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FINAL CONTRACTOR QUALITY CONTROL PLAN FORMER NAS BRUNSWICK ME

08/01/2014

DEPARTMENT OF THE NAVY

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND, ATLANTIC
REMEDIAL ACTION CONTRACT (RAC)
CONTRACT NO. N62470-13-D-8007
CONTRACT TASK ORDER NO. WE09

FINAL
CONTRACTOR QUALITY CONTROL PLAN

FORMER NAVAL AIR STATION BRUNSWICK
BRUNSWICK, MAINE

August 2014

Prepared for

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ACRONYMS AND ABBREVIATIONS

APP	Accident Prevention Plan
CIH	Certified Industrial Hygienist
COR	Contracting Officer's Representative
CPR	Contractor Production Report
CQC	Contractor Quality Control
CQCR	Contractor Quality Control Report
CTO	Contract Task Order
DCN	Design Change Notice
DFW	Definable Feature of Work
DN	Deficiency Notice
EHS	Environmental Health and Safety
EM	Engineer Manual
FCR	Field Change Request
MRRA	Midcoast Regional Redevelopment Authority
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NCR	Non-Conformance Report
SHM	Project Environmental Safety Manager
PM	Project Manager
PQCM	Project Quality Control Manager
QC	Quality Control
QCPM	Quality Control Program Manager
RAC	Remedial Action Contract
RPM	Remedial Project Manager
SS	Site Superintendent
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
TBD	To Be Determined
TtEC	Tetra Tech EC, Inc.
USACE	United States Army Corps of Engineers

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1.0 INTRODUCTION

This Contractor Quality Control (CQC) Plan establishes the procedures and methods to be implemented for the specific activities pertaining to the radiological, munitions, and other environmental remedial related work tasks at 10 sites at the former Naval Air Station Brunswick (NASB), Brunswick, Maine. Tetra Tech EC, Inc. (TtEC) has been contracted by the Department of the Navy (Navy) to perform this work at former NASB under Remedial Action Contract (RAC) N62470-13-D-8007, Contract Task Order (CTO) WE09. This CQC Plan fulfills the requirements of the TtEC quality control (QC) system requirements.

1.1 Background

NASB is located in Cumberland County, Maine, about 25 miles north of Portland, Maine and 31 miles south of Augusta, Maine. The Main Station lies between the Androscoggin River to the north and Casco Bay to the south and encompasses approximately 3,200 acres. It is bordered by City of Brunswick to the east and west. The facility includes six principal areas: the Main Station, the Topsham Annex, the McKeen Street Housing Complex, the former East Brunswick Remote Radio Transmitter Site, and Rake Stations 1 and 2. NASB was officially closed in 2011 in accordance with the 2005 Base Realignment and Closure (BRAC) Law. As of December 2013, approximately 80 percent of the NASB property has been transferred out of Navy control. The 10 sites at which the radiological, munitions, and chemical related work tasks are to be performed are currently on Navy owned property and are summarized below. One additional site, the Picnic Pond Site is being addressed under a separate plan.

The Historical Radiological Assessment (HRA) (NAVSEA 2014) was revised in 2013, and finalized in 2014. Sites described below that are listed as radiologically impacted sites in the HRA, as well as several other areas identified in the Site Management Plan (ECC 2008) will require further radiological surveys as well as some degree of radiological materials removal to be performed, in addition to the chemical or munitions related remedial actions being performed at the 10 sites. A brief description of the 10 sites is provided below.

Quarry Area of Concern
The Quarry Area of Concern is located southwest of the runways at the western boundary and is approximately four acres in size. Site investigations have discovered significant amounts of debris at the site, including munitions. It is suspected that the area was used as a dump site. During the site inspection performed in 2008, a rocket motor tail fin assembly was discovered on the surface of the Quarry Area of Concern. In 2009, the Naval Ordnance Safety and Security Activity (NOSSA) made a determination that there was at least a medium likelihood of encountering munitions-related items in the subsurface. Based on this determination, the Navy has included this area in the Military Munitions Response Program. Part of this site was also used for permitted petroleum sludge spreading/treatment in accordance with State of Maine requirements. Investigations accomplished to date have uncovered numerous Munitions and Explosives of Concern (MEC) items and debris. The Quarry Area of Concern is also designated

as a radiologically impacted site in the HRA and the radionuclides of concern (ROCs) are Cesium-137 (Cs-137), Radium-226 (Ra-226), Strontium-90 (Sr-90), and Uranium-238 (U-238).

Building 7/10 Groundwater Site

As part of a Resource Conservation Recovery Act (RCRA) closure action, a small parking lot area was evaluated for past contaminant releases. The parking lot area previously had several small buildings on it that were used for industrial operations. As a result of these operations, the solvent tetrachloroethene was found to be as high as 19 parts per billion (ppb) in one groundwater monitoring well at the site. Benzene is also present in levels between 0 and 7.4 micrograms per liter (µg/L). Based on discussions with the regulatory agencies, the Navy will initiate a cleanup effort to address these low level volatile organic contaminants (VOCs) after the Navy has better defined the areal extent of the plume boundaries.

IR Site 7 Old Acid/Caustic Pit

IR Site 7 is a flat open clearing that is approximately 1.4 acres in size located in the northeast portion of NASB. The site is believed to have been used historically for disposal of acidic and caustic liquids, transformer oils, solvents, and miscellaneous liquids and was used more recently by the Defense Reutilization and Marketing Office (DRMO) facility as an outdoor storage and equipment laydown area. The site was remediated in 2002 and approximately 400 cubic yards of soil was removed (one third was disposed of off-site and the remainder was spread across the remainder of the site in six inch lifts). Cadmium-contaminated soils (ranging from 2.5 to 16.3 milligrams per kilogram [mg/kg]) still exist in several areas. The soils also contain elevated levels of manganese. The site has shallow groundwater depth (4 to 7 feet). Groundwater is also contaminated with cadmium ranging from 1 to 50 µg/L and the goal of the soil removal is to eliminate the continued source of groundwater cadmium contamination. The site is currently being managed by the Navy to control exposures to contaminants from soil and groundwater. IR Site 7 is also designated as a radiologically impacted site in the HRA and the ROCs include Cobalt-60 (Co-60), Cs-137, Tritium (H-3), Ra-226, Sr-90, Thorium-232 (Th-232), and U-238.

IR Site 9 Neptune Drive Disposal Area

IR Site 9 is a partially remediated waste disposal area occupying approximately 20 acres in the central portion of NASB. The site contains waste incinerator ash. Wastes reportedly dumped at this location include solvents that were burned on the ground, paint sludge, and wastes from the metal shop. Previous remedial actions for non-radiological contamination removed approximately 50,000 tons of contaminated soil. Clean fill was used to create a temporary cap (polyethylene liner, fill, and vegetation) over most of the remediated areas. However, remediation did not address waste material located under the roads or around the utilities and site investigations have confirmed that the boundary of the disposal area is larger than previously remediated. Based on recent data gap investigations, the soils at various depths may contain low level concentrations of metals such as arsenic (up to 19.9 mg/kg) and chromium (up to 35.5 mg/kg) as well as polynuclear aromatic hydrocarbons (PAHs), including carcinogenic PAHs such as benzo(a)anthracene (up to 19.9 mg/kg), benzo(a)pyrene (up to 15.8 mg/kg), benzo(b)fluoranthene (up to 21.2 mg/kg) as well as other PAHs above the U.S. Environmental Protection Agency (EPA) regional screening criteria. In addition, low-level VOCs such as tetrachloroethene may be present in some soil as a recent field screening using a photoionization

detector (PID) detected up to 19.5 parts per million (ppm) during data gap sampling. IR Site 9 is also designated as a radiologically impacted site in the HRA and the ROCs include Co-60, Cs-137, Ra-226, Th-232, U-238, Sr-90, and H-3.

IR Sites 1 and 3 Hazardous Waste Burial Area

IR Site 1 (Orion Street Landfill) and IR Site 3 (Hazardous Waste Burial Area) are co-located in the central portion of NASB. IR Sites 1 and 3 are located immediately north of Building 642 and is approximately 10 acres in size and contains an estimated 300,000 cubic yards of waste. Prior disposal included domestic waste and refuse and debris including aircraft parts and construction debris as well as asbestos-containing materials (ACMs). The landfill also was used for disposal of waste oil, solvents, pesticides, herbicides, petroleum products, paints, and other various chemicals. Solvents were detected in soil jar headspace PID readings from waste zones within the landfill from 0.5 to 90 ppm. PAHs, the pesticide dieldrin, polychlorinated biphenyls (PCBs), dioxin, arsenic, and cadmium were also detected at low levels, but above EPA risk based cleanup levels. The landfill has a RCRA multilayer cap in place, which was constructed in 1995. IR Sites 1 and 3 are also designated as radiologically impacted sites in the HRA and the ROCs include Co-60, Cs-137, H-3, Ra-226, Sr-90, Th-232, and U-238.

Undocumented Former Orion Street Disposal Area

The Undocumented Former Orion Street Disposal Area is located at the corner of Orion Street and Merriconeag Drive. The exact size of the site is currently not known. The site was identified as an open disposal area where the Ground Electronics Division allegedly disposed of defective electronics components, including electron tubes. The site is designated as a radiologically impacted site in the HRA and the ROCs include Co-60, Ra-226, Sr-90, and Th-232. The site is currently a vacant lot used for athletic activities.

DRMO Site

The DRMO Site consists of Building 584 (approximately 7,200 square feet) and the adjacent DRMO yard. The yard is an approximate 84,000 square foot asphalt paved surface adjacent to Building 584. The eastern portion of Building 584 was built on top of the acid/caustic pit which is part of Site 04. The DRMO Site is designated as a radiologically impacted site in the HRA and the ROCs include Co-60, Cs-137, H-3, Ra-226, Sr-90, Th-232, and U-238.

IR Site 2/Orion Street Landfill (South)

IR Site 2 is located in the vicinity of the southern extent of the main runways within the restricted weapons compound area. The site is approximately 3-acres and was previously used as the primary landfill for NASB between 1945 and 1955 for disposal of domestic waste, hazardous materials, aircraft parts, and construction debris. All prior boring log soil samples had levels of contaminants that were below EPA risk based cleanup levels. A portion of this site has been capped with 15-inches of topsoil. Reportedly, wastes were incinerated on-site and buried in a two-acre pit (formerly a borrow pit). Site 02 is also designated as a radiologically impacted site in the HRA and the ROC is Ra-226.

Building 9 MWR CPO Wardroom/VPU/Electronics and Ordnance Shop
Building 9 is approximately 8,888 square feet in size and was constructed in 1943. The building had several uses, including a laundry facility; electronics and ordnance shop (1950s to 1960s); Patrol Squadron Special Unit (VPU) (1970s to 1980s); and the Morale, Welfare, and Recreation Wardroom from 2006 to 2011. A radiological survey was completed that identified radiological contamination was present. Building 9 is designated as a radiologically impacted site in the HRA and the ROCs include Cs-137, H-3, Ra-226, Th-232, and U-238.

IR Site 6 Sandy Road Rubble and Asbestos Disposal Site
IR Site 6 is bordered by Sandy Road to the southeast and by a stream behind Building 516 to the north and is approximately 1 acre in size. At this site, a small depression was reportedly used for general disposal of construction debris, aircraft parts, and other non-putrescible wastes until the late 1970s. IR Site 6 is designated as a radiologically impacted site in the HRA and the ROCs for the site include Co-60, Cs-137, H-3, Ra-226, Sr-90, Th-232, and U-238.

Environmental investigation and remediation activities are being conducted at NASB under the Department of Defense Installation Restoration (IR) Program in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Under Executive Order 12580, the Navy is the lead agency responsible for implementation of the IR Program and the site investigation and remediation. Navy oversight is provided by EPA, Maine Department of Environmental Protection (MEDEP), and the Midcoast Regional Redevelopment Authority (MRRA).

1.2 Purpose

The purpose of this Project CQC Plan is to establish specific procedures and methods for field inspections, and provide an effective QC system to ensure the quality of all work performed by TtEC and its subcontractor personnel during the radiological, munitions, and chemical related work tasks. This plan is applicable to all definable features of work listed in Section 3.0 and will be available at the project field office. All work activities will be conducted in accordance with this Project CQC Plan and the project-specific plans.

2.0 PROJECT ORGANIZATION, RESPONSIBILITY, AND POINTS OF CONTACT

This section describes the organization and authority of project personnel. The organizational structure, functional responsibilities, levels of authority, and lines of communication within the organization have been established to ensure high-quality work. The project organization chart showing the reporting lines for key personnel is provided in Figure 2-1. The responsibilities of key personnel are described in the following subsections. A listing of the point of contact for the project is provided in Section 2.12.

2.1 Remedial Project Manager (RPM)

The Remedial Project Manager (RPM) has primary responsibility with the Navy for day-to-day management of the project activities performed under the site-specific Work Plans and for its successful completion. The RPM is responsible for the following:

- Perform project management for the Navy.
- Ensure the project scope of work requirements are fulfilled.
- Oversee the project cost and schedule.
- Provide formal technical direction to the TtEC project team, as needed.
- Coordinate with other RPMs for other projects being performed to ensure that proper controls are in place.
- Act as lead in interacting with regulatory agencies.

2.2 Navy Technical Representative (NTR)

The Navy Technical Representative (NTR) is the Navy representative with the primary responsibility for providing on-site QA and safety oversight of contractors. The NTR is responsible for the following:

- Verify that all work has been completed per contract and technical specifications prior to final government acceptance.
- Perform ongoing field inspection to verify that all work is in compliance with both contract and technical specifications.
- Notify the contractor of any work not in compliance.
- Notify the contractor of any work being performed in an unsafe manner.
- Interact with the contractor's Project Quality Control Manager (PQCM) on quality-related issues.
- Review Contractor Daily Reports for completeness and accuracy.
- Attend preparatory phase, initial phase, pre-final, and final acceptance inspections.
- Attend weekly QC meetings.

2.3 Radiological Affairs Support Office

The Radiological Affairs Support Office (RASO) and is responsible for the technical oversight and review of the project documents and all issues related to radiological activities. The RASO acts as the lead interface with regulatory agencies on radiological issues, survey plans and reports, and radiological release criteria.

2.4 Project Manager (PM)

The Project Manager (PM) is the TtEC representative responsible for the direction, execution, and successful completion of project tasks to achieve overall project goals. The PM has responsibility for and the authority to direct all segments of the project including technical, construction, and administrative activities. The PM is responsible for the following:

- Coordinate work activities of subcontractors and TtEC personnel and ensure that all personnel adhere to the administrative and technical requirements of the project.
- Monitor the status and progress of work and ensure that project deliverables are completed on time and within the project budget.
- Monitor the budget and schedule, and notify the client and the Program Manager of any changes that may require administrative actions.
- Ensure adherence to the quality requirements of the contract, project scope of work, and the QC plans.
- Ensure that all work meets the requirements of the work plans, procedures, and technical specifications and complies with applicable codes and regulations.
- Ensure that all work activities are conducted in a safe manner in accordance with the Accident Prevention Plan (APP)/Site Safety and Health Plan (SSHP) – Safety and Health Requirements (Engineer Manual [EM]-385-1-1) (United States Army Corps of Engineers [USACE], 2008), and all applicable Occupational Safety and Health Administration regulations.
- Ensure that change conditions are properly identified and documented with the appropriate approvals.
- Serve as the primary contact with the Navy and TtEC for actions and information related to the work and make sure to include appropriate TtEC lead and experts in decision-making.
- Coordinate satisfactory resolution and completion of evaluation and acceptance for Nonconformance Reports (NCRs).
- Attend required meetings, including the preconstruction conference, weekly QC meetings, pre- and post-construction site inspections, and other scheduled and unscheduled meetings.

2.5 Data Manager

The Data Manager will be responsible for the "cradle-to-grave" data management system to ensure that it seamlessly integrates all phases of the radiological and construction work processes (not including munitions investigation activities) from the initial survey, excavation, and remediation activities through backfilling and site restoration to support free and restricted release. The Data Manager will:

- Ensure the TtEC Chain-of-Custody Module tracks samples from generation through delivery to the laboratories.
- Ensure the TtEC Excavated Soil Module tracks each truckload and stockpile of excavated soil and debris
- Ensure the TtEC Waste Management Module tracks quantities of LLRW contaminated soil, and asphalt, and debris for disposal by the Navy's LLRW waste contractor.
- Ensure the TtEC Waste Management Module tracks quantities of non-LLRW contaminated soil, asphalt, and debris for off-site disposal.

- Ensure the TtEC Waste Management Module tracks quantities of decontamination water for disposal.
- Ensure the TtEC Analytical Results Module tracks the status of each sample submitted and supports the generation of laboratory analytical reports for laboratory analytical results.
- Ensure the TtEC Materials and Equipment Module tracks material and equipment survey activities, results, and final disposition.

2.6 Safety and Health Manager (SHM)

The Safety and Health Manager (SHM) is the TtEC representative responsible for implementing and overseeing the Contract Health and Safety Program and for developing, implementing, and approving all APPs/SSHPs. Any changes to the established Contract Health and Safety Program or APP/SSHP must be at the direction and approval of the SHM, with concurrence of the Navy Administrative Contracting Officer. The SHM or designee will not necessarily be on-site during all remedial activities but will be readily available for consultation when required.

The SHM or designee is a Certified Industrial Hygienist (CIH) who is certified by the American Board of Industrial Hygiene. The SHM supervises and directs the activities of the Site Safety and Health Officer (SSHO). The SHM has the authority to stop unsafe operations, remove unqualified personnel from the work area, and approve changes to the APP/SHSP. The SHM is responsible for the following:

- Oversee all aspects of the APP/SHSP from development to implementation.
- Advise the SSHO on all related health and safety matters.
- Review site-specific plans for completeness and compliance.
- Review other site documents as they affect health and safety (e.g., Activity Hazard Analyses [AHAs] and sampling plans).
- Review and evaluate all monitoring results.
- Establish and monitor all related health and safety procedures through site safety inspections and audits.
- Ensure that TtEC employees receive required environmental health and safety (EHS) regulatory training.
- Fulfill specific responsibilities for project EHS personnel that are identified within each EHS procedure.
- Function as a technical resource for all environmental compliance, safety, loss control, and industrial hygiene issues.

2.7 Quality Control Program Manager (QCPM)

The Quality Control Program Manager (QCPM) is the TtEC representative responsible for the oversight of program QC, including field activities and data acquisition. The QCPM is responsible for the following:

- Coordinate and resolve quality concerns.
- Provide quality-related direction and ensure the training of the PQCM and others performing quality-related functions.
- Suspend project activities if quality standards are not maintained.
- Interact with the Navy on quality-related issues.
- Review audit and surveillance reports.
- Implement the Navy technical directives related to quality.

2.8 Site Superintendent (SS)

The Site Superintendent (SS) is a TtEC representative who reports to the PM and is responsible for coordinating, directing, implementing, and supervising site construction activities. The SS or designated representative will be on-site at all times during field activities. The SS is responsible for the following:

- Implement field activities in accordance with the site-specific Work Plans.
- Direct support personnel and subcontractors.
- Administer site access and communication.
- Maintain the work site, facilities, vehicles, and equipment.
- Coordinate work activities and ensure all personnel adhere to the administrative and technical requirements of the project.
- Prepare status reports and estimate future scheduling needs.
- Prepare daily Contractor Production Reports (CPRs).
- Monitor the status and progress of field activities and ensure that project deliverables are completed on time and within the project budget.
- Ensure work activities in the field are conducted in a safe manner in accordance with the APP/SSHP.
- Investigate with the SSHO all incidents, accidents, injuries, illnesses, and near misses.

2.9 Project Quality Control Manager (PQCM)

The PQCM is the TtEC representative responsible for overall management of project QC and reports to the QCPM. The PQCM has the authority to stop work on site-related issues affecting the quality of the work performed and for directing the correction of all nonconforming work. The PQCM or designated representative will be on-site at all times during field activities. The PQCM is responsible for the items on the following page:

- Provide and maintain an effective QC system for all site activities.
- Monitor QC activities to ensure conformance with authorized policies, procedures, contract specifications, required standards, and methods of quality construction.
- Prepare the daily Contractor Quality Control Reports (CQCRs).
- Coordinate and perform the three phases of inspection (preparatory, initial, and follow-up) for all definable features of work (DFWs).
- Responsible for issuance, maintenance, and enforcement of NCRs and other quality actions.
- Ensure that on-site and off-site inspections, testing, and sampling are performed in accordance with the plans, procedures, specifications, and applicable codes.
- Ensure that all required tests and inspections are performed and documented.
- Conduct required QC meetings, including the coordination and mutual understanding meeting, site survey visit, and other scheduled meetings.
- Coordinate and maintain submittal register, photograph log sheet, request for information, and Non-Conformance Report (NCR) log and other required logs or registers.
- Review and maintain records of approved submittals, Design Change Notices (DCNs), and Field Change Requests (FCRs) for construction activities.
- Inspect material delivery handling and storage in accordance with technical specifications.
- Review and approve submittals and shop drawings and/or forward submittals as information only or for approval.
- Review project plans and procedures for quality issues.
- Confirm the removal or rework of material, equipment, or work activity that is not in compliance with plans and specifications.
- Maintain the Submittal Register Log.
- Perform daily QC safety inspections and logging in the QC logs (EM 385-1-1 01.A.12.b) (USACE 2008).

The PQCM will not perform the dual role of SS.

A copy of the Delegation of Authority Letter is provided in Appendix A and a copy of the PQCM resume is provided in Appendix B.

2.10 Site Safety and Health Officer (SSHO)

The SSHO is the TtEC representative who reports directly to the SHM and ensures all elements of the APP/SSHPs are implemented and enforced on-site. The SSHO has full authority to issue stop work orders or evacuation orders when work operations or noncompliance(s) may threaten the health and safety of site workers or the public. The SSHO is responsible for the following:

- Ensure that all personnel understand the requirements of the TtEC EHS program and procedures through training and communication.
- Investigate with the SS all incidents, accidents, injuries, illnesses, and near misses.

- Ensure project personnel are trained in the hazards of substances used on the project, maintain Material Safety Data Sheets (MSDSs) and Safety Data Sheet (SDS) and make them accessible to project personnel, and perform inspections and oversight to ensure the Waste Management Plan is being followed.
- Ensure tailgate safety meetings are conducted daily prior to start of work and are documented.
- Ensure project safety equipment is inspected and in good working order as required by the EHS program.
- Coordinate site health and safety requirements with the SS and PM.
- Ensure that all health and safety monitoring equipment and personal protective equipment are maintained and direct site-monitoring activities.
- Coordinate daily field activities with the SS.
- Coordinate site safety and emergency response duties and verify site communications system with site personnel.
- Report incidents to the NTR as required by EM 385-1-1 (USACE, 2008).
- Report immediately to the PM, RPM, and NTR any fatal injury, persons admitted to a hospital, or damage to government property.
- Ensure all personnel have the required training and medical clearance prior to entering the exclusion zone at the site; inform the SS of any site personnel with medical restrictions.
- Determine and post routes to medical facilities and telephone numbers for emergency transportation to medical facilities.
- Serve as the Project Hazard Communication Coordinator.
- Maintain training records and medical certifications for all on-site personnel, including subcontractors.
- Initiate revisions or changes to the APP/SSHP to support changing site conditions.
- Maintain site control procedures.
- Maintain current records of certification for first aid and cardiopulmonary resuscitation training for field personnel.
- Attend meetings, including the preconstruction conference, weekly QC meetings, pre- and post-construction site inspections, and other project meetings.

2.11 Program Chemist

The Program Chemist is the TtEC representative who oversees sample collection, handling, analysis, and analytical data reporting. The Program Chemist is responsible for the following:

- Develop the Sampling and Analysis Plan.
- Evaluate and select qualified subcontract laboratories.
- Implement data QC procedures and perform audits of field performance.
- Review chemical laboratory data prior to use.
- Ensure that a proper review of the radiological laboratory data is performed.

- Coordinate data validation of the laboratory data as required.
- Review data validation reports.
- Prepare analytical reports and supporting project reports.

2.12 Licensed Radiation Safety Officer (Corporate Health and Physics Manager)

The Corporate Health and Physics Manager, also referred to as the Radiation Safety Officer (RSO), is responsible for the following:

- Review and make recommended revisions to:
  - The Radiation Protection Plan (RPP), Radioactive Material License (RML) procedures, radiation protection guidelines, and supporting documents
  - Project plans involving the use or handling of radioactive materials, or access to areas of radiological concern to ensure compliance with RPP requirements and supporting guidelines
- Act as the Health Physics Resource Manager, also referred to as the corporate level or license RSO.
- Designate a Project Health Physicist, also referred to as the project-level RSO Representative (RSOR), to provide day-to-day guidance on radiological protection issues.
- Maintain compliance, as the license RSO, with the TtEC Nuclear Regulatory Commission (NRC) RML, license number 29-31396-01 or Maine Agreement State RML (as required), including the following responsibilities:
  - Serve as primary point of contact for all communications to the NRC (or Agreement State, if applicable).
  - Identify and train RML authorized users.
  - Assign project RSORs.
  - Coordinate investigations involving radiological occurrences to include review and approval of a resulting Corrective Action Plan.
  - Notify NRC (or Agreement State, if applicable) in advance in writing at least 14 days before initiating at a temporary job site under TtEC RML jurisdiction any activity, or change to scope involving new activities, in areas of radiological concern (excluding routine packaging or repackaging for purposes of transporting and not requiring a job- or site-specific work package, and characterization and/or final surveys where radioactive materials and/or radiation are not likely to be detected).
  - Refrain from taking ownership of licensed materials in excess of possession limits without prior notification and written NRC (or Agreement State, if applicable) approval.
  - Notify NRC (or Agreement State, if applicable) in advance in writing within 30 days of the temporary job site completion status involving decontamination and

decommissioning activities, and disposition of any licensed material as related to RML jurisdiction.

- Place reciprocity requests with applicable Agreement States, when necessary.
- Maintain radiological exposure records.
- Develop and/or obtain approval of radiation safety training materials and/or courses.
- Perform program audits as detailed in corporate procedure NLP-08, Radiation Protection Program Audits.
- Provide guidance on radiological protection issues.
- Identify appropriate project staffing needs to implement RPP requirements.
- Assist with the development of site EHS plans and obtain approval of EHS plans for projects that involve the use or handling of radioactive materials or access to areas of radiological concern.
- Provide Resource Specialist review for Task Initiation Procedures for proposed projects involving exposure to radiation or radioactive materials.

- Delegate project responsibilities to other company health physicists (also referred to as RSORs) as necessary.

2.13 Subcontractors and Vendors

Qualified subcontractors may be selected to provide various construction services for this project. The subcontractor is required to provide labor, material, and equipment necessary to conduct construction activities as directed by the PM. Subcontractors and vendors will be required to conform to TtEC's quality requirements of all approved procedures, technical specifications, and contract provisions.

The subcontractor is responsible for field inspection of their construction and operating activities. TtEC personnel will monitor, oversee, and make on-site observations and inspections of work in progress to determine whether the subcontractor's work is proceeding in accordance with TtEC's quality requirements.

Subcontractor personnel are responsible for maintaining a daily log of the project activities they perform and for providing information needed to complete the Daily CQC Report. All inspection records, including inspection reports, deficiency reports, and reinspections of corrective actions, will be documented.

2.14 Points of Contact

The following is a list of the key project, Navy, and regulatory points of contact:

Name and Title	Contact Information
Navy COR, Zane Parry	(757) 322-4777
Navy RPM/NTR (Work Plan Phase), Todd Bober	(215) 897-4911
Navy Contracting Officer, Faith Smith	(757) 341-1986 (office phone)
Navy NTR – Construction Phase, Joe Gallant	(207) 438-2990
Navy Installation Representative/CSO, Bob LeClerc	(207) 406-2290 (office phone)
NAVSEA Detachment RASO Matt Slack	(757) 887-4212 (office phone) (202) 821-6115 (cellular phone)
EPA Region 1, Mike Daly	(617) 918-1386 (office phone)
MEDEP, Claudia B. Salt	(207) 287-7713 (office phone)
MRRA, Steve Levesque	(207) 798-6512 (office phone)
TtEC Project Manager, Derek Pinkham	(215) 702-4070 (office phone) (215) 200-5182 (cellular phone)
TtEC Quality Control Program Manager, Greg Joyce	(360) 598-8117 (office phone) (360) 780-0371 (cellular phone)
TtEC Safety and Health Manager, Roger Margotto, CIH	(619) 471-3503 (office phone) (619) 988-0520 (cellular phone)
TtEC Certified Health Physicist/RSO, Erik Abkemeier	(757) 944-0921 (cellular phone)
TtEC Site Superintendent, TBD	(xxx) xxx-xxxx (cellular phone)
TtEC Program Chemist, Lisa Bienkowski	(949) 923-7842 (office phone)
TtEC Site Safety and Health Officer, TBD	(xxx) xxx-xxxx
TtEC Project Quality Control Manager, TBD	
TtEC Data Manager, TBD	(xxx) xxx-xxxx
TtEC Regulatory Compliance Specialist, TBD	(xxx) xxx-xxxx

Abbreviations and Acronyms:

CIH – Certified Industrial Hygienist
COR – Contracting Officer's Representative
CSO – Caretaker Support Office
EPA – U. S. Environmental Protection Agency
MEDEP - Maine Department of Environmental Protection
MRRA – Midcoast Redevelopment Reuse Authority
NAVSEA – Naval Sea Systems Command
NOSSA – Naval Ordnance Safety & Security Activity
NTR – Navy Technical Representative
RASO – Radiological Affairs Support Office
RPM – Remedial Project Manager
RSO – Radiation Safety Officer
SHM – Safety and Health Manager
TBD – To Be Determined
TtEC – Tetra Tech EC, Inc.

3.0 DEFINABLE FEATURES OF WORK

A definable feature of work (DFW) is defined as an activity or task separate and distinct from other activities that requires separate control activities. The DFW establishes the control measures required to verify both the quality of work performed and compliance with specified requirements, which include inspecting materials and workmanship before, during, and after each DFW. Preparatory and Initial inspections will be performed on all DFWs, with the exception of mobilization and demobilization. Activities that will be covered by the PQCM during the inspections at each of the 10 sites are listed in Table 3-1. The following DFWs have been identified for the project:

Definable Features of Work

IR Site 9 Neptune Drive Disposal Area
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey
Radiological surveys
Test pitting
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Non-LLRW waste characterization sampling, if needed
Non-LLRW transport and disposal/recycle, if needed
IR Site 7 Old Acid/Caustic Pit
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey
Radiological surveys
Excavation and removal of soil:
Haul road upgrades
Soil survey and removal
Transport of soil to Site 1/3
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Soil sampling
Import material sampling (radiological only)
Backfill and compaction
Site restoration
Non-LLRW waste characterization sampling, if needed
Non-LLRW transport and disposal/recycle, if needed
Quarry Area of Concern
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey

Radiological surveys
Test pitting
Remediation of radioactive contamination
Excavation and removal of soil and debris:
Establish debris screening and soil debris and soil stockpile areas
Soil and debris survey and removal
Radiological screening of recovered debris and removed soil
Dewatering, if required
FSS (including systematic and biased sampling)
Waste consolidation area construction:
Debris placement
Placement of radiologically cleared and reusable soil
Placement of topsoil
Import material sampling (radiological only)
Site restoration
Non-LLRW waste characterization sampling
Non-LLRW transport and disposal/recycle
Building 7/10 Groundwater Site
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Geophysical survey
Direct push soil borings
Installation of injection points and monitoring wells
Groundwater sampling
Site restoration
Non-LLRW waste characterization sampling
Non-LLRW transport and disposal/recycle
IR Sites 1 and 3 Hazardous Waste Burial Area
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey
Radiological surveys
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Cap extension:
Expose southern edge of existing liner system
Prepare subgrade for landfill extension
Placement and stabilization of Site 7 soil
Extension of RCRA cap
Soil sampling (under cap for dose modeling)
Site restoration (includes installation of new fencing)
Non-LLRW waste characterization sampling, if needed

Non-LLRW transport and disposal/recycle, if needed
Undocumented Former Orion Street Disposal Area
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey (only if excavation required)
Radiological surveys
Remediation of radioactive contamination
Site restoration, if required
Non-LLRW waste characterization sampling, if needed
Non-LLRW transport and disposal/recycle, if needed
DRMO Site
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Geophysical survey
Radiological surveys
Asphalt pavement removal
Building site preparation
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Site restoration (outdoor areas only)
Non-LLRW waste characterization sampling, if needed
Non-LLRW transport and disposal/recycle, if needed
IR Site 2/Orion Street Landfill (South)
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey
Radiological surveys
Test pitting (north of capped area)
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Cap construction (north of capped area)
Placement of import material
Placement of geotextile liner
Import material sampling (radiological only)
Site restoration
Non-LLRW waste characterization sampling, if needed
Non-LLRW transport and disposal/recycle, if needed
Building 9 MWR CPO Wardroom/VPU/Electronics and Ordnance Shop
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Building site preparation
Radiological surveys
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Non-LLRW waste characterization sampling, if needed

Non-LLRW transport and disposal/recycle, if needed
IR Site 6 Sandy Road Rubble and Asbestos Disposal Site
Site reconnaissance and existing conditions survey/Environmental Conditions Report
Clearing of vegetation
Geophysical survey
Radiological surveys
Test pitting
Remediation of radioactive contamination
FSS (including systematic and biased sampling)
Site restoration
Non-LLRW waste characterization sampling, if needed
Non-LLRW transport and disposal/recycle, if needed

4.0 SUBMITTALS

This section describes the review and approval process of submittals. TtEC will institute and maintain a submittal register (Appendix C) to track submittals from issuance to approval. A list of required submittals will be developed at the initiation of project activities and revised as necessary. Submittals will be scheduled, reviewed, certified, and managed in accordance with the procedures defined in this section.

The submittal titles as specified in the RAC N62470-13-D-8007 are as follow:

- SD-01 Data
- SD-02 Manufacturer's Catalog Data
- SD-03 Manufacturer's Standard Color Charts
- SD-04 Drawings
- SD-05 Design Data
- SD-06 Instructions
- SD-07 Schedules
- SD-08 Statements
- SD-09 Reports
- SD-10 Test Reports
- SD-11 Factory Test Reports
- SD-12 Field Test Reports
- SD-13 Certificates
- SD-14 Samples
- SD-15 Color Selection Samples
- SD-16 Sample Panels
- SD-17 Sample Installations
- SD-18 Records
- SD-19 Operation and Maintenance Manuals
- SD-20 Closure Report and Certification of Closure

- SD-21 Sampling and Analysis Plan
- SD-22 RCRA Closure Plan

Descriptions of the submittals listed above are provided in Section 7.7, Schedule of Submittal Descriptions (SD), in the RAC N62470-13-D-8007.

4.1 Review of Submittals

Submittals will be reviewed to ensure completeness, accuracy, and contract compliance. Submittal of a certification will be inspected and approved by the PQCM for conformance to the project specifications or certification criteria. All items will be checked and approved by the PQCM or designated representative. Any submittals requiring modifications or changes will be returned to the originating organization for correction and then resubmitted for review and approval prior to acceptance. Approved submittals will be stamped, signed or initialed, and dated. During the preparatory phase of the QC inspections, the PQCM or designated representative will ensure that all materials and equipment have been tested and approved. No field activities will be performed without the required approval of applicable submittals.

4.2 Submittal Process

Required submittals will be provided to project personnel as determined by the distribution schedule. Each submittal will be assigned a unique document control number.

A transmittal form will accompany each submittal. Each transmittal will be identified with:

- Contract and CTO number
- Name and address of the submitting organization
- Date of submittal
- Description of item being submitted, including reference to specification section (if applicable)
- Approval of submitting organization indicating conformance to the requirements

The PQCM will update the submittal register regularly.

4.3 Review and Processing of Submittals that Do Not Require Navy Approval

Material submitted for review by the PQCM will indicate whether or not it conforms to established requirements. The PQCM will inform the submitter of the results of the review. The submittal log will be updated to indicate the status.

Conforming submittals will be transmitted to project and Navy personnel as determined by the distribution schedule. A transmittal form will accompany all items sent to the Navy and will list each item transmitted, the date it was reviewed by the PQCM, and its review status.

Nonconforming submittals will be returned to the submitter for correction, resolution of comments, and resubmittal.

4.4 Review and Processing of Submittals that Require Navy Approval

Submittals reviewed by the PQCM will be transmitted to the Navy in accordance with the project distribution schedule for further review and approval. All items sent to the Navy will use a transmittal form that will indicate each item transmitted, the date reviewed by the PQCM, and its review status. Upon completion of review, the NTR will either return the transmittal form to the PQCM for further action or accept the submittal as complete.

The PQCM will advise the submitter of the results of the review in writing and include any comments. The submittal log will be updated to indicate status. Nonconforming submittals may be returned to the submitter for correction, resolution of comments, and resubmittal, if required.

4.5 Revised Submittals

Revised submittals will be logged, reviewed, and processed in a manner identical to the initial submittal. Revisions to a submittal will be identified using an alphabetic suffix to the original submittal number, e.g., submittal 18 will be revised to 18(a).

5.0 TESTING

The PQCM or designated representative will verify the performance of all tests specified or required by the project-specific plans to ensure that control measures are adequate to provide a product conforming to contract specifications. General requirements for testing procedures to be implemented for this project are included in the Work Plan, Basewide Radiological Management Plan, and the Sampling and Analysis Plan. The type, number, and frequency of required tests are specified in the Testing Plan and Log (Appendix C). These tests include both operational and acceptance testing as appropriate.

5.1 Documentation

All test results, both passing and failing, will be documented as a summary report in the Daily Contractor Quality Control Report (CQCR) on the last day of each month. Paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. The test reports will be available for review by the NTR and transmitted with the project closure reports for each of the various sites at former NASB.

5.2 Laboratory Services

An independent testing laboratory will provide laboratory services as needed. The laboratory will be selected and qualified in accordance with recognized industry and applicable project requirements. TtEC will use laboratories accredited by the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP) and certified by the State of Maine for radiological and chemical analyses. QC for radiological and chemical analyses is addressed in the Sampling and Analysis Plan.

5.3 Testing Plan and Log

The Testing Plan and Log (Appendix C) lists tests required by the project specifications and drawings. The Test Plan and Log will be submitted with the last CQC Report of each month. Testing will be conducted to verify that control measures are adequate to provide a product conforming to contract specifications. General requirements for sampling and analysis procedures to be implemented for this project are included in the Sampling and Analysis Plan.

6.0 QUALITY CONTROL MEETINGS

6.1 Coordination and Mutual Understanding Meeting

Prior to the start of site work, a coordination and mutual understanding meeting will be held to discuss the QC Program requirements. Navy personnel attending the meeting will include the RPM, NTR, and the CSO. The purpose of this meeting is to develop a mutual understanding of the QC details, including forms to be used, administration of on-site and off-site work, coordination of the field activities, production, and the PQCM duties with the NTR. At a minimum, the TtEC personnel required to attend the meeting will include the PM, SS, and PQCM. Minutes of the meeting shall be prepared by the PQCM and signed by the PM and the Navy's RPM and/or NTR or designated representative. The meeting may be held in conjunction with the preconstruction meeting.

6.2 QC Meetings

After the start of field activities, the PQCM will conduct QC meetings at a frequency of once per week or as required by the NTR. The meetings will be held at the project site and will be attended by the NTR, CSO, RPM (by conference call if necessary), SS, SSHO, PQCM, Program QC Manager (by conference call if necessary), and PM (by conference call if necessary).. The PQCM will notify the CSO at least 48 hours in advance of each meeting. The following will be covered at each meeting:

- Review the minutes of the previous meeting.
- Review the schedule:
  - Work or testing accomplished since last meeting
  - Rework items identified since last meeting
  - Rework items completed since last meeting
- Review the status of submittals:
  - Submittals reviewed and approved since last meeting
  - Submittals required in the near future
- Review the work to be accomplished in the following 2 weeks, documentation required, and schedule for the three phases of control and testing:
  - Establish completion date for rework items
  - Required preparatory phase inspections
  - Required initial phase inspections

  - Required follow-up phase inspections
  - Required testing
  - Status of off-site work or testing
  - Required documentation
  - Identification of deficient conditions
- Resolve QC and production problems.
- Address items that may require revisions to the PCQC Plan.
- Address health and safety issues.
- Discuss other miscellaneous items.

7.0 INSPECTIONS

This section discusses the inspection process for the DFWs that will ensure compliance with the contract. The DFWs for this project are identified in Section 3.0 and listed in Table 3-1.

The PCQC Plan includes implementing the following three control phases for all aspects of the work specified:

- Preparatory phase
- Initial phase
- Follow-up phase

7.1 Preparatory Phase Inspection

The PQCM will conduct preparatory phase inspections prior to starting the DFWs listed in Table 3-1 with the exception of mobilization and demobilization. These inspections shall include the following:

- Review the project-specific plans (e.g., Task-specific Plans, Basewide Radiological Management Plan, site-specific Work Plans, Standard Operating Procedures, etc.).
- Verify that field measurements are as indicated on construction and/or shop drawings before confirming product orders.
- Ensure that all required procurement forms for supplies and services are approved.
- Ensure that provisions have been made to provide the required QC inspection.
- Ensure that all personnel have the required training and certifications needed to perform the work.
- Examine the work area to ensure that all required preliminary work has been completed and is in compliance with the approved Work Plan.
- Examine the required materials and equipment to ensure that they are properly delivered to the site, conform to specifications, and are properly stored.
- Review the appropriate AHAs to ensure that safety requirements are met.
- Discuss procedures for performing the work, including potential repetitive deficiencies.
- Document workmanship standards for the particular phase of work.
- Ensure that the PCQC Plan for the work to be performed has been accepted by the Navy.

The PQCM will conduct frequent internal inspections of mobilization and demobilization, which will include the items listed on Table 3-1. The PQCM is not required to notify the Navy or the PM prior to inspections of mobilization and demobilization.

The PM, Navy RPM, and NTR will be notified at least 2 working days in advance of each preparatory phase activity. This phase will include a meeting conducted by the PQCM and attended by the SS and any personnel involved in performing the DFW. When a subcontractor will accomplish a DFW, that subcontractor foreman shall attend the preparatory phase meeting.

The issues discussed during the preparatory phase meetings will be documented on the Preparatory Inspection Checklist (Appendix C). The PQCM will explain the acceptable level of workmanship required to personnel performing work activities.

7.2 Initial Phase Inspection

An initial inspection will be performed at the beginning of a DFW and will include the following:

- Check preliminary work to ensure that it is in compliance with contract requirements.
- Review the Inspection Checklist documenting results of the preparatory meeting.
- Verify full contract compliance, including required control inspections.
- Establish the required level of workmanship, testing, and inspection to ensure that work meets minimum acceptable standards.
- Resolve all differences.
- Check safety requirements to include compliance with and upgrading of the APP/SSHP and AHAs.

The PM, Navy RPM, CSO, and NTR will be notified in advance of each initial phase activity. The PQCM will document initial inspections for each item using the Initial Inspection Checklist (Appendix C) and attach it to the Daily CQC Report. The location of the initial phase inspection and documentation will be identified for future reference and comparison with follow-up inspections.

The initial phase inspection will be reviewed each time a new crew arrives on-site or when features of the work change.

7.3 Follow-Up Phase Inspection

During the completion of a particular DFW, follow-up inspections will be conducted to ensure compliance with contract requirements. The frequency of the follow-up inspections will depend on the extent of the work being performed. Each follow-up inspection will be documented on the Daily CQC Report. A Follow-up Inspection Checklist (Appendix C) will be generated for any deficient conditions identified during the Initial Inspection and attached to the Daily CQC Report

when all items are resolved. A final follow-up check will be conducted on any completed work phase prior to the commencement of a subsequent phase.

7.4 Receipt Inspections

The PQCM will conduct inspections of materials prior to their use and installation. These inspections will be documented on a receipt inspection form and maintained on-site. Any material(s) that does not meet design specifications will be rejected and returned to the vendor. Nonconforming material will be segregated and marked accordingly, to prevent inadvertent use. The PQCM will record on the Daily CQC Report that a material inspection was performed.

7.5 Additional Inspections

The PQCM may conduct additional inspections on the same DFWs under the following circumstances:

- If the quality of ongoing work is unacceptable as determined by the PQCM, PM, SS, Navy RPM, CSO, or NTR
- If the quality of the work is suspected of being below the established criteria of acceptance
- If work on a DFW is resumed after a substantial period of inactivity
- If other problems develop

7.6 Completion Inspection

Completion inspections will be performed as summarized in this section.

7.6.1 Construction Quality Control Completion Inspections

The PQCM will conduct a detailed inspection prior to the pre-final inspection, when all of the work or an increment of work is deemed to be substantially complete. The work will be inspected for conformance to plans and specifications, workmanship, and completeness. The PQCM will prepare an itemized list of work that does not conform to plans and specifications, inferior workmanship, or incomplete work, and will include on the Rework Items List any remaining items that have not been completed prior to the inspection. The list will also include outstanding administrative items, such as record (as-built) drawings. The list will be included in the QC documentation and submitted to the PM following the inspection and will specify an estimated date for correction of each deficiency. A copy of the list will also be forwarded to the NTR and CSO, the on-site Navy representatives for the Contracting Officer. The completion inspection will be documented on the Completion Inspection Checklist (Appendix C) and attached to the Daily CQC Report. The pre-final inspection will be scheduled after all the deficient items have been corrected.

7.6.2 Pre-final Inspection

The PM or designated representative will conduct the pre-final inspection. The Navy RPM, CSO, NTR, PQCM, SS, and other primary management representative(s), as applicable, will attend. The PM will schedule the pre-final inspection when notified by the PQCM that the work is ready for inspection. The PQCM is required to verify at this time that all specific items previously identified as being unacceptable, along with all remaining project work, will be complete and acceptable by the date scheduled for the pre-final inspection. If incomplete or unacceptable work is found during the pre-final inspection, a punch list will be generated by TtEC in consultation with the NTR and CSO. A copy of the punch list will be forwarded to the NTR and CSO, the on-site Navy representatives for the Contracting Officer, and the RPM. The original punch list will be maintained by the PQCM.

7.6.3 Final Acceptance Inspection

The PM will schedule the final acceptance inspection based on notification from the PQCM of readiness. The Navy RPM, SS, NTR, CSO, PQCM, and other primary management representative(s), as applicable, will attend. Notification will be provided prior to the planned final acceptance inspection date and must include verification that all specific items previously identified as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection.

7.7 Inspection Documentation

The PQCM is responsible for maintaining the inspection records. Inspection records will be legible and clearly provide all information necessary to verify that the items or activities inspected conform to the specified requirements. In the case of nonconforming conditions, the PQCM will provide evidence that the conditions were brought into conformance or otherwise accepted by the CSO. All inspection records will be made available to the Navy.

8.0 DOCUMENTATION

Preparation, review, approval, and issuance of documents affecting quality will be controlled to the extent necessary to ensure compliance to specified requirements. Project documents that will be controlled, if issued, include the following:

- Meeting minutes, conference notes, and confirmation notes
- Submittal Register
- Inspection documentation
- Contractor Production Report
- Daily CQC Report
- Material inspection and shipping logs
- NCRs
- Deficiency Notices (DNs)
- DCNs

- NCR log
- Field Change Requests (FCRs)
- FCR/DCN log
- Rework Items list
- Photograph log
- Field logbooks

8.1 Daily Contractor Quality Control Report

The PQCM is responsible for maintenance of current records of QC operation, activities, inspections, and tests performed, including the work of subcontractors and suppliers. The records will include factual evidence that required QC activities and tests were performed. The Daily CQC Report will be completed to document site activities covered by the PCQC Plan and will include:

- Records of inspection and /or testing performed
- Identification and location of each DFW and its current phase (preparatory, initial, follow-up) of completion
- Results of inspections and/or testing
- Location and description of deficiencies
- Deficiencies corrected as of the date of the report
- Rework items
- Deviations from plans, difficulties, and resolution
- Test and/or control activities performed with results and references to specifications and/or plan requirements, including the control phase (preparatory, initial, and follow-up) and deficiencies (along with corrective action)
- Material received, with statement as to its acceptability and storage
- Submittals reviewed with contract reference, reviewer, and action taken
- Off-site surveillance activities, including actions taken

The records will describe both conforming and nonconforming features and include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The Daily CQC Report attached to the Contractor Production Report will be furnished to the NTR by 10:00 a.m. on the first work day following the date covered by the report, or as agreed to by the NTR. The report need not be submitted for days in which no work is performed. At a minimum, one report will be prepared and submitted for every 7 days of no work and on the last day of a no-work period. All calendar days will be accounted for throughout the life of the contract. The first report following a day of no work will summarize work for that day only.
The report submitted on the last work day of each month will include the Rework Items List, Submittal Register, and Test Plan Log. Copies of the reports will be maintained on-site and will be available for review during business hours.

The daily CQCR will be signed and dated by the PQCM and contain the following statement: “On behalf of the Contactor, 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 and noted in this report." Other appropriate personnel, including subcontractors responsible for completion of activities, will sign and date the report as required. The report will include copies of test reports.

8.2 Contractor Production Report

The Contractor Production Report will be prepared for each day work is performed and will be attached to the Daily CQC Report prepared for the same day. The Contractor Production Report will be prepared, signed, and dated by the SS or designated representative, and will contain the following information:

- Contractor and subcontractor(s) and their area of responsibility
- Trades working on the project that day and number of personnel
- Operating equipment, with hours worked, idle, or down for repair
- Work performed that day, including location, description, weather conditions, and who did the work
- Any delays encountered
- Site visitors and the purpose of the visit
- Job safety evaluations stating what was checked, results, and instructions or corrective actions
- A list of instructions given and/or received and conflicts in plans and/or specifications
- Contractor's verification statement

8.3 Logbooks

The PQCM will maintain a logbook to document QC activities. The information in the logbook is intended to serve as a phone log and memory aide in the preparation of the daily CQC Report and in addressing follow-up questions that may arise.

8.4 Photographs and Photo Logs

The PQCM will maintain photographs and a photo log to document site activities. Each photograph will have a date and time stamp on it or the photograph will show a sign board documenting the date and time clearly and legibly in the photograph. The photo log will identify each photograph by date, time, location, and activity.

8.5 Conference Notes and Confirmation Notes

In addition to other required documentation, the PQCM is responsible for taking notes and preparing the reports of all conferences. Conference notes will be typed and the original report furnished to the Navy within 5 days of the date of the conference for concurrence and subsequent distribution to all attendees. At a minimum, this report will include the following:

- Date and place the conference was held
- List of attendees, including name, organization, and telephone number
- Comments made during the conference and decisions affecting criteria changes
- Conference notes that augment the written comments

The PM is also responsible for providing a record of all discussions, verbal directions, telephone conversations, and so forth in which TtEC personnel or their representatives participate on matters relating to this contract and work. These records, titled Confirmation Notices, will be numbered sequentially and will fully identify participating personnel, subject discussed, and any conclusions reached. The PM or designated representative will forward a reproducible copy of the confirmation notices to the Navy RPM and NTR within 5 working days.

9.0 CHANGE MANAGEMENT

This section describes the DCN and FCR, the two main vehicles to document project changes.

9.1 Design Change Notices (DCN)

The following sections detail the identification, preparation, and review and approval process for DCNs.

9.1.1 Identification

Any member of the Project Team may identify the need for a change to the design specifications or drawings. The Project Team member will notify the PCQM, who will evaluate the request and initiate a DCN, if determined necessary.

9.1.2 Preparation

The PQCM will generate a DCN form (Appendix C) and submit it to the Design Engineer for review and disposition. The DCN will identify the specification requirements, the proposed change, and the reason for the change.

9.1.3 Review and Approval

The PM, SS, and PQCM will review and approve the DCN. If the change affects the radiological aspects of the project, the DCN will also require review and approval by RASO. It is the responsibility of the PM to notify the Navy for approval of the DCN prior to making any changes identified on the DCN.

9.1.4 Implementation of Approved DCNs

The SS is responsible for the implementation of approved DCNs.

9.1.5 Records

Each approved DCN will be sequentially numbered as follows:

DCN-CTO X-YY,

Where:

X is the task order number and YY is the DCN number, beginning with 01.

A DCN log shall be maintained by the PQCM that provides the DCN number, date of DCN, and brief description of contents.

Each DCN will be copied to all the management signatories, the SS, PQCM, SSHO, and other personnel as deemed appropriate by the PM.

Copies of the approved DCN should be posted or otherwise included in daily site briefings as appropriate to ensure that all site personnel are aware of the changes to the task order program. Copies of DCN will be issued to all holders of controlled copies. The DCNs will be required to be maintained with the controlled copy of the document that has been changed.

9.2 Field Change Request

Site personnel will document changes to the approved plans (except the design specifications and drawings) in the field through the FCR form (Appendix C). At a minimum, the following information will be documented in the FCR form:

- Project name
- CTO number
- FCR number
- Documents to which a change is requested (including revision number if applicable)
- Description of the item or condition for which the change is requested
- Reason for the change
- Recommended disposition
- Cost and schedule implication of the change, if any
- Approval of disciplines
- Approval of the PM, SS, PQCM, SHM, and QCPM and concurrence from the RPM or NTR
- If the change affects the radiological aspects of the project, the FCR will also require review and approval by RASO.

9.3 Distribution of DCN and FCR Forms

Approved DCN and FCR forms will be distributed to the CTO file record, all CTO personnel that received the original document, and the NTR and RPM. The Navy may request DCNs or FCRs be submitted to the Contracting Officer or their designee.

10.0 NONCONFORMANCE

All deficiencies or nonconforming conditions discovered during inspections or other QC functions will be noted on either a deficiency notice (DN) or an NCR, as appropriate.

A DN is used to document the failure to develop, document, or implement effectively any applicable element of approved plans or to follow established procedures. A deficiency could lead to a nonconformance.

An NCR is used to document a nonconforming condition that renders the quality of an item, process, or product that has been defined in the specifications or drawings as unacceptable or indeterminate.

Copies of these forms are provided in Appendix C along with the logs used for tracking these documents. All deficiencies and nonconforming conditions will be resolved prior to completion of the project and in the timeliest manner possible. The DN will be used for all conditions that do not affect the final work product. An NCR will be used when a condition may affect the final work product and requires disposition by the Design Engineer of Record.

The PQCM will be notified of all deficiencies and nonconforming conditions identified during the course of the field activities to ensure that each of these occurrences is documented, reported, and tracked; and that corrective actions are taken and follow-up verification is conducted.

The PQCM will also document deficiencies and nonconforming conditions in the daily CQCR, noting the items found to be deficient or nonconforming; the date; time, and location; the person who identified the deficiency or nonconformance; and the status of the item to which the deficiency or nonconformance applies.

The PQCM will update the status of the deficiency when it changes. Before the work activities of the day begin, the PQCM will note the deficiencies or nonconforming conditions that require follow-up verification that day. New or changed status will be entered into the file at the end of each day. The daily CQCR will document completion of the corrective action for each deficiency or nonconformance for that day. Nonconforming conditions or deficiencies that require rework for resolution will be noted on the Rework Items List included in Appendix C. Rework Items List will be included with the daily CQC Report on the last day of the month that work is performed.

10.1 Root Cause Analysis

The DN and the NCR forms both include space to enter information regarding the cause of the problem and the proposed resolution. The determination of the root cause of a deficiency or nonconformance is an integral part of the QC process. Root-cause analysis will be made by the PQCM in conjunction with other appropriate site personnel such as the SS and the SSHO. Criteria considered in the analysis will include:

- Staff qualifications and training

- Adequacy of procedures and methods
- Adequacy of equipment
- Adequacy of QC measures

Input will be obtained, as necessary, from field staff and technical advisors in order to identify the factors that led to the problem.

10.2 Corrective Action

Following the root cause analysis, the PQCM will evaluate potential solutions (corrective actions) to determine which remedy is most effective in correcting the problem. This process will include all appropriate staff. Potential remedies considered will include:

- Supplemental staff training
- Changes of equipment or modification of equipment currently in use
- Acquisition of supplemental equipment
- Implementation of new procedures or modification of existing procedures
- Changes in QC procedures

Final approval of all remedies will be the responsibility of the PM.

Successful implementation of corrective action will be documented by the PQCM in the appropriate areas of the DN or NCR. This documentation will be supported by changes to the inspection procedures or schedule as warranted (i.e., the PQCM will not certify that corrective action has been taken until inspection of the actions and the resulting changes in the program are complete).

10.3 Condition Requiring Stop Work

If corrective actions are insufficient, resolution cannot be reached, or results of prior work are indeterminate, work may be stopped. The PQCM will direct the PM to suspend work associated with the nonconformance until corrective action is complete. The PQCM will notify the QCPM immediately after stopping work. If there is a disagreement between the PQCM and the PM, the difference will be brought to the attention of the QCPM until resolution is achieved.

The conditions of the suspension of work will be described in detail on the CQC daily report and on the Rework Items List, if corrective action is not completed by the end of the working day Work will not continue until the directed by the individual who authorized it.

11.0 QUALITY MANAGEMENT

In addition to the required QC field inspections, the TtEC Quality Management System requires a quality management overview of the site QA/QC Program implementation. The PQCM will perform regular internal QC checks on the site implementation of the QA/QC Program. Reports of any deficiencies will be provided to the PM for corrective action.

Inspections will be performed and checked for the following:

- Conformance with Work Plan and associated plans
- Thoroughness of performance
- Identification and completeness of documentation generated during performance

The PQCM will maintain the Rework Item List. This is a list of work items that do not comply with the contract and identify each item that needs rework, the date the item was discovered, the date the item will be corrected, and the date the item was corrected.

The PQCM will ensure the as-built drawings are kept current on a daily basis and marked to show deviations, which have been made from the contract drawings. The PQCM (or designee) will initial each deviation or revision. At the end of the project, updated as-built drawings will be submitted, and the PQCM (or designee) will furnish a certificate attesting to the accuracy of the as-built drawings prior to submission.

12.0 REFERENCES

ECC (Environmental Chemical Corporation). 2008. Site Management Plan, A Road Map for Environmental Cleanup, Naval Air Station Brunswick, Brunswick, Maine. December

Tetra Tech (Tetra Tech). 2014. Final Historical Radiological Assessment, Naval Air Station Brunswick, Brunswick, Maine. History of the Use of General Radioactive Materials 1943 to 2011. March

USACE (United States Army Corps of Engineers). 2008. Safety and Health Requirements. Engineer Manual (EM) 385-1-1. September 2008 Consolidated. August 2011.

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TABLE

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TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Site reconnaissance and existing conditions survey/ Environmental Conditions Report	• Review work areas as identified in the Work Plan. • Verify that RPM, NTR, and CSO have been notified. • Review AHAs. • Verify that a project kickoff meeting was held. • Verify that project kickoff meeting minutes were prepared, reviewed, and distributed. • Inspect record for radiation general awareness training for all workers (not applicable for Building 7/10 Groundwater site). • Verify the RWP has been prepared/approved (not required for the Building 7/10 Site).		• Inspect environmental survey documentation. • Verify that qualified RCT and SSHO are present at active work areas. RCT not required at the Building 7/10 Site) • Verify that existing site conditions (pre-construction) are being photographed. • Verify that RWP is available at work site (not required for the Building 7/10 Site).		• Verify that existing environmental conditions survey is conducted in all areas where field activities will take place and adjacent areas. • Verify that qualified SSHO is present at active work areas. • Verify that existing site conditions (pre-construction) are being photographed. • Verify that photographs are logged and stored. • Verify that RWP is available at work site (not required for the Building 7/10 Site). • Verify that personnel have read and signed the revised RWP, if revision is required (not required for the Building 7/10 Site).	
Clearing of vegetation and/or asphalt pavement	• Verify that RPM, NTR, and CSO have been notified. • Verify that management of cleared vegetation and/or pavement protocol is established based on the results of vegetation survey, Work Plan, WMP, and/or TSP (DRMO site). • Review AHAs. • Verify that PPE is available and meets requirements of the SSHP. • Verify that the area has been walked/visually inspected for items that could interfere with clearing (utilities, rebar, etc.).		• Verify that qualified RCT and SSHO are present at active work areas. • Verify that vegetation and/or pavement is removed throughout the excavation / survey area. • Verify that RWP is available at work site.		• Continue to inspect ongoing activities. • Verify that qualified RCT and SSHO are present at active work areas. • Verify that vegetation and/or pavement stockpiles are maintained per the Basewide Radiological Management Plan, Work Plan, WMP, TSP, and SOP requirements. • Verify that RWP is available at work site. • Verify that personnel have read and signed the revised RWP, if revision is required.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Clearing of vegetation and/or pavement (Continued)	• Verify that radiation awareness training has been completed and that training is documented. • Verify that traffic schedule has been approved by CSO and NTR. • Verify the RWP has been prepared/approved.		• Verify that vegetation and/or pavement stockpiles are maintained per the Basewide Radiological Management Plan, Work Plan, WMP, TSP, and SOP requirements. • Verify that vegetation removed from radiologically impacted sites is stockpiled at the site of origin. • Verify vegetation (small trees, branches, bushes, and grass) are chipped and spread at location approved by Contracting Officer or designee • Verify that large trees and stumps are removed and disposed/recycle at a facility approved to take this waste stream/material. • Verify that the activity is photographed.		• Verify that vegetation and/or pavement are disposed of in accordance with the Basewide Radiological Management Plan, Work Plan, WMP, TSP, and SOP requirements, and that the stockpile locations are cleaned up. • Verify vegetation (small trees, branches, bushes, and grass) are chipped and spread at location approved by Contracting Officer or designee • Verify that large trees and stumps are removed and disposed/recycle at a facility approved to take this waste stream/material. • Verify that site activities are being photographed. • Verify that photographs are logged and stored.	
Geophysical survey	• Verify that RPM, NTR, and CSO have been notified. • Verify that survey instrument certification is current and in good condition. • Verify that sensitive locations at the site are delineated and work crews are aware of restricted areas. • Review control points. • Review AHAs. • Review the Work Plan, TSPs, and drawings for this activity. • Review boundaries and extent of survey.		• Verify that qualified RCT and SSHO are present at active work areas. • Verify that surveyor has correct control point information. • Verify that the geophysical survey is performed over areas of known or suspected subsurface utilities. • Verify boundaries and extent of survey. • Verify that site activities are		• Verify that qualified RCT and SSHO are present at active work areas. • Verify that utility locations are marked in the field and identified to the equipment operators. • Verify that the site as-built records are updated to include any unknown utility lines encountered in the field. • Verify that boundaries of survey have been met. • Verify that site activities are being photographed.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Geophysical survey (continued)	• Verify that radiation awareness training has been completed and training is documented (not required for the Building 7/10 Groundwater site). • Verify that designated personnel have assigned dosimeters and completed NRC Form 4 (not required for the Building 7/10 Groundwater site). • Verify the RWP has been prepared/approved (not required for the Building 7/10 Site).		being photographed. • Verify that RWP is available at work site (not required for the Building 7/10 Site).		• Verify that photographs are logged and stored. • Verify that RWP is available at work site (not required for the Building 7/10 Site). • Verify that personnel have read and signed the revised RWP, if revision is required (not required for the Building 7/10 Site).	
Building site preparation	• Verify that RPM, NTR, and CSO have been notified. • Verify that an approved RWP is available and has been read and signed by assigned personnel. • Verify that Basewide Radiological Management Plan, TSP, and AHAs have been reviewed. • Verify that assigned personnel are trained and qualified. • Verify that training record documentation is being maintained. • Verify that personnel have been given an emergency notification procedure. • Verify that workers assigned dosimetry have completed NRC Form 4. • Verify that the scope of the building site preparation activities have been established and are understood. • Verify that equipment and materials required are on site. • Verify the RWP has been prepared/approved		• Verify that qualified RCT and SSHO are present at active work areas. • Verify that site activities are being photographed. • Verify that required dosimetry is being worn. • Verify that RWP is available at work site. • Verify the site preparation activities are being performed as described in the TSP.		• Verify that site is properly posted and secured, if necessary. • Conduct ongoing inspection of material and equipment. • Verify that qualified RCT and SSHO are present at active work areas. • Verify that required dosimetry is being worn. • Verify that RWP is available at work site. • Verify that personnel have read and signed the revised RWP, if revision is required. • Verify the site preparation activities are being performed as described in the TSP.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Radiological surveys	• Verify that RPM, RASO, NTR, and CSO have been notified. • Verify that an approved RWP is available and has been read and signed by assigned personnel. • Verify that Basewide Radiological Management Plan, TSP, and AHAs have been reviewed. • Verify that assigned personnel are trained and qualified. • Verify that training record documentation is being maintained. • Verify that personnel have been given an emergency notification procedure. • Verify that workers assigned dosimetry have completed NRC Form 4. • Verify that relevant SOPs and/or manufacturers' instructions are available and have been reviewed for equipment to be used for radiological surveys. • Verify that limits and boundaries of surveys have been established and are understood. • Verify background check. • Verify that calibration of survey instrument is within 1 year. • Verify the RWP has been prepared/approved. • Verify that equipment is on site. • Verify that traffic schedule has been approved by CSO and NTR.		• Verify that radiological instruments are as specified in the Basewide Radiological Management Plan. • Verify that qualified RCT and SSHO are present at active work areas. • Verify that site activities are being photographed. • Verify that the reference area measurements have been obtained using the procedure described in the Basewide Radiological Management Plan. • Verify that daily checks are performed on all portable survey instruments. • Verify that required dosimetry is being worn. • Verify that RWP is available at work site. • Verify that field logbooks and proper forms are in use. • Verify that measurements are being collected in accordance with the Basewide Radiological Management Plan, SAP, and relevant SOPs. • Verify that limits and boundaries of survey are being met.		• Verify that site is properly posted and secured, if necessary. • Conduct ongoing inspection of material and equipment. • Verify that qualified RCT and SSHO are present at active work areas. • Verify that required dosimetry is being worn. • Verify that any suspected material location is marked, flagged, and documented. • Verify that daily instrument checks and background measurements are obtained and documented. • Verify that survey results are documented. • Verify that RWP is available at work site. • Verify that personnel have read and signed the revised RWP, if revision is required. • Verify that survey data and sample analysis results are reviewed as required by the SOPs. • Verify that survey activities conform to the Basewide Radiological Management Plan and SOPs. • Verify that boundaries of the survey have been met. • Verify that survey instrument is recalibrated after repairs or modifications. • Verify that personnel surveys are performed for all personnel leaving a radiological controlled area.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Radiological surveys (continued)					• Verify that RASO is notified of discovered radioactive material. • Verify that area known or suspected to contain radioactive material is isolated. • Verify that site activities are being photographed. • Verify that photographs are logged and stored.	
Remediation of radioactive contamination	• Verify that RPM, NTR, CSO, and RASO have been notified. • Review procedures. Verify background activity and what constitutes a deviation. • Review AHAs. • Verify that equipment, instruments, and materials are on site, calibrated, and in working order. • Verify that required stockpile, container, and/or staging areas are established. • Review the Basewide Radiological Management Plan, RPP, and TSP. • Verify that PPE is available and meets requirements of the SSHP. • Verify that radiation awareness training has been completed and training is documented. • Verify that designated personnel have assigned dosimeters and completed NRC Form 4. • Verify that a log and database are established for identified material. • Verify that traffic schedule has been approved by CSO and NTR. • Verify that personnel have been given an emergency notification procedure. • Verify the RWP has been prepared/approved.		• Verify that qualified RCT and SSHO are present at active work areas. • Verify that required dosimetry is being worn. • Verify PPE of all workers. • Verify that RSOR has evaluated radiological impact of the material prior to any action for each material. • Verify that removal of radioactive material and remediation activities are conducted in accordance with the Basewide Radiological Management Plan, RPP, and TSP. • Verify that RCT is present during removal of any source and remediation activities. • Verify that a surface survey is completed for the initial surface area and each subsequent 1-foot excavation. • Verify that all boxes, drums, or other applicable containers have been surveyed and		• Verify that qualified RCT and SSHO are present at active work areas. • Verify that required dosimetry is being worn. • Verify that removal of radioactive material is conducted in accordance with the Basewide Radiological Management Plan, RPP, and TSP. • Verify that an additional 1 foot of soil in every direction is excavated after removal of material. • Verify that RCT scanned the excavated area after radioactive material removal. • Verify that personnel surveys are performed for all personnel leaving a radiological controlled area. • Review radiological logbook for completeness of documentation. • Inspect contaminated material handling procedure. • Verify that removed material is stored and managed in accordance with the Basewide Radiological Management Plan and RPP. • Verify that all bags and waste containers are marked with a unique identification and information is	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Remediation of radioactive contamination (continued)			surface radiation measurements are collected. • Verify that site activities are being photographed. • Verify that proper logging, recording, and photography of found point sources are being done. • Verify that traffic schedule has been approved by CSO and NTR. • Verify that RWP is available at work site.		recorded in the logbook. • Verify that filled drums or other containers are stored in approved storage areas. • Verify that liner remains in good condition. • Verify that the log of radioactive material is routinely reviewed by the RSOR. • Verify that traffic schedule has been approved by CSO and NTR. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that daily safety briefings discuss status of RWP(s). • Verify that RWP is available at work site. • Verify that personnel have read and signed the revised RWP, if revision is required.	
Test Pitting	• Verify that the RPM, NTR, and CSO have been notified. • Verify that OSHA has been notified 5 days prior to excavation. • Verify that Maine Dig Safe has been notified 72 hours prior to excavation. • Verify that training requirements are met for all personnel. • Verify that OSHA excavation permit is on site. • Verify that OSHA excavation regulations are reviewed. • Verify that equipment and material are		• Verify that the RCT and SSHO are present in an active work area. • Verify that a spotter trained in recognizing underground utilities is present at all times. • Verify that airborne concentrations do not exceed the established levels. • Verify that air monitoring and initial baseline sampling are being performed per SSHP.		• Verify that required dosimetry is being worn. • Verify that daily safety briefings discuss status of RWP(s). • Verify that RWP is available at the work location. • Verify that RWP is modified in the event of changes to the conditions. • Verify that air samples are collected as required. • Verify that tools, material, and equipment are cleaned, wiped down, and surveyed prior to removal.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Test Pitting (continued)	surveyed for radiation and survey results are documented. • Verify that test pit locations have been reviewed with the DON and regulators. • Verify that initial background air sampling has been conducted. • Verify that electrical lines are de-energized, if necessary. • Verify that existing utilities and structures are removed, if necessary. • Verify that proper equipment is on-site to perform work. • Verify the RWP has been prepared/approved.		• Verify that required dosimetry is being worn. • Verify that all personnel have signed the RWP(s). • Verify that the test pitting protocol, as described in the Work Plan, PCQCP, EPP, DCP, RPP, SWPPP, and Basewide Radiological Management Plan is being followed. • Verify that dust control is used as necessary. • Verify that site activities are being photographed. • Verify that permit conditions are followed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that traffic control procedures are being followed.		• Verify that the test pitting protocol, as described in the Work Plan, PCQCP, EPP, DCP, RPP, SWPPP, and Basewide Radiological Management Plan is being followed. • Verify that visually stained soil/material is segregated. • Continue to inspect ongoing work. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that personnel surveys are performed for all personnel leaving a radiological controlled area. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that traffic control procedures are being followed.	
Excavation and removal of soil and debris	• Verify that the RPM, NTR, and CSO have been notified. • Verify that OSHA has been notified 5 days prior to excavation. • Verify that Maine Dig Safe has been notified 72 hours prior to excavation. • Verify that an assignment letter for competent person is on file. • Verify that training requirements are met for all		• Verify that the RCT and SSHO are present in an active work area. • Verify that airborne concentrations do not exceed the established levels. • Verify that air monitoring and initial baseline sampling are being performed per SSHP. • Verify that required		• Verify that RCT and SSHO are present in an active work area. • Verify that a spotter trained in recognizing underground utilities is present at all times. • Verify that airborne concentrations do not exceed the established levels. • Verify that air and soil samples are collected as required. • Verify that excavation / removal s are	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Excavation and removal of soil and debris (continued)	personnel. • Verify that OSHA excavation permit is on site. • Verify that OSHA excavation regulations are reviewed. • Verify that equipment and material are surveyed for radiation and survey results are documented. • Verify that final excavation configurations have been reviewed with the DON and regulators. • Verify that initial background air sampling has been conducted. • Verify that electrical lines are de-energized, if necessary. • Verify that existing utilities and structures are removed, if necessary. • Verify that proper equipment is on-site to perform work. • Review the Work Plan, SAP, CQC Plan, RPP, EPP, DCP, SWPPP, WMP, and Basewide Radiological Management Plan. • Review the AHAs. • Verify that PPE is available and meets the requirements of the SSHP. • Verify that radiation awareness training has been completed and documented. • Verify that all personnel have assigned dosimeters and completed the NRC Form 4. • Verify that the RWP is in place and that all workers have read the requirements. • Verify that the Traffic Control Plan is in place and reviewed. • Verify that traffic schedule has been approved by the CSO and NTR.		dosimetry is being worn. • Verify that all personnel have signed the RWP(s). • Verify that the excavation protocol, as described in the Work Plan, CQC Plan, EPP, DCP, RPP, SWPPP, and Basewide Radiological Management Plan is being followed. • Verify that dust control is used as necessary. • Verify that site activities are being photographed. • Verify that permit conditions are followed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that traffic control procedures are being followed.		performed in accordance with the project plans and specifications • Verify that required dosimetry is being worn. • Verify that daily safety briefings discuss status of RWP(s). • Verify that RWP is available at the work location. • Verify that RWP is modified in the event of changes to the conditions. • Verify that modified RWP was concurred with by RASO and concurrence is documented. • Verify that tools, material, and equipment are cleaned, wiped down, and surveyed prior to removal. • Verify that excavation protocol, as described in the Work Plan, CQC Plan, EPP, DCP, RPP, SWPPP, and Basewide Radiological Management Plan is being followed. • Verify that visually stained soil/material is segregated. • Verify that competent person is conducting daily inspection of the excavation and slope stability, and that the inspection is documented in a logbook. • Continue to inspect ongoing work. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that personnel surveys are performed for all personnel leaving a	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Excavation and removal of soil and debris (continued)	• Verify the RWP has been prepared/approved				radiological controlled area. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that traffic control procedures are being followed.	
Final Status Survey (including systematic and biased sampling)	• Verify that RPM, NTR, and CSO have been notified. • Review the Basewide Radiological Management Plan, TSP, and the SAP. • Verify that radiation awareness training has been completed and training is documented. • Verify that designated personnel have assigned dosimeters and completed the NRC Form 4. • Verify that PPE is available. • Verify the RWP has been prepared/approved.		• Verify that RCT and SSHO are present in an active work area. • Verify that required dosimetry is being worn. • Review survey and sample handling procedures. • Verify that all personnel have signed the RWP(s).		• Verify that RCT and SSHO are present in an active work area. • Verify that required dosimetry is being worn. • Verify that surveys and samples are collected in accordance with the survey and sample handling procedures. • Inspect field documentation. • Verify that personnel surveys are performed for all personnel leaving the radiological controlled area. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that sample locations are surveyed. • Verify sample chain-of-custody form. • Verify that daily safety briefings discuss status of RWP(s). • Verify that RWP is available at the work location. • Verify that RWP is modified in the event of changes to the conditions. • Verify that modified RWP was concurred with by RASO and concurrence is documented.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Backfill placement and compaction	• Verify that RPM and CSO have been notified. • Verify that compaction equipment is available. • Review the Work Plan, PCQCP, Basewide DCP, and SWPPP and verify that adequate material is available for fill. • Review AHAs. • Review the Work Plan. • Verify that PPE is available and meets requirements of SSHP. • Verify that radiation awareness training has been completed and that training is documented. • Verify that designated personnel have assigned dosimeters and completed NRC Form 4. • Verify the RWP has been prepared/approved.		• Verify that RCT and SSHO are present in an active work area. • Verify that required dosimetry is being worn. • Verify that samples of proposed materials have been submitted and approved. • Verify that the backfill placement and compaction protocol, as described in the Work Plan and PCQCP, is being followed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the Work Plan and Basewide DCP. • Verify that all personnel have signed the RWP(s).		• Conduct ongoing inspection of backfilling and compaction operation. • Verify that the backfill placement and compaction protocol, as described in the Work Plan and PCQCP, is being followed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the Work Plan and Basewide DCP. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that daily safety briefings discuss status of RWP(s). • Verify that RWP is available at the work location. • Verify that RWP is modified in the event of changes to the conditions. • Verify that modified RWP was concurred with by RASO and concurrence is documented.	
Cap construction/ extension /waste consolidation area construction	• Verify that the RPM, NTR, and CSO have been notified. • Verify that equipment and material are surveyed for radiation and survey results are documented. • Verify that final cap configuration has been reviewed with the DON and regulators. • Verify that initial background air sampling has been conducted. • Verify that existing utilities and structures are removed, if necessary. • Verify that proper equipment is on-site to		• Verify that the RCT and SSHO are present in an active work area. • Verify that samples of proposed materials have been submitted and approved. • Verify that airborne concentrations do not exceed the established levels. • Verify that air monitoring		• Verify that required dosimetry is being worn. • Verify that daily safety briefings discuss status of RWP(s). • Verify that RWP is available at the work location. • Verify that RWP is modified in the event of changes to the conditions. • Verify that modified RWP was concurred with by RASO and concurrence is documented. • Verify that tools, material, and	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Cap construction/ extension /waste consolidation area construction (continued)	perform work. • Review the Work Plan, PCQCP, EPP, DCP, and SWPPP. • Review the AHAs. • Verify that PPE is available and meets the requirements of the SSHP. • Verify that radiation awareness training has been completed and documented. • Verify that all personnel have assigned dosimeters and completed the NRC Form 4. • Verify that the RWP is in place and that all workers have read the requirements • Verify that the Traffic Control Plan is in place and reviewed. • Verify that traffic schedule has been approved by the CSO and NTR. • Verify the RWP has been prepared/approved.		and initial baseline sampling are being performed per SSHP. • Verify that required dosimetry is being worn. • Verify that all personnel have signed the RWP(s). • Verify that the cap construction/extension/waste consolidation area construction as described in the Work Plan, PCQCP, EPP, DCP, and SWPPP is being followed. • Verify that dust control is used as necessary. • Verify that site activities are being photographed. • Verify that permit conditions are followed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that traffic control procedures are being followed.		equipment are cleaned, wiped down, and surveyed prior to removal. • Verify that cap construction/extension/waste consolidation area construction, as described in the Work Plan, PCQCP, EPP, DCP, and SWPPP is being followed. • Continue to inspect ongoing work. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that personnel surveys are performed for all personnel leaving a radiological controlled area. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that traffic control procedures are being followed.	
Import material, soil , and groundwater sampling, includes soil sampling for	• Verify that testing services will be available for the testing of the reuse and import soil samples. • Review the SAP, Basewide Radiological Management Plan, Work Plan, and AHAs. • Verify that PPE is available and meets requirements of the SSHP.		• Verify that RCT and SSHO are present in an active work area (RCT not required for the Building 7/10 Site). • Verify that required		• Verify that RCT and SSHO are present in an active work area (RCT not required for the Building 7/10 Site). . • Verify that required dosimetry is being worn not required for the Building 7/10 Site).	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
reuse	• Verify that there are adequate equipment and materials to decontaminate sample equipment as necessary. • Inspect record for radiation general awareness training for all workers (not required for the Building 7/10 Site) • Verify that NRC Form 4 is completed for each worker (not required for the Building 7/10 Site). • Verify that all personnel have signed the RWP (not required for the Building 7/10 Site). • Verify the RWP has been prepared/approved (not required for the Building 7/10 Site).		dosimetry is being worn (not required for the Building 7/10 Site). • Verify that all personnel have signed the RWP(s) (not required for the Building 7/10 Site). • Review sample collection and handling procedures		• Verify that daily safety briefings discuss status of RWP(s) (not required for the Building 7/10 Site) • Verify that RWP is available at the work location (not required for the Building 7/10 Site) • Verify that RWP is modified in the event of changes to the conditions. (not required for the Building 7/10 Site) • Verify that modified RWP was concurred with by RASO and concurrence is documented (not required for the Building 7/10 Site). • Verify that data have been collected in compliance with the SAP. • Verify sample collection and labeling of samples. • Verify sample chain-of-custody form. • Continue to inspect ongoing work. • Verify that site activities are being photographed. • Verify that photographs are logged and stored.	
Chemical and radiological laboratory services	Requirements for the Preparatory, Initial, and Follow-up Inspections are included in the SAP.					

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Installation of injection point / monitoring wells (at Building 7/10 Groundwater Site)	• Verify that the RPM, NTR, and CSO have been notified. • Verify that the locations of the injection points / monitoring wells have been reviewed with the DON and regulators. • Verify that proper equipment and materials are on-site to perform work. • Review the Work Plan, PCQCP, EPP, DCP, and SWPPP. • Review the AHAs. • Verify that PPE is available and meets the requirements of the SSHP. • Verify that the Traffic Control Plan is in place and reviewed. • Verify that traffic schedule has been approved by the CSO and NTR. • Verify applicable permits/notifications have been submitted and approved, as needed.		• Verify that the SSHO is present in the active work area. • Verify that airborne concentrations do not exceed the established levels. • Verify that air monitoring is being performed per SSHP. • Verify that the injection point/monitoring wells are installed as described in the Work Plan, and PCQCP. • Verify that dust control is used as necessary. • Verify that site activities are being photographed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that traffic control procedures are being followed.		• Verify that the injection point/monitoring wells are installed as described in the Work Plan, and PCQCP. • Continue to inspect ongoing work. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that traffic control procedures are being followed.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Direct push soil borings (at the Building 7/10 Site)	• Verify that the RPM, NTR, and CSO have been notified. • Verify that the locations of the soil borings have been reviewed with the DON and regulators. • Verify that proper equipment and materials are on-site to perform work. • Review the Work Plan, PCQCP, EPP, DCP, and SWPPP. • Review the AHAs. • Verify that PPE is available and meets the requirements of the SSHP. • Verify that the Traffic Control Plan is in place and reviewed. • Verify that traffic schedule has been approved by the CSO and NTR.		• Verify that the SSHO is present in the active work area. • Verify that airborne concentrations do not exceed the established levels. • Verify that air monitoring is being performed per SSHP. • Verify that the soil borings are being performed as described in the Work Plan and PCQCP. • Verify that dust control is used as necessary. • Verify that site activities are being photographed. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that traffic control procedures are being followed.		• Verify that the soil borings are being performed as described in the Work Plan and PCQCP. • Continue to inspect ongoing work. • Verify stormwater, sediment, and erosion control per the SWPPP. • Verify dust control per the EPP and DCP. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that traffic control procedures are being followed.	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Site restoration	• Verify that RPM, NTR, and CSO have been notified. • Review the Work Plan, and AHAs. • Verify that PPE is available and meets requirements of the SSHP. • Review site restoration activities and procedure, including post-construction SWPPP requirements.		• Verify that site demobilization procedures have concurrence from RPM, NTR, and CSO. • Verify site restoration activities are being performed in accordance with the Work Plan and AHAs. • Verify that site activities are being photographed (before/after photographs).		• Conduct ongoing inspection of site restoration activities. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that construction-related damages are repaired.	
Non-LLRW waste characterization sampling	• Verify that testing services will be available for the testing of the waste characterization samples. • Review the Work Plan, SAP, WMP, and AHAs. • Verify that PPE is available and meets requirements of the SSHP. • Verify sampling supplies are available. • Verify that there are adequate equipment and materials to decontaminate sample equipment as necessary. Verify the RWP has been prepared/approved (not required for the Building 7/10 Site).		• Verify that RCT and SSHO are present in an active work area (only SSHO required to be present at Building 7/10 Site). • Verify that required dosimetry is being worn (not applicable for Building 7/10 Site). • Review sample collection and handling procedures • Verify that all personnel have signed the RWP(s) (not required for the Building 7/10 Site).		• Verify that RCT and SSHO are present in an active work area (only SSHO required to be present at Building 7/10 Site). • Verify that required dosimetry is being worn (not applicable for Building 7/10 Site). • Verify that data have been collected in compliance with the SAP and WMP. • Verify sample collection and labeling of samples. • Verify sample chain-of-custody form. • Continue to inspect ongoing work. • Verify that site activities are being photographed. • Verify that photographs are logged and stored. • Verify that daily safety briefings discuss status of RWP(s) (not required for the Building 7/10 Site) • Verify that RWP is available at the work location (not required for the Building 7/10 Site)	

TABLE 3-1
DEFINABLE FEATURES OF WORK

ACTIVITY	PREPARATORY	DONE	INITIAL	DONE	FOLLOW-UP	DONE
Non-LLRW waste characterization sampling (continued)					• Verify that RWP is modified in the event of changes to the conditions. (not required for the Building 7/10 Site) • Verify that modified RWP was concurred with by RASO and concurrence is documented (not required for the Building 7/10 Site).	
Non-LLRW transport and disposal/recycle	• Verify that all transporters are authorized to haul the particular type of waste/recycle material being transported. • Verify that the CSO and NTR have been notified. • Verify that waste profiles have been approved by disposal/recycle sites. • Verify that the waste manifest / bills of lading has been approved and signed by a DON representative. • Verify portal monitor / hand scanning equipment per the Basewide Radiological Management Plan and SOP is present. • Verify that locations of disposal/recycle with the NTR and CSO have been confirmed. • Review submittal load ticket process from contractors. • Review the traffic pattern with the transporters. • Review the traffic plan with CSO and NTR. • Review signage requirements with CSO and NTR. • Review truck decontamination requirements. • Review the AHA for this activity. • Verify the RWP has been prepared/approved (not required for the Building 7/10 Site).		• Verify that all transporters are authorized to haul the particular type of waste/recycle material being transported. • Verify drivers sign manifest. • Verify that the contractor performs work as specified in the WMP. • Review load ticket record procedures. • Verify that transporters go through portal monitor or are hand scanned in accordance with the Basewide Radiological Management Plan and SOP. • Verify that all personnel have signed the RWP(s) (not required for the Building 7/10 Site).		• Verify DOT labeling based on sample results and waste characterization. • Verify manifests are signed and originals given to CSO. • Verify that the contractor has provided delivery logs. • Verify that disposal loads are in accordance with the standard requirements of the Work Plan and WMP. • Verify that all load tickets are accounted for. • Verify that daily safety briefings discuss status of RWP(s) (not required for the Building 7/10 Site) • Verify that RWP is available at the work location (not required for the Building 7/10 Site) • Verify that RWP is modified in the event of changes to the conditions. (not required for the Building 7/10 Site) • Verify that modified RWP was concurred with by RASO and concurrence is documented (not required for the Building 7/10 Site).	

TABLE 3-1
DEFINABLE FEATURES OF WORK

Abbreviations and Acronyms:

AHA – Activity Hazard Analysis
CSO – Caretaker Site Office
DCP – Dust Control Plan
DON – Department of the Navy
IR – Installation Restoration (Program)
NRC – Nuclear Regulatory Commission
NTR – Navy Technical Representative
OSHA – Occupational Safety and Health Administration
PCQCP – Project Contractor Quality Control Plan
PPE – personal protective equipment
RASO – Radiological Affairs Support Office
RCT – Radiological Control Technician
RPM – Remedial Project Manager
RPP – Radiation Protection Plan
RWP – Radiation Work Permit
SAP – Sampling and Analysis Plan
SOP – Standard Operating Procedure
SSHO – Site Safety and Health Officer
SSHP – Site Safety and Health Plan
SWPPP – Stormwater Pollution Prevention Plan
WMP – Waste Management Plan

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FIGURE

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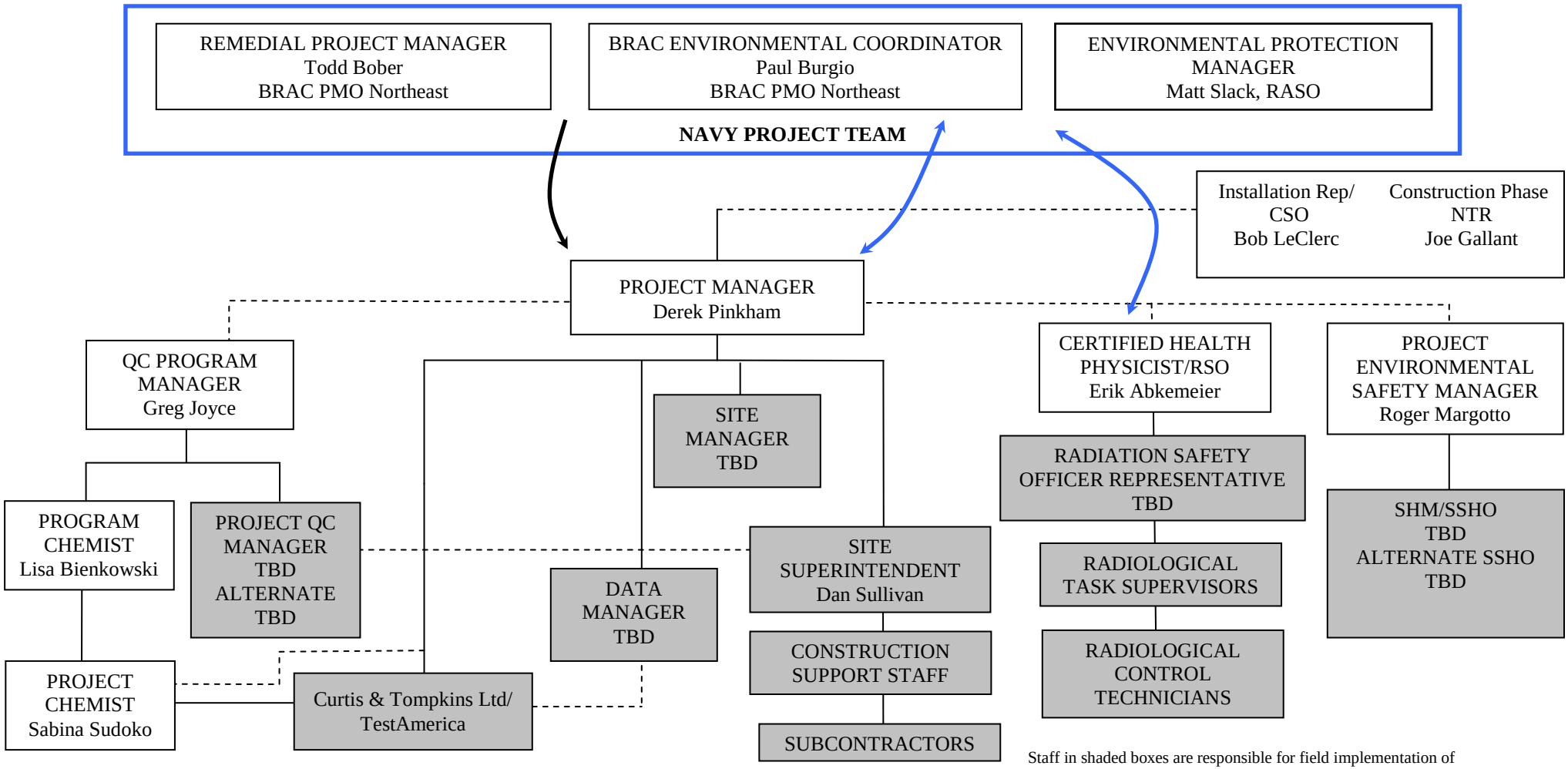
FIGURE 1-1

PROJECT ORGANIZATION CHART



Staff in shaded boxes are responsible for field implementation of activities under the Work Plan.

The Construction Manager (Jeff Bray) has overall responsibility for coordinating the activities of on-site technical staff.

Abbreviations and Acronyms:
BRAC PMO – Base Realignment and Closure Program Management Office
CSO – Contractor Site Office
RASO – Radiological Affairs Support Office
NTR – Navy Technical Representative
RSO – Radiation Safety Officer
QC – Quality Control
SHM – Safety and Health Manager
SSHO – Site Safety and Health Officer

Legend

- Formal reporting relationship
- Supporting relationship
- Primary lines of technical communication
- Line of technical direction (alternate where dashed)

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APPENDIX A

DELEGATION OF AUTHORITY LETTER

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TETRA TECH EC, INC.

August 13, 2014

Chris Hanif
Tetra Tech EC, Inc.
5250 Challedon
Virginia Beach, Virginia 23462

Subject: **Project Quality Control Manager**

Reference: NAVAL FACILITIES ENGINEERING COMMAND, ATLANTIC
REMEDIAL ACTION CONTRACT (RAC)
CONTRACT NO. N62470-13-D-8007, CONTRACT TASK ORDER NO. WE09

Dear Mr. Hanif:

In accordance with the LANT RAC VI Program Construction Quality Control Management Plan, October 2013, this letter notifies you of your appointment as the Project Quality Control Manager for task order WE-09, FORMER NAVAL AIR STATION BRUNSWICK, BRUNSWICK, MAINE issued under the above contract as directed by the Program QC Manager.

As the designated Project Quality Control Manager, you will be responsible for managing the site-specific quality control requirements in accordance with the approved plan. You will be responsible for conducting quality control meetings, performing the three phases of control, and performing submittal review. You will be required to be present during all field activities to ensure that any testing is conducted in accordance with approved plans. In addition, you will be required to prepare the necessary quality control certification and documentation.

You have the authority and responsibility for suspending work when conditions adverse to quality are identified and for directing the correction of all nonconforming work.

This letter is effective immediately until modified by the Quality Control Program Manager with concurrence of the TtEC Project Manager, the LANT RAC VI Remedial Project Manager, and the Resident Officer in Charge of Construction.

Sincerely,

Tetra Tech EC, Inc.

Gregory D Joyce

Gregory D Joyce, ASQ CQM
Quality Control Program Manager

cc: Derek Pinkham

1230 Columbia Street, Suite 750, San Diego, CA 92101
Tel 619.234.8690 Fax 619.234.8591
www.tteci.com

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APPENDIX B

RESUMES
(to be submitted upon request)

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APPENDIX C

QUALITY CONTROL FORMS

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TETRA TECH EC, INC.		Date:
CONTRACTOR PRODUCTION REPORT	Page 1 of 2	

Contract No.	Title & Location:	Report No.
N62470-13-D-8007		

Contractor:	Superintendent:
AM Weather:	PM Weather:

Work Performed Today

Work Location & Description	Employer	Number	Trade	Hours

Was a job safety meeting held this date?	Yes:		Total work hours on site this date:	0.0
(If yes, attach a copy of meeting minutes.)	No:			
Were there any lost time accidents this date?	Yes:			
(If yes, attach a copy of completed OSHA report.)	No:		Cumulative work hours from previous report:	
Was trenching/scaffolding/HV electrical/high work done this date?	Yes:			
(If yes, attach statement or checklist showing inspection performed.)	No:			
Was hazardous material/waste released to the environment?	Yes:		Cumulative work hours since start of work:	
(If yes, attach description of incident and proposed action.)	No:			

List safety actions taken today/safety inspections conducted:

Remarks:

Contractor Superintendent

Date

CONTRACTOR PRODUCTION REPORT

Contract No. N62470-13-D-8007	**Title & Location:**	Date: 1/0/1900 Report No. 0

Rental Equipment	Vendor	PO/MOA#	Charge #	Start Date	Rate	Daily Hrs	P.O.P. Expires

Materials	Vendor	PO #	Charge #	QTY REC'D	ACCUM QTY	P O QTY	P.O.P. Expires

________________________ 01/00/00

Contractor Superintendent Date

TETRA TECH EC, INC	REPORT NO:	
NAVFAC MIDLANT REMEDIAL ACTION CONTRACT (RAC VI) CONTRACT NO. N62470-13-D-8007	PROJECT:	
	PROJECT NO:	
	SUBCONTRACTOR:	
	LOWER TIER SUB:	
CONTRACTOR QUALITY CONTROL REPORT	DATE:	
	TASK:	
	LOCATION	

SEE CONTRACTOR DAILY PRODUCTION SUMMARY REPORT FOR INFORMATION ON SAFETY, WEATHER, SUBCONTRACTOR HOURS AND AREAS OF RESPONSIBILITY:

SUMMARY OF CONSTRUCTION PROGRESS AND QUALITY CONTROL ACTIVITIES PERFORMED:

Tests Performed and Results:

Materials Received:

Deficiencies Noted with Proposed or Implemented Corrective Action:

JOB SAFETY: (LIST OBSERVATIONS)

COMMENTS: ADDRESS ANY CHANGES (FCR/DCN), MEETING RESULTS OR OTHER INFORMATION

Contractor's Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials used and work performed during this reporting period are in compliance with the contract plans and specifications to the best of my knowledge, except as may be noted above.

NAME:	TITLE/COMPANY: PQCM
SIGNATURE:	DATE:

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

DEFICIENCY NOTICE

TASK ORDER # _____ DN # _____ DATE _____
LOCATION: _____ ROICC / RPM

1. Plan, Procedure, Specificaion, or Drawing (Clearly state the requiremet)

2. Description of Deficiency

QC verification of corrective action required: **Yes** _____ **No** _____

Prepared by: _____ **Approved by:** _____

3. Corrective Action

_____ _____ _____
Organization Signature Date

4.
Corrective action verified by: _____ Date _____

Comments:

_____ _____
Program Quality Control Manager Date

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

DESIGN CHANGE NOTICE (DCN)

TASK ORDER # _____ DCN # _____ DATE _____

LOCATION _____ ROICC / RPM _____

1. Document to be changed. Identify revision, date, section, drawing, etc.

2. Description of Change (Items involved, submit sketch, if applicable): **(Use continuation sheet if necessary)**

Engineering "HOLD" placed on all activities in area defined herein pending receipt of formally revised document(s) and / or DCN.
Released for construction basis of modifications prescribed by this DCN.

3. Reason for Change **(Attach additional information if nedded)**

4. Originator (Print name and sign)		Title	Date
Reviewed by: (Print name and sign)		Title	Date
Task Order Manager (Print name and sign)	Date	Program Quality Manager (Print name and sign)	Date

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

DESIGN CLARIFICATION REQUEST

TASK ORDER # _____ **DC#** _____ **DATE** _____

Submitted to: _____

1. Document reference. Identify revision, date, section, drawing, etc.

2. Clearly state requirement or describe drawing as shown. (Attach additional info if needed)

3. Information requested or proposed change. (Attach additional information if needed)

4. Response

Does response require an FCR or DCN **YES** ☐ **NO** ☐

FCR ☐ **DCN** ☐

Task Order Manager (Print name and sign)	**Date**

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

FIELD CHANGE REQUEST (FCR)

TASK ORDER # _____ FCR # _____ DATE _____
LOCATION: _____ ROICC / RPM _____

1. Document to be changed. Identify revision, date, section, drawing, etc.

2. Description of existing requirement and proposed change (Attach sheet if necessary)

3. Reason for Change (Attach sheet if necessary)

4. Originator: (print name and sign)		**Title**	**Date**
Reviewed by: (print name and sign)		**Title**	**Date**
Site Superintendent (Print name and sign)	**Date**	**Task Order Manager (Print name and sign)**	**Date**
TtEC Program QC Manager (Print Name and Sign)	**Date**	**NTR Acknowledgement (Print name and sign)**	**Date**

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT (RAC VI)
CONTRACT NO. N62470-13-D-8007

Initial Phase Inspection Checklist

Task Order No.: _____ Date: _____
Definable Feature: _____ Spec Section: _____
NAVFAC MIDLANT Notified _____ Hours in Advance Yes ____ No ____

I. Personnel Present:

	Name	Position	Company / Government
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

(List additional personnel on reverse side)

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

Comments _____

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

IV Establish Levels of Workmanship

1. Where is the work located? _____
2. Is a sample panel required? Yes _____ No _____
3. Will the initial wok be considered as a sample? Yes _____ No _____
   (If yes, maintain in present condition as long as possible.)

V Resolve any differences.

Comments _____

VI Check Safety

Review job conditions using Site Health and Safety Plan and job hazard analysis.

Comments: _____

_____
Site CQC Representative

TETRA TECH EC
NAVY REMEDIAL ACTION CONTRACT (RAC) VI
CONTRACT NO. N62470-13-D-8007

MONITORING DEVIATION FORM

Task Order # _____ **Date** _____

Project Name _____

Type of Sample _____

Sample Identification # _____ **Sampling Event** _____

_____
Field Representative

_____ _____
Project Manager **NAVFAC NTR**

Description of Deviation or Changed Condition: (State Project Requirement and Deviation)

ALTERNATE ACTION:

NAVFAC NW Response:

_____ _____
RPM Signature **Date**

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

MONTHLY REWORK ITEMS LIST

Task Order Number: _____ Project: _____ Date: _____

Number	Identification of item requiring rework	Date Identified	Date Corrected	Remarks

_____
Site CQC Representative Date

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

NONCONFORMANCE REPORT

TASK ORDER # _____ **NCR#** _____ **DATE** _____
LOCATION: _____ **ROICC/RPM**

1. Plan, Procedure, Specification, or Drawing (Clearly state the requiremet)

2. Description of Nonconforming Item or Condition

Did nonconforming condition require suspension of work activities Yes ☐ No ☐
If yes, explain requirement to restart work activities: _____

_____ _____ _____
Prepared by: Title Date

3. Corrective Action

- ☐ use-as-is
- ☐ repair
- ☐ rework to specificaion
- ☐ other - specify: _____

Comments:

_____ _____ _____
Organization Signature Date

NONCONFORMANCE REPORT

Evaluator _____ Title _____

Accept	
Accept with comments	
Reject	
Reject with comments	

Comments:

Signature _____ Date _____

Evaluator _____ Title _____

Accept	
Accept with comments	
Reject	
Reject with comments	

Comments:

Signature _____ Date _____

5. Verification

Verification required Yes ☐ No ☐

Verified by: _____ _____ _____
Signature Title Date

Approved by: _____ _____
Program QC Manager Date

TtEC
RAC VI

Preparatory Inspection Checklist

Task Order No.: _____ Date: _____

Definable Feature: _____ Spec Section: _____
ROICC Notified _____ ____ ____

I Permits

Have all necessry permits been obtained? Yes ____ No ____

Are the permits on site? Yes ____ No ____

II Sampling Process

Is all sampling equipment on site? Yes ____ No ____

Are sampling labels on site? Yes ____ No ____

Are COCs on site? Yes ____ No ____

Do sampling personnel clearly understand the sample identification procedure? Yes ____ No ____

Has sampling decon procedures been established? Yes ____ No ____

Are proper sample preservation procedures in place? Yes ____ No ____

Has the laboratory been notified of sample shipment? Yes ____ No ____

Has waste disposal processes been established? Yes ____ No ____

Do sampling personnel understand the sampling procedures? Yes ____ No ____

Comments:

VII Safety

1. Review applicable portion of the Task Order Site Health and Safety Plan.
Comments

2. Activity Hazard Analysis approved? Yes ___X___ No _____

VIII Navy comments during meeting.

Preparatory Inspection Checklist

I. Personnel Present:

	Name	Position	Company / Government
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	(List additional personnel on reverse side)		

Site CQC Representative

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT (RAC 6)
CONTRACT NO. N62470-13-D-8007

Preparatory Inspection Checklist

Task Order No.: _____ Date: _____
Definable Feature: _____ Spec Section: _____
NAVFAC MIDLANT Notified _____ Hours in Advance Yes ____ No ____

I. Personnel Present:

	Name	Position	Company / Government
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

(List additional personnel on reverse side)

II Submittals

1. Review submittals and/or submittal register. Have all applicable submittals been approved?
   Yes _____ No _____

   If No, what items have not been submitted?

   a. _____
   b. _____
   c. _____

2. Are all materials on hand? Yes _____ No _____

   If No, what items are missing?

   a. _____
   b. _____
   c. _____

3. Check approved submittals against delivered materials. (This should be done as materials arrives.)

Comments _____

Preparatory Inspection Checklist

III Material Storage

Are materials stored properly? Yes _____ No _____

If No, what actions is taken? _____

IV Specifications

1. Review each paragraph of Specification

2. Discuss procedure for accomplishing the work.

3. Clarify any differences.

V Preliminary Work and Permits

Ensure preliminary work is correct and permits are on file. Yes _____ No _____

If No, what action is taken? _____

VI Testing

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

2. When required? _____

3. Where required? _____

4. Review testing play. _____

5. Has test facilities been approved? _____

Preparatory Inspection Checklist

VII Safety

1. Review applicable portion of the Task order Site Health and Safety Plan.

_____
_____
_____
_____

2. Activity Hazard Analysis approved? Yes _____ No _____

VIII Navy comments during meeting.

_____
_____
_____
_____

_____
Site CQC Representative

TETRA TECH EC,INC.
NAVY REMEDIAL ACTION CONTRACT (RAD EMAC)
CONTRACT NO. N62473-10-D-0809

Preparatory Inspection Checklist

Task Order No.: _____ Date: _____
Definable Feature: _____ Spec Section: _____
NAVFAC MIDLANT notification _____ 48 Hours in Advance Yes ____ No ____

I Submittals

1. Review submittals and/or submittal register. Have all applicable submittals been approved?
Yes _____ No _____

If No, what items have not been submitted?
Comments

2. Are all materials on hand? Yes _____ No _____

If No, what items are missing?
Comments

3. Check approved submittals against delivered materials. (This should be done as materials arrives.)
Comments

II Material Storage

Are materials stored properly? Yes _____ No _____

If No, what actions is taken?

Preparatory Inspection Checklist

III Specifications

1. Review each paragraph of Specification

2. Discuss procedure for accomplishing the work.

3. Clarify any differences.

IV Preliminary Work and Permits

Ensure preliminary work is correct and permits are on file. Yes _____ No _____

If No, what action is taken?

V Testing

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

2. When required?

3. Where required?

4. Review testing play.

5. Has test facilities been approved?

Preparatory Inspection Checklist

VI Safety

1. Review applicable portion of the Task Order Site Health and Safety Plan.
Comments

2. Activity Hazard Analysis approved? Yes _____ No _____

VIII Navy comments during meeting.

I. Personnel Present:

	Name	Position	Company / Government
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

(List additional personnel on reverse side)

_____
Site CQC Representative

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT (RAC VI)
CONTRACT NO. N62470-13-D-8007

Preparatory Inspection Checklist

Task Order No.: _____ Date: _____
Definable Feature: _____ Spec Section: _____
NAVFAC MIDLANT Notified _____ Hours in Advance Yes ____ No ____

I. Personnel Present:

	Name	Position	Company / Government
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

(List additional personnel on reverse side)

II Submittals

1. Review submittals and/or submittal register. Have all applicable submittals been approved?
   Yes _____ No _____

   If No, what items have not been submitted?

   a. _____
   b. _____
   c. _____

2. Are all materials on hand? Yes _____ No _____

   If No, what items are missing?

   a. _____
   b. _____
   c. _____

3. Check approved submittals against delivered materials. (This should be done as materials arrives.)

Comments _____

Preparatory Inspection Checklist

III Material Storage

Are materials stored properly? Yes _____ No _____

If No, what actions is taken? _____

IV Specifications

1. Review each paragraph of Specification

2. Discuss procedure for accomplishing the work.

3. Clarify any differences.

V Preliminary Work and Permits

Ensure preliminary work is correct and permits are on file. Yes _____ No _____

If No, what action is taken? _____

VI Testing

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

2. When required? _____

3. Where required? _____

4. Review testing play. _____

5. Has test facilities been approved? _____

Preparatory Inspection Checklist

VII Safety

1. Review applicable portion of the Task order Site Health and Safety Plan.

_____
_____
_____
_____

2. Activity Hazard Analysis approved? Yes _____ No _____

VIII Navy comments during meeting.

_____
_____
_____
_____

_____
Site CQC Representative

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

SUBMITTAL REGISTER

Contract Number: N62470-13-D-8007					Project Title:										Location:
							Contractor Action			Approving Authority Action				Contracting Officer / Contractor	
Specification Section Number	SD No and Type of Submittal Material or product	Specification Paragraph Number	Classification / Approval By CO	Govt. or A/E Reviewer	Transmittal Control No.	Planned Submittal Date	Action Code	Date of Action	Date FWD to Approving Authority / Date recd. From Contractor	Date FWD to other Reviewer	Date Received from other Reviewer	Action Code	Date of Action	Mailed to Contractor / Received from Approving Authority	Remarks
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)

Action Code: NR: Not Reviewed AN: Approved as Noted A: Approved RR: Disapproved; Revise and Resubmit (Others may be prescribed by Transmittal Form)

TETRA TECH EC, INC.
NAVY REMEDIAL ACTION CONTRACT
CONTRACT NO. N62470-13-D-8007

TEST PLAN and LOG

Task Order Number: _____ Task Order Manager: _____
Project _____ Location: _____

Spec. Section	Paragraph No.	Test Procedure	Test Name	Test Frequency	Test Responsibility	Tested By	Date Completed	Remarks

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