to performing any on-site activities.

The On-site project manager 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

Lime Treatment of Nitro-aromatic-contaminated Soil in Pentolite Road Red Water Ponds (PRRWP) Area

3.2 Project Location

PRRWP of Plum Brook Ordnance Works (PBOW) located in Sandusky, Ohio

3.3 Customer/Sponsor

USACE, Huntington District (Contract No. W91237-06-C-0006)

3.4 Project Description

3.4.1 Background and Purpose

This purpose of this contract at PRRWP is to study the application of lime for the treatment and reduction of nitro-aromatic contamination in soil found in the PRRWP area of the NASA PBOW site, located in Sandusky, Ohio. The United States Corps of Engineers (USACE) is the responsible authority under the Defense Environmental Restoration Program (DERP) at PBOW. Based on the results of the completed *Interim Soil Removal Action (ISRA) (WTI 2006)* the USACE will investigate the possibility of reducing nitro-aromatic contamination at the PRRWP area applying lime treatment technologies.

The single Contaminant of Concern (COC), 2,4,6 Trinitrotoluene (TNT) is at concentrations that exceed the preliminary remediation goals (PRGs) as identified in the "*Final Action Memorandum for the PRRWP Interim Removal Action* (USACE 2003). The PRGs are based upon Remedial Goal Objectives (RGOs), which are chemical and receptor specific, risk based remedial criteria that capture all the exposure assumptions and toxicological data used in risk assessment. This reduction in nitroaromatic contamination will be done to minimize the threats to, and provide adequate protection to, human health and the environment from exposure to soil at PRRWP.

The *McTech Plan of Operation (2006)* provides complete details of the activities that are to be performed. Section 3.4.5 of this QCP provides a summary of the activities to be performed during this study.

3.4.2 Site Location and History

The former PBOW is located approximately 4 miles south of Sandusky, Ohio and 59 miles west of Cleveland, Ohio. Although the PBOW site is primarily situated in Perkins and Oxford Townships, the eastern edge of the site extends into Huron and Milan Townships. The site 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 by the United States Army in early 1941 as a manufacturing plant for 2,4,6-TNT, DNT, and Pentolite. Production of explosives at PBOW began in December 1941 and continued until 1945.

PBOW Pentolite Road Red Water Ponds (PRRWP) consists of an area of approximately 9 acres located at the north-central portion of the former PBOW. PRRWP is located just south of Pentolite Road, southeast of the former Pentolite Area and approximately one mile north of TNT B. During the operation of the site by the Department of Defense (DOD), the wastewater produced by the purification of TNT within the TNT A and TNT B areas was discharged by means of wooden flumes and/or ceramic pipes into various settling ponds (West Area Red Water Ponds and PRRWP). This wastewater was then transported to a wastewater treatment and incineration area, again, by wooden flumes and elevated pipes into different settling ponds at PRRWP. PRRWP received discharge from Wastewater Treatment Plant #1 that previously existed on site located approximately 700' east of the PRRWP area. Original PRRWP construction plans indicate pond dimensions of 200' wide (east-west) by 400' long (north-south) by 3' deep with a 1' high levee, which created a storage capacity of 182,000 cubic yards of wastewater. NASA had PRRWP filled in 1977 following a breach of the ponds.

NASA acquired the property on March 15, 1963 and currently utilizes the site. The Government Services Administration (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, and 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 PBS of the John Glenn Research Center at Lewis Field. Most of the aerospace testing facilities built at the site in the 1960's are on 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. The remaining excess acreage in the Southwest area was sold to various private concerns. NASA currently controls approximately 6,400 acres of land which includes approximately 5,400 acres within the fence line. Of the acreage inside the fence line, NASA has a use agreement with the Ohio National Guard for 604 acres and the remainder is utilized for

aerospace research as a satellite operation of the Glenn Research Center. The acreage outside the fence remains part of the test facility exclusion zone and is leased to various farmers and the Erie County Conservations League. The details of land transactions are listed in the site management plan (ICI, 1995) and can be found at the NASA PBS.

3.4.3 Overview of Remedy and Proposed Action

To date, an ISRA has been conducted at the PRRWP area and a report prepared that addresses soil contamination limits that still remain in the area. The COC was identified as nitroaromatics, specifically, 2,4,6 TNT. TNT existed in surface soil, subsurface soil, and groundwater, however surface water and sediment were not found to be contaminated.

The objective of ISRA for PRRWP completed in 2003 and the current Lime Treatment Pilot Study at PRRWP is to minimize threats to, and provide adequate protection to, human health and the environment from exposure to contaminants in soil. The remedial objectives identified for soils at PRRWP are to:

- 1.) Minimize the potential for human exposure via incidental ingestion, dermal contact, and inhalation of soil contaminated with nitroaromatics.
- 2.) Minimize the potential for nitroaromatics to migrate from soil at the site to the groundwater.

Due to funding limitations, only the 20' x 20' x 10' area identified in the *PRRWP Final Action Memorandum, USACE (2003)*, has been excavated and backfilled with clean soil. The area was only excavated to a depth of 8' rather than the 10' specified because groundwater was encountered. Exploratory test pits were used in place of continued excavation to determine the horizontal limits of the contamination. Following the test pit activities, confirmation sampling and the calculation of the hazard index (HI) determined that the original extent of contamination was grossly underestimated. Further excavation or treatment is necessary to minimize threats to, and provide adequate protection to, human health and the environment from exposure to the nitro-aromatic contamination in the soil. In addition to the original excavation of 118 cubic yards, approximately 7,600 cubic yards of additional excavation or treatment would be required to remediate PRRWP.

The Lime Treatment Pilot Study project has become available due to newly distributed funding and will investigate the possibility of reducing the TNT found in the area below the PRG level so that the soil can remain on site rather than being disposed of off site.

Project actions consist of (at minimum): excavation, tilling (in lifts between 12" and 18") of the soil with hydrated/ slaked lime (potential for several treatments based on reduction levels achieved during 1st treatment), obtaining a pH that is conducive for treatment to occur, sampling periodically (field and lab confirmation analysis) to determine the decrease in the nitro-aromatics, comparing the reduced levels to the identified preliminary remediation goal (PRG) of 13.8 mg/kg

for TNT. Surveying will also be performed to determine the volumes of soils tested prior to placing the soil back into the ground, seeding area with common grasses occurring naturally in the PRRWP area, and preparing a report documenting the processes performed in this pilot study with its findings. This pilot study will also be presented to a Restoration Advisory Board (RAB) meeting.

In discussion with the Ohio EPA, it was agreed upon that the soil could be placed back in the ground at the PRRWP should the treatment not reduce the TNT levels below the RGO levels. This agreement was based on the facts that future funding will be available for a continuation of the Interim Soil Removal Action on the additional contaminated soil and because this soil was identified as non-hazardous

3.4.4 Overview of Tasks

McTech will provide all equipment, labor, materials, and supervision necessary for the Pilot Study as described by in the SOW. Activities generally consist of excavation, tilling, sampling, replacing soil back into the ground, and site restoration.

The following tasks are required to be performed under this SOW:

- 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
- 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(A&B)** Excavation of contaminated material/ Tilling of hydrated or slaked lime.
- Task 7** Field Screening/ Confirmation Analysis by Laboratory
- Task 8** Site Restoration
- Task 9** Preparation/ Submission of the Draft and Final Lime Treatment Pilot Study for PRRWP.
- Task 10** Public meeting support will be provided to the USACE for the work defined by this contract.

The tasks outlined in this section are described in detail in the Plan of Operations (McTech Corp, October 2006). This work shall be conducted by McTech in an environmentally acceptable manner conforming to existing federal, state, and local regulations under USACE Huntington District (CELRH) supervision.

3.4.5 Summary of Field Activities

In accordance with contract requirements, McTech Corp will notify the USACE POC and provide a schedule of events prior to beginning field activities. McTech Corp has retained Mountain State Company to perform surveying of the PRRWP area. After Mountain State performs the surveys, McTech Corp will submit the survey information with digging permit forms to the NASA PBS Point of Contact (POC). McTech Corp will not perform excavation activities until NASA issues digging permits. McTech Corp 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.

The *McTech Plan of Operation (2006)* provides complete details of the activities that are to be performed. McTech will carefully excavate the soils from 60 feet by 40 feet area in 12 to 18 inch lifts. Each lift will be staged separately and then spread out to a depth of no greater than 18 inches. This will result in a total of 8 treatment piles. The piles will be treated with the addition of hydrated lime and tilling on various frequencies. Sampling activities will include daily field pH measurements and weekly laboratory analysis of the COC 2,4,6 Trinitrotoluene (TNT). At the conclusion, this field pilot study will be able to compare the results achieved via alkaline hydrolysis on a periodic basis, a continuing basis, and the control plot.

3.5 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 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) 399-5953
Cellular	(304) 360-2558

- B. NASA Technical POC**— These are the technical POC’s representing NASA.

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

<u>NASA PBOSG</u>	<u>Phone Number</u>
Gary Ponikvar	(419) 621-3342

- C. Contractor's Project Manager** – McTech Corp’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>McTech Corp Project Manager</u>	<u>Phone Number</u>
Kimberlie Chambers	Cellular (304) 215-0099
	Alternate (218) 330-6436

- D. On-site Project Manager**—The On-site Project Manager will be in charge of field activities in coordination with the Contractor’s Project Manager.

<u>McTech Corp On-site Project Manager</u>	<u>Phone Number</u>
Dan Cashbaugh	(216) 391-7700
	Cellular (216) 404-8109

- E. Site Safety and Health Officer (SSHO)** – The SSHO is responsible for safety on site. This person has the authority to stop work if unsafe conditions warrant.

<u>McTech Corp SSHO</u>	<u>Phone Number</u>
Dan Cashbaugh	(216) 391-7700
James B. Russell (alternate)	Cellular (216) 404-8109

- F. Quality Control Officer (QCO)**—This person is responsible for QC at the site. This person has the authority to stop the work if QC is not being met. The QCO is an employee of McTech Corp and is trained in QC.

<u>McTech Corp QCO</u>	<u>Phone Number</u>
Michael Malloy	(216) 391-7700
	Cellular (216) 857-4517

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

<u>McTech Corp Field Personnel</u>	<u>Phone Number</u>
Dan Cashbaugh	(216) 391-7700
<u>C&K Industrial Services, Inc. Field Personnel</u>	<u>Phone Number</u>
Gary Cooper	(216) 642-0055
	Cellular (216) 956-9253

- H. Independent Quality Control Team (IQCT)** – 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>McTech Corp IQCT</u>	<u>Phone Number</u>
Mark Perkins	(216) 391-7700
Rodney Bumgardner	(304) 201-2205
Alternate Cellular	(304) 545-4481

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

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

- J. Erie County Landfill**— Non-hazardous material removed from the site will be disposed of at the Erie County Landfill.

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

- K. Molnar Construction, Inc.**—This company will be used for the transportation of any non-hazardous materials removed from the site. Additionally, this company will provide and transport clean backfill material to the site from their facility.

<u>Molnar Construction Contact</u>	<u>Phone Number</u>
Matt Molnar	(419) 732-2763
Cellular	(419) 656-3423

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

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

- M. C&K Industrial Services, Inc.**—Non-hazardous IDW containing liquids will be managed by C&K Industrial Services, Inc. located in Cleveland, Ohio.

<u>C&K Industrial Services Inc.</u>	<u>Phone Number</u>
Scott Dean	(216) 642-0055
Cellular	(216) 952-1375

3.5.1 Lines of Authority

The McTech Corp Project Manager has overall responsibility for this project. The QCO and the SSHO have the authority to suspend the project in order to address quality control and safety issues. Refer to Appendix C of the QCP for a copy of the letter authorizing the QCO and the SSHO to perform their duties. Appendix D contains resumes of the Project Manager, IQCT, QCO and the SSHO.

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

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>
Mark Perkins	(216) 391-7700

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.

<u>Peer Review</u>	<u>Phone Number</u>
Rodney Bumgardner	(304) 201-2205
Alternate Cellular	(304) 545-4481

Appendix D contains resumes for members of the IQCT team.

5.0 Quality Control Inspections

The Quality Control Officer shall be responsible for performing a three-phase quality control inspection of all definable work features. Notifications, meetings and plan preparation are not considered definable features of work. The three phases shall include a preparatory phase, an initial phase, and a follow-up phase inspection.

5.1 Definable Features of Work

Quality control reviews will be performed by McTech Corp's IQCT on all plans, reports, maps and other paperwork submitted to the USACE to ensure their compliance with SOW

requirements. The following are the definable features of work, which require a three-phase inspection:

Task 6A Excavation of Contaminated Material

Task 6B Tilling of hydrated/ slaked lime into soil

Task 7 Field screening/ Confirmation samples

5.1.1 Preparatory Phase Inspections

The preparatory phase inspection is performed prior to beginning each definable feature of work. Refer to Appendix A for a copy of a preparatory phase checklist. In addition, CELRH Form 2824 as found in Appendix A shall be used to document the inspection of the construction equipment. Field conditions, changes in the SOW, or safety concerns may require different or additional information being included on the preparatory phase inspection forms. The information anticipated to be necessary to complete a preparatory inspection for each task is as follows:

Task 6A – Excavation of Contaminated Material

*(Ensure all ORIGINAL waste shipment records go to ATTN: Lisa Humphreys
USACE HUNTINGTON DISTRICT)*

Contract number, project location, and date

*Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH,
October, 2006*

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

*McTech Corp and subcontractor personnel, as well as all site visitors will be listed
Daily, as appropriate.*

Summary of submittals

Quality Control Plan

Plan of Operations

Site Specific Safety and Health Plan

Listing of materials and supplies required on-site

Heavy equipment

Hand tools

Level D PPE

Measuring Tape/ Survey Rod

Laser Level

Listing of any materials required for the project but not on-site

Not applicable.

Check of materials on-site to ensure that they meet contract specification

Not applicable.

Check of material storage to ensure that materials will not be damaged because of storage procedures

Establish distinct storage areas on site, in office trailer, or in vehicles.

Listing and/or discussion of procedures for accomplishing the definable feature of work

Check to ensure limits of excavation have been adequately staked by surveyors and lifts are properly measured to ensure 12" to 18" depths.

Ensure that any regulatory permits have been acquired in advance of work to be performed

Check to ensure digging permit is in place.

Identification of any type of testing that is required for the project (includes information on testing facility, frequency of testing, methods involved)

Soil samples will be obtained at the conclusion of the excavation activities. One composite sample will be taken from each of the treatment piles to establish the contaminant baseline.

Review of activity hazard analysis to ensure safety of personnel

Refer to Appendix A of the SSHP

Task 6B – Tilling Efforts of Hydrated/ Slaked Lime into Soil

Contract number, project location, and date

Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH, October, 2006

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate.

Summary of submittals

Site Specific Safety and Health Plan; Quality Control Plan; Plan of Operations

Listing of materials and supplies required on-site

PPE

Heavy Equipment including till

*Prepared tables to record pertinent data for each lift to be tilled
Hydrated/ slaked lime
Scale to measure quantity of lime to be added into soil*

Listing of any materials required for the project but not on-site
Not applicable.

Check of materials on-site to ensure that they meet contract specification
*Check labeling and integrity of all materials and tools.
Ensure adequate supply of PPE, and lab equipment to monitor/ record tilling efforts.*

Check of material storage to ensure that materials will not be damaged because of storage procedures
All sampling equipment and containers should be stored in a weather proof, protected area.

Listing and/or discussion of procedures for accomplishing the definable feature of work
Detailed procedures are found in the Plan of Operations. Work shall be performed in accordance with SOW, Plan of Operation, USACE, NASA and EPA requirements.

Identification of any type of testing that is required for the task (includes information on testing facility, frequency of testing, methods involved)
Determine time or number of passes with till to standardize mixing efforts of lime.

Review of activity hazard analysis to ensure safety of personnel
Refer to Appendix A of the SSHP

Task 7 - Field Screening/ Sample Collection for Confirmation Analysis

Contract number, project location, and date
Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH, October, 2006

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)
McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate.

Summary of submittals
Site Specific Safety and Health Plan; Quality Control Plan; Plan of Operations

Listing of material and supplies required on-site
Field screening equipment and supplies to monitor/ ensure in-situ lime treatment of nitroaromatics.

Listing of any materials required for the project but not on-site

Not applicable.

Check of materials on-site to ensure that they meet contract specification

Confirmation that all field screening equipment and supplies are on-site prior to project commencement.

Check of material storage to ensure that materials will not be damaged because of storage procedures

Protect weather sensitive materials from the elements.

Listing and/or discussion of procedures for accomplishing the definable feature of work

Ensure field screening equipment is operational and on-site personnel have been trained in its operation.

Ensure that any regulatory permits have been acquired in advance of work to be performed

Not applicable.

Identification of any type of testing that is required for the project (includes information on testing facility, frequency of testing, methods involved)

Field screenings of each 12" to 18" lifts are required and must be performed in accordance with the SOW and Plan of Operations.

Review of activity hazard analysis to ensure safety of personnel

Refer to Appendix A of the SSHP.

5.1.2 Initial Phase Inspections

The initial phase inspection is performed at the beginning of each definable feature of work. Refer to Appendix A for a copy of an initial phase checklist. Field conditions, changes in the SOW, or safety concerns may require different or additional information being included on the initial phase inspection forms. The information anticipated to be necessary to complete an initial inspection for each task is as follows:

Task 6A – Excavation of Contaminated Material

*(Ensure all ORIGINAL waste shipment records go to ATTN: Lisa Humphreys
USACE HUNTINGTON DISTRICT)*

Contract number, project location, and date

*Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH,
October, 2006.*

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate

Identify full compliance with procedures identified in the initial phase inspection for each definable feature of work

*Establish excavation depths and methods of its measurements.
Establish location and identification of each lift excavated.*

Inspect preliminary work to determine if it is complete and correct (note any deficiencies and complete a deficiency report showing what corrective action will be taken, if applicable)

Establish and document the level of workmanship

Document field activities with photographs and QCR's.

Review job safety conditions using the activity hazard analysis

Refer to Appendix A of the SSHP.

Identify any type of testing required and that is being performed

Soil must be sampled and analyzed according to the Plan of Operations and all USACE and EPA requirements.

Task 6B – Tilling Efforts of Hydrated/ Slaked Lime into Soil

Contract number, project location, and date

Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH, October, 2006.

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, and as appropriate.

Identify full compliance with procedures identified in the initial phase inspection for each definable feature of work

*Establish work areas and exclusion zones.
Measure required amounts of lime and methods of dispersal.
Monitor and enforce predetermined degree of tilling efforts.*

Inspect preliminary work to determine if it is complete and correct (note any deficiencies and complete a deficiency report showing what corrective action will be taken, if applicable)

Establish and document the level of workmanship

*Review and file data collected and conditions observed in field.
Document field activities with photographs and QCR 's.*

Review job safety conditions using the activity hazard analysis

Refer to Appendix A of the SSHP.

Identify any type of testing required and that is being performed

All liquid and solid waste must be sampled and analyzed according to the Plan of Operations and USACE and EPA requirements.

Task 7 - Field Screening/ Sample Collection for Confirmation Analysis

Contract number, project location, and date

*Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH,
October, 2006*

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate

Identify full compliance with procedures identified in the initial phase inspection for each definable feature of work

Ensure that each 12" to 18" lift is properly field screened for appropriate conditions needed for in-situ lime treatment of nitroaromatics using field screening equipment and supplies outlined in the Plan of Operations.

Inspect preliminary work to determine if it is complete and correct (note any deficiencies and complete a deficiency report showing what corrective action will be taken, if applicable)

Establish and document the level of workmanship

*Review and file field screening results and daily work logs.
Document field activities with photographs and QCR 's.*

Review job safety conditions using the activity hazard analysis

Refer to Appendix A of the SSHP.

Identify any type of testing required and that is being performed

Field screening for nitroaromatic contamination conducted in accordance with the SOW and Plan of Operations.

5.1.3 Follow-up Phase Inspections

The follow-up phase inspection is performed as daily checks to ensure the continued compliance with contract requirements. Refer to Appendix A for a copy of a follow-up phase checklist. Field conditions, changes in the SOW, or safety concerns may require different or additional information being included on the follow-up phase inspection forms. The information anticipated to be necessary to complete a follow-up inspection for each task is as follows:

Task 6A – Excavation of Contaminated Material

*(Ensure all ORIGINAL waste shipment records go to ATTN: Lisa Humphreys
USACE HUNTINGTON DISTRICT)*

Contract number, project location, and date

*Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH,
October, 2006*

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate.

Identify full compliance with procedures identified in the follow-up phase inspection for each definable feature of work

Ensure that all portions of the site have been backfilled and graded.

Ensure that all McTech Corp and subcontractor supplies and equipment have been removed from the site.

Inspect work to determine if it is complete and correct (note any deficiencies and complete a deficiency report showing what corrective action will be taken, if applicable)

Visibly inspect the site to verify that all portions of the site have been backfilled and graded.

Visibly inspect the site to verify all McTech Corp and subcontractor supplies and equipment have been removed from the site.

Establish and document the level of workmanship

Collect all logs, manifests, and other project documents, review and place in file.

Review project photographs, ensure proper labeling, and place in file.

Review job safety conditions using the activity hazard analysis

Place daily safety logs in the file and update company safety records as required.

Identify that required testing meets minimum standards

Not applicable.

Task 6B – Tilling Efforts of Hydrated/ Slaked Lime into Soil

Contract number, project location, and date

Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH, October, 2006

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate.

Identify full compliance with procedures identified in the follow-up phase inspection for each definable feature of work

Ensure that all of the contaminated materials have been removed from PBOW and disposed of according to the SOW

Inspect work to determine if it is complete and correct (note any deficiencies and complete a deficiency report showing what corrective action will be taken, if applicable)

Visibly inspect the soil to verify all 12" to 18" lifts have been effectively mixed.

Establish and document the level of workmanship

*Collect all logs, manifests, and other project documents, review and place in file
Review project photographs, ensure proper labeling, and place in file.*

Review job safety conditions using the activity hazard analysis

Place daily safety logs in the file and update company safety records as required.

Identify that required testing meets minimum standards

Not applicable.

Task 7 - Field Screening/ Sample Collection for Confirmation Analysis

Contract number, project location, and date

Contract No. W91237-06-C-0006, Pentolite Road Red Water Ponds, Sandusky, OH, October, 2006

Personnel present on-site (including McTech Corp personnel, subcontractors and suppliers)

McTech Corp and subcontractor personnel, as well as all site visitors will be listed daily, as appropriate.

Identify full compliance with procedures identified in the follow-up phase inspection for each definable feature of work

Ensure field screening result are completed for each excavation volume.

Ensure that all McTech Corp and subcontractor supplies and equipment have been removed from the site.

Inspect work to determine if it is complete and correct (note any deficiencies and complete a deficiency report showing what corrective action will be taken, if applicable)

Visibly inspect the site to verify all McTech Corp and subcontractor supplies and equipment have been removed from the site.

Establish and document the level of workmanship

Collect all logs, manifests, field screening results and other project documents, review and place in file.

Review project photographs, ensure proper labeling, and place in file.

Review job safety conditions using the activity hazard analysis

Place daily safety logs in the file and update company safety records as required.

Identify that required testing meets minimum standards

Not applicable.

6.0 Project Schedule

The proposed project schedule is as follows:

Submission of 7 copies of the Draft Site-Specific Safety and Health Plan (SSHP), the Draft Quality Control Plan (QCP), and the Draft Plan of Operations	October 5, 2006
Submission of 7 copies of the Final SSHP, QCP and Plan of Operations	5 days after receipt of comments but prior to beginning intrusive fieldwork
Submission of Lime Treatment Pilot Study Report	120 days after notice to proceed
Submission of Lime Treatment Pilot Study Report	150 days after notice to proceed

APPENDIX A

INSPECTION FORMS

Deficiency Report

Project Name: _____ Contract _____

Location: _____ Date: _____

Reference specifications paragraph: _____

Reference Contract Drawing Sheet: _____

Deficiency: _____

Corrective Action: _____

Project Manager/Date

QC Officer/Date

PREPARATORY PHASE CHECKLIST

Project Name: _____ Contract # _____

Location: _____ Date: _____

Definable Feature: _____ Spec. Section _____

PERSONNEL PRESENT

Name	Position
Company/Government	

SUBMITTALS YES NO N/A

1. Review submittals and/or submittal log 4288. Have all submittals been approved? _____
If No, what items have not been submitted?

SUBMITTALS YES NO N/A

2. Are all materials on hand? _____
If No, what items are missing?

3. Check approved submittals against delivered material.

Comments: _____

MATERIAL STORAGE YES NO N/A

1. Are materials stored properly? _____
If No, what action is being taken?

1. Review each paragraph of specifications and applicable specification

2. Discuss procedures for accomplishing work required by specification

3. Clarify or comment on any differences

PRELIMINARY WORK AND PERMITS

**1. Ensure that preliminary work is correct and that permits, if required, are on file
If not, what action is being taken?**

TESTING

1. Identify test to be performed, frequency, and by whom.

2. When is test required?

3. Where is testing required?

4. Is testing in compliance with approved plans

5. Has the testing facility been approved or certified

SAFETY

YES NO

Has the SSHP been approved (including the Activity Hazard Analysis)

Have all on-site personnel reviewed the SSHP and QCP?

QC Officer signature & date

INITIAL PHASE CHECKLIST

Project Name: _____ **Contract #** _____

Location: _____ **Date:** _____

Definable Feature: _____ **Spec. Section** _____

PERSONNEL PRESENT

Name _____ **Position** _____
Company/Government _____

Identify full compliance with procedures identified at preparatory phase. Coordinate plans, specifications, and submittals.

Comment: _____

Preliminary Work- Ensure preliminary work is complete and correct. If not, what action is being taken?

Comment: _____

What Level of Workmanship was established.

Comments: _____

TESTING	YES	NO	N/A
Is percentage of QC testing being performed?	_____	_____	_____
Is required material testing being performed?	_____	_____	_____
Does the testing meet minimum standards?	_____	_____	_____
If not, what action was taken	_____		

DEFICIENCIES	YES	NO	N/A
Have any deficiencies been encountered?	_____	_____	_____
Was a deficiency report completed, showing deficiency and corrective action?	_____	_____	_____

SAFETY

YES NO N/A

Have safety meetings been held and documented?

Comments: _____

QC Officer signature & date

FOLLOW-UP PHASE CHECKLIST

Project Name: _____ **Contract #** _____

Location: _____ **Date:** _____

Definable Feature: _____ **Spec. Section** _____

PERSONNEL PRESENT

Name _____ **Position** _____

Company/Government _____

Identify full compliance with procedures identified at preparatory and initial phase. Coordinate plans, specifications, and submittals.

Comment: _____

Preliminary Work- Ensure preliminary work is complete and correct. If not, what action is being taken?

Comment: _____

Is level of workmanship being met?

Comments: _____

TESTING

Is percentage of QC testing being performed?

YES NO N/A

Is required material testing being performed?

Does the testing meet minimum standards?

If not, what action was taken _____

DEFICIENCIES

Have any deficiencies been encountered?

YES NO N/A

Was a deficiency report completed, showing deficiency and corrective action?

SAFETY

YES

NO

Have safety meetings been held and documented?

Comments: _____

QC Officer signature & date

CONTRACTOR'S QUALITY CONTROL REPORT (QCR) (ER 1180-1-6)

DATE: _____ REPORT NO. _____

CONTRACT NUMBER AND NAME OF CONTRACTOR _____

DESCRIPTION AND LOCATION OF THE WORK: _____

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: (Attach list of items of equipment either idle or working as appropriate.)

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____

1. WORK PERFORMED TODAY: (Indicate location and description of work performed. Refer to work performed by prime and /or subcontractors by letter in Table above.)

2. TYPE AND RESULTS OF INSPECTION: (Indicate whether: P-Preparatory, I-Initial, or F-Follow-up and include satisfactory work completed or deficiencies with action to be taken.)

3. TESTS REQUIRED BY PLANS AND/OR SPECIFICATIONS PERFORMED AND RESULTS OF TESTS:

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

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.)

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

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

**SAFETY INSPECTION CHECKLIST FOR CRAWLER TRACTORS, DOZERS, SCRAPERS, MOTOR GRADERS, BACKHOES,
HEAVY HAULAGE UNITS**

U.S. Army Engineers, Huntington District

INSTRUCTIONS

SECTION 1 -- GENERAL INFORMATION:

- a. *Date*: enter month, day and year of Safety Inspection.
- b. *Owner/User*: Enter designated ownership of equipment (Corps, Corps leased or Contractor by name).
- c. *Contract Number*: Contractors enter the respective contract number
- d. *Type of Equipment* : Enter *Ford 515 Backhoe, ID 450 Bulldozer*, etc.
- e. *Number*: Enter equipment number which Contractor has issued on large scale operations.
- f. *Inspected By*: Enter signature and title of Corps or Contractor inspector (Corps inspector may be a maintenance leader, maintenance mechanic or operator and a Contractor inspector may be a mechanic, operator or service person).
- g. *Reviewed By*: Enter signature and title of Corps or Contractor reviewer (Corps reviewer may be the mechanic, shift leader, foreman or superintendent). Before a signature and title of Corps or Contractor reviewer is entered, the checklist must be reviewed by the next level of direct supervision and the equipment spot checked unannounced to insure inspections are performed.

SECTION 2 -- SAFETY INSPECTION CHECKLIST: Check YES, NO or N/A if question or statement does not apply.

SECTION 3 -- RECEIPT OF ACKNOWLEDGMENT: Sign, provide title and date checklist. If Corps personnel was the inspector and reviewer, a Corps manager, supervisor or responsible employee will sign the receipt of acknowledgment. If a Contractor personnel was the inspector and reviewer the checklist becomes a part of the official project file and a copy is furnished to the Contracting Officer Representative (COR). The COR will then sign the receipt of acknowledgment. The COR may request a copy of the checklist at any time. The COR or a representative may perform an unannounced spot check inspection to ensure compliance of safety inspection requirements. To determine if inspector and reviewer are Corps or Contractor personnel, see SECTION 1, Items f. and g.

SECTION 1 GENERAL INFORMATION

a. Date	b. Owner/User	c. Contract Number
d. Type of Equipment		e. Number
f. Inspected by (signature) (title)		g. Reviewed by: (signature) (title)

SECTION 2 SAFETY INSPECTION CHECKLIST

NOTE: Reference USACE Manual EM 385-1-1, April 1981, as revised. Equipment must be in full compliance with checklist and contract requirements.

1. Is protection (grills, screen, canopies) provided to shield the operator from falling or flying objects?			
2. Are adequate rollover protection and seat belts provided?			
3. Is a safe means of 3 point contact access to cab or operator's compartment provided -- steps, grab bars, non-slip surfaces, etc.?			
4. Are required head and tail lights, flashing lights and slow moving vehicle signs provided and properly positioned?			
5. Is the parking and service brake system capable of holding the equipment fully loaded on the grade of operation?			
6. Does the unit have an emergency brake system?			

SECTION 2, Cont.	YES	NO	NA
7. Does the emergency brake system work automatically when regular breaks fail?			
8. Can the emergency brake system be activated form the cab or operator's position?			
9. Are fuel tanks located so that spills or overflows do not run on the engine or electrical systems?			
10. Is the reverse alarm signal operable?			
11. Are cabs equipped with distortion free, shatterproof or safety glass?			
12. Are exhausts located so that discharges do not endanger or obstruct the view of the operator?			
13. Are moving parts, shafts, pulleys and belts adequately guarded?			
14. Are any of the units structural members bent, cracked or otherwise showing signs of physical damage?			
15. Are track rails, grousers, truck rollers, idlers and sprockets in good condition free from excessive wear, cracks, loose bolts or pins?			
16. Are hydraulic lines and cylinders adequately guarded and free of physical damage?			
17. Are tires on tire-mounted equipment free from excessive wear, breaks and of proper and equal size?			
18. Is the manufacturer-recommended tire inflation pressure maintained?			
19. Are all towing devices properly mounted and in good condition?			
20. Does the equipment have at least one dry chemical or CO2 fire extinguisher with minimal rating of 5 b:C available? (Corps owned or leased equipment must have extinguisher installed on the equipment)			
21. Is a 16 unit (minimum) first aid kit readily available in the equipment or on the job sit? Corps owned or leased equipment must have first aid kits installed.			
22. Are all instruments, ammeters, pressure gauges, temperature gauges, tachometers or other critical systems operable and in good condition?			
23. Are all operating levers, pedals, etc., in good operating condition?			
24. Do all modifications, replacement parts and/or repairs to the equipment maintain the same safety factor as originally designed and manufactured?			
25. Is the equipment equipped with outriggers or leveling devices and are they in operable condition?			
26. Is the equipment operations manual available to the operator?			
27. Remarks:			
SECTION 3 RECEIPT OF ACKNOWLEDGMENT			
<div style="display: flex; justify-content: space-between; border-top: 1px solid black; padding-top: 10px;"> Receipt Acknowledged by: <i>(Signature)</i> <i>(Title)</i> <i>(Date)</i> </div>			

APPENDIX B

GENERAL CHECKLIST

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 Waste Ron 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?	_____	_____	_____

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	_____	_____	_____
3.	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?	_____	_____	_____
6.	Were digging permits obtained from NASA prior to mobilizing to the site for excavation activities?	_____	_____	_____
7.	Did McTech Corp 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?	_____	_____	_____
14. 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.)?	_____	_____	_____
15. Were all drawings done in Microstation 95 (or the newest version) and in conformance with the current USACE CADD standards?	_____	_____	_____
16. If drawings are larger than 8.5" by 11" were they folded to 8.5" x 11" size?	_____	_____	_____
17. 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	_____	_____	_____
18. If water was generated during excavation, was it properly containerized, sampled, analyzed, and disposed in accordance with state and federal regulations?	_____	_____	_____
19. 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
23. Were all IDW drums labeled as to project name, contents, date of collection, and generator? (Note: waste from different sites shall not be mixed)	_____	_____	_____
24. Were the IDW drums secured with tarps, ropes and placed on pallets?	_____	_____	_____
25. Was the USACE POC notified prior to the disposal of the IDW?	_____	_____	_____
26. Did all Contractor personnel document all correspondence, phone conversations and meetings with the USACE?	_____	_____	_____
27. Was water used at the site to control dust during excavation activities?	_____	_____	_____
28. 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?	_____	_____	_____
29.	Were field screening tests utilized for nitroaromatics and lead (where appropriate) prior to collection of the excavation pit confirmation samples?	_____	_____	_____
30.	Were the procedures for the field test kits, as described in the Plan of Operations followed?	_____	_____	_____
31.	Was all information generated during the field screening activities recorded in accordance with the Plan of Operations requirements?	_____	_____	_____

APPENDIX C

**AUTHORIZED LETTER TO THE QCO
AND SSHO**



8100 Grand Avenue • Cleveland, Ohio 44104-3110
Phone: (216) 391-7700 • Toll Free: (800) 391-7445 • Fax: (216) 391-6951
www.mctechreadymix.com

Letter of Notification

To: Michael Malloy, McTech Corp

From : Kimberlie Chambers

cc: Mark Perkins, President

Date: 10/05/2006

Re: Quality Control Officer Appointment – Lime Treatment Pilot Study;
Plum Brook Ordinance Works – Pentolite Road Red Water Ponds Area; Sandusky, Ohio
Contract Number W91237-06-C-0006

Quality Control Officer Notification

Dear Mr. Malloy,

Please be informed, you are hereby appointed as McTech Corp's Quality Control Officer (QCO) for the above referenced project.

In this role, you are responsible for maintaining quality control during the course of this project. You are granted the authority to stop work on this project at any time should a quality control issue arise. As the McTech Corp QCO you are responsible for all manner of quality control concerning the tasks of this project and are to ensure all work is done in accordance with the Quality Control Plan prepared for this project.

Should you have any questions, please do not hesitate to contact me at (304) 215-0099.

Regards,

A handwritten signature in cursive script that reads "Kimberlie K. Chambers".

Kimberlie K. Chambers, CHMM
Environmental Project Manager
McTech Corporation
2333 MacCorkle Avenue Suite 106
Saint Albans, West Virginia 25177-2074
office 304.201.2205
fax 304.201.2206
cellular 304.215.0099



<i>Office</i>	<i>8100 Grand Avenue, Cleveland, Ohio 44104</i>	<i>Voice 216.391.7700</i>
<i>Mail</i>	<i>P.O. Box 5270 Cleveland, Ohio 44101</i>	<i>Data 216.391.6951</i>
<i>Plant</i>	<i>5000 Crayton Avenue, Cleveland, Ohio 44104</i>	<i>Toll Free 800.391.7445</i>
<i>Website</i>	<i>www.mctechreadymix.com</i>	<i>Email info@mctechreadymix.com</i>

Letter of Notification

To: James Russell, McTechCorporation

From : Kimberlie Chambers

cc: Mark Perkins, McTech Corp; Santina Milczewski, McTech Corp;

Date: 10/05/2006

Re: Site Safety and Health Officer Appointment (Alternate) – Lime Treatment Pilot Study; Plum Brook Ordinance Works – Pentolite Road Red Water Ponds Area; Sandusky, Ohio; Contract Number W91237-06-C-0006

Safety and Health Officer (Alternate) Notification

Dear Mr. Russell,

Please be informed, you are hereby appointed as McTech Corp's Site Safety and Health Officer (SSHO) Alternate for the above referenced project.

In this role, you are responsible for maintaining a safe and healthy work environment in the absence of the SSHO, Dan Cashbaugh. You are granted the authority to stop work on this project at any time should a safety or health issue arise. As the McTech Corp SSHO Alternate you are responsible for all manner of safety and health concerning the tasks of this project and are to ensure all work is done in accordance with the Site-specific Safety and Health Plan prepared for this project as well as the United State Army Corp of Engineers Safety and Health Requirements Manual. Should you have any questions, please do not hesitate to contact me at (304) 215-0099.

Regards,

A handwritten signature in cursive script that reads "Kimberlie K. Chambers".

Kimberlie K. Chambers, CHMM
Environmental Project Manager



8100 Grand Avenue • Cleveland, Ohio 44104-3110
Phone: (216) 391-7700 • Toll Free: (800) 391-7445 • Fax: (216) 391-6951
www.mctechreadymix.com

Letter of Notification

To: Dan Cashbaugh, McTechCorporation

From : Kimberlie Chambers

cc: Mark Perkins, McTech Corp; Santina Milczewski, McTech Corp;

Date: 10/05/2006

Re: Site Safety and Health Officer Appointment – Lime Treatment Pilot Study;
Plum Brook Ordinance Works – Pentolite Road Red Water Ponds Area; Sandusky, Ohio
Contract Number W91237-06-C-0006

Safety and Health Officer Notification

Dear Mr. Cashbaugh,

Please be informed, you are hereby appointed as McTech Corp's Site Safety and Health Officer (SSHO) for the above referenced project.

In this role, you are responsible for maintaining a safe and healthy work environment during the course of this project. You are granted the authority to stop work on this project at any time should a safety or health issue arise. As the McTech Corp SSHO you are responsible for all manner of safety and health concerning the tasks of this project and are to ensure all work is done in accordance with the Site-specific Safety and Health Plan prepared for this project as well as the United State Army Corp of Engineers Safety and Health Requirements Manual. Should you have any questions, please do not hesitate to contact me at (304) 215-0099.

Regards,

A handwritten signature in cursive script that reads "Kimberlie K. Chambers".

Kimberlie K. Chambers, CHMM
Environmental Project Manager
McTech Corporation
2333 MacCorkle Avenue Suite 106
Saint Albans, West Virginia 25177-2074
office 304.201.2205

APPENDIX D

RESUMES OF IQCT

RODNEY R. BUMGARDNER
225 Sun Valley Drive, St. Albans, WV 25177
304-727-5321 dabums@verizon.net

CAREER SUMMARY

After obtaining a BS degree in Chemical Engineering I began my career with an emphasis on environmental compliance management. Over the past 20 years I have provided guidance, consultation, and assistance on virtually all aspects of regulatory compliance to private parties, developers, contractors, waste management firms, local, state, and federal governments, financial institutions, environmental firms, oil companies, community based organizations, industrial sites, educational systems, and school age children. I have done this throughout the country including 20 States and 7 EPA Regions. Issues addressed have related to Storage Tank Management, Asbestos, Lead, NEPA, Air Emissions, Indoor Air Quality, Radon, Storm Water, Drinking Water, Waste Water, Hydraulic Analysis, Hydrology, Ground Water Remediation, Soil Remediation, Land Disturbance Reclamation, Landfill Citing and Operation, Multi Media Auditing, Environmental Management Systems, Training, Energy Conservation, Water Conservation, Landscaping, Emergency and Spill Response, Integrated Pest Management, and various safety related issues including Exposure Assessment, Training, Record Keeping, PPE Selection and Use, Program Evaluations, and Regulatory Liaison.

PROFESSIONAL EXPERIENCE

September 2001 – Present, US Postal Service, Charleston, WV

Area Environmental Specialist

Special Assignments

January 2006 – Present, Eastern Area Energy Coordinator, Charleston, WV

October 2001 – January 2002, USPS Headquarters Environmental Specialist, Washington D.C.

With Postal restructuring duties continued to increase to include responding to anthrax incidents and serve at Postal HQ during response actions. Also had responsibility to continue national training program development and water compliance programs. Coverage area has continually been adjusted with additional services to EPA Region 2 and an additional 4 states. Primary duties include providing environmental consulting to the US Postal Service to ensure compliance with all aspects of environmental compliance including; storage tank management, hazardous waste, solid waste, toxic materials, asbestos, lead, storm water, waste water, potable water, NEPA, training, recycling, contractor selection and oversight, project and program economics, and continued guidance to upper management. Duties as Energy Coordinator include eight states and involve energy savings projects, green power purchasing, utility invoice review and verification, remote metering, and compliance with Energy Policy Act.

June 1996 – September 2001, US Postal Service, Charleston, WV

District Environmental Compliance Coordinator

Special Assignments

May 1998 – August 1998, Midwest Area Environmental Coordinator, St. Louis, MO

March 2001 – September 2001, Post Master, Winfield, WV

With the appointment to a full time position my duties also increased. Coverage areas continued to expand and included, with the work in the Midwest, EPA Regions 3, 4, 5, 7, and 8 and 14 States. National Program work included development of the national strategy, environmental management systems, lead paint, asbestos, energy, radon, storage tank management, RCRA compliance, grounds management, and training. These duties also included cost estimation, project economics, personnel supervision, management briefings, regulatory liaison, and contractor selection and oversight. Duties as Post Master included the total operation of a mid-level Post Office with 11 employees serving a community of 12,000 residences.

October 1994 – June 1996, TAD Resources/US Postal Service, Charleston, WV

Environmental Coordinator

Duties were to provide environmental consulting services to the US Postal Service to ensure compliance with environmental and safety regulations through training, auditing, regulatory relations, and culture change. Coverage area included services to seven states and Washington DC. Specifically, addressed issue concerning bulk storage, hazardous waste generation, management, and disposal, lead, asbestos, recycling, water supply, waste water treatment, and radon.

November/1992 – June/1997, Bumgardner Environmental Services, St. Albans, WV

Owner/Proprietor

Duties included the conception and operation of a sole proprietorship to assist developers in turning abandoned industrial sites into productive property, oil companies in complying with various tank and waste regulations, and individuals in dealing with water and wastewater regulations. Specific duties were to market the business, bid projects, develop site specific plans, oversee subcontractor, client relations, billing and collections, and compliance with business laws.

April 1991 – November 1992, Earth Science Technologies, Kenova, WV

Team Leader

Duties as team leader included the oversight and management of all field and office personnel including drafters, drill crews, laborers, geologist, other professional staff, subcontractors, laboratory services, and client relations pertaining to underground tank management and removal, soil remediation, groundwater remediation, asbestos and lead surveys, water and waste water permitting, and wet land delineation.

November 1989 – April 1991, H.C. Nutting, Charleston, WV

Project Manager

Duties as project manager included a variety of environmental projects including underground tank management and removals, soil and groundwater remediation, air permitting, wetland delineations, landfill design, asbestos surveys, and spill prevention control land countermeasure plan development. Duties also included as geotechnical engineer for slope stability analysis, foundation design, dam design, and landfill soils. Supervision included oversight of field and office personnel including drill crews, drafters, lab technicians, laborers, geologists, subcontractors, and laboratory services.

February 1988 – November 1989, WV Department of Natural Resources, Charleston, WV

Project Engineer

Duties as project engineer included the review and approval of permit applications for NPDES permitting associated with municipal waste water treatment operation and landfill citing, waste acceptance, and operational requirements. Also, provided assistance to the WVDNR Open Dump Program and WVDNR field inspectors during compliance audits and waste suitability.

August 1986 – February 1988, Esmer & Associates, Boomer, WV

Project Engineer/Laboratory Manager

Duties as a project engineer included abandoned mine lands reclamation projects with responsibility for project work plan, design, and oversight of field operations. As laboratory manager responsible for total operation of wet chemistry lab, including sampling protocols, sample collection, analysis, client relations, State reporting.

EDUCATION/CERTIFICATION

Wahama High School, 1981, Graduate

West Virginia Institute of Technology, 1986, Bachelor of Science Chemical Engineering

Registration of Professional Engineer, P.E. 1996

Registration of Certified Environmental Auditor, C.E.A. 2002

Registration of Certified Hazardous Materials Manager, C.H.M.M. 2002

TRAINING COURSES

University of Wisconsin	1989, Landfill Design, 40 hr
West Virginia University	1989, 40 Hr Hazardous Waste Site Operations (HAZWOPER), 40 hr
	1990, AHERA Asbestos inspector/management planner, 40 hr
	1996, Forest Fire Training/Tactics, 16 hr
	1997, Managing Tactical Operations, 8 hr
	1997, Emergency Manager, 16 hr
	1998, Incident Safety Officer, 16 hr
American Red Cross	1993, Medical First Responder (first aid/cpr/emergency response), 24 hr
Colorado State University	2002, Hazardous Materials Manager, 24 hr

National Fire Academy	2003, Incident Command Systems, 8 hr
West Virginia Training Center	1989, Disinfection Control, 16 hr
	1989, Advanced Process Control, 16 hr
	1989, Time Management, 8 hr
Western Reg. Training Cntr	1997, Radon Measurement and Control, 24 hr
Environmental Management	1995, Title V Air Permits, 8 hr
	1995, ISO 9000 & 14000, 8 hr
US Postal Service	1996, Environmental Management Systems 8 hr
	1997, Hazardous Materials Response, 8 hr
	1997, Accident Prevention, 8 hr
	1997, Hazardous Communication, 24 hr
	1998, Government Contracting Officer Representative, 8 hr
	1998, Managing Group Dynamics, 8 hr
	2002, Facilitative Instructor Workshop, 24 hr
	2003, Water Training Course, 16 hr
US Fish and Wildlife Service	2000, Conservation Landscaping, 24 hr
ABS Consulting	2003, Clean Water Compliance, 8 hr
EPA Region 3	2001 – 2005, Annual Conference and Training, 12 hr / yr
ACHMM	2003 – 2006, Annual Conference and Training, 16 hr / yr
WV Technology & Design	1999 – 2006, Annual Exposition and Training, 8 hr / yr
Dept. of Energy	2006, Energy 2006 Conference and Training, 16 hr
Federal Emergency Mgmt Ad.	2005, Professional Development Series from Emergency Management Institute, 65hr
Federal Emergency Mgmt Ad.	2006, 11 Emergency management and response courses, 98 hr

ORGANIZATIONS (non work related, current and previous)

Board of Directors – Secret Santa Foundation
Board of Directors – Lakewood Volunteer Fire Department
Fire Line Officer – Lakewood Volunteer Fire Department
Delegate – WV State Fireman’s Association
President – United Methodist Men’s Fellowship
President – Sigma Pi Alumni Association
Board of Directors – WV/America Recycles Day Committee
Assistant Scout Master – Boy Scouts of America
Coach – St Albans Youth Basketball Association
Coach – St Albans Youth Soccer Association

MARK F. PERKINS
20029 Sussex Avenue
Shaker Heights, Ohio 44122

EXPERIENCE

McTech Corp. (dba) Tech Ready Mix
8100 Grand Avenue
Cleveland, Ohio 44104
PRESIDENT
1998-PRESENT

Oversee day-to-day operations. Accountable for bidding, marketing, production finance and customer service. Approve all financial obligations. Develop business opportunities.

Ascon Consulting Company, Inc.
30675 Solon Road, Suite 200, Solon, Ohio 44139
PRESIDENT AND CEO
1994-1997

Monitoring of laboratory certification process for asbestos and lead air monitoring projects, asbestos and lead survey Projects. Administrative duties included accounting, sales and closures of all projects. Day-to-day supervision of staff.

Choice Construction Company
30675 Solon Road, Solon, Ohio 44139
GENERAL SUPERINTENDENT
1991-1997

Immediate Supervisor: William Carter

Managed all types of Construction projects: General Contracting and Highway. Limited involvement since 1994. Projects completed in Northeast Ohio.

Gateway Development Project
Rock & Roll Hall of Fame & Museum
Virginia Kendall
NASA Lewis Research Center
Cuyahoga Metropolitan Housing Authority
(CMHA) Projects

Burke Lakefront Airport
Jaite Mill Demolition
Willard Park Garage
Camp Mueller

Seawright – F.A.C.E., Inc.
Cedar Road, Cleveland, Ohio 44118
CONSTRUCTION LABORER
1989-1991

Immediate Supervisor: Argolyn Perkins

Worked on various street repaving projects throughout Cleveland and Northeast Ohio. Completed tasks in all phases of construction labor on public projects for Ohio Dept. of Transportation and Cuyahoga County Engineer.

EDUCATION

Central State University, Wilberforce, Ohio – Business Management, 1987

QUALIFICATIONS

Hands on experience from Construction Laborer to Extensive level Construction Estimating
American Concrete Institute (ACI) Certified Field Technician
Ohio Ready Mix Concrete Association (ORMCA) Safety Training
Occupational Safety and Health Administration (OSHA) 10-Hour Safety Certification

480 ROXALANA HILLS DRIVE • DUNBAR, WV • 25064
218-330-6436 • MINKIM1@VERIZON.NET

KIMBERLIE K. CHAMBERS

OBJECTIVE

Progressive career advancement and development by expanding my professional abilities and personal growth through challenging opportunities within the environmental field.

EXPERIENCE

2006-Present McTech Corp Cleveland, OH

Environmental Project Manager

Project manager for Soil and Groundwater Remediation Projects, DER-FUDS, Brownfield Restoration and Redevelopment, Soil and Ground Water Remediation System Design and Implementation, Federal, State and Local Government Project Management

2005-2006 WTI Poca, WV

Environmental Specialist

Project manager for Superfund and NPL sites, Phase I and II Investigations, Groundwater Monitoring, Environmental Compliance and Regulatory Negotiations, Underground Storage Tank Removals, Water Treatment Plant Operation. Technical plan and report writing, plans include: Safety and Health, Quality Control, Work, Sampling and Analysis, Accident Prevention, Operations. Reports include: Limited Site Investigation, Remedial Investigation, Underground Storage Tank Closure, Groundwater Monitoring, Asbestos and Lead Abatement.

2004 United States Postal Service Washington, DC

Environmental Analyst

Managed and directed the collaborative development of the United States Postal Service National Environmental Strategy (2005-2009).

Managed and guided the development of an Environmental Management System, based on the ISO 14001 standard, at Postal Headquarters, Environmental Management Policy.

Authored letters, guidance materials and other documents for top Postal Executive's signatures.

Provided continuous coordination and collaboration with core functional areas at Postal Service Headquarters, Areas and Districts throughout the nation

Managed numerous consultants as well as a 3 million dollar consultant budget

1998-2005 United States Postal Service Minneapolis, MN

Environmental Compliance Specialist

Developed sampling plans and provided interpretation and summary of analytical data including laboratory results from air, asbestos, lead, water, soil and waste testing.

Performed Environmental Assessments of properties the Postal Service proposed for acquisition.

Managed Phase I and Phase II investigations and clean ups of petroleum, asbestos and lead contaminated properties.

Prepared and provided quarterly and annual monitoring reports of contaminated sites to the Minnesota Pollution control Agency as well as well permit and monitoring reports to the Minnesota Department of Health.

Ensured compliance at 971 Postal facilities in Minnesota and Wisconsin including maintenance of NPDES permits, air quality permits, hazardous waste generator

licenses, SARA Title III Title II reports, SPCC plans, storage tank operation and maintenance plans.
Implemented changes to make possible the applications for the conditional exclusion of no exposure certifications.
Conducted 337 multimedia compliance reviews in 7 states and 3 EPA regions in at Postal facilities including million square foot processing plants and vehicle maintenance facilities.
Developed and delivered environmental training courses to employees.
Applied for and received in excess of \$370,000 in reimbursements from the State of Minnesota for remediation at regulated tank sites.
Managed asbestos abatements at 208 Postal facilities in 1999 saving 1.1 million dollars in asbestos abatement costs.
Managed energy savings projects at 154 Postal facilities generating over 3 million dollars in energy savings.

1994-1998 MN Department of Transportation St. Paul MN

Pollution Control Specialist

Collected samples of soil waste and waste including unknown hazardous material at existing facilities and at proposed highway construction expansion sites.
Provided analysis, interpretation and made recommendations based on site conditions and analytical results.
Profiled waste streams and applied waste minimization practices to reduce Minnesota Department of Transportation hazardous waste generator requirements by 90%.
Conducted business and multimedia audits of waste transport, storage and disposal companies for the State of Minnesota.
Authored Minnesota Department of Transportation an Minnesota Pollution Control Agency publications and guidance documents
Planned and presented a conferences sponsored by the Minnesota Pollution Control Agency.

1988-1994 MN Department of Transportation St. Cloud, MN

Traffic Engineering Technician

Designed Traffic Control Plans using Computer Aided Drafting.
Participated in public meetings.
Inspected contractor work.

EDUCATION

1993 St. Cloud State University St. Cloud, MN
Bachelor Degree in Earth Science
Geology, Hydrology, Chemistry

TRAINING AND CERTIFICATION (ALL CURRENT)

2006 Visible Emissions Evaluation
2005 First Aid/CPR
2002 Certified Hazardous Materials Manager (CHMM 11519)
2001 Registered Environmental Manager (REM 11203)
1999 40 hour lead inspector/risk manager
1999 40 hour asbestos inspector/management planner
1996 Certified Environmental Auditor (CEA 7961)
1995 EPA certified to sample hazardous materials
1994 40 hour Hazardous Water Site Operations (HAZWOPER).

OTHER

Vice Chairman of the Sylvan Township Planning Commission
Member of the Minnesota Planning Association
Girl Scout leader for the Girl Scouts of St. Croix Valley

Michael A. Malloy, E.I.

**1416 W. 110th Street, Apt. 304
Cleveland, Ohio 44102**

**Cell: (216) 857-4517
email: mmalloy@mctechreadymix.com**

Education

Fenn College of Engineering, Cleveland State University; Cleveland, Ohio
Bachelor of Science in Civil Engineering
Graduation Date: *May 2006*

Relevant Courses of Study

- Macroeconomics (Spring 2002)
- Concrete Design (Fall 2005)
- Structural Analysis I (Fall 2005)
- Foundation Design (Fall 2005)
- Steel Design (Summer 2005)
- Engineering Economy (Spring 2005)
- Hydraulic Engineering (Fall 2005)
- Wastewater Treatment Plant Design (Fall 2005)

Certifications

- First Aid and CPR Certified
- 30 Hour OSHA- Construction Industry Course
- 40 Hour Hazwoper Course
- 8 hr. Confined Spaces Hands-On Course
- USACE Quality Control Management Training

Activities and Interests

Cleveland Engineering Society Tutoring Program (Fall 2002)

- Tutored Second Graders in need of help with math and science.

American Society of Civil Engineers Student Chapter (2002- Present)

- Participated in Ohio Contractor for a Day every fall.

Hispanic Engineers National Achievement Awards Corporation, HENAAC; Pasadena, California (2004)

- College Bowl 3rd Place Prize Winner.

Internships

Ohio Department of Transportation (Summer 2004)

Project Engineering Aide/ Project Inspector

- Studied plans and specifications for RTA Bridge at W. 65th and Madison.
- Wrote daily reports and correspondence between parties involved.
- Inspection of work and safety procedures performed by contractor.

Lux Traffic Management; London, England (Summer 2002)

Technician

- Assisted in planning stages of traffic management in the city of London by seeking jobs, preparing drawings, and gaining approval from authorities.
- Planned, installed, maintained, and removed multiple job sites safely and efficiently.

Michael A. Malloy

**1416 W. 110th Street, Apt.304
Cleveland, Ohio 44102**

**Cell: (216) 857-4517
email: mmalloy@mctechreadymix.com**

Jobs Requiring Strong Work Ethic

Mario's International Spas and Hotels (Summer 2005 – Present)

Kitchen Assistant and “Independent Contractor”

- Maintenance of kitchen and restaurant appearance during peak hours and banquets.
- Weekly maintenance of three beauty salons in Cleveland area.

Aurora Landscaping and 43 Landscaping (Summer 2005)

Worker

- Construction of residential pavers, decks, patios and retaining walls.
- Installation of sprinkler systems using trenchers.
- Complete landscaping services for new subdivisions.

Career Ambitions

- Professional Engineering License.
- Masters Degree.
- Proficiency with all engineering and planning software.
- To be president of company or start up my own business.

Hobbies

- Enjoy learning about ancient and modern history.
- Active in sports, especially soccer.

References gladly provided upon request.

7714 Straight Fork Road
Hamlin, WV 25523

Gary Cooper
PROJECT SUPERVISOR
234-15-4463

(304) 524-2646

Years with WTI: 11

Years of Environmental &
Construction Practice: 12

Professional Affiliations:

Education:

Hamlin High School 1988
USMC 1991-1995

General Qualifications

Mr. Cooper has more than 12 years of environmental and construction experience. As a project supervisor for WTI, he is responsible for overseeing on-site activities for WTI projects. Mr. Cooper specializes in general contracting, earth moving, remediation and demolition projects. He manages field crews for WTI, and is responsible for submitting regular status reports and maintaining all field correspondence with clients.

Before joining WTI, Mr. Cooper worked for Roberts & Sons pipe lining and construction, after the Marine Corps. Mr. Cooper had welding training, Diesel Mechanic training in the Corp.

References Available Upon Request

Experience Highlights

Project Manager

-US Army (1995-1998)
Pulling UST's
Contract Value \$7 Mil

- *USACE (1998)*
Landfill Caps
Minden, WV
Contract Value \$1.5 Mil

-ECI (1999)
Land Fill Cap
South Point, OH
Contract Value \$1 Mil

-*USACE (2005)*
Site Remediation/Cleanup
Project Superintendent
Fiamont, WV
Contract Value - \$1 million

-*USACE (2005 to Current)*
Site Remediation/Investigation
Project Supervisor
Sandusky, OH
Contract Value \$1.8 Mil

APPENDIX E

QC DOCUMENTATION

Quality Control Certification

Final Quality Control Plan

Lime Treatment Pilot Study Plum Brook Ordnance Works- Pentolite Road Red Water Ponds Sandusky, Ohio

Contract No. W91237-06-C-0006

This document is provided to certify that the McTech Corp 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

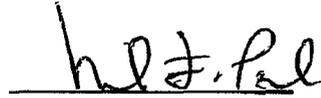
Name

Signature

Date

Senior Review

Mark Perkins



11/17/2006

Peer Review

Rodney Bumgardner



11/16/06

Quality Control Certification

Final Quality Control Plan

Lime Treatment Pilot Study Plum Brook Ordnance Works- Pentolite Road Red Water Ponds Sandusky, Ohio

Contract No. W91237-06-C-0006

This document is provided to certify that the McTech Corp 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

Mark Perkins

Peer Review

Rodney Bumgardner



11/16/06

**Comments on Quality Control Plan
Quality Control Plan**

***Lime Treatment Pilot Study
Plum Brook Ordnance Works –Pentolite Road Red Water Ponds
Sandusky, Ohio***

Contract No. W91237-06-C-0006

The following comments were provided the United States Army Corps of Engineers, Huntington District.
All comments resulting from this review have been resolved and/or incorporated.

MEMORANDUM FOR CELRH-EC-CE, ATTN: Lisa A. Humphreys

SUBJECT: Quality Assurance Review Comments for the Draft Quality Control Plan, Lime Treatment Pilot Study, Plum Brook Ordnance Works, Pentolite Road Redwater Ponds, Sandusky, Ohio – Contract No. W91237-060C-0006, October 2006

1. The subject draft plan has been reviewed and the following comments are provided:

Definitions and Acronyms

- **DERP-FUDS.** Format comment. The definition for DERP-FUDS was moved to the left, out of alignment with the other acronyms, so that it would not continue onto the next line. This format should be fixed to provide a more proper appearance to the document

Response: Concur, change has been made.

- **GSA.** An “s” should be added to Service, for General Services Administration.

Response: Concur, change has been made.

Report Text

- **Section 2.0.** Reference EM 200-1-1 is no longer applicable; the correct reference is the DoD Quality Systems Manual for Environmental Laboratories, Version 3, January 2006.

Response: Concur, the reference has been corrected.

- **Section 3.1.** Recommend adding “Nitroaromatic-contaminated” after the word “of”.

Response: Concur, the changes have been made.

- **Section 3.4.1.**
 - **1st paragraph, 1st sentence.** The phrase “work order” should be revised to “contract”, since this is a “stand alone” contract, and not a work order under a contract.

Response: Concur, the change has been made.

- **1st paragraph, 3rd sentence.** There is a space missing between “completed” and “*Interim*”; also, recommend adding the WTI contract/work order for reference.

Response: Concur the contract number has been added.

- **2nd paragraph.** General comment. Recommend adding some background information on previous USACE studies which have shown that lime treatment has been successful at

reducing nitroaromatics in soil so as to provide an introduction to this pilot study. At the end of the paragraph, the process is stated in general terms and eight test plots are noted. Are different lime doses to be applied to these eight test plots? More detail/discussion is recommended as to how the pilot study will be performed, but if this is detailed in other plans, then reference those plan(s).

Response: Concur, the following paragraph has been added to provide specific reference. “The *McTech Plan of Operation (2006)* provides complete details of the activities that are to be performed. Section 3.4.5 of this QCP provides a summary of the activities to be performed during this study.”

- Section 3.4.2, 4th paragraph, 2nd sentence. GSA should be defined, for this appears to be the first reference to that acronym.

Response: Concur, the change has been made. GSA is also included in the list of acronyms.

- Section 3.4.3
 - 3rd paragraph, 1st sentence. To match format of other references, parentheses should be placed around *USACE 2003*.

Response: Concur, the change has been made.

- 5th paragraph, last two sentences. There are references to “this experiment”; recommend revising to “this *pilot study*”.

Response: Concur, the change has been made.

- Section 3.4.4
 - Task 10. Reference is made to “this delivery order”, which should be revised to “contract”, per previous comment.

Response: Concur, the change has been made.

- Last paragraph, 2nd sentence. The word “the” should be deleted before “McTech”

Response: Concur, the change has been made.

- Section 3.4.5, 2nd and 3rd paragraphs. Do not understand why this information, which was provided in Section 3.4.3, is repeated in this section almost verbatim.

Response: Concur, section 3.4.5 has been changed to better define the actual field activities that will be performed. Paragraphs 2 and 3 have been removed. Paragraph 2 has been replaced with the following, “The *McTech Plan of Operation (2006)* provides complete details of the activities that are to be performed. McTech will carefully excavate the soils from 60 feet by 40 feet area in 12 to 18 inch lifts. Each lift will be staged separately and then spread out to a depth of no greater than 18 inches. This will result in a total of 8 treatment piles. The piles will be treated with the

addition of hydrated lime and tilling on various frequencies. Sampling activities will include daily field pH measurements and weekly laboratory analysis of the COC 2,4,6 Trinitrotoluene (TNT). At the conclusion, this field pilot study will be able to compare the results achieved via alkaline hydrolysis on a periodic basis, a continuing basis, and the control plot.”

- Section 3.5.H. It is noted that Ms. Chambers is listed as the PM, and a reviewer of documents in the PM function. For that reason, she cannot also be an IQCT reviewer. Please see comment for Section 4.1.

Response: Concur, Ms. Chambers will continue to serve as the PM and a reviewer of the documents in the PM function. Mr. Bumgardner will serve as the IQCT reviewer. In addition, Mr. Bumgardner’s resume has been included in Appendix D.

- Section 3.5.1
 - 3rd sentence. The reference to Appendix B should be Appendix C.

Response: Concur, the reference has been changed.

- Last sentence. It is noted that Appendix D also contains IQCT resumes.

Response: Concur, resume reference has been added.

- Section 4.1, Peer Review. Ms. Chambers is the PM referenced in the first sentence of this section, but is then listed as the independent, peer reviewer. She cannot serve as both.

Response: Concur, Ms. Chambers will continue to serve as PM. Mr. Bumgardner will serve as independent peer review. In addition, Mr. Bumgardner’s resume has been included in Appendix B. See response to Section 3.5.H comment

- Sections 5.0 and 5.1. The 2nd sentence in 5.0 and the first sentence in 5.1 say two different things about the definable features of work. The first sentence in 5.1 could be deleted.

Response: Concur, the sentence has been deleted.

- Section 5.1.1
 - General comment for heavy equipment. Somewhere in the tasks that involve construction equipment, reference should be made to equipment inspection, CELRH Form 2824. This may be an Initial Phase Inspection item, rather than Preparatory Phase, but I wanted to note this.

Response: Concur, the following sentence has been added. In addition, CELRH Form 2824 as found in Appendix A shall be used to document the inspection of the construction equipment.

- Identification of any type of testing, etc. It is stated that soil samples *may be required*; it is noted that soil samples are required, per previous statements and the scope of work.

**Comments on Quality Control Plan
Quality Control Plan**

***Lime Treatment Pilot Study
Plum Brook Ordnance Works –Pentolite Road Red Water Ponds
Sandusky, Ohio***

Contract No. W91237-06-C-0006

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

General:

Check spacing and reconcile the Table of Contents once all changes have been made. Currently, the page numbering is off.

Response: Spacing checked and Table of Contents page references changed as needed.

Specific: Corrections made and spacing checked.

- 1) Cover and throughout document: Please insert the correct contract number: W91237-06-C-0006. Also, remove the word, “in-situ” from the title and throughout the document as this will not be in place treatment, rather we will be excavating the soil prior to treatment.

Response: Correct contract number inserted and “in-situ” term removed from document.

- 2) Cover: Remove acronym from title block as it is not used in the title block on subsequent pages.

Response: PRRWP acronym removed from title blocks.

- 3) Cover: Please insert the correct project number: 200614M.

Response: Correct McTech project number inserted.

- 4) Section 3.1: Define PRRWP as this is the first use of this acronym in the document.

Response: Correction made.

- 5) Section 3.2: Add acronym, "PBOW" as this is the first instance Plum Brook Ordinance Works is used in the body of this document.

Response: "PBOW" added in Section 3.2

- 6) Section 3.4.1, first sentence: Suggest removing Pentolite Road Red Water Ponds as it is defined in 3.1 and Replace the last word of the sentence, "Project" with the word, "site" and add, "located in Sandusky, OH".

Response: The first sentence of Section 3.4.1 is reworded incorporating the suggestions made for more clarity.

- 7) Section 3.4.1, third and sentence: Add space before, "Based" and the results of the completed treatment of soils is not found in the *Final Action Memorandum*, rather, the WTI report, "GET THIS FROM LISA". Make sure to *italicize report names* used in this document. Remove the last part of this sentence starting with, "continue" because at this point we are not continuing a NCTRA. Add to the end of the sentence, "will investigate the possibility of reducing the nitroaromatic contamination at the PRRWP". The new sentence should read, "Based on the results of the completed Interim Soil Removal Action (ISRA) (WTI 2006) the USACE will investigate the possibility of reducing nitroaromatic contamination at the PRRWP Area applying lime treatment technologies.

Response: Space added before "Based," all titles of reports italicized and end of sentence in Section 3.4.1 has been changed to what's suggested in comment.

- 8) Section 3.4.1, fourth and fifth sentence: Change to, "This reduction in nitroaromatic contamination will be done to minimize the threats to, and provide adequate protection to, human health and the environment from exposure to soil at PRRWP to the one contaminant of concern (CO_C), trinitrotoluene (TNT) at concentrations that exceed the preliminary remediation goals (PRGs) as identified in the "*Final Action Memorandum for the PRRWP Interim Removal Action* (USACE 2003). The PRGs are based upon Remedial Goal Options (RGOs), are chemical and receptor specific, risk based remedial criteria that capture all the exposure assumptions and toxicological data used in risk assessment.

Response: Fourth and fifth sentences of Section 3.4.1 changed as suggested.

- 9) Section 3.4.1, last sentence: Remove as we will not be tilling lime directly into soil for the entire half acre 8' deep and replace with, "The study approach will be to excavate soil from various level to create eight test plots into which lime will be tilled".

Response: Change Completed.

- 10) Section 3.4.2, second paragraph, last three sentences: Delete as this additional information on the TNT Areas is not necessary and this work performed does not deal primarily with the TNT B area.

Response: All three sentences in paragraph two, dealing with TNT-B are deleted.

- 11) Section 3.4.2, third paragraph, second and third sentences: Delete the hyphens between TNT-B and TNT-A as this is not consistent with the rest of the document.

Response: Hyphens deleted.

- 12) Section 3.4.2, third paragraph, fifth sentence: Add to the end of the sentence, “located approximately 700’ east of the PRRWP area.

Response: Text added referring to location of WWTP relative to PRRWP.

- 13) Section 3.4.2, third paragraph, sixth and seventh sentence: Combine by using a comma and replacing “This” with “which.”

Response: Corrected.

- 14) Section 3.4.2, last paragraph: Move to the beginning of Section 3.4.3.

Response: Correction completed.

- 15) Section 3.4.3, end of Section, add section 1.2 of the SOW here. I realize it is repeating what you have in 3.4.5 and is somewhat redundant, however, this language serves to support both sections. Further comment in 16) below.

Response: Section 1.2 of PRRWP Scope of work added to the end of Section 3.4.3

- 16) Section 3.4.5, second paragraph, directly following first sentence: Add the following reference to the Plan of Operations, “Refer to the Plan of Operations for a full and detailed description of field activities required during this Lime treatment study.”

Response: Reference made in Section 3.4.5, following first sentence.

- 17) Section 3.5, directly following B., Add Gary Ponikvar (see Plan of Operations) and adjust lettering as appropriate.

Response: Gary Ponikvar added to NASA Technical POC list with phone number.

Comment: It was not added as suggested, see Plan of Operations.

Response: changed per Plan of Operations

18) Section 3.5, item J: Replace, "soil" with "materials" as we will not be removing soil under this SOW.

Response: Change made.

19) Section 4.1, Peer Reviewer: Change to Kimberlie Chambers and change phone number also.

Response: Kimberlie Chambers as Peer Reviewer with contact phone numbers included.

20) Section 6.0, change the date of submission of the draft plans to October 5.

Response: Changed.

21) Appendix E: Title Blocks have not been changed; change peer reviewer and take out the reference to the project manager as an additional reviewer.

Response: Appendix E updated with comments noted.

Comment: Reference to project manager was not removed.

Response: Removed