

**Final
Quality Control Plan**

Restoration Advisory Board Support

**Plum Brook Ordnance Works
Sandusky, Ohio**

Contract Number: W91237-13-C-0002

Prepared for:

U.S. Army Corps of Engineers, Huntington District



Prepared by:



**Oneida Total Integrated Enterprises, LLC
9033 E. Easter Place, Suite 200
Centennial, CO 80112**

April 2013

TABLE OF CONTENTS

1.0	PURPOSE.....	1
2.0	REFERENCES.....	2
3.0	GENERAL PROJECT INFORMATION	3
3.1	Project Type.....	3
3.2	Project Location	3
3.3	Customer/Sponsor	3
3.4	Project Description.....	3
4.0	QUALITY CONTROL PLAN	4
5.0	INDEPENDENT QUALITY CONTROL TEAM.....	5
6.0	QUALITY CONTROL WORK PLAN	6
7.0	ORGANIZATIONAL CHART.....	9

Appendices

Appendix A	Resumes of Key Personnel
Appendix B	Authorized Letter to the Quality Control Officer
Appendix C	Quality Control Documentation

LIST OF ACRONYMS

CELRH	USACE Huntington District
FUDS	Formerly Used Defense Sites
IQCT	Independent Quality Control Team
ISO	International Organization for Standardization
OTIE	Oneida Total Integrated Enterprises
POC	Point of Contact
QAR	Quality Assurance Review
QC	Quality Control
QCO	Quality Control Officer
QCP	Quality Control Plan
QCR	Quality Control Review
RAB	Restoration Advisory Board
SOW	Scope of Work
USACE	United States Army Corps of Engineers
WVMA	West Virginia Maneuver Area (Dolly Sods)
WVOW	West Virginia Ordnance Works

1.0 PURPOSE

This Oneida Total Integrated Enterprises (OTIE) Quality Control Plan (QCP) is based on the professional competence of the employees performing the project tasks and it defines the responsibilities and roles of each member of the project team. OTIE has high standards for its employees and subcontractors involved in all projects. Project tasks are assigned in accordance with clearly demonstrated capabilities. Quality Control (QC) is implemented within the project framework by a distinct QC organization functioning under established guidelines. This QCP ensures the development of a high quality technical product that requires little revision prior to the final Quality Assurance Review (QAR).

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

2.0 REFERENCES

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

- A. CELRH 5-2-7 Quality Management Plan.
- B. ER 1110-1-2 Engineering and Design Quality Management
- C. CELRDC 5-1-1 Quality Management Plan
- D. Applicable ISO 9000 processes - based on procedures and work instructions from Huntington District Corps of Engineers, Engineering /Construction Division (<http://www.lrh.usace.army.mil/ct/quality/>)

3.0 GENERAL PROJECT INFORMATION

3.1 Project Type

This project requires the contractor to provide administrative support of the Plum Brook Ordnance Works (PBOW) Restoration Advisory Board (RAB). The RAB is the Department of Defense's mechanism to involve the community, installation representatives, Ohio EPA and other state regulatory agencies, and local officials. The PBOW RAB meets regularly, usually once per quarter or when crucial project-related information is available. The RAB meets at BGSU Firelands College in Huron, Ohio. OTIE has been contracted to provide comprehensive administrative support to this RAB effort.

3.2 Project Location

Activities associated with this project will be carried out in Huntington, West Virginia and West Milton and Sandusky, Ohio.

3.3 Customer/Sponsor

USACE, Huntington District (CELRH) under Contract No. W91237-13-C-0002.

3.4 Project Description

OTIE will provide RAB technical and administrative support through the following tasks:

1. RAB and Public Meeting support, including all meeting notices and publications, agendas, minutes and maintenance of the RAB mailing list, meeting setup, preparation of presentations and handouts for the meetings,
2. Coordinating a total of three poster sessions and community surveys,
3. Developing and distributing quarterly fact sheets,
4. Preparing PBOW-related articles for the annual FUDS newsletter,
5. Coordinating and collecting newsletter articles from West Virginia Ordnance Works (WVOW) and West Virginia Maneuver Area (WVMA) projects,
6. Publishing and printing the annual FUDS newsletter,
7. Preparing the annual update of the Community Relations Plan,
8. Developing and maintaining the FUDS website.

4.0 QUALITY CONTROL PLAN

An effective QCP is important to the undertaking of this program due to the various degrees of technical applications. An effective QCP will ensure that high quality products and services will be produced that satisfy USACE standard practices, policies and guidelines.

Quality Control Officer—This person is responsible QC for this project. This person has the authority to stop the work if QC is not being met. The QC Officer (QCO) shall be responsible for reviewing the deliverables under this project.

OTIE QC Officer
Lana Wood

Contact Information
Cellular Phone: (419) 677-3273

5.0 INDEPENDENT QUALITY CONTROL TEAM

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

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

The Senior Reviewer for this project is:

<u>Senior Review</u>	<u>Contact Information</u>
John Fleissner	Office Phone: (414) 607-6734 Cellular Phone: (414) 248-3913 Email: jfleissner@otie.com

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

<u>Peer Review</u>	<u>Contact Information</u>
Beth Seppala	Cellular Phone: (303) 717-7902 Email: bseppala@otie.com

Appendix A contains resumes for members of the IQCT team, Project Manager, and QCO. Appendix B contains the letters of authorization for the Project Manager and QCO. These positions will be effective as of March 29, 2013.

6.0 QUALITY CONTROL WORK PLAN

Quality control (QC) review of all products and services provided by OTIE will be reviewed by the QCO. The QCO will ensure quality within standard USACE practices, policies, and guidelines prior to official submittal.

Independent technical reviews will be conducted by technically qualified professionals, who have not been directly involved with product development and who will ensure that:

- The concepts, assumptions, features, methods, analyses, and details are appropriate, fully coordinated, and correct,
- The problems, opportunities, and issues are properly defined and scoped,
- The results and recommendations are reasonable, within policy guidelines, and supported by the presentation,
- Any deviations from policy, guidance, and standards are appropriately identified and have been properly approved,
- The products meet the customers' needs

All reports, documents, products, and related materials that are prepared by OTIE will be on file in our offices. All reports, documents, products and related materials will be sent to the USACE Point of Contact (POC) or approved USACE entity for review and approval.

The following QC Work Plan will be followed:

RAB / Public Meeting Support

1. The contractor will make all arrangements for RAB/Public meetings, including preparation and publication of meeting notices and arrangements for appropriate meeting space.
2. The contractor will document minutes of each Team Meeting, RAB Meeting, and Public Meeting.
3. The contractor will provide presentation and handout materials as necessary for each RAB/Public meeting, as directed by the POC, and provide necessary presentation equipment. All materials will be reviewed by the QC team for accuracy prior to submittal to POC for approval.
 - If POC approves of presentation and handout materials, the contractor will finalize and prepare materials for meeting.
 - If POC disapproves, the contractor will revise the materials based on POC comments and return to Step 3.
4. The contractor will provide draft RAB/Public meeting minutes to the POC, after review by QC team, for review and comment, with approved minutes distributed to all RAB members.

Poster Session Support

1. The contractor will provide all equipment, materials and personnel necessary and to erect, and disassemble, display booth at the Erie or Huron County Fair, the Harvest Happenings Fair, and the Osborn Park Earth Day event.
2. The contractor will complete presentation / information handouts and materials for display and submit recommendations for fair promotional materials, after review by QC team, for review by POC.
 - If POC approves of presentation and promotional materials, finalize for fair.
 - If POC disapproves, note discrepancies and return Step 2.
3. Attend each day of fairs/events to provide interested attendees with POC-approved presentation materials, informational handouts and related promotional materials.

Community Surveys

1. The contractor will prepare survey materials, under USACE direction, and conduct survey using personal interviews and/or mailings.
2. The contractor will analyze and tabulate survey results, followed by QC Team review. Reviewed data will be forwarded to POC for review and comment.
 - If POC approves survey results, send data to POC.
 - If POC disapproves, note discrepancies and return to Step 2.
3. The contractor will present findings, after approval by USACE, at next RAB/Public meeting.

Fact Sheets

1. Prepare and distribute Fact Sheets of current and/or on-going activities, using monthly project fact sheet updates from USACE.
2. QC Review Team will review each Fact Sheet prior to submittal to USACE check for accuracy.
 - If POC approves Fact Sheet, send out to RAB mailing list members.
 - If POC disapproves, note discrepancies and return to Step 1.

FUDS Newsletter

1. Develop articles for the PBOW portion of the FUDS newsletter, based on the contractor's knowledge of the project and input from POC (Items 1 and 2 can be performed concurrently).
2. Collect FUDS project-related articles from other FUDS technical coordinators on WVOW and WVMA (Items 1 and 2 can be done concurrently).
3. The QC team will review each article for accuracy.

4. The Contractor will use the articles to prepare a draft newsletter layout for approval by POC.
5. After draft layout is approved by POC, the Contractor will publish and print the newsletter.

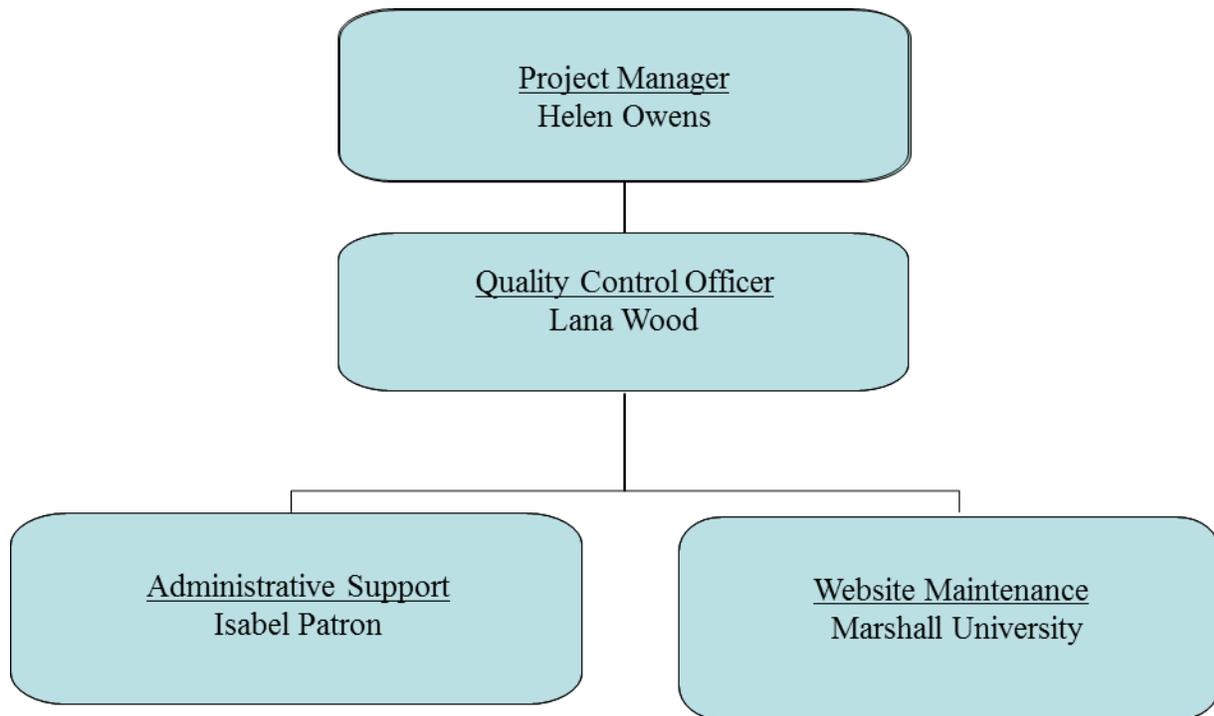
Website Maintenance

1. Coordinate materials to be posted on website with POC and maintain website to reflect the most current information.
2. Coordinate materials to be posted on website for WVOW and WVMA POCs.
3. Coordinate with website support personnel to post material on the website. Website posting will include meeting minutes, fact sheets, newsletters, and technical documents and reports.

Community Relations Plan

1. Update Community Relations Plan to reflect most up-to-date information available.
2. QC team will review Plan for accuracy, followed by submittal to POC.
 - If POC approves Plan, send data to POC.
 - If POC disapproves, note discrepancies and return to Step 1.

7.0 ORGANIZATIONAL CHART



Resumes of team members are included in Appendix A of this Quality Control Plan.

APPENDIX A

Resumes of Key Personnel

Project Manager

Helen Owens

HELEN OWENS

Project Manager

Ms. Owens has over 35 years of experience as an environmental consultant and technician. She has diverse experience in remediation project management and on-site project management, air and water pollution evaluations including protocol development, management of field activities, data collection, industrial and municipal wastewater treatment, industrial pretreatment regulation, process evaluations, and compliance consulting.

Ms. Owens has historical experience with numerous projects, such as groundwater monitoring well and soil sampling, storm water monitoring, Phase I environmental assessments, preparation of air and wastewater permit applications, development of Spill Prevention, Control and Countermeasure (SPCC) Plans under the direction and review of a Professional Engineer, air emissions monitoring programs, and environmental audits of industrial facilities.

Plum Brook Ordnance Works Remedial Action Construction (RA-C), USACE Huntington District, Sandusky, Ohio

Project Manager. Managed three soil remediation projects at the former Plum Brook Ordnance Works in Sandusky, Ohio for the US Army Corps of Engineers (USACE) Huntington District. The projects consist of excavation and remediation of nitroaromatic-contaminated soil from a former ordnance manufacturing facility. The first two projects included soils which were contaminated with nitroaromatics, PCBs, metals, and semi-volatile organics and had a combined volume of approximately 12,000 cubic yards. The soils were excavated and successfully remediated using a patented alkaline hydrolysis process. The third project includes excavation of approximately 17,000 cubic yards of contaminated soil, off-site disposal of non-hazardous soil and staging the hazardous soil for remediation. Responsible for development and implementation of work plans, day-to-day management of project activities in the field (excavation, sample collection, coordinate data management, etc.), coordination of tasks with site superintendent, implementation of the soil remediation process (alkaline hydrolysis) with subcontractor support, communication with client and host facility Environmental Manager to discuss project activities, communication with senior-level management and coordination with host-facility personnel, tracking project budget, scheduling, estimating, invoicing, subcontractor agreements, work plan development, and draft and final report preparation.

Plum Brook Ordnance Works Restoration Advisory Board Support and Long Term Monitoring of Wells, USACE Huntington District, Sandusky, Ohio

Project Manager. Provided technical and administrative support to the USACE Huntington District on the Restoration Advisory Board for the Plum Brook Ordnance Works, Sandusky, Ohio. Responsible for public outreach activities, coordination of public meetings, preparation of the annual FUDS newsletters,

Education

AAS, Environmental Quality Assurance, Muskingum Area Technical College, Zanesville, Ohio, 1977
BS, Business Management, University of Phoenix, Dayton Ohio Campus, 2004

Specialized Training

40-Hour OSHA HAZWOPER and 8-Hour Refresher
Class I Laboratory Analyst, Ohio

Helen Owens

development of the Community Relations Plan, interaction with the public and other tasks as directed by the USACE Technical Coordinator. Provided technical support in the collection of seasonal groundwater level measurements to support groundwater modeling development, and to document seasonal fluctuations. In addition to the Huntington District, provided contractor support to USACE–Nashville District on the Remedial Investigation / Feasibility Study of the former Plum Brook Ordnance Works.

Summit Equipment and Supply Groundwater Monitoring, USACE Huntington District

Project Manager. Provided technical expertise and site maintenance to the USACE Huntington District in support of the district's agreement with USEPA Region 5 at Summit Equipment and Supply, a Superfund Site. Responsible for implementation of work plans, groundwater monitoring for Monitored Natural Attenuation, report preparation, data evaluation, site maintenance, estimating, and scheduling.

Industrial Pretreatment Program, Multiple Sites, Ohio

Contract Pretreatment Coordinator. Provided program support to the City of Marysville, Ohio for the implementation of the Industrial Pretreatment Program (IPP). Provided similar support services to the City of Mason, Ohio and Middletown, Ohio. Responsible for development of an industrial user survey, permit writing, and coordination of industrial compliance activities, enforcement and development of Local Limit parameters.

Industrial Wastewater Treatment, Multiple Sites, Ohio

Wastewater Treatment Operator. Provided technical guidance to industrial operations in troubleshooting specific wastewater treatment problems, including the development and implementation of an industrial wastewater operator training seminar, evaluation of industrial wastewater treatment operations and making recommendations to achieve and maintain regulatory compliance. Responsible for the day-to-day operation of sanitary wastewater treatment plants as a contractor to the USACE, and small municipal and industrial facilities.

Quality Control Officer

Lana Wood

LANA WOOD

Quality Control Officer

Ms. Wood has 10 years of experience as an environmental consultant, quality control officer, and environmental technician. She has been involved with the preparation of technical reports detailing environmental research, and environmental restoration and monitoring for remediation projects. Ms Wood has performed collection and interpretation of analytical data, and coordination of sampling strategies for soil remediation efforts for various projects. Her responsibilities have included QC reviews, sample and data collection, coordination of risk reviews and development of project newsletters to aid in public outreach activities.

Education

BS, Biology, Union University,
Jackson, TN, 1999

Specialized Training

40-Hour OSHA HAZWOPER
and 8-Hour Refresher

USACE Construction Quality
Management, 2011

Plum Brook Ordnance Works Remedial Action Construction (RA-C), USACE Huntington District, Sandusky, Ohio

Quality Control Officer/Environmental Technician for two soil remediation projects at the former Plum Brook Ordnance Works in Sandusky, Ohio for the US Army Corps of Engineers (USACE) Huntington District. The projects consist of excavation and remediation of nitroaromatic-contaminated soil from a former ordnance manufacturing facility. The first two projects included soils which were contaminated with nitroaromatics, PCBs, metals, and semi-volatile organics and had a combined volume of approximately 12,000 cubic yards. The soils were excavated and successfully remediated using a patented alkaline hydrolysis process. The third project includes excavation of approximately 17,000 cubic yards of contaminated soil, off-site disposal of non-hazardous soil and staging the hazardous soil for remediation. As the Quality Control Officer (QCO), responsible for all manners of quality control concerning the tasks involved with sampling, excavating, treating and backfilling designated areas of concern, as well as making sure the project is implemented according to the Quality Control Plan. As the Environmental Technician (ET), responsible for coordinating sampling events, collection, packaging, shipping, documentation of sampling locations, and ordering the needed supplies. In conjunction with the QCO and ET duties, evaluated the risk and determined clean closure of the areas of concern (under direction of the Data Management Specialist), made recommendations for further test pitting in coordination with the Project Manager, monitored the remediation personnel for signs of heat-related illnesses, and monitored the remediation personnel activities to ensure they were taking precautions to prevent heat-related illnesses and exposure to contaminants and remediation chemicals.

Plum Brook Ordnance Works Restoration Advisory Board Support and Long Term Monitoring of Wells, USACE Huntington District, Sandusky, Ohio

Environmental Technician. Provided technical support to the USACE Huntington District on the Restoration Advisory Board and Long Term Monitoring of Wells for the Plum Brook Ordnance Works, Sandusky, Ohio. Tracked the measurement and maintenance data for the seasonal groundwater measurements, coordinated safety meetings with subcontractors, and assisted in drafting, finalizing and assembling the Community Relations Plan and the Well Inspection Report.

Lana Wood

National Center for Environmental Assessment, US Environmental Protection Agency, Cincinnati, Ohio

Word Processing/Graphics Specialist, Technical Support Services Lead for the National Center for Environmental Assessment (NCEA) at the U.S. Environmental Protection Agency (EPA), Andrew W. Breidenbach Environmental Research Center in Cincinnati, Ohio. Under contract to the EPA, provided formatting support to the team of NCEA research scientists in the preparation of scientific documents. Interacted primarily with the NCEA Program Management staff to ensure the research was presented accurately through textual content and graphical formats. In addition to providing formatting support, conducted proofing of documents, verification and preparation of bibliographic references, and prepared technical presentations based on the documents. As Technical Support Services Lead, responsible for a four-person team supporting NCEA Cincinnati and Washington DC. Responsible for creating reference databases using Reference Manager, Endnote and HERO/LitCiter, and creating and formatting styles to comply with EPA guidelines for publication in scientific journals. Served as the lead in creating the manual for the Annual Toxicology Conference which prepared the conference handout materials and provided support to the technical presenters by creating and formatting individual presentations. Responsible for several large, high-priority IRIS documents for NCEA Cincinnati and Washington DC which included formatting the document and organizing document flow between the team of scientists and support staff.

Independent Quality Control Team

**Senior Reviewer
John Fleissner**

JOHN FLEISSNER, PE

QC Manager

Mr. Fleissner is a Principal Engineer with wide-ranging experience as a hands-on Project and QC Manager for municipal, industrial, and governmental clients. Since 1982, Mr. Fleissner has executed and managed all aspects of Superfund and other CERCLA, RCRA and other hazardous waste remediation activities. In the past 20 years, he has served as QC Manager to over 75 HTRW facilities/sites nationwide. His responsibilities have included quality assurance (QA) reviews, work plan budgeting and scheduling, regulatory analysis, remedial investigation/feasibility study reports and responsiveness summaries, remedial design, operations and maintenance planning and documentation, and negotiation support.

As Senior Project Manager and QA Manager, Mr. Fleissner presents internal training sessions on project management techniques, contract types and rationale for selection, contract review, use of project financial analysis tools such as present worth and internal rate of return (IRR), cost accounting techniques for project forecasting and on-going control, and software training using MS Office programs, including MS Project. The aim of all training programs is to improve project delivery skills while enhancing client satisfaction.

QC Manager, AFCEE 4P, Worldwide.

Provided quality control for 27 TOs at 10 AF installations worldwide including Japan, Korea, and Alaska.

AFCEE 3P and 4P A-E, Worldwide

Quality Control / Quality Assurance Manager. Provided quality control for 58 task orders at 52 Air Force bases worldwide including Guam, the Azores, Japan, and Alaska. Tasks involved design, investigation, remediation, and construction. Developed, maintained, and enforced quality system and process for contract operations. Prepared and tracked submittals register for prime and subcontractor submittals. Provided technical review of EE/CA for Pease AFB and Site Investigations for Scott AFB.

“This is to convey my sincere appreciation and thanks for the recent technical support ... [OTIE formerly TN&A] accomplished outstanding quality documents in a very short period.” —Harold Reid, Project Manager

EMAC RAO/LTM, Naval Facilities Engineering Command Southwest Division (NAVFAC SW), San Diego, CA, 2001-2008.

Quality Control Manager responsible for quality control on CTO awarded under this 5-year, \$120 million FFP contract. Provided detailed QC review of SAPs for remedial investigation and actions at Port Hueneme, Point Mugu, and MCLB Barstow. Maintains close communication with NAVFAC SW quality assurance officer to ensure compliance with all environmental work instructions related to field sampling, sample analysis, and data quality control. Worked directly with

Education

MS, Environmental Engineering, Marquette University, Milwaukee, WI, 1977

BS, Civil Engineering, Marquette University, Milwaukee, WI, 1975

Registrations/Certifications

Professional Engineer (PE):
WI (#21071), 1981

Specialized Training

USACE Construction Quality Management for Contractors, 2002

40-Hour OSHA HAZWOPER and 8-Hour Refresher

Professional Affiliations

Water Environment Federation

TAPPI, Lake States Section

John Fleissner, PE

OTIE's project chemist on more than eight SAPs in coordination with NAVFAC SW's QC officer, including an Enhanced In Situ Bioremediation Pilot Study at NBVC Point Mugu IR Site 6 and Site 24; a Time-Critical Removal Action at IR Site 9; Corrective Action Plan support for UST Site 796-04; and for the optimization and O&M of three biobarriers at UST Site 2 at Port Hueneme, for O&M savings of \$45K per year.

Pre-Placed Remedial Action Contract (PRAC) Program U.S. Army Corps of Engineers (USACE), Kansas City District, Various Sites

QC Manager. Responsible for QC activities on the \$100M PRAC for environmental remediation. Responsible for the construction QC plans for the \$15.6M remedial action and wetland restoration at the Nascolite Superfund site and the \$5.8M landfill capping and leachate treatment remedial action at the Tongue Point Landfill, where QC testing demonstrated successful implementation of remedy with zero significant rework items.

EMAC for Environmental Restoration Services, NAVFAC SW, CA, Various Sites, 2004-2009

QC Manager responsible for QC on CTOs awarded under this 5-year, \$60M FFP contract. Provided detailed QC review of SAPs for the Remedial Design Optimizations at MCLB Barstow, Point Mugu and Port Hueneme, and for the former Naval Air Station Moffett Field Remedial Design Investigation. Maintains contact with NAVFAC SW's QA officer to ensure compliance with Work Instructions for field sampling, sample analysis, and data QC.

HTRW Program, USACE, Omaha District, Nationwide Sites

Program Manager responsible for OTIE's HTRW ID/IQ contract with the USACE Omaha District. Delivery orders have been both firm fixed price and cost plus fixed fee. Under his leadership as Program Manager, OTIE has been awarded 20 delivery orders for 12 sites in 9 states, consuming 100 percent of the \$10 million contract capacity performing on as many as 9 concurrent TOs that covered projects nationwide from NC to CA. Directed contract performance including cost (FFP and CPFF), schedule, safety and quality and the management of six PMs. Responsible for negotiation, project delivery, and customer satisfaction on nine concurrent delivery orders covering projects nationwide from North Carolina to California. Valued at \$4.8 million, these projects include long-term operations and monitoring, remedial investigation/feasibility studies (RI/FS), and groundwater protection planning. OTIE's performance on the Pemaco RI/FS for U.S. EPA Region 9 was recognized by the USACE and rewarded with an additional assignment for Region 9, a groundwater investigation for a chromium plating site.

- Managed \$3M RI/FS for Pemaco Site **(2005 – 2008)**; performed QC review of Pemaco FS; and recognized by EPA Region 9 for outstanding document quality, "*...the work performed by [OTIE formerly TN&A] has been among the best work performed by contractors that I have worked with in the past 15 years... The*

John Fleissner, PE

Remedial Investigation Report and Feasibility Study Report are exceptional work products...they [OTIE formerly TN&A] have worked diligently to ensure that dollars sent to the ACOE by EPA are expended in a manner that consistently saves money and time.” (Rose Caraway/EPA Region 9 RPM)

- Managed pre-design investigations at Iowa Army Ammunition Plant involving review of over 1,000 historic as-built drawings and over 500 historic reports and aerial photographs. Used immunoassay field analysis for TNT and RDX/HMX explosives to reduce field time by close to 40 percent and reduce the number of samples sent offsite for laboratory analysis by 50 percent.

PRAC Program,

USACE, Omaha District, Multiple Sites, 2000-2006

Program Manager for 22 FFP/CPFF task orders on \$30M ID/IQ RAC for USACE, Omaha District. Managed CERCLA pre-design investigations, program scoping, cost estimating, negotiations, RD, RA, and long-term response actions including remediation system startup, optimization, and monitoring. Responsible for technical quality and financial performance of all work. Managed application of innovative techniques to increase performance and reduce O&M costs.

- Pemaco performance was rewarded by USACE with an additional assignment for Region 9.
- Designed and implemented chemical sequestering injection system for a 40% increase in operation uptime and estimated annual cost savings of over \$18,000 at Seymour-Johnson AFB. Recognized by USACE: *“[OTIE formerly TN&A] team has impressed us with their high quality and cost-effective execution of two treatment facilities in support of the Seymour Johnson AFB environmental program in the past three years...they have proven to be dependable, responsive and team-oriented in trying to accomplish the Base objectives.” (Steve Rowe, PE, USACE Omaha District PM)*
- Managed construction of a \$2M 65-foot deep permeable reactive barrier (PRB) wall using biopolymer slurry and a \$1M 35-foot deep PRB using continuous trenching at Offutt AFB. PRB projects won the 2005 Nebraska ACEC (American Council of Engineering Companies) for engineering excellence.
- Managed coordination of 5 stakeholders through RAB; prepared presentation materials, supported outreach
- Managed accelerated site closure (SS-31) two years ahead of schedule at Seymour Johnson AFB by optimizing SVE.

Independent Quality Control Team

**Peer Reviewer
Beth Seppala**

BETH SEPPALA

Geologist

Ms. Seppala is an accomplished Project Manager and Geologist for projects involving field and site investigations, remediation, data analysis, quality control, and report writing for industrial/commercial and DoD clients, including the Army, Navy, and Air Force.

Her site assessment and remediation experience has been associated with environmental permits and regulations, including RCRA and CERCLA. She is experienced in numerous forms of remedial technologies, including excavation and off-site disposal, soil vapor extraction, and permeable reactive barriers. Field activities have involved drilling using hollow stem auger, direct push, and air rotary techniques; borehole logging; well installation and development; soil, soil vapor, and groundwater sampling; packer and slug testing; and the use of innovative investigative methods, including the membrane interface probe (MIP) and passive diffusion bag samplers. Ms. Seppala's report writing experience has included generation of work plans, field sampling plans, RCRA facility investigation (RFI) reports, Remedial Investigation (RI) reports, site investigation reports, health and safety plans, and summary reports. She is also experienced in the preparation and submittal of proposals, including technical writing and cost estimate preparation.

Ms. Seppala's client-focus, technical knowledge, and professionalism have helped her develop excellent working relationships with her clients and state regulatory agencies, including the Colorado Department of Public Health and Environment (CDPHE).

Management of RCRA Solid Waste Management Units for US Army Corps of Engineers (USACE) Omaha District at Pueblo Chemical Depot, Pueblo, Colorado

Project Geologist and Task Manager responsible for preparing RFI work plans and reports, Corrective Measure Study (CMS) Work Plans and Reports, and coordination of fieldwork for 5 Solid Waste Management Units (SWMU) regulated under a RCRA Part B Permit at the Pueblo Chemical Depot. Procured subcontractors and coordinated with field staff for execution of fieldwork. Participated in meetings with Colorado Department of Health and Environment and Environmental Protection Agency regulators to discuss the path forward for sites including SWMUs 57, a site contaminated with polychlorinated biphenyls and lead in soil requiring remediation, and SWMU 34, a former firing range requiring completion of an RFI which included an extensive geophysical investigation.

Shallow Groundwater Zone Remedial Process Optimization for the Air Force Center for Engineering and the Environment (AFCEE) at Air Force Plant (AFP) 44, Tucson, Arizona

Project Manager responsible for remedial process optimization (RPO) of dual-phase extraction system accomplishments in the shallow (<120 feet bgs)

Education

BA, Geology, Colgate University, Hamilton, NY 1999

Specialized Training

OSHA HAZWOPER 40-Hour

Beth Seppala

groundwater zone (SGZ) in accordance with AFCEE RPO guidance. Tasks include evaluation of system operations (10+ years in operation) that have reached asymptotic removal levels and the evaluation of TCE, DCE, and 1,4-dioxane distribution in soil and groundwater through sonic drilling, groundwater sampling, and incremental soil sampling across the vertical extent of the water-bearing zone and underlying aquitard. Additional investigation activities included downhole geophysics to identify possible gravel channels within the aquifer; 1,4-dioxane permanganate oxidation treatability studies; and studies performed by the University of Arizona to define micro and macro scale mass flux migration through basal clay towards regional aquifer. The evaluation and recommendations will be included and submitted in the final RPO report.

Focused 1,4-Dioxane Remedial Investigation for AFCEE at the Tucson International Airport Area (TIAA) Superfund Site, Tucson, Arizona

Project Geologist responsible for a Phase I focused remedial investigation (FRI) at the TIAA Superfund site, which includes AFP 44, the Tucson international Airport, and the Tucson Airport Remediation Project. The Phase I FRI involves further identification and documentation of potential sources of 1,4-dioxane, compilation and review of existing information related to 1,4-dioxane in groundwater, and identification of data gaps in defining the extent of the 1,4-dioxane contamination in the area.

Management of RCRA Solid Waste Management Units (SWMUs) and Storage Tank Sites for USACE Omaha District at Fort Carson, Colorado Springs, Colorado

Chief Project Manager responsible for management of 170 RCRA SWMUs and more than 20 underground storage tank/aboveground storage tank (UST/AST) sites under the Fort Carson Directorate of Environmental Compliance and Management Installation Restoration Program. Oversaw home office and field project staff, provided client communication, developed cost proposals, managed contract delivery orders, and conducted cost tracking, subcontractor procurement, and project invoicing for six cost-plus and performance-based contract delivery orders totaling over \$13 million.

Management of RCRA SWMUs for USACE Omaha District at Fort Carson, Colorado Springs, Colorado

Project Manager responsible for 15 RCRA SWMU within the used/waste oil UST program, which consists of 57 SWMUs regulated under the RCRA Hazardous Waste Part B permit. Provided financial and technical management of all tasks (including RFI work plan preparation and implementation), subcontractor procurement and supervision, coordination and supervision of field investigations, and client and regulator interaction. The primary constituents of concern include polyaromatic hydrocarbons (PAH), petroleum hydrocarbons (BTEX), metals, oil, and grease.

Beth Seppala

Management of RCRA SWMU at the Old Central Wash Rack for USACE Omaha District at Fort Carson, Colorado Springs, Colorado

Project Manager responsible for a RCRA SWMU formerly used to wash off mud, dirt, and dust that accumulated on vehicles during field exercises. Responsible for the preparation of a RFI Report incorporating data from several different field investigations describing the nature and extent of inorganic and organic compounds in soil and groundwater.

Site Investigation of a Former Weapons Storage Area at the Waikale US Naval Magazine for the Naval Facilities Engineering Command (NAVFAC) Pacific in Oahu, Hawaii

Project Geologist responsible for a site investigation at a former weapons storage facility. Served as a Field Geologist during two fieldwork periods and as Field Manager during a third fieldwork period. Involved in planning of field work and aided in the decision making process for additional borehole placement based on previous drilling results. Coordinated and directed subcontractors and aided in finalizing and submitting the final Addendum No. 2 and No. 3 work plans. Primary author for the final site investigation (SI) addendum report. Project included investigation of two sites within the former weapons facility, including USTs and a petroleum lubricant and chlorinated solvent area. Constituents of concern included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and fuel hydrocarbons. Field activities also included sample management, drilling boreholes, groundwater well installation and development, soil sampling with Encore samplers low-flow groundwater sampling, and slug testing. Entered boring logs from field effort into gINT database for inclusion in final SI addendum report.

Remedial Investigation and Feasibility Study (RI/FS) for the US Air Force at F.E. Warren AFB, Cheyenne, Wyoming

Project Geologist responsible for planning and execution of a large RI/FS for six groundwater trichloroethylene (TCE) plume source areas and a 12-acre uncontrolled landfill. Aided in organization of subcontractors for field activities. Served as Field Geologist for trenching of a former landfill to determine volume and types of waste materials, including potential unexploded ordnance. Field activities also included drilling auger and direct-push soil borings, installing groundwater wells, collecting soil gas samples, and developing and sampling groundwater wells. Involved in a MIP survey used to identify source areas in Zone D. Aided in managing analytical database and presenting findings for final reports. Entered boring logs from field effort into gINT database to be included in final RI document. Organized and reported findings in numerous project deliverables, including RI, FS, engineering evaluation/cost analysis, and removal action assessment report.

APPENDIX B

Letters of Authorization



March 29, 2013

TO: Dan Cashbaugh

SUBJECT: Appointment of On-Site Project Superintendent/Site Safety and Health Officer
Restoration Advisory Board Support and Long-Term Monitoring of Wells
Plum Brook Ordinance Works
Sandusky, Ohio
Contract Number: W91237-13-C-0002

Dear Mr. Cashbaugh,

Please be informed, you are here by appointed as OTIE's On-Site Project Superintendent and Site Safety and Health Officer (SSHO) for the above mentioned project.

In this role, you are responsible for on-site coordination, direction, and implementation of all field activities performed under this contract. You are granted the authority to stop work at any time should a quality control or safety issue arise. As OTIE's On-Site Superintendent and SSHO, you are responsible for all manners of on-site supervision and safety concerning the tasks of this project and are to ensure all work is done in accordance with the technical specifications, Accident Prevention Plan, 29 CFR 1910, and EM 385-1-1 dated September 2008.

Should you have any questions, please do not hesitate to contact me at 303-770-0582.

Regards,

A handwritten signature in blue ink that appears to read "P. Watts".

Phillip Watts, RG, PMP
Senior Program Manager

Oneida Total Integrated Enterprises (OTIE)
9033 E. Easter Place, Suite 200
Centennial, CO 80112
303.770.0582 office
303.885.4932 cell

Acknowledged:

A handwritten signature in blue ink, likely belonging to Dan Cashbaugh, written over a horizontal line.

Dan Cashbaugh

March 29, 2013
Date



March 29, 2013

TO: Helen Owens

SUBJECT: Appointment of Project Manager
Restoration Advisory Board Support and Long-Term Monitoring of Wells
Plum Brook Ordinance Works
Sandusky, Ohio
Contract Number: W91237-13-C-0002

Dear Ms. Owens,

Please be informed, you are here by appointed as OTIE's Project Manager for the above mentioned project.

In this role, you are responsible for on-site coordination, direction, and implementation of all field activities performed under this contract. You are granted the authority to stop work at any time should a quality control or safety issue arise. As OTIE's Project Manager, you are responsible for all manners of on-site supervision concerning the tasks of this project and are to ensure all work is done in accordance with the technical specifications and the Quality Control Plan developed for this project.

Should you have any questions, please do not hesitate to contact me at 303-770-0582.

Regards,

Phillip Watts, RG, PMP
Senior Program Manager

Oneida Total Integrated Enterprises (OTIE)
9033 E. Easter Place, Suite 200
Centennial, CO 80112
303.770.0582 office
303.885.4932 cell

Acknowledged:

Helen Owens

March 29, 2013
Date



March 29, 2013

TO: Lana Wood

SUBJECT: Appointment of Quality Control Officer
Restoration Advisory Board Support and Long-Term Monitoring of Wells
Plum Brook Ordinance Works
Sandusky, Ohio
Contract Number: W91237-13-C-0002

Dear Ms. Wood,

Please be informed, you are here by appointed as OTIE's Quality Control Officer (QCO) for the above mentioned project.

In this role, you are responsible for on-site quality control for all field activities performed under this contract. You are granted the authority to stop work at any time should a quality control issue arise. As OTIE's QCO, you are responsible for all manners of quality control concerning the tasks of this project and are to ensure all work is done in accordance with the technical specifications and the Quality Control Plan developed for this project.

Should you have any questions, please do not hesitate to contact me at 303-770-0582.

Regards,

A handwritten signature in blue ink that reads "P. Watts".

Phillip Watts, RG, PMP
Senior Program Manager

Oneida Total Integrated Enterprises (OTIE)
9033 E. Easter Place, Suite 200
Centennial, CO 80112
303.770.0582 office
303.885.4932 cell

Acknowledged:

A handwritten signature in blue ink that reads "Lana Wood".

Lana Wood

A handwritten date in blue ink that reads "3/29/13".

Date

APPENDIX C

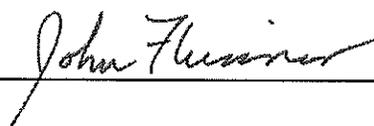
Quality Control Documentation

Quality Control Certification

**Final
Quality Control Plan**

**Long-Term Monitoring of Wells
Plum Brook Ordnance Works
Sandusky, Ohio**

Contract No. W91237-13-C-002

<u>Assignment</u>	<u>Name</u>	<u>Signature</u>	<u>Date</u>
<u>Senior Review</u>	John Fleissner		<u>03/15/13</u>
<u>Peer Review</u>	Beth Seppala		<u>03/15/13</u>

Comments on

**Final
Quality Control Plan**

**Restoration Advisory Board Support Services
Plum Brook Ordnance Works
Sandusky, Ohio**

Contract No. W91237-13-C-0002

The following comments were provided by TMG's Independent Quality Control Team. All comments resulting from this review have been resolved and/or incorporated.

Comment 1. Section 6.0 – Bullets 4 and 6 are not relevant to this project.

Response – Bullets 4 and 6 have been deleted.

Comment 2. Section 7.0 Organizational Chart. Are there any other personnel who are expected to do things for this project—I am thinking of administrative support, website designer, graphic artist for presentation materials, some sort of technical liaison, etc? It just seems like the org chart should show a little more information.

Response – The Organizational Chart has been revised to include Marshall University for the Website Maintenance task and Isabel Patron for Admin Support.