

# **Former Lake Ontario Ordnance Works Underground Storage Tank Removal and Site Closure**

**Contract No: W912P4-07-D-0005  
Task Order No: 0002**

## **Contractor Quality Control Plan Revision 0**

**September 10, 2008**

**Prepared for:**

**U.S. Army Corps of Engineers - Buffalo District**

**Prepared by:**

**ECC**

1125 Route 22 West  
Suite 310  
Bridgewater, NJ 08807



# CONTRACTOR QUALITY CONTROL PLAN

## Former Lake Ontario Ordnance Works Underground Storage Tank Removal and Site Closure Niagara County, New York

September 2008

I hereby certify that the enclosed Contractor Quality Control Plan, shown and marked in this submittal, is that proposed to be incorporated with Contract Number Contract No: W912P4-07-D-0005 Task Order No: 0002 at the Formerly Utilized Defense Site (FUDS) Lake Ontario Ordnance Works (LOOW). This Contractor Quality Control Plan is in compliance with the Contract drawings and specifications, and is submitted for Government approval.

Reviewed and Approved by:

David M.  
Miller

Digitally signed by David M. Miller  
DN: cn=David M. Miller, c=US,  
ou=ECC, email=dmiller@ecc.net  
Date: 2008.09.09 17:15:15 -04'00'

Project Manager  
Tom Williams

Will Stephan  
2008.09.09 14:29:24  
-04'00'

Date

Quality Control System Manager  
Wilbur Stephan, CHMM

Date

Marc Mizrahi

Digitally signed by Marc Mizrahi  
DN: cn=Marc Mizrahi, c=US, o=ECC  
Date: 2008.09.09 14:46:17 -04'00'

Program Manager,  
Marc Mizrahi, CHMM

Date

Accepted by:

USACE  
Contracting Officer  
Sheila L. Lewis

Date

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## ACRONYMS AND ABBREVIATIONS

AHA	Activity Hazard Analysis
AEC	Atomic Energy Commission
APP	Accident Prevention Plan
COC	Chain-of-Custody
COR	Contracting Officer's Representative
CQC	Contractor Quality Control
CQCP	Contractor Quality Control Plan
CS	Construction Supervisor
DFW	Definable Feature of Work
DQCR	Daily Quality Control Report
ESH&Q	Environment, Safety and Health, and Quality
FIO	For Information Only
FUDS	Formerly Utilized Defense Sites
GA	Government Approval
IH/HPT	Industrial Hygienist/Health Physics Technician
IPPP	Interim Production Pilot Plant
JSA	Job Safety Analysis
CO	Contracting Officer
LOOW	Lake Ontario Ordinance Works
MSDS	Material Safety Data Sheet
NCR	Nonconformance Report
NIKE	Surface-to-Air Missile System
PM	Project Manager
PgM	Program Manager
RFI	Request for Information
RTM	Remediation Technical Manager
QA	Quality Assurance
QC	Quality Control
QCO	Quality Control Officer
QCM	Quality Control Manager
QCSM	Quality Control System Manager
RCDQMP	Radiochemical and Chemical Data Quality Management Plan
RSO	Radiological Safety Officer
SAP	Sampling and Analysis Plan
SOW	Scope of Work
SSHPP	Site Safety and Health Plan
SSHS	Site Safety and Health Specialist
USACE	United States Army Corps of Engineers
UST	Underground Storage Tank

# **1. INTRODUCTION**

This Contractor Quality Control Plan (CQCP) for the Lake Ontario Ordinance Works (LOOW) was developed by ECC for the United States Army Corps of Engineers (USACE), U.S. Army Engineer District, Buffalo, in accordance with the Contract No. W912P4-07-D-0005 Task Order No: 0002, and the Specifications for Underground Storage Tank (UST) Removal and Site Closure at the Formerly Utilized Defense Sites (FUDS) LOOW Site. The UST Removal and Site Closure will be executed under the USACE FUDS program. Work conducted under this contract will be performed in accordance with all applicable Federal, State, and local laws and regulations. This CQCP is the basis of the project quality control (QC) system and provides an outline of the planned QC procedures for the project.

The primary function of quality management is to facilitate the correct performance of tasks to ensure that remediation and construction activities are performed according to plans and specifications, regardless of schedule or budget. However, proper implementation of quality management helps to avoid rework, thereby resulting in exceptional schedule and budget performance. This is achieved through the execution of a realistic plan to ensure that the required standards of quality remediation and construction are met and to preclude problems resulting from substandard quality. This CQCP defines the procedures for management and control of ECC personnel, subcontractors, and suppliers to ensure the completed project complies with contract requirements.

## **1.1 QUALITY CONTROL OBJECTIVES**

The objective of the CQCP is to establish and describe the quality management system used to ensure that the project activities are conducted and documented in a planned and controlled manner. This plan defines the management structure, organization, responsibilities, and authorities needed to make certain that remediation and construction are performed according to plans and specifications. Performance of quality work and implementation of a quality assurance program are the responsibilities of all ECC staff members and subcontractors and can be achieved through a cooperative effort and commitment to quality by all personnel.

ECC's goal in the implementation of this CQCP is to ensure compliance with the contract specifications, drawings, applicable regulations and procedures, and to ensure that the appropriate quality standards for project activities are achieved and maintained. The Quality Control System Manager (QCSM) is responsible for implementing this program and assuring the performance of quality work. The QC staff is responsible for monitoring and evaluating the adequacy and implementation of this program and supporting procedures. The QCSM has the full support of management and is given the independence and authority necessary to accomplish assigned tasks.

## **1.2 SITE QUALITY CONTROL PLAN**

This CQCP describes the QC requirements for locating and removing underground storage tanks from various locations at the Lake Ontario Ordinance Works Site. The CQCP will address activities associated with the sampling and analysis of UST contents for characterization and disposal; sampling an analysis of soils and water associated with excavation and UST closure activities; site restoration and testing, as necessary; and preparation of UST / site close out reports. The CQCP is designed to monitor project contract compliance relating to inspection of the project excavation, loading, transportation and disposal activities, site restoration and sampling and analysis requirements utilizing the Three Phase Control system as described in Section 4.0 - Three Phases of Control. The specific health and safety, analytical, testing, and documentation requirements of the project, are the primary concern of this CQCP. These requirements are detailed in the Accident Prevention Plan (APP)/Site Safety and Health Plan (SSHP) and the Sampling and Analysis Plan (SAP). This CQCP is designed to implement, modify, plan, and



complete all task order operations in compliance with contract requirements using proper record-keeping and reporting procedures.

ECC will maintain responsibility for its work and the work of its subcontractors. To ensure compliance with contract requirements and maintain responsibility of all work performed under this contract, ECC will:

- Maintain qualified personnel, equipment, and facilities which are required for the completion of the project; and
- Provide a continuous inspection program to examine the quality of materials, maintain standards of workmanship, ensure remediation and construction standard excellence, evaluate unit performances, identify and correct deficiencies, and provide a finished project which meets or exceeds the contract requirements.

ECC will not consider this plan to be in effect without formal written acceptance of the Contracting Officer (CO). ECC understands that acceptance of this plan is conditional and will be based on continued compliance with the contract specifications. ECC acknowledges that the CO or COR may request changes or periodic updates to the CQCP to maintain contract compliance. The QCSM is responsible for managing and coordinating the Three Phase Control system and QC documentation. No work or testing may be performed unless the QCSM or a designated alternate is on-site.

## **2. PROJECT DESCRIPTION**

The LOOW site is located in northwestern portion of Niagara County, New York approximately 10 miles northeast of Lewiston, New York and approximately five miles south of Lake Ontario (Figure 1). The LOOW site is located within the United States Geological Survey (USGS) Ransomville Quadrangle 7.5 Minute Series topographic map (USGS 1980) as shown on Figure 2.

The LOOW site currently consists of multiple property parcels including operating facilities and unused lands. The Niagara Falls Storage Site (NFSS) occupies 191 acres located in the southwestern portion of the LOOW site.

Activities associated with the UST Removal and Site Closure Project will be conducted within the following three primary areas:

- Former LOOW Wastewater Treatment Plant (WWTP);
- Former Navy Interim Production Pilot Plant - Thermal Pyrolysis Area (IPPP); and
- Former NIKE Missile Battery NF-03/05 (NMB).

The location of each of the above primary project areas is shown on Figure 2.

### **2.1 SITE HISTORY**

In 1942, the War Department obtained 7,500 acres in northwestern Niagara County, NY for the construction of a trinitrotoluene (TNT) production facility designated the Lake Ontario Ordnance Works. TNT production, production support, and storage areas were constructed on 2,500 acres in the eastern portion of LOOW. The remaining 5,000 acres surrounding the production area were left as an undeveloped buffer zone and allowed for possible expansion of the plant from 6 to 12 production lines. The plant expansion never occurred, and this acreage in the western portion of LOOW remained undeveloped. In 1943 after approximately 9 months of operation, LOOW was decommissioned due to excess production at other TNT plants. The 2,500 acre production area of LOOW was used by various Department of Defense (DoD) agencies including the Air Force and Navy. Two manufacturing plants were subsequently built on the property- Air Force Plant 68 and the Navy IPPP. The Army constructed NIKE Missile Battery NF-03/05.

In the mid 1940s approximately 1,500 acres in the southern portion of the LOOW were transferred to the USACE - Manhattan Engineer District (MED). The MED subsequently became the U.S. Atomic Energy Commission (AEC), then the Energy Research and Development Administration (ERDA), and finally the U.S. Department of Energy. Portions of the 1,500 acres were used for storage of radioactive materials during the development of the atomic bomb. However, from the 1950s to 1980s, radioactive materials formerly located throughout the 1,500 acre property were consolidated into the current 191 acre NFSS area.

### **2.2 SITE OWNERSHIP**

The LOOW UST Project work areas are currently owned by non-Federal entities. The WWTP work area is located on property owned by the Town of Lewiston. The IPPP and NMB work areas are located on property owned by Chemical Waste Management, Incorporated.

The USACE Buffalo District has requested all communications with current property owners to be conducted through the following USACE contact:

Mr. Jeffrey S. Hall, P.E.  
USACE Buffalo District - Project Engineer  
U.S. Army Corps of Engineers, Buffalo District  
Phone: (716) 879-4272  
Fax: (716) 879-4355  
E-Mail: [jeffrey.s.hall@usace.army.mil](mailto:jeffrey.s.hall@usace.army.mil)

### **2.3 DEFINABLE FEATURES OF WORK**

The scope of work for the Soils Remediation at the FUDS Lake Ontario Ordnance Works Site requires the following Definable Features of Work (DFWs) to be completed during remedial activities:

- Submittal of work planning documents including the Accident Prevention Plan (APP), Site Safety and Health Plan, Radiation Safety Plan (RSP), Activity Hazard Analyses (AHAs), Sampling and Analysis Plan and the Contractors Quality Management Control Plan (CQCMP);
- Mobilization of needed support structures and equipment;
- Clearing and posting of work areas;
- Sampling & analysis of UST contents and excavated soils for waste characterization and disposal;
- Geophysical Surveying;
- Test Pitting;
- UST removal, decontamination and disposal;
- Site Restoration;
- Site Demobilization;
- UST / Site Close-Out report;

ECC will provide all necessary equipment and personnel to perform UST removal and close-out activities as defined in the contract specifications. This work will be carried out during scheduled work hours of 7:00 am to 5:30 pm, Monday through Friday. Changes to this work schedule will be discussed with the COR at least 48 hours prior to the implementation of proposed changes.

### **3. QUALITY CONTROL ORGANIZATION**

This CQCP describes the QC system that will be implemented by ECC to ensure that field work and sampling activities comply with the requirements of the project scope, project work plans, and the required field and analytical testing methods. This plan provides ECC and USACE quality assurance (QA) personnel with a schedule of project meetings, inspections, and submittals required for this project. The following sections describe the roles, responsibilities, and authorities of ECC's personnel associated with the activities for this project.

#### **3.1 PROJECT ORGANIZATION**

The project organization chart identifying key personnel, responsibilities, and lines of authority for the LOOW remediation work for the FUDS contract is presented in Appendix A. Resumes for project personnel are provided in Appendix G.

ECC is responsible for developing, modifying, and implementing the CQCP, which will be implemented independently of the QA oversight performed by representatives of the USACE. However, the CQCP will not be activated without formal written acceptance of the CO.

#### **3.2 QUALITY CONTROL ORGANIZATION**

A brief description of the roles and responsibilities of project personnel is described in the following sections.

Changes to the CQC staff organization require acceptance from the USACE CO and must be submitted in writing 7 days prior to the proposed change. Requests will include the names, qualifications, duties, and responsibilities of each proposed replacement. All such changes to CQC staff and notification/acceptance of the CO will be routed through the Project Manager (PM).

##### **3.2.1 Program Manager**

The ECC Program Manager (PgM), Marc Mizrahi, is responsible for executive oversight and overall conformance of the work to USACE requirements and specifications, including technical, cost, and schedule. The PgM has the overall responsibility for the success and proper execution of the contract and all task orders. This responsibility includes reviewing all required submittals, designating the PM and QCSM, and ensuring that the project schedule and budget allow sufficient resources to properly complete the required elements of the work in accordance with the approved work plans. The PgM also has the primary responsibility for tracking any proposed changes in the scope of work (SOW) for the overall project and reporting any proposed changes to the PM, QCSM, and the COR. The PgM interfaces directly with the USACE Buffalo District regarding contract execution and accountability, and is the primary point of contact for the contract.

##### **3.2.2 Project Manager**

The ECC PM, Mr. Thomas Williams, organizes the assigned project staff and initiates project planning and implementation activities at the Task Order level. The PM controls the budget and schedule with the concurrence of the PgM, ensuring the contract requirements are met. The PM is responsible for managing all field activities related to the requirements of the SOW, including subcontractors. The PM reports directly to the PgM and ensures that all project activities conform to USACE requirements and specifications. PM duties also include assigning responsibilities for preparing project reports and reviewing each form/report for accuracy and content.

### **3.2.3 Site Superintendent**

The Site Superintendent (SS) shall manage the day-to-day activities on the site. The Site Superintendent shall be responsible for the safe execution of the work, will report to the ECC PM, and has responsibility for schedule adherence. Prill Development, Inc. (ECC subcontractor) will be providing the Site Superintendent for this project. The ECC project team SS will have all of the above detailed responsibilities.

### **3.2.4 Corporate Environment, Safety and Health, and Quality Corporate Sponsor**

In accordance with the ECC QA Program, an Environment, Safety and Health, and Quality (EHS&Q) Sponsor will be assigned for this project. This position has overall responsibility and authority for developing and managing the Programmatic QC Plan. This person will serve as a technical advisor on quality-related matters and resource to the QCSM.

### **3.2.5 Quality Control System Manager**

The ECC QCSM/Quality Control Manager (QCM), Wilbur Stephan, is responsible for supervising all QC aspects of the project to ensure compliance with contract plans and specifications. The QCSM is responsible for overall management of the Contractor Quality Control (CQC) Program and has the authority to act independently in all QC matters. As supervisor of the CQC Program, the QCSM approves all submittals and supervises all QC procedures. The QCSM maintains communications between project management and project team members and acts as primary spokesman on quality matters when interfacing with external organizations.

A copy of the QCSM appointment letter is included in this CQCP as Appendix B. The appointment letter describes the responsibilities of the QCSM and delegates sufficient authority to the QCSM to adequately perform CQC functions, including authority to stop work when such work is not in compliance with the contract.

#### **QCSM Authority and Responsibility**

The QCSM reports to the ECC Corporate ESH&Q Sponsor to facilitate required authority and organizational freedom, including sufficient independence from cost and schedule considerations. The QCSM has the overall responsibility and authority for the administration of all CQC Program-related activities. Generally, the QCSM is responsible for:

- Ensuring that the CQCP is implemented for the full scope of work; and
- Conducting regular reviews and reporting to the QCM and the PM regarding the status and adequacy of the CQC Program.

The QCSM for the project serves as primary spokesperson on matters related to the CQC Program, including formal communications with the USACE, and is responsible for verifying that activities affecting quality are correctly performed. The QCSM will provide a Daily Quality Control Report (DQCR) to the USACE. The QCSM is responsible for reviewing all attachments to the DQCR, such as the daily safety meeting records, new JSAs, etc.

To carry out this responsibility, the QCSM is given sufficient authority, access to work areas, and organizational freedom to perform the following functions:

- Identify quality problems;
- Initiate, recommend, or provide solutions to quality problems through designated channels;
- Identify the need for corrective action;
- Verify implementation of solutions and corrective actions;
- Assure that further processing, delivery, installation, or use of items or services are controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred;
- Halt work, if work is not in compliance with the contract requirements;
- Certify that all submittals are in compliance with contract requirements; and
- Ensure that all certifications provided by others (e.g., equipment and material; and vendors or suppliers) are accurate and in compliance with contract requirements.

### **3.2.6 Quality Control Officer**

The QCO, Kevin Kosko, is responsible for coordinating and supervising all QC aspects of the planned field activities including sampling tasks to ensure compliance with project plans and specifications. The QCS will be present on-site during all field activities and is responsible for performing field QC functions. To carry out these responsibilities, the QCS is given the authority to perform the following QA functions:

- Lead all Preparatory Inspection meetings, if QCSM is not available;
- Prepare the DQCR;
- Identify, recommend, and oversee corrective actions for field deficiencies;
- Halt work, if work is not in compliance with the contract requirements;
- Coordinate with the PM for scheduling of required field QC testing requirements;
- Ensure that the quality of data meets project QA objectives as identified in the SAP;
- Ensure consistent QA/QC procedures are in-place during the performance of project sampling and analysis activities;
- Ensure that QA procedures for the sampling activities are conducted in a manner consistent with state regulations;
- Recommend any necessary corrective action procedures to maintain project QA objectives;
- Conduct field and laboratory audits to assure that project QA and QC requirements are implemented; and
- Check chain-of-custody (COC) records for correctness and accuracy.

### **3.2.7 Radiological Safety Officer**

The Radiological Safety Officer (RSO), Kevin Kosko, will be responsible for the implementation of all radiation safety activities. The RSO also is responsible for the project radiation monitoring. The RSO will oversee all operations relating to radioactive material handling and post-remedial release of the survey units. The RSO will be functioning as both the RSO and SSHS regarding radiation and occupational safety monitoring and reporting functions. Specific duties of the RSO, and the forms used by the RSO, are detailed in the Site Safety and Health Plan, and the Radiation Protection Plan.

### **3.2.8 Site Safety and Health Specialist**

The SSHS, Kevin Kosko, will be responsible for the following:

- Supervise daily on-site implementation and enforcement of the APP/SSHP;
- Ensure site compliance with federal, state, and OSHA safety and health regulations and all requirements of the APP/SSHP including, but not limited to, radiation surveys, air monitoring,

use of personal protective equipment (PPE), decontamination, site control, procedures used to minimize hazards, safe use of engineering controls, the emergency response plan, spill containment program, and documentation of the daily safety and health inspection results;

- Conduct all necessary on-site training;
- Stop work if unacceptable health or safety conditions exist, and take necessary action to re-establish and maintain safe working conditions;
- Consult with and coordinate any modifications to the APP/SSHP with the ECC Safety and Health Specialist, RSO, the PM, and the CO;
- Document the safety and health findings during daily quality control inspections;
- Recommend corrective actions for identified safety and health deficiencies; and
- Oversee the corrective actions in coordination with site management.

### **3.2.9 Remediation Technical Manager**

The Remediation Technical Manager (RTM), Dave Miller, is responsible for coordinating and supervising all quality control aspects of the sampling tasks to ensure compliance with the project plans and specifications. He also will assist in the interpretation of analytical results. The RTM will be present on-site during all field sampling activities, and is responsible for maintaining proper operating conditions. To carry out these responsibilities, the RTM is given the authority to perform the following QA functions:

- Ensure that the quality of data meets project QA objectives as defined in the SAP;
- Ensure consistent QA/QC procedures are in-place during the performance of project sampling and analysis activities;
- Ensure that QA procedures for the sampling activities are conducted in a manner consistent with state regulations;
- Conduct field and laboratory audits to assure that project QA and QC requirements are implemented;
- Coordinate the laboratory and field audits with the QCSM and Project Health Physicist (the RSO);
- Review field and laboratory audit reports with the QCSM and RSO and assist in implementing corrective action identified by the field or laboratory audits;
- Implement project QA requirements and coordinate field and laboratory data validation;
- COC records for correctness and accuracy; and
- Review analytical procedures and results to evaluate the analytical QC parameters of reported analytical results.

### **3.2.10 Industrial Hygiene/Health Physics Technician**

The Industrial Hygiene/Health Physics Technician (IH/HPT) will report to and interface with the SSHS for survey protocol and technical issues. The IH/HPT will perform the radiation monitoring of the materials for disposal purposes; air monitoring; instrument maintenance and calibration; and radiological monitoring during the project. The IH/HPT is responsible for maintaining the radiological survey records of the materials and the site.

### **3.2.11 Subcontractors**

When other companies and/or subcontractors are involved in performing activities governed by the requirements of the CQCP, the responsibility and authority of such organizations will be clearly established and documented. Although ECC may delegate the establishment and execution of certain portions of the CQCP, ECC will retain the responsibility of the project QC program.

ECC anticipates utilizing several subcontractors. Prill Development is contracted to perform the actual excavation, tank removal, cleaning and disposal. K2 Environmental Services, LLC will provide onsite QC supervision, technical and staffing augmentation including health and safety and radiation safety.



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## **4. THREE PHASES OF CONTROL**

The QCSM is responsible for implementing the core of the Quality Management System, the Three-Phase Control system, to ensure that all project work complies with requirements of the contract plans and specifications. The Three Phases of Control will be implemented for each DFW delineated in the work plan (DFWs are presented in Appendix C) The phases are described below. Required actions are listed for each phase.

### **4.1 PREPARATORY PHASE**

The QCSM will notify the CO or COR at least 48 hours before beginning any of the required Preparatory Phase actions. The Preparatory Phase will be performed prior to the beginning of work on each DFW. This phase will include a meeting conducted by the QCSM and attended by the SSHS, the SS, other CQC personnel (as applicable), and the supervisor responsible for the DFW. The results of the preparatory phase actions will be documented by separate minutes prepared by the QCSM and attached to the DQCR. ECC will instruct workers as to the acceptable level of workmanship required to meet contract specifications. The Preparatory Phase will include the following activities:

- Review of each paragraph of the applicable specification sections;
- Review of the contract plans;
- Ensure that all materials and/or equipment were tested, submitted, and approved;
- Ensure that provisions were made to provide required control;
- Review of the testing plan;
- Ensure that provisions were made to provide the required QC inspection and testing;
- Examination of the work area to ensure that the required preliminary work is completed;
- Examination of the required materials and equipment to ensure that they are on-site and conform to the specifications;
- Review the APP/SSHP and appropriate AHAs to ensure that applicable safety requirements are met and that required material safety data sheets (MSDS) were submitted;
- Discuss construction methods and procedures for conducting the work, including elimination of repetitive deficiencies, document tolerances, and workmanship standards; and
- Ensure that the portion of the plan for the work to be performed is accepted by the CO or COR.

### **4.2 INITIAL PHASE**

The QCSM will notify the CO or COR at least 48 hours before each Initial Phase activity. The initial phase will be accomplished at the beginning of each DFW. The QCSM will ensure that the personnel responsible for the definable features of work are instructed concerning the acceptable level of workmanship required. The QCSM will document the results of the initial phase meeting as separate meeting minutes attached to the DQCR.

The following will be accomplished during the Initial Phase:

- Check preliminary work to ensure that it is in compliance with contract and task order requirements;
- Review minutes of the preparatory meeting;
- Establish the level of workmanship required;
- Resolve conflicts;
- Check site and personnel safety to ensure compliance with the APP/SSHP and the appropriate activity hazard analysis; and
- Ensure that inspections and testing are scheduled.

The Initial Phase must be repeated for each new crew starting work on-site or if acceptable quality standards are not being maintained.

#### **4.3 FOLLOW-UP PHASE**

The QCSM or QC personnel will perform daily checks to ensure continuing compliance with the contract requirements, including control testing, until the completion of each DFW. The inspections and/or tests will be documented and included in the DQCR. Final follow-up checks will be conducted and all deficiencies corrected prior to the start of additional features of work. The follow-up checks will include the following:

- Ensure the work is in compliance with contract requirements;
- Check site and personnel safety to ensure compliance with the APP/SSHP and the appropriate activity hazard analysis;
- Ensure the quality of workmanship required is maintained;
- Ensure that scheduled testing is performed; and
- Ensure that nonconforming work is corrected.

#### **4.4 ADDITIONAL PREPARATORY AND INITIAL PHASES**

Additional Preparatory and Initial phases may be conducted on the same DFWs as determined by the USACE if the quality of on-going work is unacceptable; there are changes in the QC staff, the Project Management staff, or the work crew; work on a definable feature is resumed after a substantial period of inactivity; there is a change order for that specific activity; or other problems develop.

#### **4.5 PROJECT COORDINATION MEETINGS**

A Pre-work Conference will be held between the ECC Project Management team, including the PM, SS, QCSM, SSHS/RSO, and the USACE to review submittals, safety, labor relations, environmental protection, project schedule, payment, and procurement of materials. Other subjects concerning the project may be discussed at the discretion of ECC or the USACE.

The minutes of this meeting will be prepared by ECC's QCSM and reviewed by ECC's SS before distribution to all the organizations involved.

Once work commences, subsequent coordination meetings may be called by either ECC or the USACE to reconfirm mutual understandings and/or address deficiencies in the CQC system or project procedures which may require corrective action by ECC.

#### **4.6 DEFICIENCY TRACKING**

Deficiencies may be identified at any stage of the Three Phases of Control process. Defects and deficiencies identified will be recorded in the DQCR. Once identified, defects and deficiencies will be monitored closely until resolved through re-work, replacement, or other required performance. The status of each deficiency will be recorded on the DQCR until resolved. No additional work which builds on the deficient item will be permitted until the deficiency is corrected.

ECC requires its subcontractors to adhere to the CQCP and the APP/SSHP, including the provisions of EM 385-1-1 (November, 2003). Acceptance of these plans and policies will be in written form. In addition, ECC requires subcontractors to have their own QC procedures specific to the type of work performed. ECC will review and approve subcontractor procedures before allowing subcontractors to begin work. Appropriate subcontractor QC plans and procedures directly affecting project work will be

documented and written copies maintained onsite. All QC functions will be coordinated through the QCSM and documented in daily reports.

While onsite, all subcontractor personnel will be under the supervision and review of the QCSM and Construction Supervisor (CS). Subcontractor deficiencies will be recorded on the DQCR. These conditions are documented in the subcontractor agreements prior to the start of any field work.

#### **4.7 SAFETY INSPECTIONS**

The SSHS will perform daily safety inspections throughout the project. The inspections will evaluate site operations and will be reported daily in the DQCR and faxed or delivered to the COR by 10:00 a.m. the following day. In addition, the SSHS will conduct daily safety meetings with all site personnel and document the meetings using the Daily Safety Meeting form. This form will be attached to the DQCR and sent to the COR daily. All ECC QC and Safety and Health personnel are experienced and trained to identify and correct any deficiencies in site operations. Deficiencies and corrections will be recorded on the DQCR and will include the area of deficiency, type of deficiency, corrective action to be taken or already taken, the responsible party for corrective action, date of follow-up inspection(s), and signature of the investigating QCSM.

All on-site inspections will be considered a matter of record. The inspections will be filed in ECC's Quality Control Section and submitted in the appropriate contract formats.

#### **4.8 COMPLETION INSPECTION**

The QCSM will conduct a Completion Inspection of all DFWs to verify that the work performed meets the requirements of plans, specifications, quality, workmanship, and completeness. Three types of completion inspections are performed:

- Quality Control Completion Inspection;
- Pre-Final Inspection; and
- Final Acceptance Inspection.

Completion inspections are discussed and defined in Section 7.3, Completion Inspections.

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## **5. SUBMITTAL CONTROL PROCEDURES**

ECC will review and modify the Submittal Registry (ENG Form 4288), received from the USACE, the reflect any additional submittals deemed necessary. ECC will submit the items listed on the Submittal Register and any submittals required by the contract specifications. Each submittal will be in compliance with the contract requirements. The QCSM will check and approve each submittal, and complete each respective transmittal form (ENG Form 4025). The Submittal Register template to be used is presented in Appendix D.

The Submittal Register is the submittal scheduling document and will be used to control submittals throughout the life of the contract. The Submittal Register and progress schedules will be coordinated and updated as requested.

The Submittal Register will be maintained by the QCSM. Listings will be grouped by section number and listed in numerical sequence of the transmittal number shown on ENG Form 4025.

### **5.1 SCHEDULING**

Submittals covering a complete system or interrelated components will be coordinated and submitted concurrently. Certifications to be submitted with the applicable drawings also will be scheduled. The approved Submittal Register will specify the scheduled dates for submittals.

### **5.2 TRANSMITTAL**

Submittals to the USACE will be transmitted with ENG Form 4025. Each item to be submitted will be identified to ensure proper listing of the specification paragraph and sheet number of the contract/design drawings pertinent to the data submitted for each item. ENG Form 4025 will accompany each copy of a submittal.

### **5.3 DEVIATIONS**

For submittals that include proposed deviations requested by ECC, the "Variation" column on ENG Form 4025 will be checked. ECC will establish in writing the rationale for the deviation and annotate the deviations of the submittal.

### **5.4 CERTIFICATION**

The QCSM is responsible for certifying that all submittals are in compliance with contract requirements and for ensuring that all certifications provided by others (i.e., vendors and suppliers) are accurate and in compliance with contract requirements.

### **5.5 REQUIRED SUBMITTALS**

The required submittals (as applicable) for this project are categorized as follows:

- SD-01 Preconstruction Submittals;
- SD-06 Test Reports;
- SD-07 Certificates;
- SD-11 Closeout Submittals.

No activities will be performed prior to receipt of the required approvals of applicable submittals. The QC staff will check to ensure that all materials and/or equipment are tested, submitted, and approved during the Preparatory Phase of QC inspections.

## **5.6 SUBMITTAL CATEGORIES**

### *Government Approval*

Submittals subject to Government Approval (GA) are noted as such in the contract specifications and the Submittal Register. Each submittal required under the contract will be transmitted to the USACE on or before the scheduled submittal date as listed in the Submittal Register. Submittals receiving GA will be stamped and dated as such.

### *For Information Only*

Although approval of the USACE is not required on For Information Only (FIO) submittals, the USACE may require re-submittal of any item or material that is not in compliance with the contract specifications.

Both GA and FIO classified submittals will be sent to individuals on the distribution list (Appendix E).

## **5.7 CERTIFICATES OF COMPLIANCE**

Any quality compliance certificates required for the project will include the following:

- Name and address of the contractor;
- Project name and location;
- Quantity and date of the shipment or delivery of the certified material; and
- Signature of an official authorized to certify the quality of the material for the manufacturer.

Copies of laboratory test results submitted with the certificates will contain the name and address of the testing laboratory and date of the reported tests. Certification will not relieve ECC from supplying satisfactory material. The proposed testing laboratories are presented below:

Radiological Constituents:  
Eberline Laboratories  
601 Scarboro Rd.  
Oak Ridge TN 37830

Chemical and Metals:  
Chemtech Laboratories  
284 Sheffield St.  
Mountainside, NJ 07092

## **6. TESTING**

Testing and test control practices support project work activities. Testing is conducted for two purposes:

- To verify conformance to quality requirements (i.e., proof tests prior to installation, pre-operational tests and construction tests, product certification tests); and
- To provide data for use in other activities (i.e., field and/or laboratory tests conducted to provide design input data).

For LOOW the testing performed will include, but is not limited to, radiological analyses of physical samples. Physical samples include those obtained for waste characterization, unrestricted release, and Final Status Survey (FSS) support.

### **6.1 OPERATIONAL TESTING**

Operational testing will be conducted to verify that the materials and techniques used in the performance of this SOW are in compliance with project specifications and in conformance with established parameters. Results will be documented and provided to the USACE as required by project specification.

### **6.2 ACCEPTANCE TESTING**

Acceptance testing will be conducted to identify specific conditions that must be achieved for the work or material to be within acceptable quality parameters. Testing methods and procedures will be performed by approved laboratories and the information will be forwarded to the USACE as required. Acceptance testing will be performed for backfill and compaction of placed backfill.

### **6.3 TESTING REQUIREMENTS**

ECC and its subcontractors will adhere to the approved SAP for waste characterization of tank contents, post excavation sampling and waste profiling of soils and wastewater.

The SAP specifies analytical requirements and analytical quality procedures for the program to ensure that the chemical and radiological data collected are of known and adequate scientific quality. All laboratories will be Certified Testing Laboratories and will be required to meet the quality control requirements of the SAP. As part of this program, the QCS will supervise the collection of samples for the project.



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## 7. INSPECTIONS

A structured control system will be implemented for each major work task and will include preparatory, initial, follow-up, and safety inspections. The QCSM or QCS will ensure that no work proceeds until the appropriate inspection phase is performed. In addition to the QC staff, other project personnel will implement this control system as part of their normal duties/responsibilities.

### 7.1 INSPECTION PHASES

The ECC inspection program consists of three phases of inspections prior to and during the task performance and coincides with the Three Phases of Control. This inspection approach ensures QC in the field through multiple inspections during all phases of job performance for each DFW. The Three Phases of Control are outlined in detail in Section 4.0 of this CQCP.

### 7.2 INSPECTION ACTIVITIES

The different types of QC inspection activities performed under the CQCP include the following activities.

#### Field Inspections

Primarily visual examinations, but may include measurements of materials and equipment being used, techniques employed, and the final products. These inspections confirm that a specific guideline, specification, or procedure for the activity is successfully completed. They are performed either during remediation, backfill, and/or site restoration, or shortly after completion of the work. The results will be documented in the DQCR.

#### Field Tests

Tests or analyses conducted in connection with site activities, and performed primarily on samples or work in-progress to determine whether the project requirements are being met. Field tests are performed upon receipt of the material to provide prompt confirmation or rejection of the material. Work in-progress is tested to minimize the potential of rework being required as a result of defective material or work.

#### Laboratory Tests

Testing performed by on-site or off-site laboratories on samples of materials used to characterize the materials and confirm performance. These tests are performed as soon as possible after samples are obtained to provide prompt confirmation or rejection of the material or the resulting work.

#### Receiving Inspections

Inspections that include a visual examination and/or measurement of materials obtained from suppliers when they arrive at the site. They are performed to verify that the materials received meet design specifications, are free of defects, and were not damaged in transit.

#### Radiological Surveys

Surveying includes the establishment of background and direct gamma scanning of excavated material to ensure 2X background is not exceeded.

### Civil Surveys

Horizontal and/or vertical grad control for excavation/backfill establishment of elevation benchmarks reference location surveys for structures, and topography, as appropriate.

### Review of Manufacturers' Certificates

The QCSM will ensure that Certificates obtained from suppliers are reviewed for selected shipments of materials received. Certificates include a statement of the requirement that the material must meet, verification that the material does meet the requirements, and supporting test results.

### Compilation of Checklists

Checklists required for critical inspections and completed to document inspection results. These checklists are maintained by the QCSM.

## **7.3 COMPLETION INSPECTIONS**

Three types of Completion Inspections are performed to verify that the work performed meets the requirements of plans, specifications, quality, workmanship, and completeness:

### Quality Control Completion Inspection

Based on the USACE's concurrence that the work is nearing completion and prior to the Pre-final Inspection, the QC staff conducts a detailed inspection for conformance to requirements. The COR is notified of the inspection date so he/she may participate. An itemized deficiencies list is prepared identifying items that do not conform to plans and contract specifications. The list is submitted to the USACE. All deficiencies will be corrected within 5 days of the inspection.

### Pre-Final Inspection

Notice is given to the USACE 14 days prior to the Pre-Final Inspection. The notice includes assurance that all specific items previously identified as unacceptable, along with all remaining contract work, will be completed by the date scheduled for the Pre-Final Inspection.

### Final Acceptance Inspection

Notice is given to the USACE 14 days before the Final Acceptance Inspection and includes assurance that all specific items previously identified as unacceptable, if any, along with all remaining work performed under the contract will be complete and acceptable by the date scheduled for the Final Acceptance Inspection.

At a minimum, the QCSM or the QCS will perform Final Inspections of the UST excavation areas, and the USTs themselves, to ensure proper decontamination has been completed. Inspections will focus on protection of the immediate area, surrounding stockpiles, and the effectiveness of physical barriers.

## **8. NOTIFICATION OF NONCOMPLIANCE**

This section describes the procedures for controlling noncompliant items with specified design requirements by tracking them from identification through acceptable corrective action. All project personnel are responsible for identifying deficiencies and notifying the QCSM.

### **8.1 IDENTIFYING DEFICIENCIES**

The QCSM will be notified of all deficiencies identified during the course of site activities to ensure that each deficiency is documented, reported, and tracked; corrective actions are implemented; and follow-up verification is conducted.

The QCSM will include the identified deficiencies in the DQCR, noting the item found to be deficient, date, time, location, applicable drawing number, specification number, the person who identified the deficiency, and the status of the item to which the deficiency applies (installed, awaiting installation, deficiency identified upon receipt, item previously accepted but in storage, etc.).

When an item is identified as deficient, the QCSM will describe the item/condition in the DQCR, complete a Nonconformance Report (NCR), and enter the NCR in the QC database tracking system. The QC database serves as the daily reminder file of identified deficiencies so the QCSM can monitor their status. The NCR form provides the hard documentation of the status of the deficiency and includes the documented history of the deficiency as corrective action proceeds.

The QCSM will update the status of the deficiency in the QC database daily or when there is a change in status. Before the work activities of the day begin, the QCSM will access the database and note the deficiencies that require follow-up verification that day. New or changed status will be entered into the database at the end of each day. The DQCR will include a report on each NCR/deficiency that was completed and closed out for that day.

### **8.2 COMPLETION INSPECTION PUNCH LIST**

Completion Inspections conducted by the QCSM may result in the development of a punch list of nonconforming items to approved design, plans, and specifications. During the course of each Completion Inspection the QCSM will document items of noncompliance in a punch list that will serve as input to the QC database for items requiring corrective action. The QC database will serve to track the follow-up of open items and identify the completion and close-out dates.

The QCSM will monitor the punch list corrective action database on a daily basis until all corrective actions are complete and the punch list is closed out.

### **8.3 NOTIFICATION**

The CO or COR will be informed of the identification and progress toward resolution of nonconforming items and/or conditions. This is accomplished through the reporting requirements stated in implementing procedures and/or plans or through attendance at coordination meetings.

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## **9. FIELD QUALITY CONTROL**

The field control component of the CQCP includes:

- Procedures for documenting and justifying any field actions do not conform to the CQCP;
- Documentation of all pre-field activities such as equipment check-out, calibrations, and manufacturer inspections;
- Documentation of field measurement QC data;
- Documentation of field inspection activities during the project; and
- Documentation of post-field activities including sample shipment, receipt, and laboratory analysis.

### **9.1 FIELD CHANGES TO CQCP**

Changes to this CQCP, procedures, testing requirements, or personnel may be required to adjust for unforeseen circumstances. Changes may be required by the USACE in the event that identified procedures do not provide adequate control, or may be initiated by ECC to ensure that QC objectives are met.

Should modifications to this CQCP become necessary or desirable, the QCSM will notify the COR in writing in the form of a Request for Information (RFI). The notification will include a description of the proposed change, the reason(s) for requesting the change, and the date upon which the change needs to become effective along with other pertinent information. Proposed or requested changes will not be considered in effect until written approval is granted by the USACE. ECC will make every effort to provide as much lead time to the USACE as possible.

### **9.2 PRE-FIELD ACTIVITIES**

Pre-field activities include equipment calibrations, Preparation Inspections, and a copy of the manufacturer inspections for materials to be incorporated into the project.

Equipment will be inspected and calibrated according to manufacturer's requirements prior to field use. Inspection of heavy construction equipment will be recorded daily on the Equipment/Vehicle Inspection Form. Calibration of field testing equipment will be recorded on the Testing Equipment Calibration Form. All equipment inspections and calibrations will be conducted by personnel with specific training and experience. These forms will be collected by the QCSM daily and attached to the DQCR. Examples of these forms are provided in Appendix F, QC Forms.

### **9.3 FIELD MEASUREMENT QUALITY CONTROL**

Field measurement data for the LOOW project will include field testing of soil, multi-gas/VOC, direct gamma measurements and dust track monitoring. For applicable tests, results will be included on the DQCR as they become available to the QCSM.

Samples will be tracked and recorded using a series of letters and numbers consisting of three or four character strings, identifying the specific sample. The QCSM will maintain and make available a legend of all of the character strings. This legend will be updated and disseminated as needed. A partial example of the legend is as follows:

## **LOOW-hh-X(N)(S)(E)(W)(B or I)**

LOOW is the project site

"hh" is the unique identification assigned to each UST location:

"X" describes the sample matrix:

- 1 = soil
- 2 = liquid
- 3 = water
- 4 = other

"N" represents the north wall of the excavation

"S" represents the south wall of the excavation

"E" represents the east wall of the excavation

"W" represents the west wall of the excavation

"B" represents the bottom of the excavation

"I" represents samples taken inside the UST

For example: Sample No. LOOW-01-1-N indicates that the sample is:

Project Site - LOOW;

Collected at UST location 01; and was taken on the north wall of the excavation

All logbooks, sample labels/tags, custody seals, representative sampling documents, and COC documents will be completed using these sample designations. QC samples will be assigned unique sample designations in the same way as field samples.

### **9.4 INSPECTION OF FIELD ACTIVITIES**

Field activities will be inspected on a daily basis, and more frequently as required by the QCSM. The QCSM will make daily inspections of all work in progress, recording all deficiencies on the DQCR and noting the corrective action to be implemented. The SSHS will inspect all activities for safety and conformance to the project plans and specifications.

### **9.5 POST-FIELD ACTIVITIES**

Post-field activities will include shipping samples for analysis off-site. These items will be tracked by the QCSM. Upon receipt of test results or other disposition of the post-field activities, such activity will be recorded in the DQCR.

### **9.6 SUBCONTRACTOR CONTROL**

Activities of subcontractors will be under the direct supervision of the RTM or their designee. Inspections of all subcontractor work, including Preparatory, Initial and Final Phase inspections will be conducted by the QCSM or their designee.

## 10. DOCUMENTATION AND CERTIFICATIONS

QC reports include the following items (QC forms are presented in Appendix F):

- Daily Quality Control Report:
  - Description of work
  - Weather
  - Rainfall
  - Temperature
  - Work performed by ECC
  - Work performed by subcontractors
  - Specific inspections performed
  - Type and location of tests performed and results of the tests
  - Verbal instructions received from the CO / COR
  - Submittal action
  - Delivery of equipment and materials
  - Off-site surveillance of fabricated items
  - Remarks
- Preparatory, Initial, and Final Inspection Reports;
- Equipment Daily Checklists;
- Nonconformance Report; and
- Record of SOW Clarifications.

### 10.1 FILES

ECC maintains three distinct forms of files for project documentation:

- Hard copy
- MIS software
- MIS backup discs

### 10.2 CERTIFICATIONS

The following statement will be included on each DQCR:

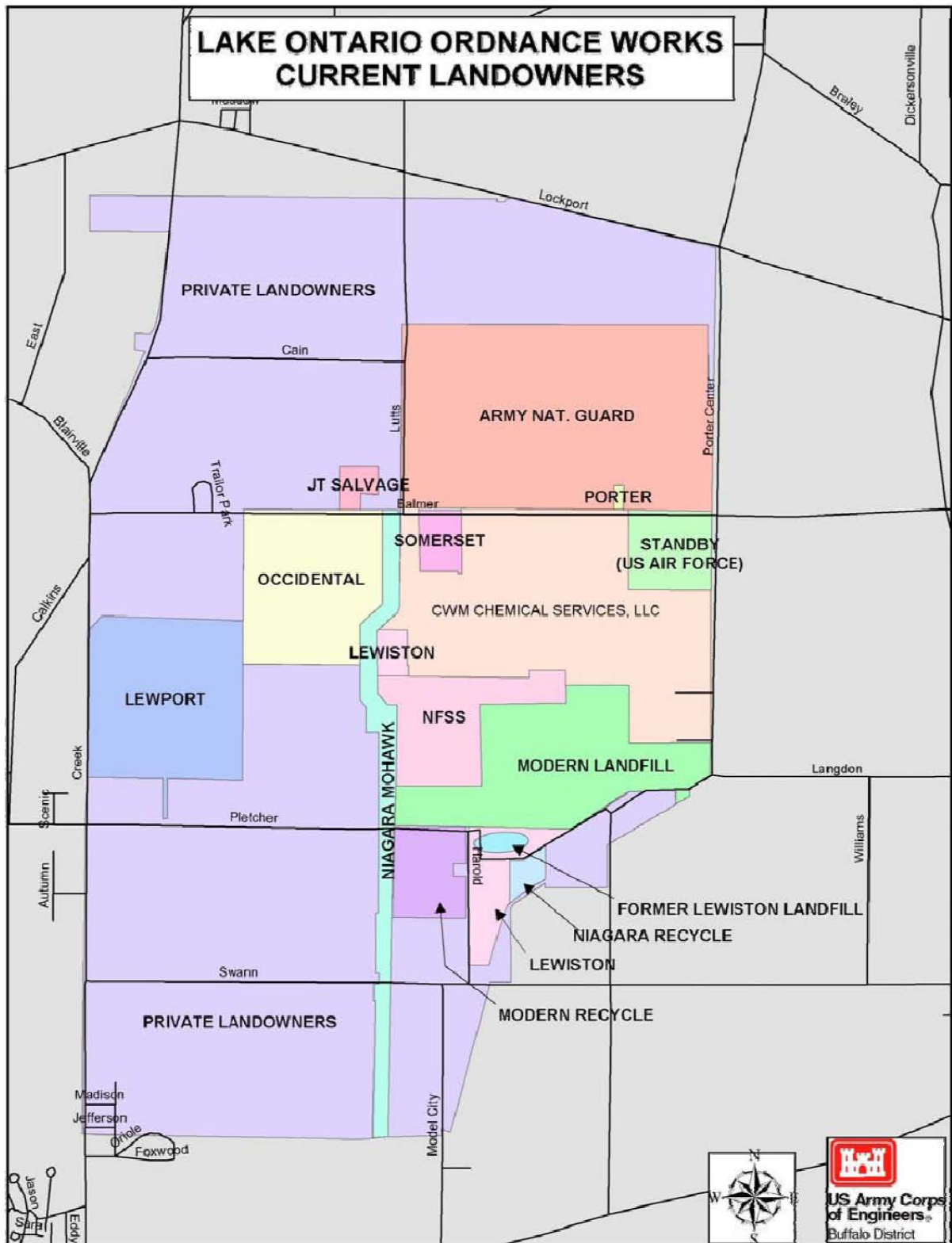
*"On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report."*

The QCSM will present a certificate of completion stating that the "work has been completed, inspected, tested, and is in compliance with the contract."

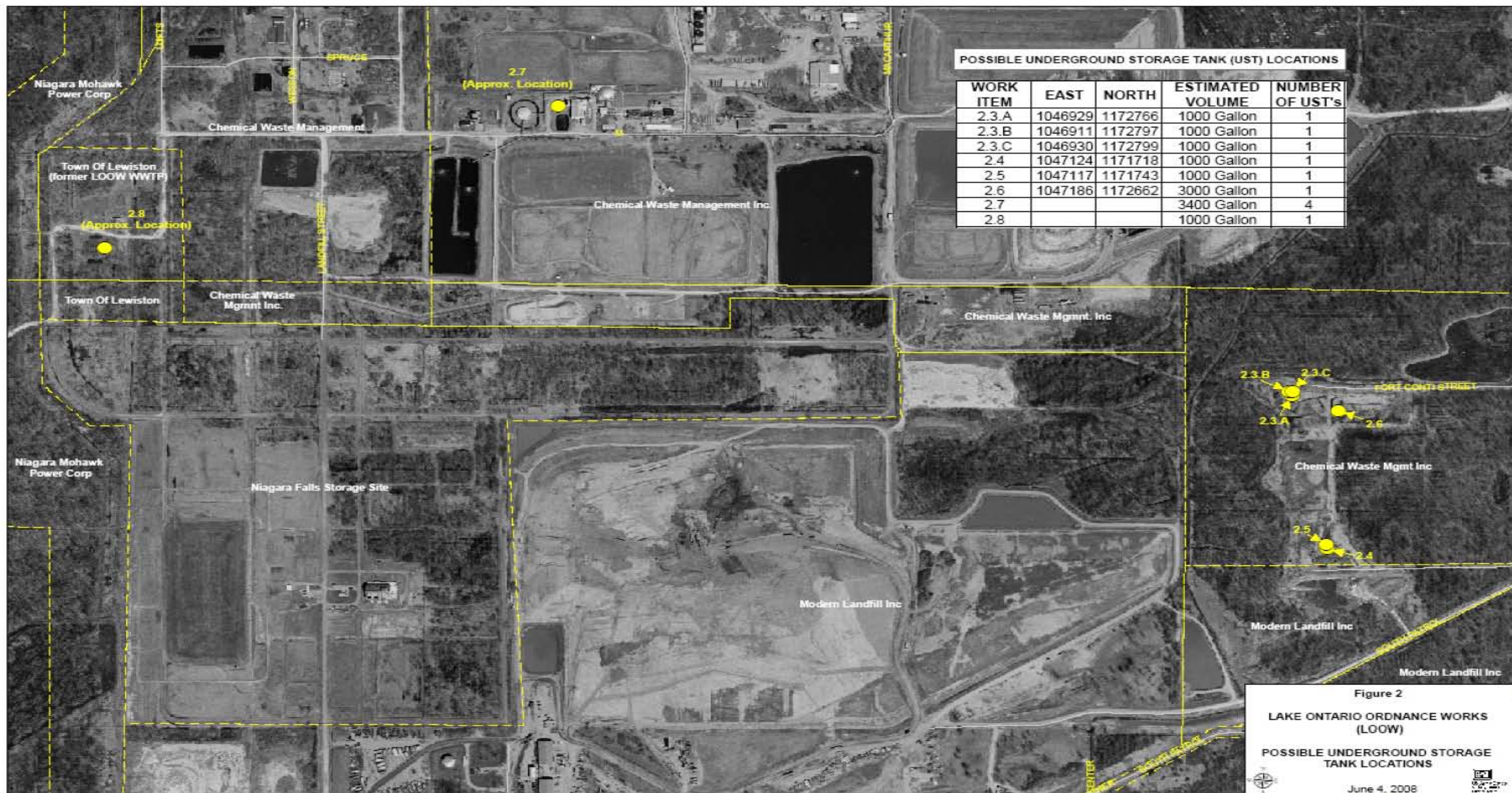


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## **FIGURES**



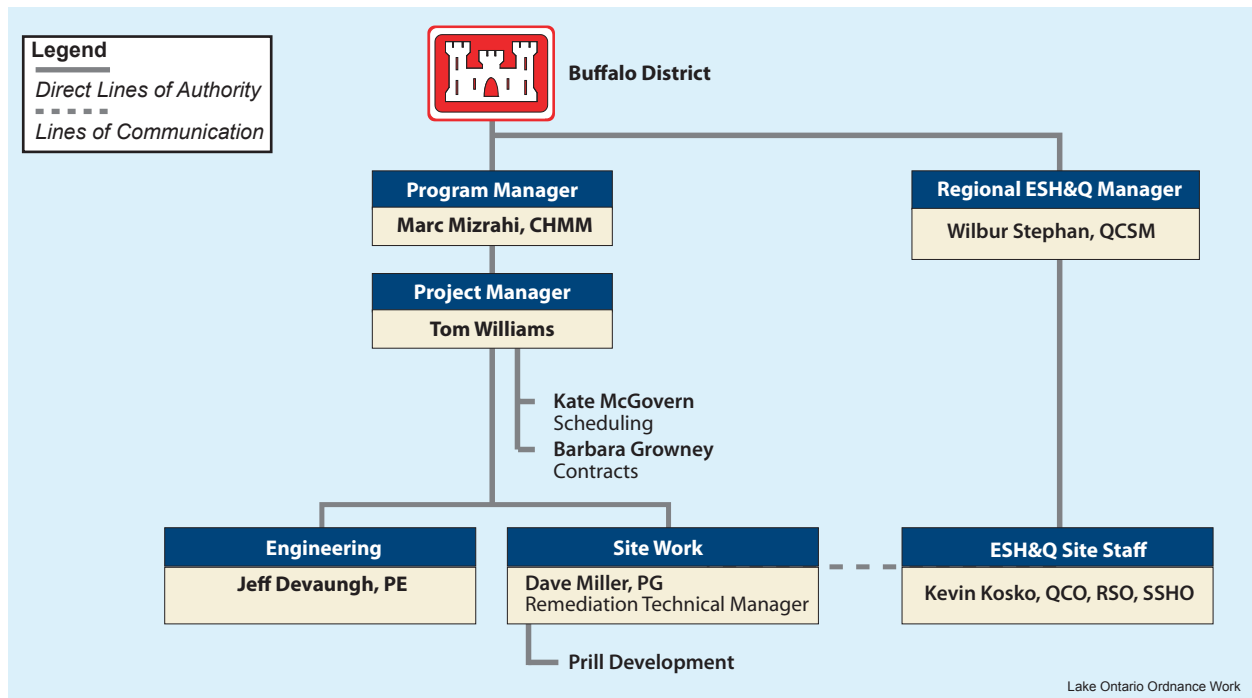
Figures-3



Figures-5

## **APPENDIX A**

### **ORGANIZATION CHART**



**APPENDIX B**

**LETTER OF AUTHORITY TO QCSM**





July 23, 2008

Mr. Wilbur Stephan  
1125 Route 22 West  
Bridgewater, NJ 08807

**Subject: Appointment as Quality Control Manager, Contract No. W912P4-07-D-0005**

Dear Mr. Stephan,

This letter is in reference to the United States Army Corps of Engineers (USACE) Buffalo District, Contract No. W912P4-07-D-0005, titled "Underground Storage Tanks Removal and Site Closure, Former Lake Ontario Ordnance Works Site, Niagara County, New York".

You have been appointed as the Quality Control Manager (QCM) for this project. As the QCM, you are expected to fulfill all quality control roles and responsibilities specified in the contract for your position.

**Responsibilities**

If not specified in the contract, you are expected to perform the following duties:

1. Ensure that quality control personnel reporting to you or working for our subcontractors meet required qualifications;
2. Review and understand project-specific quality control plans; ensure that these plans contain the appropriate defineable features of work (DFW), testing plan, and submittal register for the project. Draft recommended modifications to the approved plan if the plans are substandard and obtain the required approvals. Ensure that the project-specific quality control plan is maintained current at the project;
3. Ensure that the submittal register meets project requirements and is appropriately linked to the critical path project schedule. Manage or monitor the submittal process to ensure that we are meeting the submittal register requirements;
4. Ensure that the Four Phases of Control (Preparatory Meeting, Initial Inspection, Follow-up Inspection, and Closeout Inspection) are being planned, performed, and documented for each DFW;
5. Ensure that daily quality control inspections are performed and documented;
6. Ensure that all quality control testing is being performed in accordance with the testing plan, that the testing results are being reviewed for conformance with requirements, that the records of the testing contain all of the required documentation;
7. Ensure that all materials and equipment delivered to the job site are inspected and certified to ensure that they conform with project requirements;
8. Monitor project documentation including records, photographs, and logbooks to ensure that the records and documents meet project requirements. Maintain and organize documentation in accordance with the project closeout requirements;
9. Maintain project documentation on the client project portal and on the ECCONET project portal;
10. Ensure that non-conformances are identified and corrected in a timely manner. Report and investigate quality incidents, and develop lessons learned;
11. Notify contracts and operations personnel of any subcontractor who consistently does not conform to contract plans and specifications. Document your findings on ECCONET;
12. Consult appropriate client personnel if there is any question about the interpretation of plans and/or specifications;

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**Corporate Office**

1240 Bayshore Highway  
Burlingame, CA 94010

Phone: (650) 347-1555

Fax: (650) 347-8789

www.ecc.net



13. Do not accept or approve any substantive changes without written notification from the appropriate authority;
14. Conduct project surveillances, issue prompt reports to operations personnel, and ensure appropriate closeout of action items from the surveillance. Use the ECCONET Project Dashboard to summarize your findings; and,
15. Provide training to all project personnel including subcontractors on the project quality control process and requirements. Ensure that each person understands their responsibilities for delivering a quality deliverable to our client and stakeholders.

#### Authority

You and your quality control staff have the authority to stop work if it is not of adequate quality, fails to meet required specifications, or poses an imminent safety hazard. Your responsibility in such a situation is to ensure proper resolution of the issue(s). If there is a disagreement between you and the Project Manager regarding the resolution of substandard work or an imminent safety hazard, contact me for guidance.

#### Relationship

As the QCM, you have a direct reporting relationship to me for quality control and issue resolution. You also have an indirect reporting relationship to the Project Manager to facilitate execution of the quality control process.

If you have any questions, or need additional information, please contact me at (303) 898-8859.

Sincerely,

**Richard  
Gioscia**

Digitally signed by Richard Gioscia  
DN: cn=Richard Gioscia, c=US,  
o=Vice President, ou=ECC,  
email=rgioscia@ecc.net  
Date: 2008.07.24 03:46:34 -06'00'

Richard Gioscia, CIH, CSP, CQM, CHMM  
Vice President  
Environment, Safety, and Quality

Distribution: Thomas Williams  
Marc Mizrahi  
ECC Project File

**APPENDIX C**

**DEFINABLE FEATURES OF WORK**

<b>Definable Features Of Work</b>	
1	Submittal of work planning documents including the Accident Prevention Plan (APP), Site Safety and Health Plan, Radiation Safety Plan (RSP), Auditable Hazards Analysis (AHAs), Sampling and Analysis Plan and the Contractors Quality Management Control Plan (CQCMP) and close-out documentation.
2	Mobilization of needed support structures and equipment
3	Clearing and posting of work areas
4	Surveys and sampling (for waste characterization, job coverage, geophysical scanning for underground utilities/ tanks and final closure);
5	Excavation of test pits and UST removal operations
6	Tank cleaning (decontamination)
7	Backfill of the excavations
8	Site Restoration

**APPENDIX D**

**SUBMITTAL REGISTER**

**CONTRACT NO.** W912P4-07-D-0005 Task Order No: 0002

**CONTRACT NO.** W912P4-07-D-0005 Task Order No: 0002

[illegible]

[illegible]

**APPENDIX E**

**QUALITY CONTROL FORMS**





Environmental Chemical Corporation

### COMPLETION INSPECTION PUNCH LIST

Contract No.: \_\_\_\_\_ Date: \_\_\_\_\_

Description and Location of Work Inspected: \_\_\_\_\_

Specs Section: \_\_\_\_\_ Reference Contract Drawings: \_\_\_\_\_

A. Personnel Present:

	<u>NAME</u>	<u>POSITION</u>	<u>COMPANY</u>
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

B. Status of Inspection:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

C. Workmanship is acceptable. \_\_\_\_ Yes \_\_\_\_ No If not, explain:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

On behalf of ECC, I certify that the work inspected is complete and meets the performance specifications cited above and that all material and equipment used and work performed was completed in accordance with approved plans and work instructions and meets contract delivery order requirements.

\_\_\_\_\_  
Quality Control Supervisor

\_\_\_\_\_  
Date



*Environmental Chemical Corporation*

**ENVIRONMENTAL CHEMICAL CORPORATION  
QUALITY ASSURANCE UNIT**

**CORRECTIVE ACTION REQUEST FORM**

CAR # \_\_\_\_\_ Date: \_\_\_\_\_  
Project or Area \_\_\_\_\_  
Date of Nonconformance \_\_\_\_\_  
Responsible Manager \_\_\_\_\_

Nonconformance/findings:

--

Signature of person reporting nonconformance: \_\_\_\_\_

Root Cause Analysis:

--

Corrective Action:

--

Person responsible for CA: \_\_\_\_\_ Expected Completion Date: \_\_\_\_\_

Project Level Follow-up:

--

Signature of PM or PgM: \_\_\_\_\_ Date Submitted: \_\_\_\_\_

QCM Follow-up:

--

Inspection Required: YES ☐ NO ☐ If yes, projected date: \_\_\_\_\_ Completed: \_\_\_\_\_

Signature of QCM: \_\_\_\_\_ Date closed: \_\_\_\_\_

Origination Date: 1/30/03

Revision Date: 1/30/03



Environmental Chemical Corporation

### DAILY QUALITY CONTROL REPORT

DATE: \_\_\_\_\_  
Project No.: \_\_\_\_\_ Contract No. \_\_\_\_\_  
Project Title and Location: \_\_\_\_\_  
Weather Information: \_\_\_\_\_  
Temperature: \_\_\_\_\_ Wind Speed and Direction: \_\_\_\_\_

**1. Contractor/Subcontractor and Area of Responsibility:**

NUMBER	TRADE	HOURS	EMPLOYER	LOCATION/DESCRIPTION OF WORK
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

**2. Work Performed by Prime Contractor (including QA/QC samples collected and calibration information):**

<u>Plant/Equipment</u>	<u>Date of Arrival/Departure</u>	<u>Date of Safety Check</u>	<u>Hours Used</u>	<u>Hours Idle</u>	<u>Hours Repair</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

**3. Work Performed by Prime Contractor today (including QA/QC samples collected and calibration information):**



Environmental Chemical Corporation

4. **Work Performed by Subcontractors:** (Indicate location and description of work performed, and by whom. When network analysis is used, identify work by NAS activity number).
  
5. **Control Activities Performed:**  
**Preparatory Inspections:** (Identify feature of work and attach minutes)  
**Initial Inspections:** (Identify feature of work and attach minutes)  
**Follow-Up Inspections:** (List specific inspections performed, results of inspection compared to specification requirements, problems encountered, and corrective actions taken):
  
6. **Any sampling performed as contingency sampling:**
  
7. **Corrective actions and/or deviations from the approved SAP, including approvals:**
  
8. **Delivery of Equipment and Materials:** (Indicate acceptability, storage, and reference



Environmental Chemical Corporation

**specification/drawing requirements)**

**9. Submittals Reviewed:**

(a) Submittal No.	(b) Spec/Plan Reference	(c) By Whom	(d) Action
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**10. Offsite Surveillance Activities, Including Action Taken:**

**11. Job Safety: (List items checked, results, instructions and corrective actions taken).**



Environmental Chemical Corporation

**12. Remarks: (Instructions received or given; conflict(s) in Plans and/or specifications; delays encountered)**

**13. Certification: On behalf of the Contractor, I certify that the above report is complete and correct and that I, or my authorized representative, have inspected the work performed this day by the prime Contractor and each subcontractor and have determined that all materials, equipment, and workmanship are in strict compliance with the plans and specifications, to the best of my knowledge, except as may be noted above.**

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**Quality Control System Manager**



Environmental Chemical Corporation

### INITIAL INSPECTION CHECKLIST

Contract No.: \_\_\_\_\_ Date: \_\_\_\_\_

Description and Location of Work Inspected: \_\_\_\_\_

Specs Section: \_\_\_\_\_

Reference Contract Drawings: \_\_\_\_\_

A. Personnel Present:

	<u>NAME</u>	<u>POSITION</u>	<u>COMPANY</u>
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

B. Materials being used are in strict compliance with the contract plans and specifications. \_\_\_\_ Yes \_\_\_\_ No  
If not, explain: \_\_\_\_\_

C. Procedures and/or work methods witnessed are in strict compliance with the requirements of the contract specifications. \_\_\_\_ Yes \_\_\_\_ No  
If not, explain: \_\_\_\_\_

D. Workmanship is acceptable. \_\_\_\_ Yes \_\_\_\_ No  
If not, explain: \_\_\_\_\_

E. Safety violations and corrective action taken: \_\_\_\_\_

On behalf of ECC, I certify that the work inspected is complete and meets the performance specifications cited above and that all material and equipment used and work performed was completed in accordance with approved plans and work instructions and meets contract delivery order requirements.

\_\_\_\_\_  
Quality Control Representative

\_\_\_\_\_  
Date



Environmental Chemical Corporation

### MATERIAL INSPECTION AND RECEIVING CHECKLIST

Contract No.: \_\_\_\_\_ Date: \_\_\_\_\_

Description and Location of Work Inspected: \_\_\_\_\_

Specs Section: \_\_\_\_\_

Reference Contract Drawings: \_\_\_\_\_

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On behalf of ECC, I certify that the work inspected is complete and meets the performance specifications cited above and that all material and equipment used and work performed was completed in accordance with approved plans and work instructions and meets contract delivery order requirements.

\_\_\_\_\_  
Quality Control Representative

\_\_\_\_\_  
Date





**Site Information:**

Project Name:	Date of Inspection:
Company(s):	Type of Inspection: <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly
Tasks or Activities Observed:	

**Persons Conducting Inspection:**

Name	Company	Name	Company

**A. General Workplace Conditions**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Walking/Working Surfaces		
Aisles and Passageways		
Platforms/Scaffolding		
Ladders		
Stairs		
Exits/Egress		
Roadways		
Excavations/Trenches		
Ventilation		
Lighting		
Noise Exposure		
Ergonomics		
Potable Water		
Sanitation Facilities		
Temperature Extremes		

**B. Hazardous Materials Use & Storage**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
MSDSs Available		
Material Labeling		
Storage Conditions		
Storage Containers Condition		
Chemical Storage Compatibility		
Compressed Gas Storage & Use		
Waste Storage/Disposal		



**C. Motor Vehicles & Power Equipment**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Seatbelts & Back-up Alarms		
Dozer Equipment		
Scraper Equipment		
Road Grader Equipment		
Water Trucks		
Front End Loader/Backhoe Equip.		
Cranes/ Hoists & Rigging		
Forklifts		
Other Heavy Equipment		

**D. Hazard Controls**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
General Site Controls		
Work Zone Delineation		
Lockout Systems		
Accident Prevention Signs and Tags		
Barricades		
Hole Covers		
Electrical Grounding & GFCI Use		

**E. Emergency Systems**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Emergency Instructions		
Fire Protection		
Eye Wash and Showers		
First Aid Kits/Stations		
Emergency Rescue Equipment		

**F. Protective Equipment Use & Compliance**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Eye Protection		
Ear Protection		
Respiratory Protection		
Head Protection		
Hand Protection		
Foot Protection		
Body Protection		
Fall Protection		



**G. Hand/Power Tools and Power Systems**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Hand Tools Condition		
Portable Power Tools Condition		
Welding/Burning Equip. Condition		
Power Tools Guarding		
Electrical Power Generator		
Pneumatic Power Generator		

**H. Remediation Waste Management**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Waste Properly Categorized		
Cross Contamination Minimized		
Containers in Good Condition		
Waste Storage		
Staging/Stockpiling of Soil/Debris		
Decontamination Water		

**I. Project Environmental Programs**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Dust Control		
Odor Control		
Oil and Spill Prevention		
Stormwater/Erosion Control Activities		

**J. Environmental Management System**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No
Pollution Prevention		
Recycling		
Paper Conservation		
HS Continual Improvement		
Employee Participation		

**K. Other Environmental Safety and Health Conditions or Work Practices**

Category	Observations (N/A if Not Applicable)	Action required <input type="checkbox"/> Yes <input type="checkbox"/> No



**Environmental Chemical  
Corporation**

**SITE H/S INSPECTION FORM**

**Page 4 of 4**

**Site Information:**

Project Name:

Date of Inspection:

Company(s):

Type of Inspection: ☐ Weekly ☐ Monthly ☐ Quarterly

**Summary and Recommendations**

Finding Number and Hazard Classification (#/Classification)*	Findings and Recommended Corrective Action	Date Corrected	Corrected or Verified by

\*Classify as Major or Minor – Major findings indicate that a potential or imminent hazard to people, property, or the environment exist

# **Lake Ontario Ordinance Works** **ESQ CONFORMANCE TRACKING LOG**

DATE	CONFORMANCE ITEM (Environment, Safety or Quality)	RESPONSIBLE PARTY	RESOLUTION DETAIL	RESOLUTION DATE	DATE CLOSED



Environmental Chemical Corporation

### SOIL BACKFILL INSPECTION CHECKLIST

Contract No.: \_\_\_\_\_ Date: \_\_\_\_\_

Description and Location of Work Inspected: \_\_\_\_\_

Specs Section: \_\_\_\_\_

Reference Contract Drawings: \_\_\_\_\_

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On behalf of ECC, I certify that the work inspected is complete and meets the performance specifications cited above and that all material and equipment used and work performed was completed in accordance with approved plans and work instructions and meets contract delivery order requirements.

\_\_\_\_\_  
Quality Control Representative

\_\_\_\_\_  
Date



## RECORD OF SCOPE OF WORK CLARIFICATIONS

[illegible]



**Environmental Chemical Corporation**

**NONCONFORMANCE REPORT**

PROJECT NO. _____	PAGE _____ OF _____
PROJECT NAME _____	DATE: _____
NONCONFORMANCE:	
IDENTIFIED BY: _____ DATE: _____	
CORRECTIVE ACTION REQUIRED:	
TO BE PERFORMED BY: _____ DATE: _____	
MUST CORRECTION BE VERIFIED? YES _____ NO _____	
TO BE VERIFIED BY: _____ PREPARED BY: _____ DATE: _____	
CORRECTIVE ACTION TAKEN:	
PERFORMED BY: _____ DATE: _____	
VERIFIED BY: _____ DATE: _____	

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

\_\_\_\_\_ DATE: \_\_\_\_\_





**ECC**  
***Minutes***

***Preparatory Phase Inspection Meeting***

Project: \_\_\_\_\_

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

Contract No.: Definable Feature of Work: \_\_\_\_\_

Specification Section(s): \_\_\_\_\_

**Agenda No.** \_\_\_\_\_

USACE Notified?: Yes Hours In Advance: 48hr Discussed Operation with COR? Yes

**Personnel Present:**

No.	Name	Organization	Position
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

**I. Preliminary Correspondence and Planning**

**II. Submittals**

1. Have all submittals been reviewed?:
2. Are all materials present?:
3. Check approved submittals against delivered material?:
4. Comments:

**III. Material Storage**

1. Are materials stored properly?: (water-sensitive materials stored inside building)
2. If not, describe corrective action:

#### **IV. Specifications, Drawings & Work Plans**

1. Review pertinent specifications: SOO
2. Review pertinent contract drawings: SOO
3. Review pertinent work plans: RAWP, APP/SSHP, CQCP and FSP
4. Operational Procedure: See Plans
5. Clarify any differences/variances: SOO to take precedence or consult with QCSM

#### **V. Preliminary Work and Permits**

1. Are appropriate permits secured?:
2. Boring permits?
3. Utility Clearance (one-call) (Yes – on file)
4. Other?

#### **VI. Testing and Documentation**

1. Review testing plans/requirements?:
2. Tests or samples to be performed/collected, frequency and by whom:
3. List Testing facilities:
4. Test facilities approved?:
5. Results due/expected:
6. Sample documentation (Chain of Custody Forms, Sample log)

#### **VII. Safety**

1. Review applicable sections of EM 385-1-1:
2. Review Site Safety & Health Plan:
3. Review relevant activity hazard analysis: reviewed Activity Hazard Analysis for Geoprobe Operations/ Soil sampling
4. Other comments:

NOTE: Use particular care when cutting or retrieving sample from acetate liner sleeves. The edges become extremely sharp when cut.

#### **VIII. Comments:**

QCSM:

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**APPENDIX F**

**FINAL DISTRIBUTION LIST**

3 Copies      Mr. Jeffrey S. Hall, P.E.  
USACE Buffalo District - Project Engineer  
U.S. Army Corps of Engineers, Buffalo District  
Phone: (716) 879-4272  
Fax: (716) 879-4355  
E-Mail: [jeffrey.s.hall@usace.army.mil](mailto:jeffrey.s.hall@usace.army.mil)

1 Copy        Mr. Harold Leggett COR  
USACE Buffalo District - Project Engineer  
U.S. Army Corps of Engineers, Buffalo District  
Phone: (716) 912-0234  
Fax: (716) 879-4355

1 Copy        Ms. Linda Houston Project Manager  
USACE Buffalo District - Project Engineer  
U.S. Army Corps of Engineers, Buffalo District  
Phone: (716) 879-4272-0234  
Fax: (716) 879-4355

## **APPENDIX G**

### **RESUMES**



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## **Tom Williams** **Project Manager**

### **SUMMARY OF EXPERIENCE**

Mr. Williams is qualified as a Project Manager based on more than 20 years of experience in the direct supervision of multidisciplinary personnel, site safety and work plan development, on-scene management of hazardous waste site cleanup activities, heavy equipment operation, field construction, and demolition. His experience as a project manager on USEPA Emergency Response and Cleanup Services (ERCS) and Emergency and Rapid Response Services (ERRS) contracts has included direct supervision of six Class IV removal actions and five innovative technology sites. His experience under USEPA contracts range from design and construction of treatment facilities to the construction of a 20,000 square foot decon facility utilized by the EPA, Red Cross, OSHA and recovery workers during the World Trade Center incident. He has also served as remediation manager for more than \$18 million in remediation and construction management projects under US AFCEE and USAED environmental contracts. He has had direct involvement with a wide variety of remedial technologies, including groundwater extraction and treatment, soil vapor extraction, bioventing, thermal desorption, PCB destruction, ozone injection/sparging, fuels recovery, soil washing and enhanced bioremediation. Mr. Williams has served as Site Superintendent, Project Manager or Construction Manager on residential, commercial and industrial projects. Many of these projects were completed under either emergency or time critical basis demonstrating his ability to develop plans and budgets and perform under high stress conditions.

### **PROFESSIONAL EXPERIENCE**

**Roebbing Steel, (ECC 5-08-Present ).** During this final phase of construction on a historic building, Mr Williams is responsible for budget management, scheduling, procuring and organization of site activities. These activities include paving, installation of slate and a stainless steel roofing systems, Completion of HVAC activities, trim carpentry, outstanding punch list items as well as final submittals and close out documents .

**Cosden Chemical Superfund Site (ECC 5-08-Present).** ECC Operation Manager, Responsible for the day-to-day project activities such as planning, organizing, scheduling, directing, coordinating, and controlling project resources during present operation and maintenance phase. Treatment train includes 2 extraction wells, equalization tank, multimedia filtration, clarification, filter press, carbon polish and soil vapor extraction. Mr Williams serves as primary contact with USACE for review and optimization of system operations and performance.

**Stanton Cleaners Superfund site (ECC 5-08-Present).** ECC Operation Manager, USACE – Stanton Cleaners Area Groundwater Site, Great Neck, New York, Operation Manager for the operation and maintenance of a fully automated 80 gpm groundwater pump and treat system and a soil vapor extraction system. System constructed under USEPA ERRS (Earth Tech)contract, Mr Williams served as project manager for the remedial investigation through the construction completion. To date system has treated greater than 170,000,000 gallons of water with less than 2% down time.

**NEIEcs.** VP construction, (6/07-5/08) Responsible for staffing and coordination of all construction project performed by company. Responsible for coordination of Business Development and proposal activities, coordination and interaction with bonding company, hiring, training and supervision of construction professionals.



**WRSie**, Senior Project Manager (8/2006-6/2007) Responsible for project management of 5 USEPA region II superfund projects under the Emergency and Rapid Response contract in region II.

**Earth Tech**, Senior project Manager (2/1992-9/1995,12/1996-8/2006) Mr Williams served as PM on more than 19 USEPA task orders including world trade center incident. While working with Earth Tech Mr. Williams received 6 letters of accommodation/recognition from the USEPA. Region II and 2 exceptional reviews from USEPA region III.

**Jacobs Engineering** Remediation/Construction Manager (9/1995 – 11/1996) Mr Williams was responsible for the all construction and radiation field activities performed in Alaska under the USACE TERC and AFCEE contracts. Completed work on 6 FUD's sites from the Aleutian islands to Kotzebue AK.

## **EDUCATION**

Danville Community College, AAS, Business Management, 1986

## **Training and Certifications**

ICS-400 Training, 2006  
ICS-300 Training, 2006  
ICS-200 Training, 2006  
ICS-100 Training, 2006  
USAED Construction Quality Management Training, 1996  
Project Management Training Seminar, Earth Tech, 1993  
Hazardous Waste Transportation, RCRA, HM-181, 1992  
Project Management Accounting Seminar, Earth Tech, 1992  
Estimating for the Building Trades NJIT, 1991  
Construction Management NJIT, 1991

## **Health & Safety Training and Certifications**

- Safety Orientation 05/11/2006
- Hazard Communication (US) /WHMIS (Canada) 12/28/2005
- Defensive Driving Awareness Training 08/20/2004
- First Aid 06/16/2006 and CPR 06/16/2006
- DOT Level 1 Shipper/(TGD) Canada 05/24/2006
- HAZWOPER 40-Hour 11/01/2002
- HAZWOPER Refresher 8-Hour annually
- OSHA 10-Hour Construction Safety 08/03/2005
- CS/LE - Authorized Entrant 12/28/2005
- Confined Space Entrant Attendant & Supervisor 09/01/1993
- Respirator Fit Test annual



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**Wilbur R. Stephan III, CHMM  
QCSM**

**SUMMARY OF EXPERIENCE:**

As the Environmental Chemical Corporation (ECC) Environment, Safety & Quality Manager, I provide environmental, safety, and quality (ESQ) consulting services to both internal and external clients on Federal, State, Municipal and private sector projects. I have extensive experience in the environmental, health & safety profession in both environmental and safety matters. Most recent project assignment as the Site Safety & Health Officer (SSHO) and alternate Quality Control Systems Manager (QCSM) on the USACE Middlesex Sampling Plant Remedial Project in Middlesex, New Jersey. My other functions include providing corporate environmental, safety and quality support to projects managed from ECC's Bridgewater, NJ office. In this role I am responsible for overseeing environmental, safety & quality issues on all remediation and construction projects, in the New York and New Jersey area, as well as conducting employee training and implementing corporate safety policies.

**PROFESSIONAL EXPERIENCE:**

ECC, Bridgewater, New Jersey (July 2006 – Present) – Environment, Safety & Quality Manager

**Middlesex Sampling Plant, Middlesex, NJ** (August 2006 – July 2008) – Assigned as the Site Safety & Health Officer (SSHO) and alternate Quality Control Systems Manager (QCSM) for ECC on this USACE remedial construction project. The project involved the removal of soils impacted by radioactive isotopes, semi-volatile organics, and heavy metals (pb); treatment of contaminated water; and site restoration.

**Roebbing Steel Superfund Project / MGH Adaptive Reuse Project, Roebbing, NJ** (January 2008 – present) – Assigned as the QCSM, Mr. Stephan manages the day-to-day QC program during the close-out phase. Close-out activities included tracking of punchlist items, close-out of the submittal registry, and preparation of DQCSR's during field activities. Additional activities included the management of QCS during roof repair and installation activities. Responsible for the management of QCS including the daily preparation of DQCSR's, tracking submittals, coordinating preparatory meetings, performing initial and follow-up inspections, coordinating field QC inspections

**Li Tungsten, Glen Cove, NY** (August 2006 – June 2007) – Responsible for providing safety consultation to the project management team on an as-needed basis. Responsibilities include conducting safety audits of the project, review of work plans, and function as the onsite ESQ representative as requested by the management team based on project staffing requirements.

**Bog Creek & Cosden Chemical Superfund Site, NJ** (August 2006 – Present) – Responsible for providing corporate environmental, safety & quality support to the project management team during all phases of the project including O&M. Responsible for conducting project audits, review and follow up of incidents and subsequent investigations, review of work plans and ESQ input during all planning aspects of the project.





**Kauffman & Minter Superfund Site, Jobstown, NJ** (August 2007 – Present - Assigned as the SSHO to this project. The project's scope involves the remediation of VOC mass in the subsurface using Insitu Chemical Oxidation technology. This particular ISCO technology utilizes Potassium Permanganate as the treatment oxidizer. As SSHO, Mr. Stephan is responsible for oversight of field activities, training of all project personnel in both site orientation and specific hazards associated with the ISCO operations, and supporting the Quality Control staff.

**Stanton Cleaners Superfund Site, Great Neck, NY** (April 2007 – Present) - Assigned as the SSHO supporting this O&M project. Mr. Stephan is responsible for conducting periodic safety & quality surveillances, implementation and updating of the project APP, preparation of AHA's, and training and safety oversight of subcontractors during task-specific activities.

Shaw Environmental & Infrastructure, Inc., (Shaw), New York, NY (April 1991 – July 2006) - Health & Safety Manager/Principal Scientist/Project Manager

**Assigned as the Site Safety & Health Officer (SSHO) for the Maywood FUSRAP Project in Maywood, NJ.** This \$330 million, 8-year USACE project involves the remediation of radioactively contaminated soils on commercial and municipal properties in the towns of Maywood, Lodi and Rochelle Park. Radioactive elements being remediated include Radium 226, Thorium 232, and Uranium 238. As the project SSHO he is responsible for overseeing the safe implementation of construction and site investigation activities for a 50-person work force including unionized craft.

Responsibilities as the project SSHO include preparation of the Site Safety & Health Plan (SSHP) and associated addendums, safety training, medical monitoring, daily safety inspections, weekly and monthly safety reporting, incident/accident investigation and workers compensation follow up, safety equipment inventory and maintenance, emergency response coordination, and air monitoring (work area & breathing zone). As the SSHO he supports engineering with reviews of design plans and function as a liaison with Federal, State and Local government inspectors. As SSHO he is also tasked with managing the project's Radiation Safety Officer (RSO) and the project's subcontractor providing field health physics (radiation protection technicians) safety support during remedial construction activities.

## **EDUCATION:**

B.S., Environmental Health Science, City University of New York – York College; 1991

## **ADDITIONAL TRAINING:**

40 Hour OSHA and 8 Hour Supervisory Training (29 CFR 1910.120)  
10 & 30 Hour OSHA Construction Safety Standards Training  
OSHA 500 Construction Safety Trainer  
USACE Contractor Quality Control (February 2007)  
Radiation Worker Training (10 CFR 19)



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Excavation Competent Person Training (1926 Subpart P)  
Confined Space Entry Supervisor / Attendant  
SSPC C-3 – Supr./Competent Person for Deleading of Industrial Structures  
Lead Inspector/Risk Assessor (Cert. #990029)

**REGISTRATIONS/CERTIFICATIONS/LICENSES:**

Certified Hazardous Materials Manager (#2839), Institute of Hazardous Materials Management  
Site Safety Manager - NYC Building Department (#695)



PROFESSIONAL DEVELOPMENT SUPPORT CENTER  
HUNTSVILLE, ALABAMA

**CERTIFICATE**

*This is to certify that*

**Wilbur R. Stephan III**

*has completed the Corps of Engineers Training Course*

**CONSTRUCTION QUALITY MANAGEMENT FOR CONTRACTORS**

USMA, West Point, NY      NEW YORK      1-2 February 2007  
Given at \_\_\_\_\_ By \_\_\_\_\_  
Location Instructional District Date

*Peter DeStefano*  
PETER DE STEFANO, (917) 790-8577

Facilitator

**THIS CERTIFICATE EXPIRES FIVE YEARS FROM DATE OF ISSUE**

*Gary Z. Anderson*  
Chief, USACE Professional Development Support Center



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**KEVIN KOSKO RRPT**  
**Project RSO/SSHO/QCO**

**SUMMARY of Experience:**

Over 24 years of diverse health physics, safety and management experience in commercial nuclear power, private industry, Department of Defense and Department of Energy facilities. Extensive decommissioning and demolition experience resulting from work at Shippingport Atomic Power Station, Fort St. Vrain, Mound, Hematite and several private remediation projects. Adept at applying sound health physics principles to difficult situations in order to achieve safe, cost effective results.

**EXPERIENCE:**

**K2 Environmental Services LLC@ Middlesex Sampling Plant K2 Site Manager, Project RSO**  
10/17/06- Present

Responsible for development and implementation of the project Radiation Protection Plan, the Final Status Survey Plan and Final Status Survey Reports using MARSSIM methodology. Provided oversight for Radiological Controls Technicians and monitored work activities to assure compliance with all federal, state and local regulations. Developed lesson plans, test materials and provided training for Radiological Workers and Radiological Controls Technicians.

**K<sup>2</sup> Environmental Services LLC@ Brookhaven National Lab Bldg. 811 UST Removal K2 Project Manager Project RSO/ESH Manager 08/16/04-12/6/04**

***Teamed with WESTON Solutions***

Responsible for development and implementation of the *Health and Safety Project Plan, Radiation Protection Plan, Auditable Hazards Analysis* (AHAs), radiological operations procedures and work planning documents to support an underground storage tank removal and soil remediation project. Performed oversight of all aspects of the radiological/health and safety programs. Provided worker training in accordance with site, corporate and regulatory requirements. Directed daily safety meetings, performed radiological and EHS program audits to ensure compliance with applicable regulations. Successfully interfaced with client and regulatory personnel on a daily basis. The project was completed with zero accidents or injuries. Developed the MARSSIM survey plan and supervised collection of data using GPS guided equipment.

**K2 Environmental Services LLC@ Hematite Decommissioning K2 Site Manager, RSO/EHSManager\_10/17/03-8/02/04**

***Teamed with LVI Services***

Responsible for development and implementation of the project Radiation Protection Plan and Health and Safety Plan during operations to remove equipment from a former nuclear fuel manufacturing facility. Provided oversight for Radiological Controls Technicians and monitored work activities to assure compliance with all federal, state and local regulations. Developed lesson plans, test materials and provided training for Radiological Workers and Radiological Controls Technicians.

**K<sup>2</sup> Environmental Services LLC @ Mound K2 Site Manager/Project Engineer 6/02/03-10/16/03**

***Teamed with BNFL***

Responsible for preparing integrated work control plans for decontamination and demolition of a Category III Nuclear Waste Processing Facility. Provided project-engineering services in support of D&D



work including underground tank removal and structure demolition.

**The Chamberlain Group (Various Doe Facilities) Radiological Engineer/Project Engineer**  
12/8/01-6/01/03

***Subcontracted to URS Corporation, RWE NUKEM, and BNFL at DOE Mound***

Responsible for developing decommissioning work plans for the WD Building Plutonium Waste Processing Facility. Worked with client personnel to successfully resolve issues during the work package review/approval process. Provided technical support to the URS / Nukem team during cost evaluation and bid development for several Mound facilities including; Building 38, WD Building, ATS and Building 23. Developed and authored all dismantlement and demolition work packages for the Building 38 Plutonium Processing Facility. Worked with client personnel to successfully resolve issues during the work package review/approval process.

Contracted to RWE Nukem at Curtis Bay DOD facility. Responsibilities included: development of internal and external dosimetry programs, instrumentation calibration/repair and initiation of a statistical sampling plan for eventual NRC Radioactive Materials License termination.

Assigned to work on a DOE (EM-50) sponsored initiative that introduces innovative technologies to DOE nuclear sites. Successfully initiated technical deployments to Portsmouth Gaseous Diffusion Plant and Oak Ridge (ETTP).

Assigned to a joint Department of Energy/Department of Defense Project (HDERP) to find, ship and refurbish DOE radiological instruments. Personally located over 3000 excess instruments at various DOE sites that will now be used by first responder units in the event of a national emergency.

**DOE MOUND Laboratories (EG&G Management) Decommissioning** 4/1/99 – 1984

Senior Radiological Engineer/Site Manager for EG&G Management/Safety Team Leader.

Duties consisted of: providing supervision, work review and performance evaluation for 10-20 Health Physics Technicians and 1-2 Radiological Engineers assigned to the site D&D and Waste Management organizations. Responsible for developing engineering controls, work planning documents and field oversight in support of high risk decommissioning activities. Appointed to the position of Lead Radiological Engineer for the TRU waste "Tiger-Team." Responsible for D&D of high activity hot cell components / areas and repackaging of PU238 waste. Took part in several programmatic focus groups tasked with wholesale procedure revisions. Served as the site ALARA Coordinator, responsible for reviewing high-risk jobs and developing/implementing appropriate controls. Performed numerous audits and self-assessments and implemented/tracked appropriate corrective actions.

**DOE MOUND Laboratories (EG&G Management) Decommissioning** 8/7/96 – 4/1/99

***Site Manager for EG&G Management/Safety Team Leader***

Responsible for health physics design review during the construction and initial testing of a new consolidated waste processing facility used for repackaging TRU (PU<sup>238</sup>) waste. Specific responsibilities included: directing mock-up training, procedure modifications, dry defueling/dismantlement and demolition of the C.F.X. (high neutron flux) Test Reactor and administrative oversight for 10-20 Radiological controls Technicians employed by EG&G Management.

**Fort St. Vrain Decommissioning Project, Platteville, CO (RSI) 5/6/96 - 7/12/96**

***Health Physics Supervisor for D&D activities***

Provided technical input during development of work plans for decontamination and removal of the pressurized concrete reactor vessel. Provided staff oversight and performance evaluation for 15-20 Radiological Controls Technicians during decommissioning of the high temperature gas reactor facility.

**Beaver Valley Nuclear Power Plant, Shippingport, PA (Bartlett) 3/5/96 - 5/3/96**



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***Health Physics Instructor/Evaluator/Senior Health Physics Technician***

Instructed Health Physics Technicians on procedural compliance during the OJT/OJQ inprocessing. Provided health physics coverage for primary and secondary steam generator maintenance plus reactor lower internals removal and replacement. Provided technical input in the development of work plans and implementation of engineering controls.

**Harshaw Chemical, Cleveland, OH On-Site Environmental 12/17/95 - 2/4/96**

***Health Physics Supervisor for D&D activities***

Responsible for initiating and implementing MARSSIMS survey techniques, and air sampling programs for the decontamination/decommissioning and NRC License termination of a former uranium hexafluoride processing site. Developed and maintained the project internal and external dosimetry program. Instructed workers on proper health physics procedures and practices for removal of contaminated systems and structures. Prepared work control documents and developed engineering controls to maintain exposure ALARA. Provided oversight and performance evaluations for 6-8 RCTs

**Beaver Valley Nuclear Power Plant, Shippingport, PA (Bartlett) 12/10/94 - 4/1/95**

***Health Physics Instructor/Evaluator/Senior Health Physics Technician***

Instructed Health Physics Technicians on procedural compliance during the OJT/OJQ inprocessing. Provided health physics coverage for primary and secondary steam generator maintenance during refuel outage. Provided technical input in the development of work plans and implementation of engineering controls.

**ABB Fuel Manufacturing Site, Windsor, CT (Brooks & Associates) 10/1/94 - 12/7/94**

***Lead Health Physics Technician for D&D activities***

Developed procedures and survey requirements for packaging and shipment of Uranium 235 fuel pellets, completed all documents and manifests. Implemented Assay Program used to classify material for radioactive shipment or unconditional release. Instructed and directed workers during the remediation and removal of radioactive equipment. Provided technical basis for selection of engineering controls during D&D activities. Responsible for oversight of 5-10 Health Physics Technicians.

**Elkeum Metals, Marietta, OH (Applied Health Physics) 4/27/94 - 7/27/94**

***Health Physics Supervisor/Radiological Engineer for D&D activities***

Instructed workers in proper health physics procedures and practices using mock-ups and classroom evaluation for decontamination/decommissioning work. Responsible for oversight of 4-6 Health Physics Technicians. Developed and maintained the site internal and external dosimetry program. Prepared work planning documentation and engineering controls during D&D thorium processing mill, resulting in the release of their NRC Radioactive Materials License.

**Kewaunee Nuclear Power Plant, Kewaunee, WI (NSS-Numanco) 3/27/94 - 4/26/94**

***Senior Health Physics Technician***

Provided health physics coverage for all primary and secondary steam generator work evolutions.

**Hawker Siddeley, Toronto, Ontario, Canada (Applied Health Physics) 2/2/94 - 3/30/94**

***Project Manager for D&D activities***

Responsible for engineering, construction, and operation of a size reduction facility to process thorium alloy mill tailings. Responsible for oversight of all radiological and operations personnel, instrumentation, dosimetry and work place monitoring. Prepared all required paperwork including shipping manifests to ensure DOT compliance for shipment of waste to receiver sites. Prepared final survey documentation that resulted in the release of their radioactive materials license.

**Health Physics Technician at 13 different commercial nuclear power facilities. 9/18/84 - 12/1/93**



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**EDUCATION:**

B.S. Degree, Environmental Engineering - Cambridge State University (3.47 G.P.A)

N.R.R.P.T. Certified

DOE Core Certified

HAZWOPER 40-Hour Course (29 CFR 1910.20)

HAZWOPER Supervisors Course (29 CFR 1910.200)

OSHA 30-Hour Construction Training Course

DOE 40-hour Tritium Training (Course code DOE 050031)

Lead Abatement Training (OSHA 29CFR 1926.62)

D.O.T. Radioactive Materials Transport Course

D.O.E. OJT/Classroom Instructor Qualified

Basic First Aid and CPR Certification

Plenary Member of the Health Physics Society





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## **DAVID M. MILLER, CPG, PMP**

### **Remediation Technical Manager**

#### **SUMMARY OF EXPERIENCE**

Mr. Miller is a Sr. Hydrogeologist with 20 years of technical and project management experience in the environmental industry, with focused expertise in groundwater investigations, groundwater modeling, and site characterizations for HTRW remediation projects. He has specialized experience in groundwater monitoring system design and implementation, well installation and drilling methodologies, aquifer pumping tests, aquifer dewatering, and O&M and troubleshooting of remediation systems. He has developed and implemented a variety of designs to remediate soil and groundwater, including VOCs, PCPs, dioxins, petroleum hydrocarbons (dissolved and separate phase), and heavy metals. He designs and implements remedial actions using innovative technologies and traditional methods of remediation, including AS/SVE, dual-phase vapor extraction, chemical oxidation, and groundwater pump and treatment systems in various configurations.

Mr. Miller has specialized experience working on Performance Based task orders and proposals, and understands the concept of the contract type in terms of risk management and meeting performance objectives required by a Performance Work Statement. He has successfully guided the development of various technical approaches, plans and reports required to execute the various steps of the CERCLA process at NPL and non-NPL sites in several States, including New York. His regulatory experience includes cooperative negotiation of cleanup criteria and No Further Action determinations from EPA and State agencies, including NYDEC.

#### **PROFESSIONAL EXPERIENCE**

**USACE Kansas City, PRAC, Installation, Sampling and Analysis of Monitoring Wells, Middlesex Sampling Plant FUSRAP Site, Middlesex, New Jersey (2008-present).** Project Manager responsible for obtaining post-soils remedial action groundwater data to be used during regulatory review of the OU-2 groundwater decision documents. Project activities include the installation of 13 monitoring wells, and a 2-year, quarterly monitoring program including the sampling, analysis, and reporting of total uranium, VOCs and MNA parameters in up to 17 monitoring wells.

**USACE Kansas City, PRAC, Middlesex Sampling Plant FUSRAP Site, Middlesex, New Jersey (2006-2008).** Quality Control Systems Manager (QCSM), then later, Operations Manager for the Soils OU-1 Remedial Action cleanup of low level radioactive waste (LLRW), in accordance with the Record of Decision (ROD). Responsible for the implementation of the 3-phase QC inspection system for the definable features of work, preparation of daily QC reports, and technical liaison between ECC, the USACE and subcontractors. USACE requires use of the Resident Management System (RMS) portion of the Quality Control System (QCS) software to manage cost, quality control and administrative elements on this project. As Operations Manager, tracked waste quantities and coordinated transportation and disposal of radiologically and chemically contaminated soils and debris. Managed the removal and closure of two underground storage tanks. Additional responsibilities included support of water management (treatment and compliant discharge), permit acquisition, and project close-out, including the preparation of the Project Close-out and Preliminary Remedial Action Reports.

**Delta Airlines/Ogden Aviation, LaGuardia Airport Fuel Farm Facility, Queens, New York (1998-1999).** Project Hydrogeologist responsible for the operations and maintenance of a temporary dual-phase extraction system. The system operated for 14 months, and was designed for separate phase product recovery. The entire system consisted of 24 extraction wells, diffused-air floatation (DAF) for oil/water separation, bag filters, clay/sand filters, low-profile air stripper, and finally, carbon. Operating challenges





included a persistent bio-growth and iron fouling, which required treatment with chemical additives (Ferremede and B-126). Provided frequent response to the Process Logic Control (PLC) auto-dialer, which required a rapid response to trouble-shoot, and repair the system. The project successfully reduced the thickness of floating product from several feet to less than 1/8 inch, which led to project closure. The project value was \$1.2 million.

**Bern Metals and Universal Metals, Buffalo, New York (1991-1993).** As Project Manager, coordinated extensive site characterization at two 5-acre abandoned scrap metal sites. Utilized field portable X-ray fluorescence spectrometers to analyze lead content in soils. Projects involved subcontracts, test pit excavations, surveying, and stringent health and safety considerations. Prepared technical report with high quality graphics, geostatistical evaluations, and concise depictions of environmental data. Received personal letter of commendation from USEPA On-Scene Coordinator for both projects.

**USACE Kansas City PRAC, Kauffman & Minter Superfund Site, ISCO Remedial Action, Springfield Twp, New Jersey (3/06-Present).** Quality Control Systems Manager (QCSM) for this \$1.8 million FFP contract type. Project includes the remediation of source area groundwater using in-situ chemical oxidation. Project responsibilities include implementation of the 3-phase QC inspection system for the definable features of work, preparation of daily QC reports, and technical liaison between ECC, the USACE and USEPA, and subcontractors. USACE requires use of the Resident Management System (RMS) portion of the Quality Control System (QCS) software to manage cost, quality control and administrative elements on this project.

**US Army Contracting Agency, Aberdeen Proving Ground, Maryland, Directorate of Contracting, Assistant Chief of Staff Installation Management (9/05-Present).** Assistant Project Manager and Sr. Scientist responsible for ongoing Task Order 0002, a \$4.3 million Performance Based, Guaranteed Fixed Price Remediation Insurance project with sites located at Camp Crowder, Missouri and Fort Chaffee, Arkansas. Develop technical approaches and corresponding budget, cooperatively interfacing with all project stakeholders, including the US Army Environmental Center, USEPA Region VII, MDNR Federal Facilities personnel, as well as MDNR Departments of Geology and Land Surveying, and Health and Senior Services.

Site remediation activities include a combination of effective and permanent treatment technologies such as excavation and on-site treatment, SVE/DPE and product recovery. Cleanup objectives were negotiated with and agreed to with the USEPA Region VII and the MDNR. Successfully negotiated “No Further Action” with the USEPA at one of the NPL sites, and obtained concurrence from the MDNR.

**USACE Kansas City PRAC, Repair/Replace Decontamination Solution Recovery System (DSRS), Chemical Decontamination Treatment Facility (CDTF), Fort Leonard Wood, St. Robert, Missouri (8/05-3/06).** Project Manager. Project requirements included the replacement of 2,000 feet of double-wall piping, three 10,000 – gallon storage tanks, and design/build of a water recycling system. Due to the potential hazard of chemical agents formerly in contact with demolished materials, the project waste required certificate of destruction and subsequent disposal of the material as Missouri Special Waste. Coordination with the Missouri Department of Natural Resources (MDNR) was required for permitting and waste acceptance at a licensed treatment facility. Project was completed on time and within budget, with no interruption of CDTF operations. This \$1.1 million project was estimated, negotiated, and awarded within 2 weeks of the issued request for proposal (RFP) due to the urgent requirement to replace the deteriorated DSRS, and maintain ongoing training operations at the facility. USACE requires use of their Quality Control System (QCS) software to manage cost, quality control and administrative elements on this project.

**USACE Kansas City LTRA (transferred to USACE NYD), Stanton Cleaners Area Groundwater**



**Contamination Superfund Site, Great Neck, New York (9/04-Present).** Project Manager providing Long Term Response Action (LTRA) Operations and Maintenance (O&M) support. Remediation systems include groundwater (GW) pump and treat (P&T) system, incorporating an air stripper and carbon filtration, and a soil vapor extraction system with carbon treatment before discharge. The GW P&T system has recovered, treated, and discharged over 120,000,000 gallons of PCE contaminated groundwater with less than 1% off-line time. Project requirements include monthly O&M performance monitoring, semi-annual monitoring well sampling, and Indoor Air Quality Sampling, as well as community relations support for the USEPA Region II.

**USACE Kansas City PRAC (transferred to USACE NYD), Bog Creek Farm Superfund Site, Howell Twp., New Jersey (9/05-Present).** Project Manager providing O&M support to the USACE and USEPA Region II on this fixed firm price contract type. A groundwater vacuum extraction system removes approximately 40 GPM for hydraulic control of a VOC-contaminated plume. The P&T system requires full-time operators on site, and the groundwater is treated in batches. Project requirements include monthly O&M performance monitoring and reporting. USACE requires use of their Quality Control System (QCS) software to manage cost on this project.

**USACE Kansas City, PRAC, Former Nebraska Ordnance Plant, Mead, Nebraska (2002-3/04).** Project Hydrogeologist and O&M Project Manager providing LTM/LTO of 3,000-gpm GAC groundwater on-site treatment facility designed to contain a TCE- and explosives-contaminated plume at a USEPA Region 7 Superfund site. Performed quarterly LTM sampling events including over 140 monitoring wells and 40 private water supply wells over 3 years to assess the treatment system's performance. Collected and evaluated data from monthly performance/compliance samples to optimize treatment operations and ensure treatment effectiveness. Implemented a well evaluation, maintenance, and rehabilitation program to achieve optimum performance of the groundwater extraction wells. Contaminant concentrations in the treated effluent from the plant were below the discharge criteria set by the Nebraska DEQ and the system has operated with less than 3 percent down time due to shut-down or unscheduled repairs.

**USACE Kansas City, Site-specific Environmental Restoration Contract, Wayne Interim Storage Site, Wayne, New Jersey (2002).** Project Hydrogeologist for the cleanup of low level radioactive waste (LLRW) at this FUSRAP site. Responsible for the design, installation and operation of a dual aquifer dewatering system to support excavation of contaminated soils. The dewatering system included the installation of over 70 wells, the performance of two long-term aquifer pumping tests and three short-term tests, and groundwater modeling. The system extracted groundwater continuously for 9 months, intercepting over 3.5 million gallons of water, prior to contact with contaminated soils, which would have slowed excavation, and required additional water treatment. A sophisticated monitoring network was used to measure and record water levels across the site to ensure the protection of the lower confined aquifer, which is used locally for drinking water supply.

## **EDUCATION AND TRAINING**

BA, Environmental Geology, State University of New York (SUNY), 1988  
NJDEP Certified Subsurface Evaluator, 1995  
New Jersey Certified for UST Closure, 1995  
New Jersey Certified Soil Boring, 1990  
40-hour HAZWOPER Training 1988; Refresher, 2007



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## **PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS**

American Institute of Professional Geologists, Certified Professional Geologist (CPG-9682), 1995;  
Pennsylvania (003165-G), 1997; Virginia (001257), 1996; Nebraska, 2004  
Certified Project Management Professional (PMP) from the Project Management Institute, 2007  
National Groundwater Association, Member

## **EMPLOYMENT HISTORY**

2002 - Present: ECC, Bridgewater, New Jersey, Sr. Hydrogeologist/Project Manager  
1998 - 2002: The IT Group, Trenton, New Jersey, Project Hydrogeologist  
1993 - 1998: OHM Remediation Services Corp. Trenton, New Jersey, Sr. Hydrogeologist  
1988 - 1993: Roy F. Weston, Edison, New Jersey, Project Scientist

## **CLIENT REFERENCES**

Jim Moore, Project Manager, USACE, New York District, 917-790-8331  
Garth Anderson, Project Manager, USACE, Kansas City District, 816-983-3255  
Andy Gosnell, Geologist, USACE, Kansas City District, 816-983-3891  
George Prince, USEPA-ERT, Edison, NJ, 732-321-6649  
Randy Jackson, Remedial Project Manager, LANTDIV, Norfolk, VA, 757-322-4316  
Roy Petersen, Project Manager, Quality Distribution, Inc. (Formerly Chemical Leaman), 610-518-3124

**APPENDIX H**

**SCHEDULE OF VALUES**

**(To be provided under separate transmittal)**